INTERNATIONAL COURT OF JUSTICE

CASE CONCERNING
AERIAL HERBICIDE SPRAYING

(ECUADOR v. COLOMBIA)

REJOINDER OF THE REPUBLIC OF COLOMBIA

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1 FEBRUARY 2012

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Annex 60

UNITED NATIONS OFFICE ON DRUGS AND CRIME (UNODC),
***COLOMBIA COCA CULTIVATION SURVEY 2010*, JUNE, 2011**

(United Nations Office on Drugs and Crime (UNODC), pp. 16, 26, 30, 31, 73)

UNODC
United Nations Office on Drugs and Crime

Government of Colombia

Colombia
Coca cultivation survey 2010

June 2011

Coca cultivation in Colombia

The area under coca cultivation in Colombia at 31 December 2010 is 62,000 hectares. For 2010, an estimation was included (+4,908 hectares), associated to the presence of small fields (see page 96); due to this, the figure of 62,000 hectares is not completely comparable to the historical series, since the data of the historical series is not adjusted. The figure of 2010 without adjustment is 57,000 hectares. The following table shows the area under coca cultivation, without the adjustment, in 2009 and 2010.

Table 2. Cultivated area with and without adjustment 2009-2010

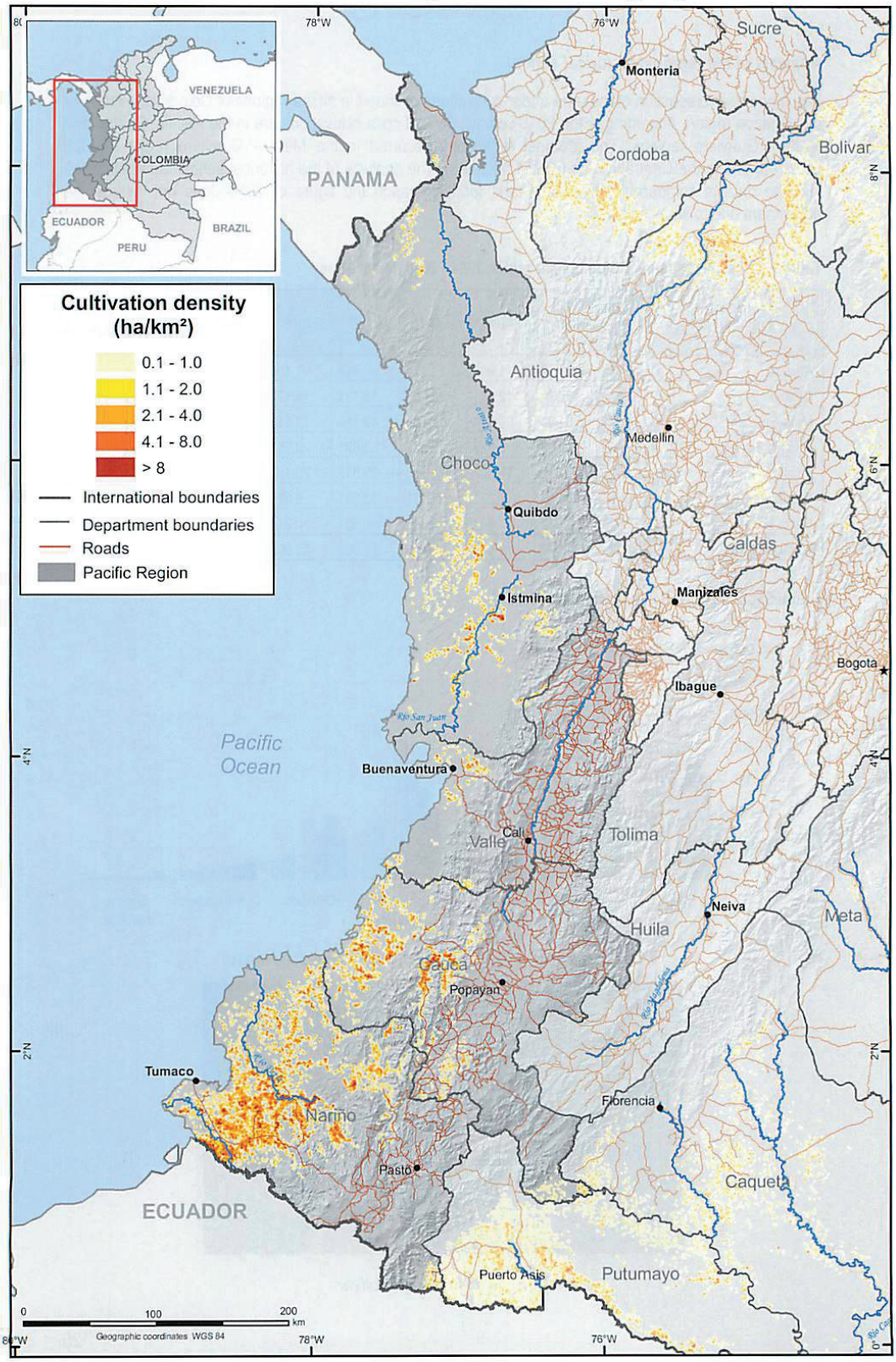
Department	2009 Census		2010 Census	
	Without adjustment	Adjusted	Without adjustment	Adjusted
Nariño	16,428	17,639	14,671	15,951
Cauca	6,144	6,597	5,434	5,908
Guaviare	8,323	8,660	5,427	5,701
Antioquia	4,554	5,096	4,604	5,350
Putumayo	5,316	5,633	4,785	4,785
Cordoba	2,782	3,113	3,347	3,889
Bolivar	4,777	5,346	2,860	3,324
Chocó	1,666	1,789	2,904	3,158
Meta	4,295	4,469	2,864	3,008
Vichada	3,139	3,228	2,666	2,743
Caquetá	3,760	3,985	2,578	2,578
Norte de Santander	2,714	3,037	1,626	1,889
Vaupes	351	395	638	721
Santander	953	1,066	580	673
Valle	929	997	611	665
Guainía	538	606	394	446
Amazonas	277	312	299	338
Arauca	418	430	240	247
La Guajira	163	182	115	134
Magdalena	151	169	104	121
Boyacá	182	204	90	105
Caldas	166	186	39	46
Cundinamarca	-	-	28	32
Total	68,025	73,139	56,905	61,813
Rounded total	68,000	73,000	57,000	62,000

In the period 2009 - 2010, the total area of coca cultivation decreased in Colombia, which keeps the trend to the reduction that began in 2007 - 2008. This was a 15% reduction, for the smallest area under coca cultivation since UNODC measures this phenomenon. It is important to highlight that the coca fields detected in the 2010 census occupied 1.6 % of the total cultivable land in Colombia.

Like the censuses conducted as from 2001, this census represents the situation of coca cultivation at 31 December 2010. The census covers the whole country and detected coca cultivations in 23 out of the 32 departments. In 15 of them, there was a reduction of the cultivated area; in 4 of them there was an increase; 3 are stable and one (Cundinamarca) is back in the list after having been out in 2009.

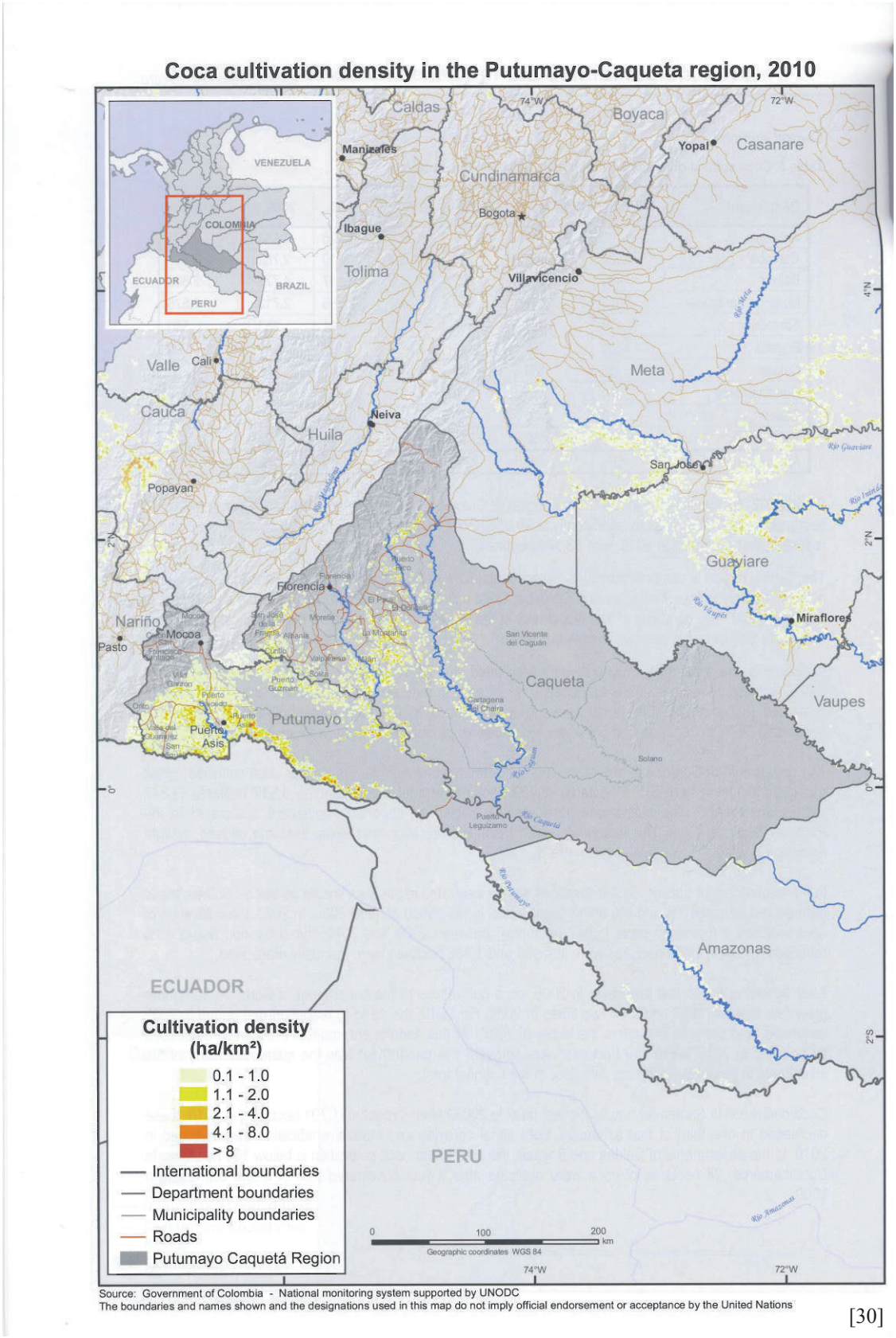
The most important reductions between 2009 and 2010 took place in the departments of Guaviare (-2,967 hectares) in the east of the country and Bolivar (-2,127 hectares) in the Central region. The reduction in the area under coca cultivation in Guaviare is 32% of the total reduction in 2010. After an important increase in 2009, the department went back to the tendency to reduction that had begun in 2004. In 2010, it drops to the lowest area under cultivation since UNODC measures it.

Coca cultivation density in the Pacific region, 2010



Source: Government of Colombia - National monitoring system supported by UNODC
The boundaries and names shown and the designations used in this map do not imply official endorsement or acceptance by the United Nations [26]

Annex 60



Source: Government of Colombia - National monitoring system supported by UNODC
The boundaries and names shown and the designations used in this map do not imply official endorsement or acceptance by the United Nations

[30]

Putumayo-Caqueta Region

Table 9. Coca cultivation in the Putumayo-Caquetá region, 2004-2010 (in hectares)

Department	2004	2005	2006	2007	2008	2009	2010
Putumayo	4,386	8,963	12,254	14,813	9,658	5,316	4,785
Caquetá	6,500	4,988	4,967	6,318	4,303	3,760	2,578
Total	10,886	13,951	17,221	21,131	13,961	9,076	7,363
Annual trend	-26%	+28%	+23%	+23%	-34%	-35%	-19%

In the department of Putumayo, limiting with Ecuador and Peru, coca cultivation reached a peak of 66,000 hectares (40% of the country total) in 2000. After four years of important and consecutive reductions, it dropped to 4,386 hectares (5% of the country total) in 2004, but this trend changed between 2005 and 2007 with consecutive increases of 105% in 2005, 37% in 2006 and 21% in 2007; as from this year, a strong tendency to decrease started and it continued during 2010, dropping to 4,785 hectares (8% of the country total).

Coca cultivation in the department of Caquetá attained its lowest historical level in 2010 with 2,578 hectares (4.5% of the national total), with a slight trend to reduction that started in 2001 when the cultivation had reached 14,516 hectares (10% of the national total).

In Putumayo and Caquetá, coca cultivation is characterized by a high dispersion, due to which it is not easy to find consolidated nucleuses. For 2010, the main concentration of coca cultivation is associated to the Putumayo River, mainly in zones of expansion of the area of influence of coca cultivation.

Aerial spraying activities in Putumayo went from 3,777 hectares in 2009 to 11,434 hectares in 2010, and in the department of Caquetá from 6,652 hectares in 2009 to 16,947 hectares in 2010. Manual eradication was reduced in Putumayo, going from 4,654 hectares in 2009 to 1,972 hectares in 2010, while in Caquetá it decreased from 3,922 hectares in 2009 to 1,556 hectares in 2010.

Coca Fields in Putumayo – Caqueta Region

2.7 SUPPLY REDUCTION

Forced manual eradication

For 2010, 43,690 hectares of coca cultivation were eradicated; the area eradicated decreased with respect to the previous year (-28%) to levels that are comparable to those of 2006 (41,346 hectares). These activities took place in 27 departments, focusing mainly in Nariño (21,108 hectares) and Antioquia (5,110 hectares). 689 hectares of opium poppy were eradicated in nine departments; 95% were eradicated in Nariño, Cauca and Tolima.

The manual eradication strategy is under the responsibility of Acción Social, and is carried out by means of the Mobile Eradication Groups -GME of the Presidential Management against Illicit Crops –PCI, with the support of the Antinarcotics Police and the Military Forces. The fields eradicated are certified by UNODC since 2007. As a complement, the Police, the Navy and the National Army carry out forced manual eradication activities throughout the country.

During 2010, 22 people of the Public Force and 9 eradicators died in the development of forced manual eradication activities. Likewise, 88 people of the Public Force and 70 eradicators were injured.

Table 38. Manual eradication of coca cultivation by department, 2010

DEPARTMENT	Coca Cultivation		Opium Poppy	
	Eradicated Area (has)	% of the Total	Eradicated Area (has)	% of the Total
Nariño	21,108	48.3	588	85.2
Antioquia	5,110	11.7	-	-
Córdoba	2,807	6.4	-	-
Cauca	2,144	4.9	43	6.1
Putumayo	1,972	4.5	-	-
Norte Santander	1,632	3.7	8	1.1
Bolívar	1,436	3.3	-	-
Vichada	1,214	2.8	-	-
Meta	1,178	2.7	3	0.4
Caquetá	1,156	2.6	6	0.8
Santander	1,061	2.4	-	-
Guaviare	777	1.8	-	-
Valle del Cauca	648	1.5	-	-
Cundinamarca	296	0.7	4	0.5
Chocó	222	0.5	-	-
Amazonas	215	0.5	-	-
Magdalena	196	0.4	-	-
Boyacá	136	0.3	-	-
Cesar	91	0.2	12	1.6
Tolima	87	0.2	28	3.9
Caldas	75	0.2	-	-
Arauca	46	0.1	-	-
Guajira	42	0.1	-	-
Guainía	37	0.1	-	-
Casanare	3	-	-	-
Risaralda	1	-	-	-
Huila	-	-	4	0.6
Total	**43,690**	**100**	**689**	**100**

Sources: UNODC. Acción Social-PCI. PONAL, Navy and National Army.

Annex 61

DECISION N° 486 OF THE COMMISSION OF THE CARTAGENA AGREEMENT ON THE COMMON PROVISIONS ON INDUSTRIAL PROPERTY, ART. 260, 14 SEPTEMBER 2000

SUBREGIONAL INTEGRATION AGREEMENT (CARTAGENA AGREEMENT)

Decision 486—Common Provisions on Industrial Property*

(of September 14, 2000)

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259. The following in particular shall be considered acts of unfair competition in connection with industrial property:

(a) any act capable of creating confusion, by whatever means, as to the establishment, goods or industrial or commercial activity of a competitor;

(b) false assertions in the course of trade capable of discrediting the establishment, goods or industrial or commercial activity of a competitor;

(c) statements or assertions the making of which in the course of trade could mislead the public as to the nature, method of manufacture, characteristics, suitability for use or quantity of the goods.

Chapter II
Business Secrets

260. Any undisclosed information that a natural person or legal entity legitimately holds, that may be used in any productive, industrial or commercial activity and is capable of being passed on to a third party shall be considered a business secret in so far as the said information is:

(a) secret, in the sense that, as a whole or in the precise configuration and combination of its elements, it is not generally known or readily accessible to those who move in the circles that usually handle the information concerned;

(b) of commercial value due to its secrecy; and

(c) made the subject of reasonable measures on the part of its legitimate holder with the view to keeping it secret.

The information constituting a business secret may relate to the nature, characteristics or purpose of goods, to production methods or processes or to means or methods of distributing or marketing goods or rendering services.

261. For the purposes of this Decision, that information shall not be considered a business secret that has to be disclosed by virtue of a legal provision or by court order.

Information that is supplied to any authority by a person holding it shall not be regarded as being in the public domain or disclosed by virtue of a legal provision where the person supplies it with a view to obtaining licenses, permits, authorizations, registrations or any other official enactments.

262. Any person who lawfully has control over a business secret shall be protected against the disclosure, acquisition or use of that secret by third parties in a manner contrary to proper business practice. The following acts performed in relation to a business secret shall constitute unfair competition:

Annex 62

DOCUMENT 148, DYNCORP CASE NO. 1:07CV01042(RWR), UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA, 18 SEP. 2009

(United States District Court for the District of Columbia,
Cases No. 1:01-cv01908 (RWR-DAR) and 1:07-cv01042 (RWR-DAR).
Cases consolidated for Case Management and Discovery, pp. 1, 12)

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Venancio Aguasanta Arias, *et al.*, Plaintiffs, v. DynCorp, *et al.*, Defendants.	Case No. 1:01cv01908 (RWR-DAR)
Nestor Ermogenes Arroyo Quinteros, *et al.*, Plaintiffs, v. DynCorp, *et al.*, Defendants.	Case No. 1:07cv01042 (RWR-DAR) (Cases Consolidated for Case Management and Discovery)

ORDER

Having considered the Joint Motion to Dismiss Without Prejudice the *Arias* and *Quinteros* Plaintiffs Who Did Not Submit Questionnaire Responses, as filed on August 12, 2009, that motion is granted and the 681 individual plaintiffs (identified on the list attached hereto) are hereby dismissed without prejudice.

Date: 9/16/09

Richard W. Roberts
United States District Judge

Annex 62

REF. NO.	CASE NO.	PLAINTIFF
659	CASE3190	Vélez, Angélica
660	CASE3224	Llanos, Carmen
661	CASE3225	Llanos Guanga, Aida
662	CASE3232	Corozo Cortez, Digna Aney
663	CASE3240	Llanos Guanga, Luz Maria
664	CASE3241	Guanga Guanga, Maria Paula
665	CASE3247	Carlos Alfredo Ordoñez Mideros
666	CASE3250	Anili Ordonez Mideros
667	CASE3255	Nely Maria Angulo Quinteros
668	ARIAS PL.	Vidal Camacho
669	ARIAS PL	Deicy Lalangui
670	ARIAS PL	Unnamed Child of Vidal Camacho & Deicy Lalangui
671	ARIAS PL	Unnamed Child of Vidal Camacho & Deicy Lalangui
672	ARIAS PL.	Unnamed Child of Vidal Camacho & Deicy Lalangui
673	ARIAS PL	Unnamed Child of Vidal Camacho & Deicy Lalangui
[redacted]		Witness 14
		Spouse (W14)
		Unnamed Child of
		Unnamed Child of
		Unnamed Child of
679	ARIAS PL	Jofre Jijon Alvarado
680	ARIAS PL	Enma Pena
681	ARIAS PL	Unnamed Child of Jofre Jijon Alvarado & Enma Pena

Witness 14 and spouse

Total Number of Plaintiffs Listed: 681

Annex 63

ACCIÓN ECOLÓGICA, *REPORT ON THE INVESTIGATION OF THE FUMIGATIONS' IMPACTS ON THE ECUADORIAN BORDER* (JUNE 2001), P. 3 (PAGE NOT INCLUDED EITHER IN THE ANNEX 161 OF EM VOL. IV, OR IN THE ORIGINAL ANNEXES).

Report on the Investigation of Fumigation's Impact on the Ecuadorian Border

Accion Ecologica

June 2001

[…]

the results of the water samples from Mataje River, a deviation of Mira River, collected by the Navy Base in San Lorenzo, are not known yet. The clinical reported stated that 26 children and 18 adults got sick and that 29 people from other neighboring villages with the same health problems were given medical care. (El Comercio, Quito, 22/Oct/00). In January the press reported the effects of December spraying in Putumayo. "Tens of people have been forced to move out to Nueva Loja, in Sucumbios, searching for medical care. In this town, the main medical center in the Marco Vinicio Iza Hospital, where between 10 and 15 people are cared for due to poisoning caused by the chemicals used. The acting director of that hospital, José Viera, said that the most commonly observed symptoms for that reason are skin and breathing problems." Spraying operations affect the municipalities of Valle del Guamuez and San Miguel, on the other side of the Ecuadorian border. (El Comercio, Quito, 12/Jan/01.)

Justification

After these press reports, no more specific information on what effects people are experiencing due to spraying. Spraying carried on until March in Putumayo, a neighboring province with Ecuador. Campesinos in the border region have claimed that the fumigations were carried out by various airplanes in groups of four to six, accompanied by helicopters. During February and March the fumigations were carried out between 7h00 and 12h00 in the morning and from 14h00 to 17h00 in the afternoon, during three consecutive days (Cooperativa Nuevo Mundo). Others claimed the fumigations were daily from 8h00 to 16h00, from December to February and there were some nights that they sprayed during a shootout. The fumigations were repeated after a period of one week to fifteen days (Organización San Francisco). Campesinos report that after spraying started, a thick mist fell on their communities, bringing a strong chemical odor to both air and water they

drank. Farmers associations, grouped in the so called Associations Union, which includes 38 farmers associations from Sucumbios and Orellana, have made a number of claims on the impact of spraying on crops and health of Ecuadorian border communities. No local, province or national authority responded to these claims. No health, military or civilian authorities have come to visit these communities. The lack of interest was seen again in the meeting on June 16 in Lago Agrio, where the Ministers of Agriculture and the Environment, and the 14 authorities called to attend, turned down the farmers invitation. This meeting had been scheduled so that farmers could express their claims and concerns about what they were experiencing. Given thos situation, Accion Ecologica, which participates in the creation of a Bi-national Commission in which the Government and Civil Society will a follow up on the effects of Plan Colombia in Ecuador, decided to document the situation that the border farmers communities are going through in order to facilitate the Commission's work, bring up a situation that remains invisible to public opinion, and support the farmers organizations so that their claims are heard.

[Page 3]

…

Annex 64

ORGANISMO ANDINO DE SALUD, HIPOLITO HUNANUE AGREEMENT, ANALYSIS OF HEALTH SITUATION IN THE BORDER, PACIFIC/ANDEAN CORRIDORS NARIÑO/TULCÁN - SAN LORENZO (COLOMBIA - ECUADOR), 2009.

ANALYSIS OF HEALTH SITUATION IN THE BORDERS (AHSB)

Pacific/Andean Corridors Nariño / Tulcán - San Lorenzo (Colombia - Ecuador)

Classification made by ORAS - CONHU

ANDEAN-PACIFIC CORRIDOR NARIÑO / TULCÁN - SAN LORENZO (COLOMBIA-ECUADOR)

September, 2010 Lima, Perú
Legal Deposit at *Biblioteca Nacional,* Perú N° XX

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First Ed. 2010
Copies : XX copies
Printing

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This publication has been financed by *Corporación Andina de Fomento* CAF, y ORAS-CONHU.

ANDEAN-PACIFIC CORRIDORS NARIÑO / TULCÁN - SAN LORENZO (COLOMBIA-ECUADOR)

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Vice-Ministry of Health and Welfare
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Corporación Andina de Fomento

ART/UNDP Program – Ecuador

Andean Health Organization - Hipólito Unanue Agreement

Annex 64

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ACKNOWLEDGEMENTS

It will be impossible to mention all those who made the publication of this document possible, some of whom are no longer with us, but we would like to mention those who have participated in some way along this path and that without their generous collaboration, we would not have been able to initiate and conclude the Nariño / Tulcán - San Lorenzo ASIS.

We also wish to extend special recognition to the *Corporación andina de Fomento,* CAF, especially to Juan Pablo Rodríguez, Deputy Director of Regional Programs and Olympia Icochea, social specialist for the Vice-President of Social and Environmental Development, for their constant support and enthusiasm for the work for health in frontier towns.

To the Ministry of Social Protection for the period 2003 - 2010, Dr. Diego Palacio Betancourt, the Vice-Minister of Health and Welfare for the period 2008 - 2010, Dr. Carlos Ignacio Cuervo Valencia, to officers Guillermina Agudelo Matías, who worked as specialized professional of the International Cooperation Bureau of the Ministry of social Protection. Luz Stella Méndez Martínez, specialized profesional of International Cooperation of the Ministry of Social Protection of Colombia.

To the authorities of the Ministry of Public Health, Caroline Chang Campos ex Minister of Health for the period 2007- 2010, to the Common System Group of Information of the MSP, , Renata Jara, Rita Mosquera and Eduardo Aguilar for Improvement Process of Public Health, Eulalia Narváez responsible for the Health Situation Division, Ruth Velasco Carchi ex Provincial Director of Health Provincial, Hernán Yépez Director of the Luis G. Dávila Hospital and its Statistics Team.

To the special participations of Ángel Roberto Sempertegui Ontaneda health evidence advisor, sanitary safety and disease control OPS/OMS Colombia, Ana Cristina Nogueira Representative of OPS/OMS in Colombia, Jorge Morales Ministry of Foreign Affairs - Colombia

Participantes del taller de ASIS José Castillo, Melba Narváez, Teresa Reyes, Magola Meneses, Marcia Burbano, Ludgarda Villarreal, Elisa Rodríguez, Sonia Gaicedo, Magaly Mullo, Byron López, Patricio Chamorro, Mónica Cañas, Renata Jara, Eduardo Aguilar Jarrín, Hetty Valencia MontYear, Guillermo Rodríguez, Jaime Ruano Montenegro, Rocío Díaz, Teodulia Rodríguez, Maria Mercedes Muñoz Ramírez y acompañamiento de Matilde Fresa

To the participants of the prioritization workshop Guillermina Agudelo Matías MPS, Maria Belén Jaimes Sanabria MPS, Vilma Fabiola Izquierdo, Nohora Espinosa Pérez, Juan Carlos Vela Santacruz, Mauricio Guerrero, Luis Fernando Paredes Information Systems, Rocío Díaz Rosero, Gloria Rodríguez, Shirley Ariana Bustamante, Sol María Casanova, Miriam Chiran, Tito William Revelo, Maribel Robles Miño, Hetty Valencia MontYear, Rina Sánchez, Mónica Cañas, Rita Mosquera, Eduardo Aguilar, Ruth Velasco, Melba Narváez, Patricio Chamorro, Fátima Tejada, Cristian Vinueza, Elva Villarreal Carmelo, Magaly Mullo Maldonado, Priscila Pérez, Sonia Caicedo Urbina, Elisa Rodríguez, Gloria

Yandún, Isaura Briones, Camilo Dueña, Mercedes Palacios, Alexandra Porras, Víctor Arauz, Ecuador, Gustavo Bretas, and accompaniment of Sylvia Tovar.

To the General Directorate of Epidemiology Team of Peru, José Medina, Omar Napanga, Marielena Ulloa, who made communications among countries possible.

Special support in meetings and seminar preparation Milagros Araujo, Elsa Domínguez, Maritza Yactayo, José Castillo

We wish to express our gratitude to each of the individuals who have contributed to ASIS. We apologize for any possible unintentional omission.

Annex 64

PRESENTATION HEALTH SITUATION ANALYSIS – ASIS - OF THE ANDEAN-PACIFIC CORRIDORS NARIÑO / TULCÁN - SAN LORENZO ON THE ECUADOR – COLOMBIA FRONTIER.

The Andean Health Organism – Hipólito Unanue Agrement *(Organismo Andino de Salud - Convenio Hipólito Unanue)* (ORAS-COHNU), through the PASAFRO Project: Health Bridge for Peace and Integration, based on its main objective "*to contribute to the permanent rise of quality of life for frontier residents, promoting the integration in health in frontier, respecting ethnic and cultural diversity of its peoples and registering health as a "bridge for peace*", opening opportunities for Exchange between the Ministry of Public Health of Ecuador and the Ministry of Social Protection of Colombia, makes available the ASIS frontier of the "Nariño / Tulcán – San Lorenzo" as a result of a series of meetings in which we have been able to compile indicators and analyze them based on the Guide for the health situation analysis of populations in frontier areas of the Andean countries

This document is the first ASIS developed by binational teams of Colombia and Ecuador, which exposes the main health problems in the area, described in the following components: demographic, mortality-morbidity and social response, coupled with prioritization of attention areas and the main interventions required by the area, such that the information given here supports the planning, preparation of binational local projects that allow joint actions, complementary of effectiveness in the fight against poverty and common health problems in the frontiers of our brother countries and link cantons and/or municipalities in evidence based tasks that allow frontiers to become a place for peace, integration and local development.

We recognize that it has not been an easy task, but it is rewarding and even more, of satisfaction, since it has allowed the exchange of knowledge in selected areas together, to see once more that frontier disappear at local levels and the resident is identified with the problems and shortcomings of the other, because he knows he cannot move forward unless the overall situation is improved.

Therefore, for me it is a great pleasure to introduce the "Nariño / Tulcán - San Lorenzo" ASIS axis, sure that it will be used by local, regional and national authorities in favor of our Andean populations and we continue to demonstrate that health is a privileged space for the integration of our peoples.

Dr. Oscar Feo
Executive Secretary ORAS-CONHU

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ACCRONYMS AND ABBREVIATIONS

ART/UNDP: Articulation of Territorial Network / United Nations Development Program - UNDP.
ASIS: Analysis of Health Situation *(Análisis de la Situación de Salud*).
CAF: *Corporación Andina de Fomento*.
CAN: Andean Community *(Comunidad Andina*).
CIE: Clasificación Estadística Internacional de enfermedades y problemas de salud. *(International Statistical Classification of diseases and health problems)*
COPIAF: Comisión Presidencial de Integración y Asuntos Fronterizos. *(Presidential Commission for Integration and Frontier Matters)*
IDH: Índice de Desarrollo Humano. *(Human Development Index)*
INEC: Instituto Nacional de Estadísticas y Censos. *(Statistics and Census Institute)*
IPS: Institución Prestadora de Servicios de Salud. *(Health Provider Institution)*
MBE: Medicina Basada en Evidencias. *(Evidence Based Medicine)*
MCR: Mecanismo de Coordinación Regional Andino. *(Andean Regional Coordination Mechanism)*
MINSA: Ministerio de Salud. *(Ministry of Health)*
MOPECE: Módulos Principios de Epidemiología para el Control de Enfermedades. *(Epidemiology Principles Modules for Disease Control)*
MPS: Ministerio de Protección Social Colombia. *(Ministry of Social Protection Colombia)*
MSP: Ministerio de Salud Pública. *(Ministry of Public Health)*
UBN: Necesidades Básicas Insatisfechas. *(Unsatisfied Basic Needs)*
ASTU: Nomenclatura de las Unidades Territoriales Estadísticas Andinas. *(Nomenclature of Andean Statistical Territorial Units- ASTU)*
ODM: Objetivos de desarrollo del Milenio. *(Millennium Development Objectives)*
OMS: Organización Mundial de la Salud. *(World Health Organization - WHO)*
OPS: Organización Panamericana de la Salud.*(Pan American Health Organization-PAHO)*
ORAS-CONHU: Organismo Andino de Salud: Convenio Hipólito UNANUE. *(Health Andean Organism: Hipólito UNANUE Agreement)*
PAI: Programa Ampliado de inmunizaciones. *(Expanded Immunization Program)*
PAMAFRO: Control de la Malaria en las Zonas Fronterizas de la Región *(Malaria Control in Frontier Zones in the Andean Region)*
PASAFRO: Plan Andino de Salud en Fronteras. *(Andean Health Plan in Frontiers)*
PIDS: Plan Integrado de Desarrollo Social. *(Integrated Plan of Social Development)*
RAVE: Red Andina de Vigilancia Epidemiológica. *(Andean Epidemiological Monitoring Network)*
REMSAA: Reunión de Ministros de Salud del Área Andina. *(Ministers Meeting of the Andean Area)*
RSI: Reglamento Sanitario Internacional. *(International Health Regulations)*
SIG: Sistemas de Información Geográfica. *(Geographical Information Systems GIS)*
SIISSE: Sistema Integrado de Indicadores Sociales del Ecuador *(Integrated System of Social Indicators of Ecuador)*
UE: Unión Europea. *(European Union EU)*
ZIF: Zona de Integración Fronteriza. *(Frontier Integration Zone)*

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OBJECTIVE

The ASIS frontier of Andean / Pacific corridors of Colombia and Ecuador is aimed primarily at decision makers in the analyzed areas and the national ambit of both countries, expecting to find important frontier data that allows them to plan actions to improve the quality of life of the populations located in this area; we consider the contributions in this paper valuable because it captures the health condition of a population group not unilaterally involved in the frontier areas of the neighbor country.

It is also important to note that ASIS will contribute in project development of health investment in the frontier areas for the relevant information it offers and because the arrival to the main intervention which the axis requires has been based on evidence and co-participation of both nations.

BACKGROUND OF FRONTIER ASIS

In November 2002, the Ministers of Health issued an important Resolution at the REMSAA XXIV, 384 which approved the draft decision guidelines of the Andean Health Plan in Frontiers (PASAFRO), whose main objectives are: Prioritizing health problems of each frontier and define joint actions to address them; b) Establish binational networks of health services at the frontiers, with special emphasis on Frontier Integration Zones (BIZ-ZIF), defined between the participating countries, and c) Developing, implementing and evaluating cross-frontier projects in binational health care. This resolution was presented to the Council of Foreign Ministers which approved Decision 541, on March 11, 2003 in Bogotá creating the Executive Committee of the Andean Plan composed of the responsible officers of the Offices of External Cooperation and International Relations for implementation and monitoring.

In March 2006, during the V Andean Forum on Health Epidemiological Monitoring of Frontiers several agreements related to ASIS were defined, one of which provides the conduction of at least one study of binational health situation analysis conducted by the local teams for the support of the Andean Health Organization during the XXVIII REMSAA held in Santa Cruz de la Sierra in March 2007, approved the Strategic Plan of the Health Andean Plan in Frontiers from 2007 to 2012 and by Resolution 428, the need for conducting studies of the ASIS frontier was established.

Simultaneously with these developments, in 2007 the ORAS-CONHU performed a sustained work to obtain an ASIS model to serve as a reference document for the Andean countries and so, it identified a Guide that was being prepared by the Ministries of Health and Social Protection of Colombia and the Ministry of the Popular Power for Health of Venezuela; the Guide was subject to a review, consensus and development by technical teams, and the focal points were designated by the Ministry of Popular Power for Health Ministry of Venezuela. The Ministry of Social Protection of Colombia, the Ministry of Public Health of Ecuador, the Ministry of Health of Peru and Chile, the Ministry of Health and Sports of Bolivia and PAHO-OPS technical support for the creation of the "Guide for the analysis of health status of populations in frontier areas of the Andean countries ", the same that was approved for use in frontier areas by Resolution 445 agreed at the XXIX REMSAA, held in Quito, Ecuador in 2008, which also approved Resolution 444 requesting the Secretariat of the ORAS-CONHU to make strategic alliances with institutions and cooperation agencies and countries outside the ORAS-CONHU for implementation of the 2007-2012 Plan.

In response to the mandate in March 2008, the *Corporación Andina de Fomento* (CAF) approved the Strategic Plan of the Health Andean Plan in Frontiers and created the Frontier Cooperation and Integration Fund (COPIF), aimed at supporting initiatives that promote programs and activities that benefit the frontier areas of two or more CAF member countries; that was how the PASAFRO Project: Health Bridge for Peace and Integration, 2009-2010 was born.

In February 2009, the guide for the analysis of health situation of populations in frontier ambits of the Andean countries was published, and on March 17, 2009 the teams of the central level of Colombia and Ecuador (ASIS focal points of each country) attended a virtual meeting in which the scope of the CAF-PASAFRO Project, one of whose objectives was the ASIS development of the Nariño, Colombia and San Lorenzo-Carchi, Ecuador axis. Amongst the most important activities of this binational ambit, AIS and prioritization workshops were held in Ipiales and Tulcán, respectively; the conclusions of the first workshop are recorded in MiASTU of March 31, 2009, and of the second workshop in MiASTU of September 9, 2009 where indicators were collected, analyzed and deepened on priority issues on both sides of the frontier.

ASIS BACKGROUND IN COLOMBIA

ASIS Colombia began with the proposal of PAHO / WHO in 1999. The background for developing the process of analyzing health status (ASIS) are milestones such as XXXIII Binational Meeting of the Presidential Commission for Integration and Frontier Affairs, in which an agreement was signed between the frontiers of Colombia and Venezuela, aimed to make an analysis of the health situation and prioritize public health issues in the frontier area. In the context of the binational meetings held during 2006, assessment indicators of the binational ASIS were identified.

In July, 2004, the binational meeting for the Comprehensive Health Care in the Colombian-Peruvian Frontier was held, which proposed the implementation of binational networks for the monitoring of public health events and a joint plan to address prevalent diseases was prepared. Subsequently, in October 2006, as part of the meeting of the Binational Technical Health Committees, indicators and methodology for the diagnosis of health in the frontier area, based on the progress of work with Venezuela were agreed.

In 2006, the Pan American Health Organization-PAHO, approved the funding of Technical Cooperation with Countries (TCC), focused on strengthening the response capacity for Public Health Monitoring of local teams in the Colombian-Ecuadorian frontier, through which health staff of the frontier municipalities was trained in basic epidemiology (MOPECE), Geographic Information System with SIGEPI, socialization of tools for public health monitoring, establishment and operation of the Epidemiological Monitoring Committees (COVES) and Status Room operation.

In October 2007, officers of frontier departments and municipalities were trained in health situation analysis, conclusion of indicators, ASIS methodology for the Colombian-Ecuadorian Frontier Integration Zone (BIZ) and unification of data collection instruments. Additionally, public health monitoring in the context of the Epidemiological Monitoring Andean Network (RAVE), the International Health Regulations and the National Policy of Public Health were concluded.

Currently, the process of the Situation of the Health Analysis in Colombia includes information from the Population Census, 2005 and vital statistics of the National Bureau of Statistics (DANE), annual surveys of quality of life, National Mental Health Survey, 2003, National Survey of Demography and Health (ENDS), 2005, amongst others.

The training workshop “Formulation of health projects in Frontier Areas of Colombia” was conducted in June 2010; this workshop was organized by the Ministry of Social Protection with the support and cooperation of ORAS-CONHU and PAHO. The workshop was attended by 35 persons representing 10 Colombian departments along the frontier with Brazil, Ecuador, Panama, Peru and Venezuela as well as officers of the International Cooperation Office and the Public Health Directorate of the Ministry of Social Protection and *Universidad de la Sabana,* venue of the event. The preliminary preparation of three project proposals for frontier areas proposals for projects was drafted.

ASIS BACKGROUND IN ECUADOR

The former National Directorate of Epidemiology of the Ministry of Public Health (MSP) of Ecuador initiated ASIS development as such since 2004. At present, it is the Epidemiology Coordination of the MSP, through the Epidemiological Monitoring area, the entity responsible for conducting the development of the health situation and situation room analysis.

Since 2005, there have been annual meetings with the heads of provincial epidemiology for training and evaluation of ASIS development in each province. In early 2006, the first national ASIS was published as an initial approach of the descriptive analysis of the health-disease process (morbidity-mortality) and its determinants. Despite these efforts, this process has not reached a structured and systematic development as in other countries in the region.

On the other hand, this activity starts as of 2006 in the Northern frontier with the implementation of a technical cooperation Project between Colombia and Ecuador, whose one of its results was the strengthening of the epidemiological monitoring system, training of binational monitoring committees and the creation of binational ASISs. This cooperation framework already has a preliminary document of Carchi´s frontier province ASIS. In this regards, the publication of epidemiological bulletins is being used to provide information to epidemiologists in the country on simple tools that can be used to achieve the provincial and local ASISs.

Therefore, we can say that ASIS in the Southern frontier (El Oro, Ecuador and Tumbes, Perú) shows another development level due to the progress achieved with the support of the Ministry of Health of Peru, which has allowed the creation of a binational study in January 2006 and that generated from the methodology of the Andean ASIS, with the support of the Health Andean Organization in the process of being published.

INTRODUCTION

The search for the optimal health of our Andean populations starts by recognizing their health problems, characterizing them, measuring them, explaining the health-disease profiles and their determinants, whether belonging to the health sector or not. Over the past few years, the Andean countries have acquired a better understanding of their sociocultural and health realities with the use of ASIS, allowing them to know how ready they are to address the problems that arise in their territories; however, the frontier areas are a challenge to resolve in the pursuit of a healthy environment or a healthy frontier.

Frontiers deserve attention by the States because one cannot speak of a healthy frontier if it involves only the health of a group of people belonging to the same geopolitical space. Frontiers must work in a comprehensive and coordinated way, looking for a common purpose which is to improve the quality conditions of the geographical-political units, including as a substrate the different population groups defined by specific characteristics such as gender, age, occupation amongst others and their development environment is the historical, geographical demographic, social, economic, cultural, political and epidemiological context of the bi or tri frontiers, existing complex relationships that determine and condition the state of health.

The Health Situation Analysis of ASIS is a methodological tool for the characterization, measurement and explanation of health and its determinants, which has been applied mostly unilaterally, providing vital information for one side of the frontier, but leaving unanswered questions about what is happening a few kilometers apart. Here is where the needs to make the diagnosis, analysis and prioritization of areas in which actions occur in more than one political region and where the advance towards achieving the expected results require political actors and the society to work together.

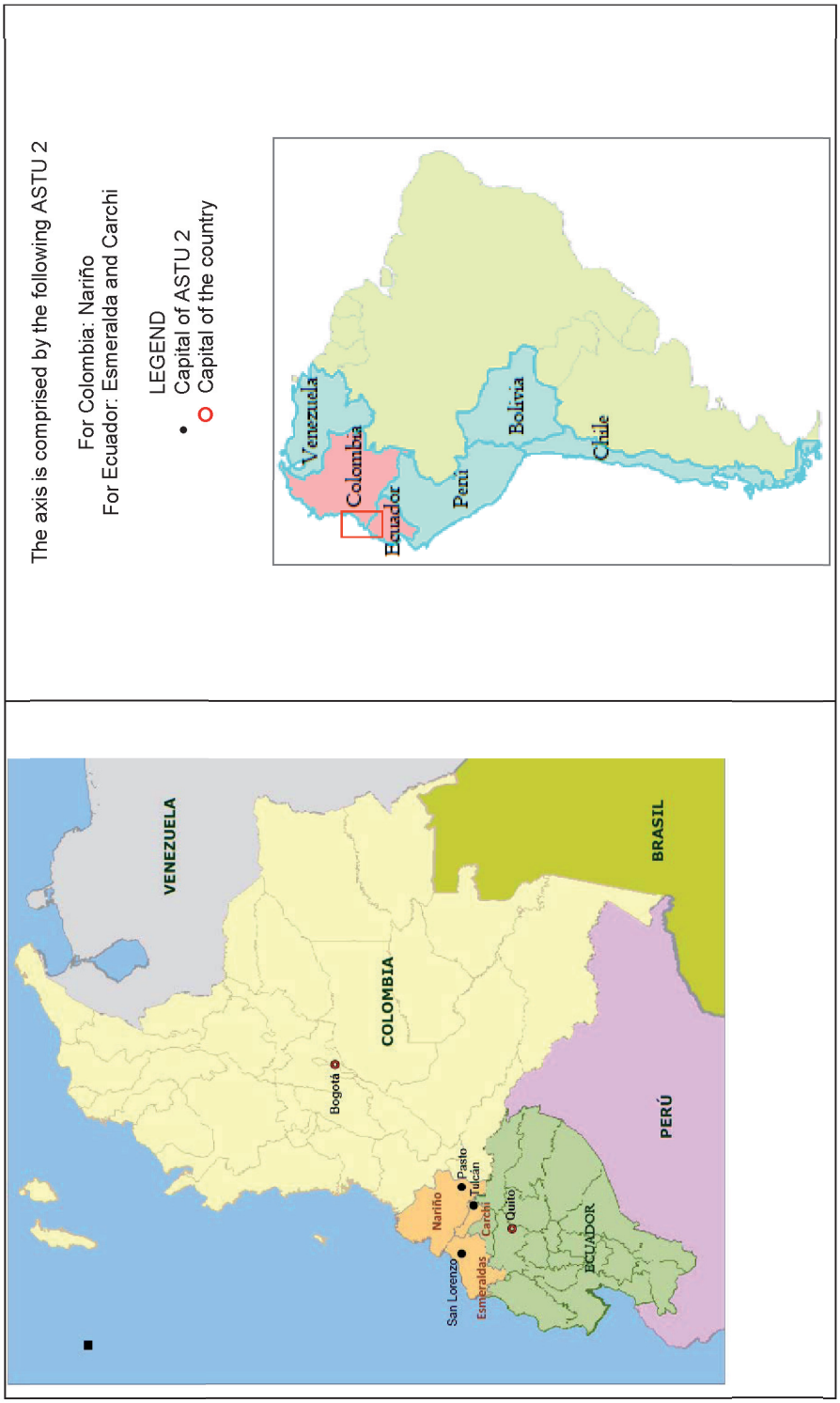
In 2009, the Andean Health Organization published the "Guide for the Health Situation Analysis (ASIS) of the Population in Frontier Areas of the Andean Countries," as a result of the effort of six Andean countries: Bolivia, Colombia, Chile, Ecuador, Peru and Venezuela, neighbors and brothers, and PAHO support, in order to have a reference document that allows the application of the ASIS methodology in the frontier areas, standardizing information from different geopolitical areas of the Andean countries, allowing to relate the health diagnosis, identified risk factors and their solution by means of an articulated strategy that allows the participation of the affected communities, other sectors of the social, economic and productive community in order to have information to know the real picture, based on reliable and timely indicators by which it is possible to monitor the health situation.

The Nariño / Tulcán - San Lorenzo (Colombia and Ecuador frontier) ASIS belongs to the first ASIS group, where the Pacific - Andean axis, Colombia´s ASTU 4 (Tumaco, Ricaurte, Cumbal, Cuaspud and Ipiales), together with Ecuador´s ASTU 3 (San Lorenzo and Carchi) have been analyzed, leaving the Amazon axis for future analysis. This ASIS was developed in 2009 in various stages, initially with the socialization of the working tool, in this case the Andean Guide for ASIS, from March 29-31, 2009, and then worked in the compilation of indicators, analysis, prioritization and the arrival to the key interventions required by the frontier axis, working in ***on site*** workshops and virtual meetings.

The contents of the ASIS document is divided in four chapters: the first is contextual information of each country, the second is the analysis by components and of each profile that makes up ASIS, such as social, economic and ecological information, health-disease and the organized response to society; Chapter 3 describes the Prioritization of areas based on the methodology of the Health Needs Index (HNI), and Chapter 4 consists of the key interventions required by the axis. We must note that the information contained in this technical paper comes from official sources of both countries as do additional quotations of the indicators of the Andean countries.

The publication of the findings in this paper has been achieved thanks to the perseverance of the technical teams of both countries, who have always participated with great enthusiasm, dedication and mystics.

Map 1: Ubicación de las ASTU 2 de la frontera Tumbes – El Oro. 2010.



CHAPTER ONE

CONTEXTUAL INFORMATION

COLOMBIA

Colombia Is a country situated on the Northern part of South America, with an continental land area 1,141,748 Km^2 and islands totaling 928,600 Km2. It is the 26th largest country in the world; it has land frontier with Venezuela, Brazil, Peru, Ecuador and Panamá, maritime boundary in the Caribbean Sea with Panama, Costa Rica, Nicaragua, Honduras, Jamaica, Haiti, Dominican Republic in the Pacific Ocean with Panama, Costa Rica and Ecuador.

Constitutionally, Colombia is organized as a decentralized unitary republic, organized in three administrative powers: executive, legislative and judicial branches and exercised in each of the political-administrative divisions according to the level of complexity. According to the political-administrative division, the next entity in extension and responsibility is the Department, called ASTU 2, and the ASTU 4 municipality. This organization in three powers originates from the time when Colombia finally achieved independence from Spain after winning the Puente de Boyacá Battle, on August 7, 1819, nine years after declaring its independence, on July 20, 1810. Since that time, there have several Constitutions, but the 1886 Constitution by Rafael Núñez was the longer and amended in 1991 by the National Constituent Assembly.

Due to the heterogeneity of its development and population of the municipalities, these have been classified into categories from one to six, the former being that which groups the most developed groups and the last, the least developed. 96% of the municipalities are in categories 4, 5 and 6 and for this reason, a constant support by the State is needed to ensure the improvement of life conditions. The frontier towns with Ecuador, are in categories 4, 5 and 6.

> *The Congress is the only body that can issue laws. At departmental level, this power is exercised by "Departmental Assemblies" whose mandates are ordinances and have constituency in their territories. At Municipal level is the Municipal Council whose number of members is proportional to the complexity of each municipality.*

Colombia´s estimated population at 2009 is 44,977,758, with the highest proportion (56%) aged under 30 (56%) followed by ages between 30 and 60 (35%), and over 60 years in a lesser proportion (10%). Looking at data from previous years, there is a reduction in birth rates, increased life expectancy, which today is 74 years, an aging index of 20.5 and an increase in the population of the elderly, which indicates that Colombia is in a period of demographic and epidemiological transition. The population density is uneven in the five geographical regions of Colombia and at national level, it has 28 inhabitants per km^2.

These regions have been defined by geographical composition and are specified as the Caribbean region located on the Atlantic coast, the Andean region located in the central mountain region, the Orinoco region located in the Eastern plains, the Amazon region in the Amazon rainforest and the Pacific region located in the coastal zone of the Pacific Ocean. Each region is distinguished not only by its geography but also by their habits and level of development, being the Andean region, the most developed since it holds the most important populated centers including the capital. As mentioned earlier, most of the population is in the Andean zone and is composed by 87% *mestizo*, followed by 10,6% Afro, 3.43% indigenous communities and 0,01% gypsies. Colombia´s Constitution has considered this multiethnic population in its fundamentals and principles.

The diversity of climates and climatic zones ranging from desert to snowy peaks, allows exuberance of flora and fauna, and several products such as coffee, the main exportation product. Since the 1990´s several productive oil wells have been discovered, particularly in the Eastern region, which has generated foreign currency since it has become an important exportation product. GDP is USD 5,440 million.

Power service covers 93% of the population, water supply covers 83.4% and sewerage 73%, which indicates that at country level, the provision of these services is good. A similar situation is observed in the education sector, where illiteracy rates have been reduced to 6% and the coverage level of education is 38%.

Like all frontier areas, language, the presence of ethnic groups and indigenous and Afro-descendants, geography and a history of 500 years of Spanish domain, each nation has similarities in the strengths and weaknesses. This work aims to improve these weaknesses and empower the strengths such as joint and coordinated work among brother nations.

ECUADOR

The Republic of Ecuador is located at the Northeastern part of South America. On the North, it frontiers with Colombia, at the South and East with Peru and at the West with the Pacific Ocean. Its capital is San Francisco de Quito, venue of the main State bodies and of the Government, and its largest city is Santiago de Guayaquil, the main maritime port and important economic center.

According to the projection from the National Census in November 2001, the population of Ecuador for 2010 is 14,090,080, 49.6% were men and 50.4% women; 61.0% of the population lives in urban areas and 39.0% in rural areas. With a total of 24 provinces, divided into seven regions, Ecuador has an insular area consisting of the Galapagos Islands. Its territorial extension is 256,370 square kilometers with a population density of 47 inhabitants per km^2, and is the 71st largest country in the world.

The 2001 census data indicated that 830,418 inhabitants declared themselves indigenous, however, indigenous organizations estimate between 25% and 30% of its total population, which is mainly concentrated in the Amazon and in the rural Andes. The 2000 Household Survey (EMEDINHO) showed that 72% of the population over 15 years found appropriate the designation of "*mestizo*", 15% defined themselves as "white", 6% as "indigenous", 4% "black " and 2%" *mulatto*."

The Ecuadorian population is very young. 35% of the population is under 15 years, 61% between 15 and 64 and only 4% is over 65 years. The population growth is very high, approximately 1.9% annually, in spite that the migration index is 0.52 per 1,000 inhabitants. The birth rate is very high (25x 1,000 inhabitants), and the fertility rate is of almost three children per woman. The mortality rate is relatively low (5.3 per 1,000 inhabitants), but the Infant mortality rate is as high as 32 per 1,000. In spite of the above, life expectancy at birth is approximately 72 years. Ecuador´s population is one who has not completed the demographic transition, but is clearly on the downward cycle.

Ecuador´s population is mostly urban, approximately 65% of the total has a percentage of rural population older than in other neighboring countries (59.8% in Peru, Colombia 29%). The population is unevenly distributed. Until the mid-twentieth century, most of it lived in the *Sierra (*uplands*)*, but today, almost half of Ecuadorians live in the Coast. On the contrary, the East is less populated, with 3% of the total, while maintaining a higher percentage than other countries in the Amazon region to oil fields.

Approximately 3'000 .000 people live in Guayaquil and its metropolitan area. This city is where the southern coastal cities concentrate; it is Ecuador´s economic drive and its main port. The metropolitan district of Quito, the Capital, and its area of influence has 2,000 ,000 inhabitants.

With regards to migration, emigration has been one of the most striking constant of the Population of Ecuador. The movement has been from the people of the Sierra to the cities of the Coast and the East, especially Guayaquil, Machala, Portoviejo, Manta and Esmeraldas. In the mountains have been the main destinations Quito, Cuenca, Ambato, Loja, Ibarra and Riobamba.

The 2001 census reflected that between 1996 and 2001, 378,000 Ecuadorians left the country in search of labor opportunities. This represents 8.3% of the population economically active and 3.1% of the total population registered in the Census. The volume of migration had an impact on the flow of remittances entering the country, which became the second source of income followed after oil. Between 2000 and 2002, income from remittances to Ecuador was USD1,400 million, representing 7% of GDP. This income contributed to raise the level of household consumption, an important factor for poverty levels to be reduced after 2001.

Poverty levels: In 2004, the last measurement made by the INEC (ENIGHU, February 2003 - January 2004) showed that 41.5% of the population was classified as poor and 8.5% as extremely poor. It was found that the richest 20% of the population has access to 43.6% of all consumer goods, whereas 20% of the poorest population has access to 6.5 times less (6.7%). Four out of ten are poor in the cities, and eight out of ten are poor in rural areas.

For 2001, poverty at national level was estimated at 61.3%; the correlation between ethnic groups identified as indigenous and black and poverty was evident because, 9 out of 10 households and 73.8% households of these groups respectively, live in poverty. While the average illiteracy in the country was 9%, illiteracy in indigenous population was 28.2%, and 11.6% in Afro descendants; in women, illiteracy is 10.3%, more than one percentage point above national average (9%). If we combine two exclusion factors (indigenous and woman) the differences deepen further: 28% of the indigenous women are illiterate; on the other hand, the schooling national average was 7.3 years while in the Indigenous population, this average was 3.3 years. Mothers with no schooling have an average of 3.7 children, while those who have received higher education have 1.9 children. This effect is critical if we consider that large households are more likely to be poor. In 2001, 72% of households of more than six members were poor.

However, the incidence of poverty has different expression in relation to the head of household; poverty among female-headed households is 58.3% in male-headed households it reaches 62.5%. This is important to consider in social investment programs in women. The private base salary increased from US $ 146.00 in 2001 to USD163.80 in early 2002, while the value of the basic basket was USS248.40 for the same year.

Health spending has been increasing, estimating a budget of USD845 million for 2007 corresponding to 8.3% of the national budget.

Annex 64

Table 1. Main indicators at country level. Colombia and Ecuador 2007

INDICATORS	COLOMBIA	ECUADOR
CAPITAL	Bogotá	Quito
CURRENCY	Colombian Peso	US Dollar
INDEPENDENCE	Declaration: July 29, 1810 Definition: August 7, 1819	August 10, 1809
AREA	2.080.408 Km^2 of which 1.141.748 are Continental	256.370 Km^2 - Continental
POPULATION	44,977.758	14,204.900
DEM. DENSITY	38 inhab/Km^2	47 inhab/Km^2
HID-IDH	0,807	0,806
EVN (life expectancy)	74 years	75 years
POPULATION GROUPED IN	Andean region	Coast
UBN (Basic needs unmet)	40.7%	61.3%
SOURCE OF INCOME	Coffee	Oil Remittances
TGF (family rate)	2.45 children/woman	2.6 children/woman
TBN	21.5 x 1.000 inhab.	20.9 x 1.000 inhab
TBM	5.81 x 1.000 inhab.	4.3 x 1.000 inhab
HEALTH EXPENDITURE	7.4% of national budget	8.3% of national budget

THE COLOMBIAN-ECUADORIAN FRONTIER

The Colombian-Ecuadorian Frontier Integration Zone (BIZ-ZIF) is comprised by ASTU 2, corresponding to the departments of Nariño and Putumayo in Colombia and the Provinces of Esmeraldas, Carchi and Sucumbíos in Ecuador; this zone has 2,665,471 inhabitants distributed in 1,896,332 in the Colombian side and 768,139 inhabitants in the Ecuadorian side. Administratively, this zone comprises 37 Municipalities (ASTU 4) in Colombia, and 20 Cantons (ASTU 3) in Ecuador. From its geographical, natural and socio-cultural point of view, this zone is distributed in three corridors: Pacific, Andean and Amazonia and in relation to ASIS, the Andean and Pacific corridors have been integrated as follows:

ANDEAN AND PACIFIC CORRIDOR

Ecuador/ (ASTU 3)

* Tulcán
* San Lorenzo

Colombia/ (ASTU 4)

* Cuaspud
* Cumbal
* Ipiales
* Ricaurte
* Tumaco

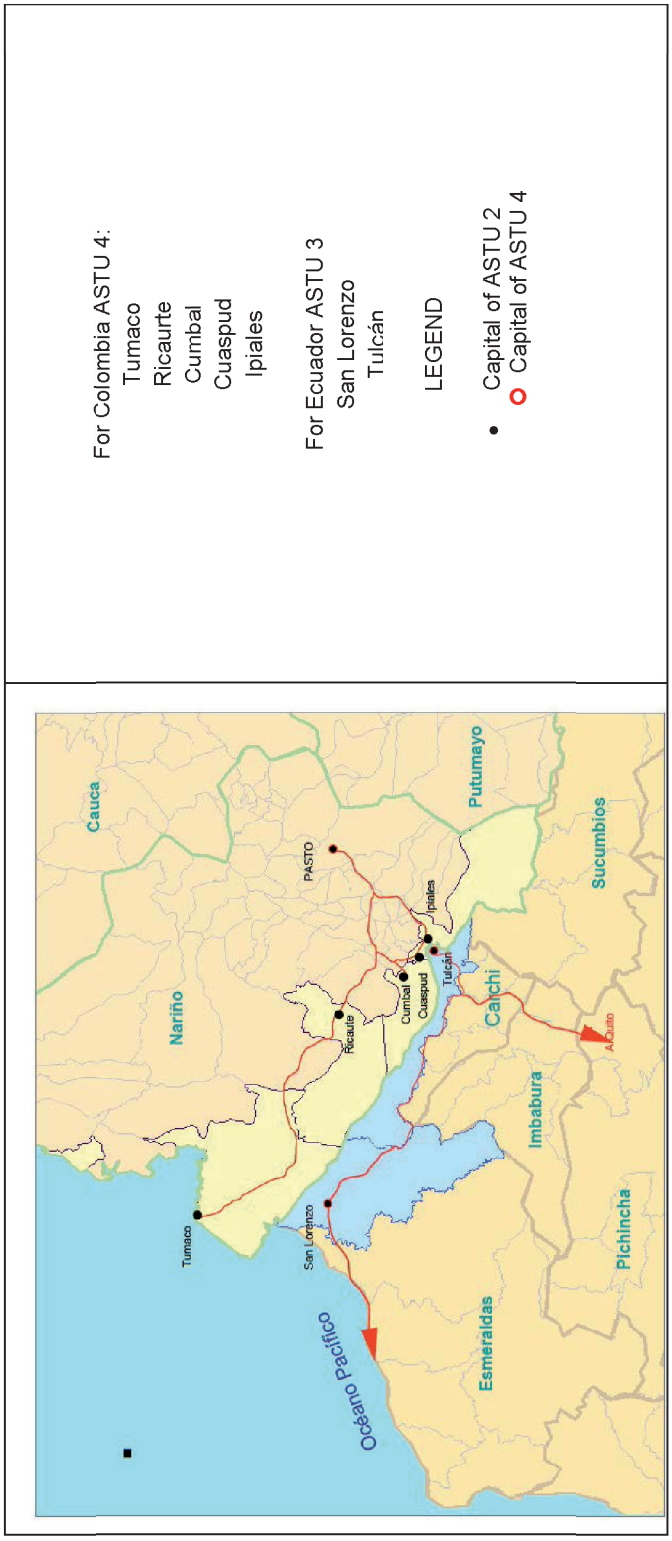
For the purposes of binational health situation, this corridor has been defined as the frontier strip of the Colombian-Ecuadorian axis, two zones geographically identified as:

Andean Zone: Formed by the Tulcán Canton (ASTU 3) in Ecuador and the municipalities of Cumbal, Cuaspud and Ipiales (ASTU 4) in Colombia.

Pacific Zone: Formed by the San Lorenzo Canton (ASTU 3) in Ecuador and the municipalities of Ricaurte and Tumaco (ASTU 4) in Colombia.

The ASTU 3 cantons of Ecuador selected would be equivalent to the ASTU 4 municipalities in Colombia. While there are records for Colombia´s ASTU 4, those of Ecuador refer to general indicators.

Map 2: ASTU 3 and 4 location forming corridors of the Andean / Pacific frontier. Colombia - Ecuador 2010



CHAPTER TWO

ANALYSIS BY COMPONENTS

The analysis of health, a tool for the characterization, measurement and explanation of health condition and its determinants is made up by three components: the socio-economic and ecological component, morbidity and mortality and organizer response to society.

Tables and graphs form part of the ASIS data base jointly agreed and worked between Ecuador and Colombia during 2009 and include indicators from official sources of 2007.

1. SOCIAL, DEMOGRAPHIC AND ECOLOGICAL COMPONENT

An analysis of social, demographic and ecological factors is a necessary input for any understanding of individual and/or collective behavior, since this component includes data on areas where population is located, its concentrations and its social system (education, poverty, amongst others). It is known that diseases are linked to low educational levels and to poverty; thus, society develops modifies their epidemiological profile and we can see that societies with higher income per capita are faced to chronic-degenerative diseases but have better possibilities to overcome them, while poor societies are faced to communicable diseases such as TB, produced to a large extent by subhuman conditions and claim social justice and equality.

1.1 Methodology

The methodology for frontier ASIS development for the social, demographic and ecological component follows the principles of the *"Guide for the analysis of health situation in the frontier populations of the Andean countries"*

The social and demographic component is made up by three profiles, each of them containing a group of indicators, the same that were identified and structure by a matrix and background of each indicator, and finally standardized for frontier analysis. The year base for the Colombian-Ecuadorian frontier ASIS is 2007, that is, that data in this component correspond to that year, except where indicated.

Profile of the territorial environment: Geographically, it characterizes two ASTU 3 of Ecuador and five ASTU 4 of Colombia selected for ASIS, and contains the following indicators:

- Geographical location, limits and territorial extension
- Types of transport, distances and arrival times between more distant communities, populated centers and the capital.

- Types of transport, distances and arrival time between health institutions of lesser to higher complexity
- Roads and access
- Communication means
- Climate
- Natural Risk zones
- Festivities

Profile of the demographic environment: Characterizes two ASTU 3 of Ecuador and five ASTU 4 of Colombia, object of ASIS and includes the following indicators:

- Total Population, by gender and age groups
- Population by ethic group, urban or rural zone,
- Growth rate
- General fertility, birth and mortality rate.
- Vulnerable groups
- Displaced population and refugees
- Disability
- Life expectancy at birth

Socio-economic profile: characterizes the socio-economic profile of the frontier zone and includes the following indicators:

- UBN Index
- Population below the poverty line and extreme poverty
- Unemployment rate
- Illiteracy
- School desertion
- Schooling years

1.2 ANALYSIS BY PROFILES

1.2.1. Profile of the territorial scope

The analysis of the territorial scope is done by integrating the formation of five municipal territorial divisions of the department of Nariño, Colombia, classified as ASTU 4 (Tumaco, Ricaurte, Cumbal, Cuaspud and Ipiales) with two Canton territorial divisions of the provinces of Carchi and Esmeraldas in Ecuador, classified as ASTU 3 (Tulcán and San Lorenzo)

Territorial extension

The total territorial frontier area is 8,866.6 Km2, comprises three geographical areas clearly defined: a) the Andean zone which includes Tulcán, Cumbal, Ipiales and Cuaspud, b) the foot hill zone occupied by the municipality of Ricaurte, mostly forest area, and c) the Pacific region which includes San Lorenzo and Tumaco. The municipality with the highest extension is Tumaco, followed by Ipiales and Tulcán. The regions with less territorial extension in the frontier strip are Cumbal, San Lorenzo and Cuaspud.

Table 2: Territorial areas. Nariño / Tulcán - San Lorenzo 2007

ASTU 4 / ASTU 3	Territorial area expressed in Km^2	%
Cuaspud	52	0,59
Cumbal	667	7,52
Ipiales	1647	18,57
Ricaurte	1,211	13,66
San Lorenzo	277	3,12
Tulcán	1,256	14,17
Tumaco	3,757	43,37
TOTAL	**8,866.58**	**100**

Source: Municipal Government, Republic of Ecuador, Provincial Diagnostics / DAÑE Departamento Administrativo Nacional de Estadística (*Statistics Department*), Colombia / 2007

Longitude and latitude

The Colombian-Ecuadorian frontier strip is mainly Equatorial, with a minimum longitude of 77°05'38" and a maximum of 78°50'0" and a minimum latitude of 00°44'00" and a maximum of

Table 3: Longitude and latitude. Nariño / Tulcán - San Lorenzo 2007

ASTU4 / ÑUTE 3	Longitude of ÑUTE 4 and 3	Latitude of ÑUTE 4 and 3
Cuaspud	77° 44' 12".	0° 51' 57"
Cumbal	77° 47' 42"	0° 54' 43"
Ipiales	77° 05' 38"	0° 54' 25"
Ricaurte	78° 25' 52"	01° 06' 41"
Tumaco	78° 41' 21"	1° 32' 58"
Tulcán	77° 43' 0"	00° 44' 0"
San Lorenzo	78° 50'	1° 15'

Source: Municipal Government, Republic of Ecuador, Provincial Diagnostics / DANE Departamento Administrativo Nacional de Estadística (*Statistics Department*), Colombia / 2007

Modes of transport and distances

The mode of transport in the frontier zone is basically by land, except Tumaco where river is the main mode of transport. The arrival time between the most remote communities in cantons and municipalities and the main town averages 196,4 minutes, although in the cases of Tumaco and Tulcán, this arrival time can exceed 300 minutes (5 hours) to the main town. The distance in kilometers is 97.4 kilometers, but there are also extreme cases such as Cuaspud, the smallest territorial area, whose most distant community is only 12 km away, and Tumaco, which is 270 km away from the forest area.

Table 4: Mode of transport and distances. Nariño / Tulcán - San Lorenzo 2007

ASTU4 / ASTU 3	Mode of transport between development centers and the remotest dispersed community	Arrival time to ASTU 4 or 3 main town (from the remotest community of ASTU 4 or 3) in minutes	Distance in kms to the main town (from the remotest community of ASTU 4 or 3)
Cuaspud	Land	60	12
Ricaurte	Land	60	60
San Lorenzo	Land	170	160
Ipiales	Land	180	30
Cumbal	Land	240	36
Tulcán	Land	305	114
Tumaco	River	360	270
Average		**196,4**	**97,4**

Source: Field study. Local actors, Ecuador, / IDSN, Instituto Departamental de Salud de Nariño *(Health Institute Nariño)*, Colombia, Field study / 2007

Figure 1: Distances between ASTU of the Nariño / Tulcán - San Lorenzo axis 2007

Cuaspud						
45	Cumbal					
15	25	Ipiales				
145	155	130	Ricaurte			
245	255	230	100	Tumaco		
20	30	5	135	235	Tulcán	
270	280	255	385	485	250	San Lorenzo

Source: Municipal Government of Tulcán, Republic of Ecuador / DANE Departamento Administrativo Nacional de Estadística, *(Statistics Department)* Colombia / 2007

Travel times and distances to health institutions

The average travel time from dispatching local health entities to higher complexity health entities is 169.6 minutes (approximately 3 hours) over a distance of 100 kms by road. In the case of the Colombian frontier, the highest level of complexity is in Pasto, and for the frontier area of Ecuador, the towns of highest complexity are Esmeraldas in the San Lorenzo canton and Quito in the Tulcán canton.

Table 5: Travel time and distance to health institutions. Nariño / Tulcán - San Lorenzo 2007

ASTU 4/ ASTU 3	Arrival time of sending health entities of ASTU 4 or 3 to higher complexity level in minutes	Distance in kms from sending health entities of ASTU 4 or 3 to higher complexity level in minutes.
Ricaurte	90	60
Ipiales	90	89
Ricaurte	90	60
Cumbal	100	36
Cuaspud	120	12
San Lorenzo	180	160
Tumaco	300	235
Tulcán	300	235
Average	**169,6**	**100,6**

Source: Field study. Local actors, Ecuador, / IDSN, Instituto Departamental de Salud de Nariño *(Health Institute Nariño)*, Colombia, Field study / 2007

Access and communications

Since the frontier strip region is a territory with two distinct geographical zones: Andean and Pacific, we find different access forms, such as, by land, river and air; maritime access is also important, especially in San Lorenzo and Tumaco, being Tumaco the most important maritime port of the frontier strip. Also, most of the region has the main communication means, such as telephone, fax, radio-telephone and e-mail; e-mail is not available in the San Lorenzo canton.

ASTU4 / ASTU 3	Forms of access	Communication means
Cuaspud	Land	Telephone, radio, internet, fax
Cumbal	Land	Telephone, radio, internet, fax
Ipiales	Air, land	Telephone, radio, internet, fax
Ricaurte	Land	Telephone, radio, internet, fax
Tumaco	Air, Land, River	Telephone, radio, internet, fax
Tulcán	Land, Air	Telephone, fax, others
San Lorenzo	Land	Telephone

Source: Field study. Local actors Ecuador, / IDSN, Instituto - Departamental de Salud de Nariño, Colombia, Field study / 2007

Temperature, humidity and rainfall

From the two geographical areas it can be seen that in the Andean region, the prevailing temperature is cold with temperatures between 10°C and 13°C, while the Pacific region and the foothills have temperatures between 22°C and 28°C, average humidity is 82%, with Tumaco the most humid and Cuaspud the lesser. The average rainfall is approximately 1,580 mm. finding a positive relationship between hot spots and this variable, as follows: Ricaurte, Tumaco and San Lorenzo have the highest levels of rainfall and are the warmest areas.

Table 7: Temperature, humidity and precipitation. Nariño / Tulcán - San Lorenzo 2007

ASTU4 / ASTU 3	Average temperature (in degrees Celsius)	Average humidity %	Rainfall in mm
Cumbal	10	84	951
Cuaspud	12	75	980
Ipiales	12	85	870
Tulcán	13	82	870
Ricaurte	22	88	3996
Tumaco	26	90	2191
San Lorenzo	28	70	1200
Average	**17,6**	**82**	**1579,7**

Source: Carchi Provincial Government, Republic of Ecuador, Provincial Diagnosis / DANE Departamento Administrativo Nacional de Estadística, Colombia*(Statistics Department, Colombia)* / 2007

Risk zones

The frontier strip regions face various natural hazards: the Andean region, as an especially volcanic area and with some of its volcanoes active (Galeras[1], Cumbal[2], amongst others) faces ongoing risk of eruptions that could be of varying intensity with consequences seen, from falling ash or mud avalanches to pyroclastic flows. On the other hand, the Pacific region keeps in constant risk of a tsunami, in fact, on several occasions in recent years, an alert situation has remained for this reason. Other natural hazards are earthquakes and floods. Man-made risks are also described, such as pesticide poisoning and air, water and soil pollution.

[1] **Galeras** is a volcano in southern Colombia, located 7 km. from San Juan de Pasto, capital of Nariño. It is one of the most active volcanoes in Colombia and the one with highest historical background, with reports of major eruptions since the sixteenth century.

[2] **Cumbal** is the highest volcano in located in Nariño in southern Colombia; it has an altitude of 4.764 m a.s.l. In the past, sulfur was extracted from its fumaroles and crater using traditional methods of mining. Miners also exploited ice, which in some season covers the top, and offered it to the Ipiales market; this volcano has not shown any activities sin the 1930´s.

Table 8: Risk zones. Nariño / Tulcán – San Lorenzo 2007

ASTU 4 / ASTU 3	Risk Zones: (Landslides, volcanoes, avalanches, floods, storms, earthquake, pollution)
Cuaspud	Cumbal volcano, Chiles volcano, highest risk in the village of Chvisnan and Macas, due to its closeness
Cumbal	Cumbal volcano risk zone
Ipiales	Ipiales (earthquake)
Ricaurte	Pan American road, landslides
Timaco	Tumaco (island) (Tsunami and earthquake) Mira river bank (overflow)
Tulcán	Landslides, massive flow of displaced, air, water, soil pollution
San Lorenzo	Massive flow of displaced, pesticide poisoning, traffic accidents

Source: Health Staff references of local units. Ecuador / IDSN, (Health Institute of Nariño), Colombia, field work / 2007

Festivals

Throughout the year there are festivals in the frontier strip area, mostly religious, they share the Christmas and New Year festivities, in some regions such as Ipiales, Easter is of special importance because of the religious connotations, and there is tourism around the Las Lajas sanctuary[3], also in January there are carnivals in 4 of the 7 frontier regions, in July, 3 towns have festivals, and the only month carnivals are held in four of the seven frontier regions, on July 3 towns have festivals; May is the only month that does not have celebrations or festivals.

Table 9: Festivities. Nariño / Tulcán - San Lorenzo

ASTU4/ASTU3	**Festival calendar**
Cuaspud	White and black carnival, 4, 5 and 6 January – Patron saint festival in honor of St. Nicolas de Bari, December 4-8, *Maria Inmaculada*, July 16-20, *Virgen del Carmen – San Rafael* October 24 – *San Francisco de Asis* October 2 and 3.
Cumbal	White and black carnival, 4, 5 and 6 January – Patron saint festival in honor of St. Nicolas de Bari, December 4-8, *Maria Inmaculada*, July 16-20, *Virgen del Carmen – San Rafael* October 24 – *San Francisco de Asis* October 2 and 3.
Ipiales	"White and black" carnival, 4, 5 and 6 January – June 21 Sun Day - festival in honor of *Señor del Rio* – January 15-20 – *Virgen del Carmen* July 16-20, *Virgen de Las Lajas* September 15.
Ricaurte	"White and black" carnival, 4, 5 and 6 January - *Divino Niño*. July 20 - S*an Francisco*. June 27-30. *Señor de Cuaiquer*. August 15
Tumaco	Fire carnival – February 11-16. - *San Andrés* Tumaco, November 30
Tulcán	Canton festival – April 11; Province festival – November 19; Christmans and New Year, carnival
San Lorenzo	Patron saint festival – August 19 – Canton festivial – March 22

Source: Health Staff references of local units. Ecuador / IDSN, (Health Institute of Nariño), Colombia, field work / 2007

[3] Las Lajas is a Catholic temple of worship and veneration of *Nuestra señora de las Lajas* in southern Colombia. Since the XVIII century, it has been the destination of pilgrimage and tourism. The sanctuary located in the Guaitara river canyon, in the village of Las Lajas, municipality of Ipiales, 7 kms from the town municipal center in the department of Nariño in southern Colombia and 10 km from the frontier with Ecuador. The current building, the fourth since the XVIII century, replaced a chapel from the 19th century and is a gray and white stone church, of the late 14th century Gothic style, consisting of three aisles built over a two-arch bridge that crosses the river and serves as atrium or square of the *Basilica*, joining it with the other side of the canyon.

1.2.2. Demographic Profile

Population 2007

The total population of the frontier strip region is 454,083 and the regions with highest number of population are Tumaco, Ipiales and Tulcán. The municipalities with less population are Ricaurte and Cuaspud. It is important to note that the Andean region has a population of 254,453 corresponding to 56,1% of the total and the Pacific zone, 199,629 corresponding to 43,9%.

Table 10: Population. Nariño / Tulcán – San Lorenzo 2007

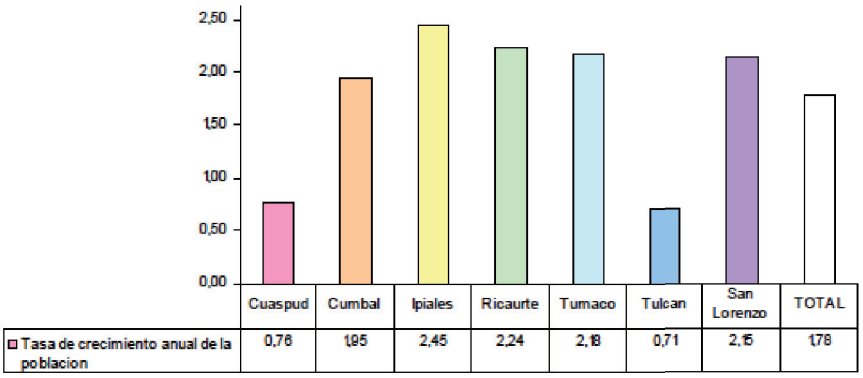
ASTU4 / ASTU 3	Total Population 2007	%
Cuaspud	8187	1,80
Ricaurte	15613	3,44
San Lorenzo	32084	7,07
Cumbal	32221	7,10
Tulcán	83824	18,46
Ipiales	114609	25,24
Tumaco	167545	36,90
Frontier	**454083**	**100**

Source: INEC, Census data base Ecuador / DANE Ecuador base datos de censo de población / DANE Departamento Administrativo Nacional de Estadística, *(Statistics Department)* Colombia / 2007

Growth rate 2007.

Growth rate during 2007 was 1.78% in average for the seven ASTU of the Colombian-Ecuadorian frontier strip, being Ipiales, Ricaurte, Tumaco and San Lorenzo the regions with higher growth, and Cumbal, Cuaspud and Tulcán, the regions with lower growth.

Figure 2: Population growth rate. Nariño / Tulcán - San Lorenzo 2007



Source: INEC – Instituto Nacional de Estadísticas y Censos – Republic of Ecuador / DANE Departamento Administrativo Nacional de Estadística (*Statistics Department*) *Colombia* / 2007

General fertility rate. In the frontier strip, an average of 95.55 children were born for every 1.000 women; Tumaco, Ricaurte and Cuaspud show the highest rates exceeding 1000 birth for every 1.000 women and Tulcán, San Lorenzo, Cumbal and Ipiales, show rates near the average

Table 11: General fertility rate. Nariño / Tulcán - San Lorenzo 2007

ASTU4 / ASTU 3	General fertility rate (1.000)
Tulcán	100,00
Ipiales	74,22
Cumbal	79,00
San Lorenzo	82,00
Cuaspud	102,30
Tumaco	114,10
Ricaurte	117,20
Frontier	95,55

Source: ENDEMAIN Maternal-Infant Demographic survey Ecuador 2004 / DANE Departamento Administrativo Nacional de Estadística, *(Statistics Department)* Colombia / 2007

Birth and mortality rates. The average birth rate in the frontier region is 24.3 / 1.000 inhabitants; this indicator is similar in all regions, except in San Lorenzo, where the overall average doubles with 54.0 / 1.000 inhabitants. The average mortality rate in the region is 3.5 / 1.000 inhabitants, with Tulcán, Ipiales and Cuaspud showing highest values and San Lorenzo the lowest mortality rate in the frontier strip.

Table 12: Birth and mortality rates. Nariño / Tulcán - San Lorenzo 2007

ASTU4 / ASTU 3	Birth gross rate (1.000)	Mortality gross rate (1.000)
Ipiales	20,0	4,3
Cumbal	20,0	2,2
Cuaspud	22,8	4,2
Ricaurte	27,0	3,8
Tulcán	28,0	4,3
Tumaco	28,1	3,9
San Lorenzo	54,0	1,6
Frontier	**24,3**	**3,5**

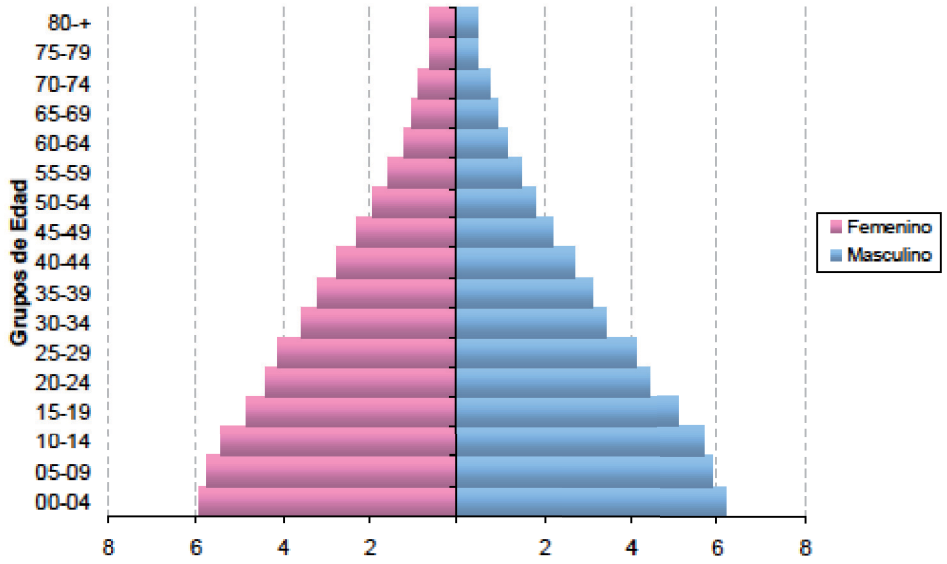
Source: SIISE, Sistema Integrado de Indicadores Sociales *(Social Indicator System)* Ecuador. Version 4.5/ DANE Departamento Administrativo Nacional de Estadística, *(Statistics Department)* Colombia / 2007

Population pyramid

The features of the population pyramid of the frontier area are those of developing regions; that is, a broad base and a narrow top. Population of children under 1 year is 54.887 (12.1%); if we widen the population range, the population under 15 years is 157,977 (34.8%); for its part, population over 65 years is only 26,320 adults (5.8%). Gender differences are not significant, there are 226,963 men representing 49.99%, and 227,120 women, representing 50.01% of the total population. No significant differences either between men and women percentages by age groups except for women over 65 years (6.2%) that show a slight increase as compared to men (5.4%).

Figure 3: Population pyramid of the frontier area. Nariño / Tulcán - San Lorenzo 2007

Age Groups



Source Population Census - Ecuador / DANE Departamento Administrativo Nacional de Estadística, *(Statistics Department)* Colombia / 2007

Table 13: Population according to ethereal groups. Nariño / Tulcán - San Lorenzo 2007

AGE GROUPS	TOTAL			
	Male	Fem.	Total	%
00-04	28045	26842	54887	12,1
05-09	26603	26147	52750	11,6
10-14	25825	24515	50340	11,1
15-19	23349	21995	45344	10,0
20-24	20236	19900	40136	8,8
25-29	18593	18688	37281	8,2
30-34	15630	16123	31753	7,0
35-39	14113	14619	28732	6,3
40-44	12150	12553	24703	5,4
45-49	9969	10375	20344	4,5
50-54	8116	8649	16765	3,7
55-59	6784	7050	13834	3,0
60-64	5370	5524	10894	2,4
65-69	4256	4632	8888	2,0
70-74	3348	3876	7224	1,6
75-79	2296	2864	5160	1,1
80-+	2280	2768	5048	1,1
Total	226963	227120	454083	100,0

Source: INEC, Ecuador base datos de censo de Población (Databse Population Census / DANE Departamento Administrativo Nacional de Estadística, *(Statistical Department)* Colombia / 2007

Table 14: Male population by age groups. Nariño / Tulcán - San Lorenzo 2007

AGE GROUPS	CUASPUD		CUMBAL		IPIALES		RICAURTE		TUMACO		TULCÁN		SAN LORENZO		TOTAL	
	Male.	%	Male.	%	Male.	%	Male.	%	Male.	%	Male.	%	Male.	%	Male.	%
00-04	473	11,4	1728	10,7	6070	10,8	1108	13,6	12186	14,4	4206	10,0	2274	14,1	28.045	12,4
05-09	488	11,8	1761	10,9	5850	10,4	1120	13,8	10703	12,7	4502	10,7	2179	13,5	26.603	11,7
10-14	454	10,9	1776	11,0	5865	10,5	1005	12,4	10194	12,1	4512	10,8	2019	12,5	25.825	11,4
15-19	415	10,0	1594	9,8	5417	9,7	838	10,3	9193	10,9	4179	10,0	1713	10,6	23.349	10,3
20-24	349	8,4	1544	9,5	4908	8,8	767	9,4	7955	9,4	3395	8,1	1318	8,2	20.236	8,9
25-29	301	7,3	1346	8,3	4685	8,4	717	8,8	7054	8,4	3380	8,1	1110	6,9	18.593	8,2
30-34	263	6,3	1171	7,2	4017	7,2	510	6,3	5513	6,5	3163	7,5	993	6,2	15.630	6,9
35-39	231	5,6	1119	6,9	3930	7,0	407	5,0	4754	5,6	2765	6,6	907	5,6	14.113	6,2
40-44	193	4,7	881	5,4	3529	6,3	338	4,2	4080	4,8	2315	5,5	814	5,0	12.150	5,4
45-49	181	4,4	664	4,1	2935	5,2	284	3,5	3249	3,8	1962	4,7	694	4,3	9.969	4,4
50-54	167	4,0	606	3,7	2228	4,0	240	3,0	2529	3,0	1783	4,2	563	3,5	8.116	3,6
55-59	166	4,0	564	3,5	1801	3,2	203	2,5	2028	2,4	1589	3,8	433	2,7	6.784	3,0
60-64	134	3,2	455	2,8	1499	2,7	149	1,8	1509	1,8	1291	3,1	333	2,1	5.370	2,4
65-69	104	2,5	333	2,1	1124	2,0	147	1,8	1198	1,4	1077	2,6	273	1,7	4.256	1,9
70-74	85	2,0	262	1,6	883	1,6	138	1,7	969	1,1	816	1,9	195	1,2	3.348	1,5
75-79	72	1,7	196	1,2	648	1,2	84	1,0	580	0,7	574	1,4	142	0,9	2.296	1,0
80-+	72	1,7	189	1,2	630	1,1	71	0,9	702	0,8	456	1,1	160	1,0	2.280	1,0
Total	4148	100,0	16189	100,0	56019	100,0	8126	100,0	84396	100,0	41965	100,0	16120	100,0	226.963	100,0

Source: INEC, Ecuador base datos de censo de Población (Database Population Census / DANE Departamento Administrativo Nacional de Estadística, *(Statistical Department)* Colombia / 2007

Table 15: Female population by age groups. Nariño / Tulcán - San Lorenzo 2007

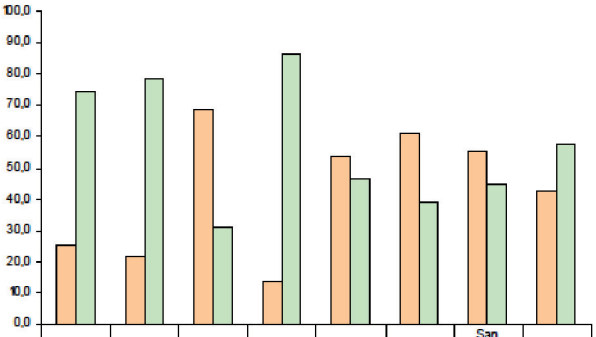
AGE GROUPS	CUASPUD		CUMBAL		IPIALES		RICAURTE		TUMACO		TULCÁN		SAN LORENZO		TOTAL	
	Fem.	%	Fem.	%	Fem.	%	Fem.	%	Fem.	%	Fem.	%	Fem.	%	Fem.	%
00-04	467	11,6	1551	9,674	5872	10,0	967	12,9	11769	14,2	4034	9,6	2182	13,7	26.842	11,8
05-09	464	11,5	1698	10,6	5990	10,2	1023	13,7	10549	12,7	4328	10,3	2095	13,1	26.147	11,5
10-14	415	10,3	1729	10,8	5553	9,5	914	12,2	9609	11,6	4349	10,4	1946	12,2	24.515	10,8
15-19	372	9,2	1512	9,4	5074	8,7	751	10,0	8576	10,3	4050	9,7	1660	10,4	21.995	9,7
20-24	314	7,8	1474	9,2	5113	8,7	695	9,3	7692	9,3	3322	7,9	1290	8,1	19.900	8,8
25-29	279	6,9	1303	8,1	4994	8,5	686	9,2	6986	8,4	3342	8,0	1098	6,9	18.688	8,2
30-34	251	6,2	1134	7,1	4416	7,5	497	6,6	5675	6,8	3158	7,5	992	6,2	16.123	7,1
35-39	234	5,8	1113	6,9	4308	7,4	394	5,3	4877	5,9	2781	6,6	912	5,7	14.619	6,4
40-44	199	4,9	929	5,8	3912	6,7	317	4,2	4032	4,8	2341	5,6	823	5,2	12.553	5,5
45-49	179	4,4	711	4,4	3150	5,4	253	3,4	3378	4,1	1997	4,8	707	4,4	10.375	4,6
50-54	164	4,1	630	3,9	2542	4,3	223	3,0	2680	3,2	1832	4,4	578	3,6	8.649	3,8
55-59	169	4,2	566	3,5	2003	3,4	203	2,7	2015	2,4	1646	3,9	448	2,8	7.050	3,1
60-64	146	3,6	477	3,0	1584	2,7	151	2,0	1459	1,8	1357	3,2	350	2,2	5.524	2,4
65-69	117	2,9	381	2,4	1317	2,2	140	1,9	1219	1,5	1163	2,8	295	1,8	4.632	2,0
70-74	101	2,5	318	2,0	1129	1,9	127	1,7	1071	1,3	912	2,2	218	1,4	3.876	1,7
75-79	83	2,1	250	1,6	879	1,5	74	1,0	748	0,9	665	1,6	165	1,0	2.864	1,3
80-+	85	2,1	256	1,6	754	1,3	72	1,0	814	1,0	582	1,4	205	1,3	2.768	1,2
Total	4039	100,0	16032	100,0	58590	100,0	7487	100,0	83149	100,0	41859	100,0	15964	100,0	227.120	100,0

Source: INEC, Ecuador base datos de censo de Población (Databse Population Census / DANE Departamento Administrativo Nacional de Estadística, *(Statistical Department)* Colombia / 2007

Population by regions

With regards to population by regions, we find three aspects: areas with mostly urban population such as Ipiales (68.7% urban) and Tulcán (61% urban), areas with mostly rural population such as Ricaurte (86.2% rural), Cumbal (78.2% rural) and Cuaspud (74.7% rural), and areas with similar percentages between urban and rural, such as Tumaco (53.6% urban and 46.4 rural) and San Lorenzo (55% urban and 45% rural).

Figure 4: Population by area. Nariño / Tulcán - San Lorenzo 2007



	Cuaspud	Cumbal	Ipiales	Ricaurte	Tumaco	Tulcan	San Lorenzo	Promedio
Porcentaje poblacion Urbana	25,3	21,8	68,7	13,8	53,6	61	55	42,7
Porcentaje poblacion Rural	74,7	78,2	31,3	86,2	46,4	39	45	57,3

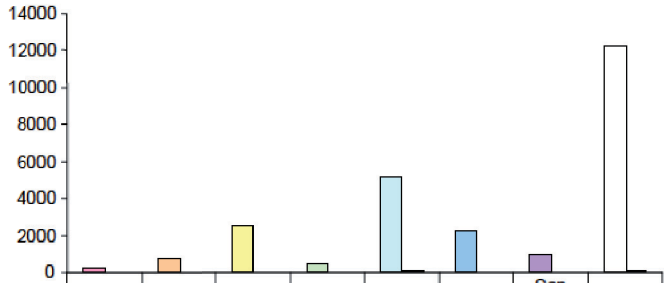
% Urban population								
% Rural population								

Source : INEC, Ecuador Data base population Census 2001/ DANE Departamento Administrativo Nacional de Estadística, *(Statistics Department)* Colombia / 2007

Expectant mothers

During 2007, a total of 12.236 expectant mothers was recorded, most of them in the municipalities of Tumaco and Ipiales and the Tulcán Canton.

Figure 5: Expectant mothers. Nariño / Tulcán - San Lorenzo 2007



	Cuaspud	Cumbal	Ipiales	Ricaurte	Tumaco	Tulcán	San Lorenzo	Total
Gestantes	206	711	2527	463	5172	2242	915	12236
%	1,68	5,81	20,66	3,78	42,27	18,32	7,48	100

Expectant mothers	206	711	2527	463	5172	2242	915	12236
%	1,68	5,81	20,66	3,78	42,27	18,32	7,48	100

Source: 2007 Forecast Ministry of Health – INEC Instituto Nacional de Estadístcas y Censo 2001 / DANE Departamento Administrativo de Estadísitca *(Statistics Department)* Colombia / 2007

Indigenous population

75% of the indigenous population is concentrated mainly in the municipalities of Ipiales, Cumbal and Ricaurte; 4% (AWA community) live in the Tulcán and San Lorenzo cantons.

Table 16: Indigenous population. Nariño / Tulcán - San Lorenzo 2007

ASTU4 / ASTU 3	Indígenas (Population total)	%
San Lorenzo	1.425	1,9
Tulcán	1.592	2,1
Cuaspud	7.068	9,2
Tumaco	7.419	9,7
Ricaurte	10.512	13,7
Cumbal	19.689	25,6
Ipiales	29.140	37,9
Frontier	**76.845**	**100**

Source: INEC, Database population Census Ecuador / DANE Departamento Administrativo Nacional de Estadística, *(Statistics Department)* Colombia / 2007

Gypsy Population

During 2007, the gypsy population (known in Colombia as ROM population) recorded 84 gypsies living in Ipiales, no gypsy population is recorded in the remaining municipalities.

Ethnic composition[4]

The ethnic composition of the frontier strip, except indigenous communities, is formed by two ethnias: *mestiza* 217.135 representing 48.6% of the overall region and Afro descendants: 152.758 representing 34.2%; additionally, we must take into account that 76.845 indigenous represent 17.2% and gypsy population, 0.6%. It is clear that there are broad differenced in the ethic distribution by regions; Afro descendants are mostly concentrated in Tumaco and San Lorenzo, and *mestizos* although they can be found across the territory, their higher percentage is in Tulcán and Ipiales.

Table 17: Ethnic composition. Nariño / Tulcán - San Lorenzo 2007

ASTU4 / ASTU 3	*Mestizos*	%	Afro descendants	%	White	%
Cuaspud	1.118	0,5	1	0	0	0
San Lorenzo	4.277	1,9	22.811	14,9	0	0
Ricaurte	4.951	2,3	150	0,1	0	0
Cumbal	12.525	5,8	7	0	0	0
Tumaco	30.702	14,1	129.424	84,7	0	0
Tulcán	78.375	36,1	167	0,1	0	0
Ipiales	85.187	39,2	198	0,1	0	0
Frontier	**217.135**	**100**	**152.758**	**100**	**0**	**0**

Source: INEC, Database population Census Ecuador / DANE Departamento Administrativo Nacional de Estadística, *(Statistics Department)* Colombia / 2007

[4] There is a difference of 4,494 people when comparing total populations with total ethnic composition plus indigenous and gypsy population. This is possible due to population adjustments or final ethnic composition.

Life Expectancy

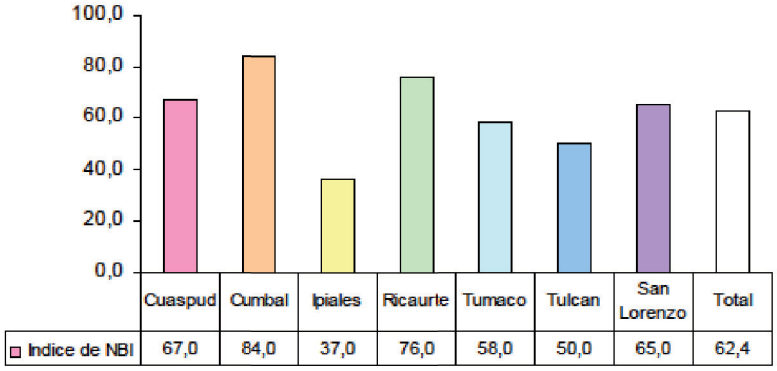
Overall life expectancy in the frontier strip is 71.2 years, which in gender analysis is 71.8 for women and 70.6 for men, according to the population pyramid; however, national values for Colombia and Ecuador are 74 and 75 respectively. This figure is not available for the Colombian zone at municipality level.

1.2.3.- Socioeconomic profile

UBN Index

The UBN (Unsatisfied Basic Needs index in the Colombian-Ecuadorian frontier is 62.4%; the region with the highest UBN is Cumbal with 84%, followed closely by Ricaurte with 76%, then Cuaspud and San Lorenzo with 67% and 65%, respectively, Tumaco with 58% and Tulcán with 50%. Finally, Ipiales with 37% is the region with least UBN.

Figure 6: UBN Index. Nariño I Tulcán - San Lorenzo 2007



Poverty and overcrowding.

Data for poverty indicate that 65,6% of the population of the border corridor lives in poverty and 26,9% in extreme poverty; data for Colombia are reflected by departments, and Ecuador by cantons. San Lorenzo has the highest poverty indexes and Tulcán shows the lowest values; similarly, tghe highest extreme poverty concentrates in San Lorenzo, and the lowest Tulcán compared with the rest of the regions. Tulcán and San Lorenzo show overcrowding; no overcrowding is recorded in the remaining municipalities of the frontier corridor.

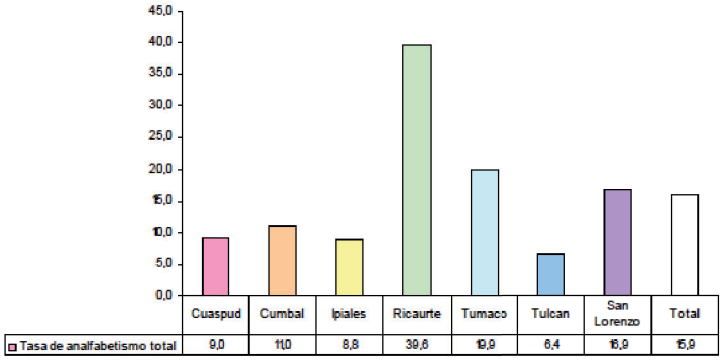
Unemployment.

The unemployment rate is approximately 10.8% in the Colombian-Ecuadorian frontier; 12.3% for the Colombian frontier (department), and 4.6% for the Ecuadorian frontier in Tulcán (the lowest in the region) and 9.6% in San Lorenzo.

Illiteracy.

The overall illiteracy percentage in the area is 15.9%, somewhat lower than that measured in the population over 15 which is 11.4%. Again, we find a unique value for the Colombian municipalities of 11.3% (value at department level), 16.9% for San Lorenzo, the highest in the region, and the lowest Tulcán with 6.4%. Gender data recorded in Ecuador show that illiteracy among adults aged 15 years and over is higher in women, Tulcán 8.7% and San Lorenzo 15.4% compared with illiteracy in men Tulcán 5.1 % and San Lorenzo 15.4 %. No data were obtained for Colombia´s municipalities.

Figure 7: Total illiteracy. Nariño / Tulcán - San Lorenzo 2007



Source: SIISE, Sistema Integrado de Indicadores Sociales del Ecuador *(Social Indicators System).* Version 4.5/ DANE Departamento Administrativo Nacional de Estadística, *(Statistics Department)* Colombia / 2007

School dropout

Pre-school and primary school dropout is 12.7% in these age groups, and 8.7% in secondary school. In all cases, dropout is mostly marked in the towns of San Lorenzo, where the primary drop reaches almost 45% and 30.4% and Ricaurte, where secondary school dropout reaches 18,9% and pre-school 17.1%. The lowest dropouts are found in Cuaspud, Tulcán and Cumbal. No data available for Tumaco.

Table 18: School dropout. Nariño / Tulcán - San Lorenzo 2007

ASTU4 / ASTU 3	% Pre.school Dropout	% Primary school Dropout	% Secondary school Dropout
Cuaspud	3,4	2,1	4,2
Tulcán	5,8	2,9	6
Cumbal	5,9	5,2	5,3
Ipiales	13,9	5,8	5,8
Ricaurte	17,1	15,4	18,9
San Lorenzo	30,4	44,7	11,8
Tumaco	ND	ND	ND
Frontier	12,7	12,7	8,7

ND: No Data

Source: ME, Data base *Dirección Provincial de Educación*, Carchi, Ecuador / DANE Departamento Administrativo Nacional de Estadística, *(Statistics Department)* Colombia / 2007

Schooling (years)

On average, men and women over 15 years in the Colombian-Ecuadorian frontier region only attend school 6.2 years; the difference between gender shows that men in the frontier area on the Colombian side show 0.1 percentage point less schooling. In Tulcán, schooling years for men and women is equal, but not in San Lorenzo, where men have 0.6 percentage points more schooling than women.

1.3 DISCUSSION

In this component, the axis is characterized by a geographical, climatic and cultural variety where several health conditions converge and where a permanent exchange of consumption habits and behavior can be observed, possibly due to the fact that this corridor brings together Andean and Pacific cantons.

The structure of the population pyramid shows a broad base, children who some years ahead will be an economically active population, representing an encouraging demographic group that requires investment in education.

This corridor shows high fertility and birth rates, low life expectancy at birth, poor social development with disturbing unemployment indexes, poverty, school dropout, illiteracy and high basic needs unmet.

The rural population corresponds to more than half the region and is affected by the poor geographical access to urban health centers; this vulnerability factor is increased by the cultural and ethnic diversity,

a determinant factor of the existing inequality observed in the regions that form the zone.

The bi-territorial zone also shares specific natural and biological risks of the two clearly differentiated zones, such as the Pacific coast with tsunamis and tropical diseases and the Andean zone with volcanic threats, landslides and floods.

Below are some indicators worth of attention in this axis and that may propitiate attention actions:

Tumaco is the remotest municipality of the corridor (270 km), geographically difficult to access. It is a seaport and link to river transportation.

The Andean zone is mainly volcanic with some of its volcanoes active (Galeras, Cumbal, amongst others).

The Pacific zone has permanent tsunami risk, natural risks such as earthquakes and floods, man-made risks such as pesticide poisoning, air, water and soil pollution.

The overall fertility rate of Tumaco, Ricaurte and Cuaspud show the highest rates, exceeding 100 births per 1000 women.

The San Lorenzo birth rate doubles overall average with 54.03% per 1000 women.

The mortality rate for Tulcán, Ipiales and Cuaspud show the highest values in the corridor.

For the year under study, there is a total of 12,236 expectant mothers, most of them in Tumaco and Ipiales and in the canton of Tulcán.

75% of the indigenous population is mainly concentrated in the municipalities of Ipiales, Cumbal and Ricaurte.

Basic needs unmet in the Colombian-Ecuadorian frontier reach 62.4%, ASTU with highest UBN index are Cumbal (84%), Ricaurte (76%), Cuaspud (67%) and San Lorenzo (65%).

Data for poverty indicate that 65,6% of the population of the border corridor lives in poverty and 26,9% in extreme poverty. San Lorenzo is the place with highest poverty levels.

The unemployment rate is approximately 10.8% in the Colombian-Ecuadorian frontier, and for the municipalities in Colombian frontier this rate is 12.3%

Overall illiteracy percentage in the region is 15.9%, with San Lorenzo, the highest: 16.9%

Pre-school and primary school dropout is 12.7% in this age group and 8.7% in secondary school. In all cases, school dropout is mostly marked in San Lorenzo, where primary school dropout reaches almost 45% and pre-school dropout, 30.4%, and Ricaurte where secondary school dropout reaches 18.9% and pre-school dropout, 17.1%

On average, men and women over 15 attend 6.2 years of school.

Desertion from preschool and primary is 12.7% of those age groups and 8.7% from secondary. In all cases the ,most marked desertion takes place in San Lorenzo, with 45% in primary and 30.4% in Preschool. In Ricaurte, secondary desertion is 18.9% and preschool 17.1%.

On average, men and women over 15 have attended 6.2 years of schooling.

2. HELATH-DISEASE COMPONENT

The development of this component is a better-documented feature of public health, using information drawn from:
Death statistics
Disease burden statistics.

The death statistics reflect the frequency of occurrence of deaths and informs us about the period and geographical area. The figures are compiled routinely and universally and provide an accessible statistic. The system of recording is an essential source of data for ASIS, and it has improved over the years, much more since the implementation of the International Classification of Diseases (ICD). The causes of death are coded homogeneously once entered. Therefore, they are important as a means of obtaining an epidemiological view of a disease.

The groups with the highest international classification of diseases morbidity and mortality have a high risk of being in a worse state of health in successive time periods. This means that a prompt intervention in these population groups not only eliminates health problems found but also improves the prognosis for the future health situation.

2.1 Method

The method used to develop ASIS on the frontier for the Health-Disease Component follows the guidelines of the “Guide for the analysis of the health situation of populations in frontier contexts in the Andean countries.”

For our ASIS, we will give a description of the main diseases that form the core of the Health-Disease Component and not the causes of out-patient consulting for the primary health services and basic second-level hospitals, and morbidity related to hospital discharges.

The Health-Disease Component has two profiles, each containing a group of indicators, and structure through a matrix and history of each indicator; and finally, they are standardized for the analysis of frontiers. The base years for the ASIS on the Colombia-Ecuador frontier is 2007, which means that the data collected for this component belong to that year, unless otherwise indicated.

The sources of data used to analysis this component are the Ecuadorian Health Ministry and information from its Social indicators System SIISSE; and information on mortality

comes from the INEC census bureau; and for less publicized indicators specific surveys were taken and in some case, recourse was taken to subsystems by programs. For Colombia, the figures come from the information systems of the Social protection Ministry and the statistical bureau DANE and the Public health Monitoring System SIVIGILA.

Morbidity Profile

This describes the main causes of disease in the two ASTU3 of Ecuador and the 5 ASTU4 of Colombia in ASIS, with the following indicators:

- % live births with LBW (live births with weight under 2,600g)
- % of under-5s with acute malnutrition
- % of under-5s with global malnutrition
- % of under 5s with chronic malnutrition
- Mandatory-reporting diseases
- TB rate per 100,000 inhabitants
- Dengue rate per 100,000 inhabitants
- HIV/AIDS rate per 100,000 inhabitants
- Malaria rate per 100,000 inhabitants
- Chicken-pox rate per 100,000 inhabitants
- Nutritional state of children aged 0.5
- Main causes of morbidity
- First causes of emergency consultation

Mortality profile

This describes the main causes of death from disease in the 2 ASTU3 of Ecuador and 5 ASTU4 of Colombia in the ASIS, with the following indicators:

- Main causes of mortality
- AD mortality
- ARI mortality
- Maternal mortality rate

Analysis by profiles

2.2.1 Morbidity

Morbidity records on the Colombia-Ecuador frontier come from primary attention centres and subcentres in Ecuador and Health IPS in Colombia. For Ecuador this includes all those attended to by private health services and dispensaries, and for Colombia it includes all those attended to by the health services of the frontier municipalities in Nariño.

Intestinal parasitosis ranks first with 43.1 per 1000 inhabitants in the total for out-patient consultation on the frontier corridor. The second cause was primary hypertension, at a rate of 27.3 per 1000 inhabitants.

There is a predominance of infectious diseases which are the main cause of death in the corridor, together representing 138.4 per 1000 inhabitants, with a predominance of parasitosis (41.3 per 1000 inhabitants), 8urinary tract infections (26.7), acute non-specific

infection of the respiratory tract (26), infectious origin diarrhea and gastroenteritis (25.5), acute rhinopharyngitis (17.7), acute tonsillitis (8.3)), pneumonia (7.6), acute bronchitis (6.9) and bacterial intestinal infections (4.4).

The diseases of the gastrointestinal tract – chronic gastritis (10.2), non-specific gastritis (5.3) are also major causes of the demand for health services in the corridor.

Table 19.Primary causes of morbidity for out-patient consultation Nariño/Tulcán-San Lorenzo 2007.

No.	Code	Cause	No. of cases	rate per 1000*
1	8829	Non-specific intestinal parasitosis	18,617	41.3
2	110X	Primary hypertension	13,234	27.3
3	N390	Non-specific infection of the urinary tract	12,031	26.7
4	J22	Non-specific acute infection of the lower respiratory system	11,730	26.0
5	A09X	Infectious origin diarrhea and gastroenteritis	11,479	25,5
6	J00X	Acute rhinopharyngitis (common cold)	7,980	17.7
7	M545	Non-specific lumbago	5,355	7.6
8	K295	Non specific chronic gastritis	4,615	10.2
9	J039	Non-specific acute tonsillitis	3,740	8.3
10	J189	Non-specific pneumonia	3,444	7.6
11	J209	Non-specific acute bronchitis	3,121	6.9
12	K297	Non-specific gastritis	2,407	5.3
13	T149	Non-specific traumatism	2,139	4.7
14	A049	Non-specific bacterial intestinal infection	1,976	4.4
15	M069	Non-specific rheumatoid arthritis	1,903	4.2
		Subtotal	102,861	228.2
		Other causes	144,861	321.4
		Total	247,222	549.6

- The population is 338,175 in Colombia and 112,581 in Ecuador, totalling 450,756. Source: Ecuadorian health Ministry Provincial and local SCI, Colombian Ministry of Social Protection.

Table 20. First causes of morbidity for hospital discharges Nariño/Tulcán-San Lorenzo 2007.

No.	Code	Cause	No. of cases	rate per 1000*
1	O809	Non-specific single childbirth	1,639	3.6
2	J189	Primary hypertension	1,424	3.2
3	A09X	Infectious origin diarrhoea and gastroenteritis	1.408	3.1
4	N390	Non-specific infection of the urinary tract	1,210	2.7
5	110X	Primary hypertension	852	1.9
6	0800	Spontaneous single birth, head to vertex	762	1.7
7	O829	Non-specific caesarean section	574	1.3
8	O039	Non-specific assisted single birth	500	1.1
9	O034	Incomplete spontaneous abortion, without complications	392	0.9
10	O234	Non-specific infection of the urinary tract during pregnancy	331	0.7
11	S069	Non-specific Intracranial traumatism	313	0.7
12	O808	Spontaneous single birth, other presentations	305	0.7
13	J459	Asthma	300	0.7
14	O654	Labour obstructed by disproportion pelvis/foetus, non specific	227	0.5
15	K359	Non-specific acute appendicitis	225	0.5
		Subtotal	10,237	22.7
		Other causes	22,425	49.7
		Total	32,662	72.5

- The population is 338,175 in Colombia and 112,581 in Ecuador, totalling 450,756. Source: Ecuadorian Health Ministry Provincial and local SCI, Colombian Ministry of Social Protection.

While childbirth is not morbidity as such – since morbidity refers to disease – the chart attempts to reflect the use of hospital services.

The causes of hospitalization by the corridor health services are led by childbirth (3.6 per 1000 inhabitants) followed by pneumonia (3.2), presumed infectious-origin diarrhoea and gastroenteritis is third (3.1). Urinary tract infections is fourth (2.7). There is also a preponderance of chronic degenerative hypertension (1.9) in fifth place. The other causes are related to complications in childbirth, abortion and infections of the urinary tract during pregnancy. Cranial trauma, asthma and acute appendicitis appear as causes of hospitalization.

Figure 8. First causes of morbidity form hospital discharges Nariño/Tulcán-San Lorenzo 2007.

Non-specified acute appendicitis	0.5
Obstructed labor due to fetus disproportion, with no other specification	0.5
Asthma, non-specified	0.7
Single spontaneous birth	0.7
Intracranial trauma, non-specified	0.7
Non-specified infection of urinary tract during pregnancy	0.7
Spontaneous, incomplete abortion, without complication	0.9
Assisted childbirth, with no other specification	1.1
Cesarean birth, with no other specification	1.3
Single spontaneous childbirth	1.7
Hypertension	1.8
Urinary tract infection, non-specified	2.7
Diarrhea and gastroenteritis of infectious origin	3.1
Pneumonia	3.2
Spontaneous single childbirth, with no other specification	3.6

Source: Ecuadorian health Ministry Provincial and local SCI/Colombian Ministry of Social Protection

As with the causes of out-patient consultation, diarrhoea and gastroenteritis of infectious origin is the first cause of consultation in the hospital emergency services (18.1%) and urinary tract infections (7.5%) and intestinal bacterial infections (7.1%) in second and third place; hypertension (6.5%) is another important emergency service problem. The other pathologies are almost all of infectious origin but we can also alcoholism (3.1%) as the tenth cause and threatened abortion (2.4%) as other causes of consultation.

Figure 9. Prime causes of mortality , taken from emergency admissions. Nariño /Tulcán-San Lorenzo, 2007

Non-specified gastritis	1,5
Non-specified, asthma	1,7
Vaginitis, vulvitis and vuvovaginitis in infectious diseases and parasites	2,0
Threatened abortion	2,4
Non-specified acute tonsillitis	2,5
Non-specified alcohol	3,1
Dyspepsia	3,0
Volume depletion	3,6
Non-infectious colitis and gastroenteritis	4,4
Non-specified infection of urinary tract in pregnancy	4,6
Other acute gastritis	4,8
Essential (primary) hypertension	8,5
Non-specified bacterial intestinal infection	7,1
Urinary tract infection in non-specified locus	7,5
Diarrhea and gastroenteritis of presumed infectious origin	18,1

Damage subject to epidemiological monitoring

Ecuador's Ministry of Public Health and Colombia's Minister of Social Protection conduct epidemiological monitoring of the damage of interest to public health in each country, through their epidemiological monitoring offices. The bi-Frontier ASIS considers damage monitored jointly, and that which is of greatest importance to the public health of populations in the frontier corridor.

Malaria

Due to its climatic characteristics, the Tumaco-San Lorenzo frontier corridor is endemic for transmissible diseases such as malaria. During 2007, the PAMAFRO project, and the health teams of Ecuador and Colombia undertook interventions

designed to mitigate the action on climate change, through a "clean house, clean yard" strategy, and the strengthening of the diagnosis and treatment by health volunteers, which was a decisive contribution to the progressive reduction of incidents.

For the year analyzed, there were 2,176 cases of malaria, and a frontier API of 290.9 per 1000 inhabitants, with the highest rates observed in Tumaco (1,138.2), and San Lorenzo (848.5), these two places becoming transmission zones

Table 21. Table of malaria incidence. Nariño/Tulcan-San Lorenzo 2007

ASTU4/ ASTU 3	Cases	API
Cuaspud	0	0
Tulcán	0	0,0
Cumbal	2	6,2
Ricaurte	5	32,0
Ipiales	13	11,3
San Lorenzo	244	848,5
Tumaco	1907	1138,2
Frontier	**2171**	**290,9**

Source: National, Provincial and local SCI, Health Ministry-Ecuador/Ministry of Social Protection-Colombia

Dengue

Due to the climate, geography and socioeconomic characteristics, the Andean and Pacific frontier corridor is an endemic zone for epidemics of dengue. The warm climate and rainfall are conditions which favor the reproduction of the vector. It is considered the collection of water in receptacles in homes due to the scarcity of water is one of the factors which causes the persistence of *Aedes aegypti* in this region.

The collection system of solid waste is inadequate, and limited in some urban centres. This contributes to the present of unusable receptacles in most houses in the region, and they become potential breeding grounds for *Aedes aegypti*, especially during the rainy season, and the risk of transmission of dengue in the region increases.

During 2007, the incidence of dengue in the frontier corridor was limited to a single municipality (Tumaco), at 2.4 per 1000 inhabitants, that is, four cases.

HIV and AIDS

With regards to HIV-AIDS, the largest number of ASTU 3 and 4 in the frontier corridor is reported in Tumaco (37 cases, 22.1 per 100,000 inhabitants), and San Lorenzo, three cases (10.4 per 100,000 inhabitants), followed by Ipiales, (eight cases, 7 per 100,000 inhabitants), which could be due to a greater effort in screening. In the other municipalities – Cuaspud, Cumbal and Ricaurte- no cases were reported, but this could be due to low level of screening.

Table 22: incidence of HIV-AIDS. Nariño/Tulcán-San Lorenzo 2007

ASTU 4	HIV/AIDS
ASTU 3	
Cuaspud	0
Cumbal	0
Ricaurte	0,0
Tulcán	1,2
Ipiales	7,0
San Lorenzo	10,4
Tumaco	22,1
Frontier	5,8

Source: National, Provincial and local SCI, Health Ministry-Ecuador/Ministry of Social Protection-Colombia

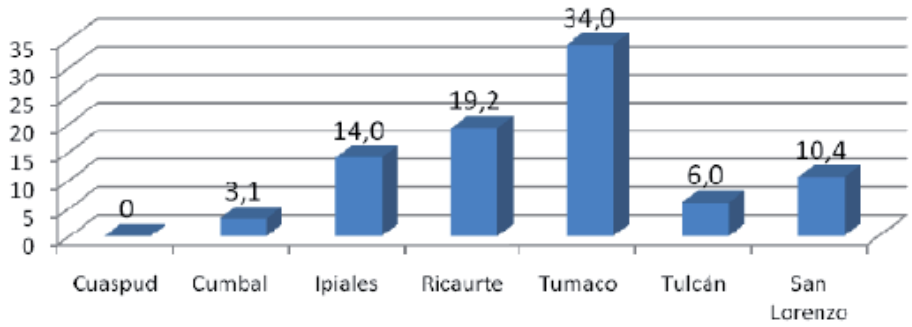
Tuberculosis

Tuberculosis is one of the principal problems of public health in the two countries.

85 cases of all kinds of tuberculosis were reported during the year analyzed, a rate of 12.4 per 1000 inhabitants overall, but in Ecuador incidence was 32.6 per 1000 inhabitants: but with the ASTU 3 of Tulcan and San Lorenzo below the national average: in the case of Colombia, the rate is 24.9 per 1000 inhabitants, and the ASTU4 for Tumaco exceeds that average.

The highest rate of tuberculosis was observed in Tumaco, with a rate of 34 per 1000 inhabitants, Ricaurte with 19.2 per 1000 and Ipiales with 14 per 1000, in Colombia, and San Lorenzo, 10.4 per 1000 inhabitants, the highest value for ASTU in Ecuador.

Figure 10. Incidence of tuberculosis. Nariño/Tulcán-San Lorenzo, 2007

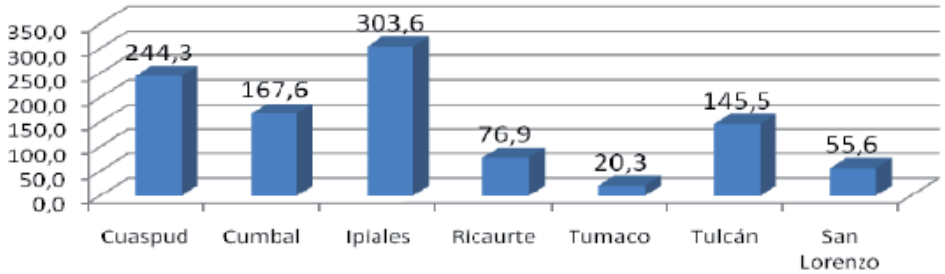


Source: National, Provincial and local SCI, Health Ministry-Ecuador/Ministry of Social Protection-Colombia

Chickenpox

During 2007, there were 6,006 cases of chickenpox, or 104 per 100,000 inhabitants, the greatest incidence was in ASTU 2, Ipiales, with 348 cases or 303.6 per 100,000 inhabitants. Cuaspud has 20 cases (244.3 per 100,000 inhabitants), Cumbal has 54 (167.6 per 100,000),Tulcán 122 (145.5 per 100,000 inhabitants)

Figure 11. incidence of chickenpox, Nariño/Tulcán present San Lorenzo 2007

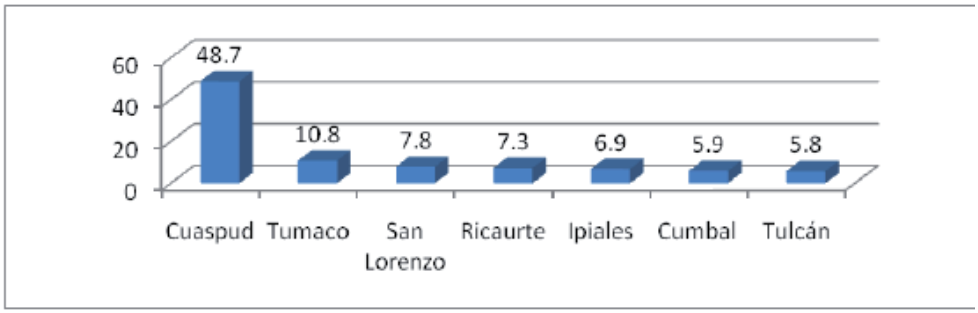


Source: National, Provincial and local SCI, Health Ministry-Ecuador/Ministry of Social Protection-Colombia

Low birth weight

An analysis of low-birth-weight showed that the highest incidence occurred Cuaspud, followed by Cumbal, The problem related to several socio-economic factors, including poverty, education, pregnancies before the age of 20 and after 40.

Figure 12. Percentage of live births with low-birth-weight (less than 2500 g). Nariño/Tulcán-San Lorenzo, 2007



Source: National, Provincial and local SCI, Health Ministry-Ecuador/Ministry of Social Protection-Colombia

Malnutrition

An analysis of the nutritional state of children under-5, shows that 15.7 per 1000 of under-5s suffer from chronic malnutrition, Tulcán being the highest percentage (38 per 1000 under-5), and the lowest Tumaco with 0.6 per 1000 under-5.

The percentage of overall malnutrition in the corridor is 11.3 per 1000 among under-5s, in ASTU 4 in Colombia, between 0.6 and 1.7 per 1000 among the under-5s. In ASTU three, Ecuador it is 35.3 per 1000 under-5s in San Lorenzo, and 38 per 1000 among under-5s in Tulcán, for 2007.

Table 23. Nutritional status of children under-5. Nariño/Tulcán-someone's in 2007

ASTU 4/ ASTU 3	Global malnutrition in under-5s	**Chronic** malnutrition in over-5s
Cuaspud	1,6	4,5
Cumbal	1,7	3,7
Ipiales	1,4	2,0
Ricaurte	0,4	0,8
Tumaco	0,6	0,6
Tulcán	38,0	38,0
San Lorenzo	35,3	35,3
Frontier	11,3	15,7

Source: SIISE Ecuador 2008/Ministry of Social Protection.Colombia

2.2.2. MORTALITY PROFILE

Infant mortality

The infant mortality rate (IMR) at level ASTU0 (country) for 2007 in Ecuador is 12.4. For ASTU2, it is 17.9 in Carchi and 7.4 in Esmeraldas. For Colombia ASTU0 is 15.9, and for ASTU2 -Nariño it is 16.6 per 1000 live births. Ecuador, ASTU3 San Lorenzo has an infant mortality rate 13.3 times higher than the national average and for Colombia infant mortality in each of the ASTU2 is below the national average and its ASTU2.

Table 24 shows that the ASTU with greatest the vulnerability for infant mortality is ASTU3 - San Lorenzo

ASTU 4/ ASTU 3	IMR	IMR Male	IMR Female
San Lorenzo	23,7	31,25	15,9
Tulcán	20,9	19,9	22,5
Tumaco	14,2	14,6	13,9
Ipiales	10,9	11,1	10,7
Cuaspud	10,7	0,0	22,0
Ricaurte	4,8	4,6	4,9
Cumbal	4,6	6,0	3,2

Source: Ministry of Public Health Information System Ecuador 2007/DANE Estadisticas vitales-Colombia

Neonatal mortality

ASTU Cuaspud and Cumbal have no neonatal deaths recorded for 2007. The greatest incidence are in the ASTU of Tulcán and San Lorenzo. In an analysis by sex, women are more vulnerable to die in the Colombian ASTU and men in the Ecuador ASTU.

Table 25. Neonatal mortality. Nariño/Tulcán-San Lorenzo, 2007

ASTU 4/ ASTU 3	IMR	IMR Male	IMR Female
Tulcán	16,1	25,9	6,7
San Lorenzo	11,8	19,5	3,9
Tumaco	6,2	4,4	7,9
Ipiales	6,1	3,6	8,5
Ricaurte	2,4	0,0	4,6
Cuaspud	0,0	0,0	0,0
Cumbal	0,0	0,0	0,0

Source: Ministry of Public Health Information System Ecuador 2008/DANE Estadisticas vitales-Colombia

Mortality among the under-5s

The children with greatest vulnerability to death before reaching the age of five live in Ipiales, where the mortality rate is double than that of Cuaspud, which is second. A comparison of mortality rates, for every child that dies in Tulcán, 63.3 die in Ipiales. In distribution by genders, there is a marked difference in Ricaurte, where for each female death there are 3.5 male deaths. In the rest of the ASTU, the difference is much smaller.

Table 26. Mortality among the under-5s. Nariño/Tulcán-December 2, 2007

NUTEs 4/ NUTEs 3	IMR under 5s	IMR under 5s male	IMR under 5s female
Ipiales	1323,1	1318,0	1328,3
Cuaspud	744,7	634,2	856,5
Cumbal	548,9	694,4	386,8
San Lorenzo	448,8	483,7	412,5
Tumaco	430,0	467,7	390,9
Ricaurte	241,0	361,0	103,4
Tulcán	20,9	19,9	22,5

Source: Ministry of Public Health Information System Ecuador 2007/DANE Estadisticas vitales-Colombia

The highest rate of mortality due to AD was reported by San Lorenzo. The, mortality for this cause was seven times greater than in Tumaco, which is the second-highest ASTU for mortality. Similarly, the ASTU of Cuaspud, Cumbal and Ricaurte did not report mortality through due to AD in this type of in this group of

the population. Distribution by gender variable from ASTU to ASTU, and Tulcán reported no information.

Table 27. AD mortality among the under-5s. Nariño/Tulcán - San Lorenzo 2007

NUTEs 4/ NUTEs 3	TM por EDA < 5 años	TM por EDA < 5 años Hombres	TM por EDA < 5 años Mujeres
San Lorenzo	89,7	87,9	97,7
Tumaco	12,5	8,2	17,0
Ipiales	8,4	16,5	0,0
Tulcán	4,2	SD	SD
Cuaspud	0,0	0,0	0,0
Cumbal	0,0	0,0	0,0
Ricaurte	0,0	0,0	0,0

Key:
NUTE = ASTU
TM por AD<5 años = AD MR under 5s
TM por AD < 5 añios hombres = AD MR under 5s male
TM por AD < 5 años mujeres = AD MR under 5s female

Source: Ministry of Public Health Information System Ecuador 2007/DANE Estadisticas vitales-Colombia

Ipiales reported the highest ARI mortality rate in this frontier area. For each death due to ARI in Tulcán, there were 21 Ipiales. Cuaspud and Ricaurte did not report and deaths from this cause. In the distribution by gender, it can be seen that in San Loernzo and Ipiales all the deaths were among women, while in Cumbal, men were the more vulnerable sex. In Tulcán, there are no data by gender.

Table 28. ARI mortality among the under-5s. Nariño/Tulcán-San Lorenzo 2007

NUTEs 4/ NUTEs 3	TM por IRA < 5 años	TM por IRA < 5 años Hombres	TM por IRA < 5 años Mujeres
Ipiales	33,5	0,0	68,1
Cumbal	30,5	57,9	0,0
San Lorenzo	22,4	0,0	45,8
Tumaco	16,7	24,6	8,5
Tulcán	1,8	SD	SD
Cuaspud	0,0	0,0	0,0
Ricaurte	0,0	0,0	0,0

Key:
NUTE = ASTU
TM por IRA <5 años = ARI MR under 5s
TM por IRA < 5 añios hombres = ARI MR under 5s male
TM por IRA < 5 años mujeres = ARI MR under 5s female
Source: Ministry of Public Health Information System Ecuador 2007/DANE Estadisticas vitales-Colombia

Maternal mortality

The Cuaspud and Cumbal ASTU reported no maternal mortality in 2007. This may be due to under-recording. The greatest incidence of maternal mortality was in Ricaurte with 712.6 per 100,000 live births, which represents 90.8 times the number of deaths for the same cause in Tulcán.

San Lorenzo has a rate which is almost 4 times higher than that of the rest of the country (62.02).

Table 29. Maternal mortality. Per 100,000 live births. Nariño/Tulcán-San Lorenzo 2007

NUTEs 4/ NUTEs 3	Número de muertes maternas	Razón de mortalidad materna por 100,000 N.V.
Ricaurte	3	712,6
San Lorenzo	2	231,2*
Ipiales	2	87,1
Tumaco	2	42,5
Tulcán	4	256,9
Cuaspud	0	0,0
Cumbal	0	0,0

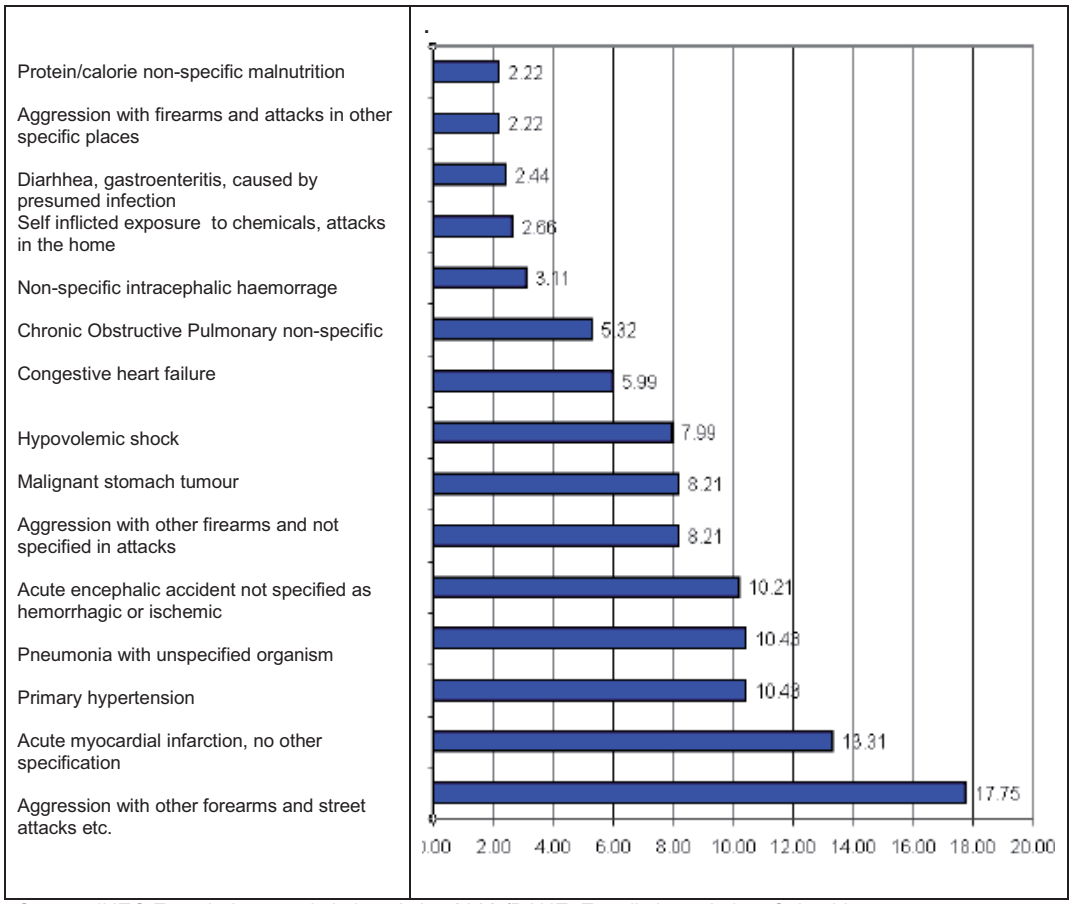
Key:
NUTE = ASTU
Número de miertes maternas = No. of maternal deaths
Razón de mortalidad maternal per 100,000 NV = Ratio of maternal mortality per 100,000 live births
* Account is taken of the population registered in 2007 (413) plus those registered late in 2008 (452), total for 2007 (865). (Tulcán 1557, 2007)

Source: Ministry of Public Health Information System Ecuador 2007/DANE Estadisticas vitales-Colombia

General mortality

In the analysis of the first 15 causes of general mortality in the population of the Andean and Pacific corridors in 2007, the commonest relates to cardiovascular problems (43.1 per 100,000 population), followed by violence, due to aggression with firearms (20.2 per 100,000 inhabitants). The ASTU where the population is most vulnerable to death due to cardiovascular problems is Cuaspud (134), Ipiales (68) and Tumaco (64), and the most frequent incidence of violence was in Ricaurte (64), Tumaco (55) and Cuaspud (37). Tulcán and Cumbal did not report death by violence among the primary causes of death.

Figure 13. General mortality per 100,000 inhabitants Nariño/Tulcán-San Lorenzo 2007



Source: INEC Ecuador's annual vital statistics 2008 /DANE, Estadisticas vitales, Colombia

2.3. Discussion

The report on morbidity shows that the main causes of conflict of medical consultation are acute respiratory infection, acute diarrhoea, and essential hypertension. Childbirth is one of the primary causes of hospitalization.

It is considered to be of special interest to analyze intestinal parasitosis, not only from the point of view of the health sector, but also taking account of the need for constant supplies of water fit for human consumption, since this is one of the principal risks of its incidence.

With regard to mandatory-report diseases, there is a worrying situation with regard to malaria, with high annual parasite indices (API), in particular in Tumaco and San Lorenzo. These results suggest the urgent need to continue to encourage detection and prompt treatment.

Tuberculosis has results which indicate the need to give priority to this pathology inTumaco, which has the highest incidence in the frontier zone.

Dengue does not present rates of incidence which suggest that it is a frequent or major problem, although there is evidence of risk factors which propitiate its presence, such as the weakness in the disposal of solid waste, which facilitates the presence of breeding-grounds.

Diseases and events which show the most worrying results are in child malnutrition, low birth weight and infant mortality, which have higher rates than the national average, in particular in some municipalities. Low birth weight is of special interest, expressed as a percentage of live births with this characteristic, which is higher than the national average and in particular, the serious situation of Cuaspud, where almost half of live births have this characteristic. It is therefore important to analyze this finding in depth, and to ascertain relationships with other risk factors, such as height.

Malnutrition in the under-5s is alarming in the entire region, due to the results in Tulcán and San Lorenzo, where more than 30% of children in this age range have global malnutrition, and more than 40% have chronic malnutrition. We consider that this is the most serious finding, given to the pathology itself, and because it becomes a risk factor for proper psychomotor development, with the appearance of other diseases or death, and likewise this population in a few years´ time will be the economically active population of the region.

The situation of infant mortality is serious in San Lorenzo-Tulcán and Tumaco, which report higher than average figures for their respective countries. It should be noted that the municipalities of San Lorenzo and Tulcán are the most seriously affected by pathologies causing death to children under 1, and considering the high proportion of children with malnutrition in these two municipalities, account should be taken of this problem in assigning priorities for the events to be intervened.

In the municipalities of San Lorenzo and Tumaco, AD mortality is the highest in the region; and Ipiales, Cumbal, San Lorenzo and Tumaco have the highest mortality figures for ARI.

Maternal mortality is present in the municipalities of Ricaurte, Ipiales, Tumaco, San

Lorenzo and Tulcán, and although the rate is high, it is important to review this indicator taking account of the number of deaths or the denominator, to produce an analysis which is closer to reality.

The principal causes of death in the population in general are related to cardiovascular problems and violence (aggression with firearms). Municipalities where the population is most exposed to death by these two events are Cuaspud and Tumaco.

We now provide some indicators which are of interest with regard to the component of morbidity and mortality.

Morbidity in outpatient treatment

Intestinal parasitosis ranks first with 41,3 x 1.000 inhabitants, in the demand for external consultations in the border corridor.

The second cause why persons attended external consultations in 2007 was essential hypertension that represented 27,3 x 1.000 inhabitants.
There is a prevalence of infectious diseases which, as a group, represent 138,4 x 1.000 inhabitants, the most prevalent of which is parasitosis (41.3 x 1.000 inhabitants), urinary tract infections (26,7 x 1.000 inhabitants), unspecified acute infection of lower respiratory tract (26 x 1.000 inhabitants), infectious diarrhoeas and gastroenteritis (25,5 x 1.000 inhabitants), acute rhinopharyngitis (17,7 x 1.000 inhabitants), acute tonsillitis (8,3 x 1.000 inhabitants), pneumonia (7,6 x 1.000 inhabitants), acute bronchitis (6,9 x 1.000 inhabitants) and intestinal infections of bacterial origin (4,4 x 1.000 inhabitants); that are the main cause of death of the population of the border corridor.

Illnesses of the gastrointestinal tract such as chronic gastritis (10,2 x 1.000 inhabitants) and unspecified gastritis (5,3 x 1.000 inhabitants) also constitute important causes of the demand for attention at health service centres in the border corridor.

Morbidity due to discharge from hospital

The causes for medical care with hospitalisation by the health services on the frontier corridor are most commonly childbirth (3.6 per 1000) followed by pneumonia (3.2 per 1000), diarrhoea and gastroenteritis with presumed infectious origin (3.1 per 1000), urinary tract infections (2.7 per 1000) and arterial hypertension (1.9 per 1000).

Damage subject to public health monitoring

There were 2,176 cases of malaria, with the frontier rate of 481.6 per 100,000, with the highest rates in Tumaco (138.2 per 1000) and San Lorenzo (848.5 per 100,000)

With regard to HIV-AIDS, the largest number of cases in ASTU 3 and 4 of the frontier corridor were reported in Tumaco, with 37 cases (22.1 per 100,000).

85 cases of tuberculosis in all its forms were reported, the rate of overall rate of 12.4 per 1000. The highest rate of this illness was in Tumaco, with 34 per 1000 inhabitants.

There were 6,006 cases of chickenpox, 134 per 100,000, the highest rate appearing in ASTU 2 Ipiales, with 348 cases, 303.6 per 100,000, Cuaspud with 20 cases (244. per 100,000, Cumbal with 54 cases (67.6 per 100,000 inhabitants), and Tulcán with 122 cases (145.5 per 100,000).

The global rate of malnutrition is 11.3% for the region, and the highest rates are to be found in Tulcán (38%) and San Lorenzo (35.3%).

The proportion for chronic malnutrition is 15.7% for the region, and the highest rates are found in Tulcán (54.2%) and San Lorenzo (44.3%).

Mortality

With regard to infant mortality, the most vulnerable ASTU are San Lorenzo (23.7 per 1000 live births) and Tulcán (20.9.).

Infant mortality. The most vulnerable ASTU are Ipiales (1,323) and Cuaspud (744.7) per 100,000 children under-5.

Neonatal mortality. The most vulnerable ASTU are Tulcán (16.17) and San Lorenzo (11.8 per 1000 live births.

AD mortality The most vulnerable ASTU is San Lorenzo (89.7 per 100,000 under-5s)

ARI mortality. The most vulnerable ASTU are Ipiales (30.5 per 1000 under-5s) and Cumbal (30.5)

Maternal mortality was reported in the ASTU Ricaurte (3), Ipiales (2), Tumaco (2) and San Lorenzo (2).

General mortality. It is appreciated that the main cause of death in the Andean and Pacific corridors is due to aggression led by firearms (28.2 per 100,000), followed by acute myocardial infarction (13.3), primary essential hypertension (10.4) and non-specific pneumonia (10.4). However, when the causes are grouped together, it can be seen that cardiovascular problems occupy first place, followed by aggression with firearms.

3. SOCIAL RESPONSE COMPONENTS

3.1 Methodological framework

The component of social response, as in the two preceding components, is based on methodology of guidelines established in the "Guide to the analysis of the health situation in populations in the frontier areas of Andean countries".

In the first instance, the PASAFRO Project socialized the indicator matrices to be worked on each component. For the social response component, there are three further profiles established: resources, services and health coverage, with 18 indicators defined as equivalent to the 23 proposed:

Indicators analyzed:

1. Health budget (ASTU 2 and 3 (specifying sources of financing
2. Immunization coverage, by immune and biological category in children under one, and from 1-4.
3. Immunization courage coverage for yellow fever in the general population
4. Immunization: coverage with vaccine against tetanus and diphtheria in women of reproductive age
5. Immunization Coverage with vaccination against tetanus and diphtheria in pregnant women
6. Prenatal care coverage (according to the standard in each country)
7. Non-institutional childbirth care given by trained or qualified personnel
8. Institutional childbirth coverage
9. Coverage in care in the prevention of disease prevention programs (prompt detection of cervical cancer, Elisa test in pregnant women, anti-retroviral treatment for HIV patients)
10. Hospital discharges per 1000 inhabitants
11. Number of community mothers or similar
12. Hospital beds per 1000 inhabitants
13. Percentage of bed occupancy
14. Health institutions or services depending on level of care
15. Identification of health service providing networks
16. Emergency care services
17. Laboratories
18. Blood banks

Some indicators were not equivalent for ASTU defined (ASTU 3 Ecuador and ASTU 4 Colombia), since no information was available for 2007, including:

1. Outpatient consultations per inhabitant/year
2. Traditional medicine centres

64

3. Culturally adapted hospitals
4. Number of hospital hammocks per institution
5. System of referrals and counter-referrals

The local teams, with the support of the responsible provincial and national ASIS team, work on the indicators established, and the source of data used for the analysis of this component was the statistical information in institutions and documents provided by the first- and second-level health services, information supplied by the Health Ministries of Ecuador and Colombia; and institutional records such as INFA for Ecuador.

The descriptive analysis is based on prioritized indicators, as agreed by the two countries, which allows us to visualize the availability of infrastructure, human talent, characteristics of principal resources, capacities to produce the services available on the frontier, useful information to confront factors that upset the health situation of the sector.

This section is fundamental to the entire process of planning to organize a response of society to health problems, and taking into account that ASIS allows us to define scenarios, and with each, identify priority problems.

3.2 Analysis by profiles

Organization of health services

On the frontier corridor, there are 105 health establishments, of which 91% of first level, and the remainder are second level. There are 10 establishments with emergency medical services, 38 clinical laboratories, and two blood banks.

It should be noted that there is a marked lack of availability of blood banks in the frontier corridor - one for Colombia and one for Ecuador.

Table 30. Health institutions and services, Nariño/Tulcán – San Lorenzo 2007

NUTE3/ NUTE 4	Primer nivel	Segundo nivel	Urgencias	Laboratorios	Banco Sangre
Tulcán	32	4	1	6	1
Ipiales	24	3	4	7	1
Tumaco	24	1	1	15	0
San Lorenzo	8	1	1	5	0
Cumbal	4	0	1	2	0
Cuaspud	3	0	1	2	0
Ricaurte	1	0	1	1	0
Frontera	96	9	10	38	2

Key:
NUTE = ASTU
Primer nivel = Level 1
Segundo nivel = Level 2
Urgencias = Emergency
Laboratorios = Laboratories
Banco sangre = Blood-banks
Frontera = Total frontier

Source: Health Monitoring Information System, Ministry of Health, Ecuador/Ministry of Social Protection Colombia

Availability of resources

Availability of human resources

The availability of doctors in 2007 is 2.3 for Ecuador and 1.6 per 1000 inhabitants for Colombia, but in the frontier region, this is only half those figures, which apparently means that there is a deficit of doctors in the frontier corridor, and the figures for nurses are the same - in Colombia, 0.9% per 1000 inhabitants. These referential data for the frontier corridor do not even reach 50% of the average; the same is true for dentists.

Table 31. Availability of health resources. Per 1000 inhabitants Nariño/Tulcán-San Lorenzo 2007

NUTE 3/ NUTE 4	Médicos por mil habitantes	Enfermeras por mil habitantes	Odontólogos por mil habitantes	Camas Hospitalarias por 1000 habitantes
Ipiales	1,7	0,4	0,4	0.8
Tulcán	1,5	0,9	0,23	1.7
San Lorenzo	0,89	0,14	0,14	2.4
Cumbal	0,7	0,3	0,3	0
Cuaspud	0,5	0,4	0,4	0,6
Ricaurte	0,3	0,2	0,2	2,36
Tumaco	0,2	0,3	0,2	1,74
Frontera	0,8	0,4	0,3	0,8

Key:
NUTE = ASTU
Medicos por mil habitantes = Doctors per 1000 inhabitants
Enfermeras por mil habitantes = Nurses per 1000 inhanbitants
Odontologos por mil habitantes = Dentists per 1000 inhabitants
Camas hospitalarias por 1000 habitantes = Hospital beds per 1000 inhanitants
Frontera = Total frontier

Source; Integrated Social Indicators System-Ecuador/Ministry of Social Protection, Colombia

Community mothers

On the frontier there are a total of 1,102 community mothers, the largest numbers being in the municipality of Tumaco (590), and then, with half the number, Ipiales with 255; and the other municipalities in Colombia and I San Lorenzo and Tulcán have between 30 and 65 community mothers. The ratio of community mothers per hundred children aged 0-4 is 3.6 on the frontier corridor.

Table 32. Community mothers and similar Nariño/Tulcán -San Lorenzo 2007

NUTE 3 /NUTE 4	Madres comunitarias y similares
Tumaco	590
Ipiales	255
Ricaurte	70
San Lorenzo	65
Cumbal	50
Tulcán	42
Cuaspud	30
Frontera	1102

Key:
NUTE = ASTU
Madres comunitarias y similares = Community mothers and similar
Frontera = Total frontier

Source: INNFA –Ecuador database Ministry of Health-Colombia

Budget for the frontier corridor

It will be seen that the Municipalities of Ipiales and Tumaco (Colombia) have the highest budget, but if we analyze those as income per capita for health of the population living in the frontier corridor, the total is USD46.42. Ipiales, Tumaco, San Lorenzo and Tulcán have allocations which are lower than the average for the frontier; and Cumbal, Cuaspud and Ricaurte are higher than the average.

It is interesting to note that there is inequity of budget allocations within the same country, since Tumaco has a per capita allocation of USD21, compared to Ricaurte with USS112 per inhabitant. It should be noted that not all municipalities in Colombia have their own resources.

Table 33. Budget allocations. Measured in dollars. Nariño/Tulcán -San Lorenzo in 2007

NUTE 3/ NUTE4	Presupuesto de salud 2007	Recursos propios(NUTE 2)	Población total 2007	Gasto público en salud per cápita
Ricaurte	1.755.188,8		15613	112,42
Cuaspud	526.051,8	8.552.341	8187	64,25
Cumbal	1.787.410,5		32221	55,47
San Lorenzo	868.000,0	30421,12	32084	27,05
Ipiales	2.590.734,5		114609	22,60
Tumaco	3.620.962,2		167545	21,61
Tulcán	1.188.898,4	34970	83824	14,60
Frontera	12.337.246,1	8.587.311,4	454.083,0	46,08

Key:
NUTE = ASTU
Presupuesto de salud = Health budget
Recursos propios = Own resources
Población total = Total population
Gasto público en salud per capita = Public spending per capita on health
Frontera = Total frontier

Source: Database of the Ministry of Public Health, Areas-DPS-Finance-Ecuador /Ministry of Social Protection Colombia

Availability of hospital beds

On the frontier corridor there is an average availability of 1.4 beds per 1000 inhabitants, which is close to the national average (Ecuador-Colombia, 1.5). However there is an important gap (06 - 2.4) between the ASTU which form the frontier corridor. With regard to the average percentage of bed occupancy, this is below the national standard (Ecuador-Colombia is 5%), and the other ASTU, except Tumaco which is above the national standard. The ASTU of Ricaurte,

Cumbal and Cuaspud provide no hospitalization services.

Table 34: Bed availability. The percentage of bed occupancy and hospital discharges. Per 1000 inhabitants. Nariño /Tulcán -San Lorenzo 2007

NUTE 3/ NUTE 4	Camas hospitalarias por 1000 habitantes	Porcentaje de ocupación de camas	Egresos hospitalarios por 1000 habitantes
San Lorenzo	2,4	56,7	110,1
Tulcán	1,7	64,5	54,1
Ipiales	0,8	80	81,2
Tumaco	0,6	93	73,2
Frontera	1,4	73,6	79,6

Key:
NUTE = ASTU
Camas hospitalarias por 1000 habitantes = Hospital beds per 1000 inhabitants
Porcentaje de ocupación de camas = Percentage occupancy
Egresos hospitalarios por 1000 habitantes = Hospital discharges per 1000 inhabitants
Frontera = Total frontier

Source: Health Ministry Information System- Hospitals - Ecuador /Ministry of Social Protection Colombia

Coverage of health services

Coverage of prenatal control, institutional childbirth and noninstitutional childbirth

The average cover of prenatal control on the frontier is 77.36%, which is close to national standards (Ecuador-Colombia 80%). Institutional childbirth is in the range between 17% and 80%, with an average of 50.56%. It is important to note that not all pregnant women attended to in establishments in the corridor give birth there, and there is an unquantified population which gives birth in private clinics, higher complexity centres, and other places outside the corridor. The entire range of care for pregnant women is not present, since for the presence of coverage for prenatal control to be acceptable, immunization in the same group is low, 23.43%, although these data for DT immunization do not always represent real coverage, since there may be women who have a complete DT scheme prior to childbirth.

Screening of HIV among pregnant women.

The average coverage of HIV screening for pregnant women on the frontier is 72.98%; the lowest figures are recorded in the Cantons of Ecuador (San Lorenzo, Tulcán), and this is probably due to the strategy of vertical transmission prevention, which started in the middle of 2006, added to the social and economic conditions of the local population.

Table 35: Maternal care Nariño/Tulcán-San Lorenzo in 2007

NUTE 3/ NUTE 4	Cobertura de Control Prenatal	Cobertura de parto no institucional	Cobertura parto institucional	Tamizaje VIH a embarazadas	Tratamiento ARV VIH embarazadas	Cobertura de inmunizaciones con TD a gestantes
Cumbal	100	6	32	84,6	0	2,7
Ricaurte	87	0	14	100	50	6,0
Ipiales	86	0	127	78,4	83	11,9
San Lorenzo	83,4	5,03	80,02	33,2	0	83,2
Tulcán	73,1	0	36,9	53,5	0	48
Cuaspud	60	0	17	91,2	0	3,6
Tumaco	52	0	47	70	82	8,5
Frontera	77,36	5,50	50,56	72,98	215,00	23,41

Key

NUTE	= ASTU
Cobertura de control prenatal	= Prenatal control coverage
Cobertura de parto no institucional	= Non-institutional childbirth coverage
Cobertura de parto institucional	= Institutional childbirth coverage
Tamizaje VIH a embarazadas	= HIV screening of expectant mothwea
Tratamiento ARV VIH embarazadas	= ARV/HIV treatment for expectant mothers
Cobertura de inmunizaciones con TD a gestantes	= TD immunization cover for expectant mothers
Frontera	= Total frontier

Source: Ministry of Social Protection-STD-HIV/AIDS program, API Ecuador/Ministry of Social Protection Colombia

Immunization

Immunization of children

The scheme of vaccination for children under 1 in both countries is BCG at birth, three doses of Pentavalent and polio vaccination before the age of 1, and SRP between 20 and 23 months for 2007. It should be noted that BCG coverage is with doses applied to children under 1, pentavalent and OPV is with the third vaccination dose, and SRP is the only dose applied at 12-23 months.

Average coverage of BCG in the frontier corridor is 94.6%, which is close to the national standard of both countries (100% for Ecuador and 95% for Colombia). Although the average is good, the populations of Cuaspud, Cumbal and Ricaurte have coverage of less than 50% of the population allocated, while in Ecuador, the level of coverage in Ipiales and Tumaco is more than 100%, and this information should be validated.

Coverage for polio and Pentavalents and is quite low, and does not meet the national target (100% for Ecuador and 95% for Colombia). It is interesting that Ricaurte, although it has a higher budget per head, has the lowest coverage in the corridor (60%) for Pentavalents and polio. The ASTU for Tulcán and Tumaco have the widest coverage.

Although the three biological vaccinations analyzed in this section are applied to children aged under 1, there was observable desertion between the first vaccination (BCG) and the other biologicals, of 17%. This can be attributed to the migration flows in the area, the rupture in the schemes of vaccination, unreal denominators (population), and poor data quality.

The triple virus coverage in the frontier corridor averages 96.6%, and for this biological, all the ASTU have very acceptable values in terms of national standards.

The average coverage in vaccination in children under 1 for the entire frontier corridor satisfies the expected percentage for BCG (95%). It should be noted that many children are vaccinated in the hospital where the mother gave birth, and therefore some localities which do not have hospitals show very low coverage. Likewise, some children are born or vaccinated in other establishments which do not belong to the frontier corridor. However, an evaluation of access to primary care establishments to continue the scheme and complete the three doses shows that compliance is that is far below the standard (76.8% Polio3). There are no studies to show the causes of this gap between BCG (indicator access to the health system), and the next vaccination, administered in primary care units. Nonetheless, there is technical consistency over all between Polio3 and Penta3, without major differences between Cantons/municipalities, except Tumaco, which indicates that once a child has contact with the service, it receives the vaccination which it should receive at that age.

A similar coverage ratio is to be seen in the analysis of BCG and SRP vaccine, administered from 12 months onward. The scheme of both vaccines is of a single dose, but in OPV3 and Penta3, an evaluation needs to be made of coverage with the third dose, which can be interpreted to mean that the greater complexity for compliance of coverage with in this group is to ensure that the population receives the three doses required for protection.

Table 36. Vaccination coverage in children under 1, and of 1 year (Nariño/Tulcán-San Lorenzo 2007

NUTE 3/ NUTE 4	Polio	Pentavalente	BCG	Triple viral
Tulcán	101,5	101,5	114	96,6
Ipiales	96,1	96,2	145,3	96,5
San Lorenzo	78,5	78,49	171	108,9
Cumbal	74	74,2	47,8	78,7
Cuaspud	71,9	72,5	27,5	96
Ricaurte	60,1	60,6	49,3	80,5
Tumaco	55,3	59,4	107,1	88,1
Frontera	76,8	77,6	94,6	92,2

Key:
NUTE = ASTU
Polio = Polio
Pentavalente = Penta(valent)
BCG = BCG
Triple viral = Triple virus
Frontera = Total frontier

Source: Health Ministry Information System API -Ecuador/Ministry of Social Protection, Colombia

This comportment of coverage deserves operational investigation to detect the reason the gap between BCG and Penta3 through rapid monitoring of coverage, to provide more real results. Likewise, there should be proposals for operational research relating to the detection of the causes of vaccination comportment, which shows low coverage in those under 1 year for Polio3 and Penta3.

Yellow fever

Vaccinations administered to groups or cohorts, and requiring dosage over periods which are not annual, generate high complexity, in calculating the coverage of the population group.

Example. An MEF requires five doses to consider the scheme complete, and the population group is aged 15-49, taking account that at any age any of this group could complete the scheme. This makes it difficult to achieve real coverage, since on many occasions women are vaccinated for each pregnancy, or if they lose their vaccination card, they vaccinate themselves again. It is also a complex fact, that this year there begin to appear cohorts of MEF who have all doses for DPT in infancy, and DT in their schooldays.

Table 37. Cover of Yellow Fever, TTD in pregnant and non-pregnant women of fertile/reproductive age. Nariño/Tulcán -San Lorenzo 2007.

ASTUD 3/ ASTUD4	General yellow fever coverage ages 1-60	TD immunization for WRA	TD immunization for expectant mothers
Ipiales	10,9	14,1	11,9
San Lorenzo	9,64	18,6	83,2
Ricaurte	5,7	4,5	6,0
Tumaco	5,4	4,8	8,5
Cumbal	4,5	6,8	2,7
Cuaspud	3,8	8,1	3,6
Tulcán	N/A	3,67	48
Frontera	5,7	8,7	23,4

N/A Does not apply because it was not included in the vaccination scheme for this canton

Source: Health Ministry Information System API -Ecuador/Ministry of Social Protection, Colombia

In the case of pregnant women, annual coverage is measured, and there is a noticeable diversity of coverage from 2.7% to 83.2%, which implies a high risk of neonatal tetanus if the woman, during the time she is not pregnant, does not receive any dose, or if she did not vaccinate herself in previous pregnancies.

In the case of yellow fever, it is common to observe that people do not always keep their vaccination cards, and they vaccinate themselves again and again, being in the age range in which they should receive a single dose.

3.3 **Discussion**

Social response indicators are similar for each of the ASTU in the two countries,. We begin the analysis with the availability of health services. On the frontier corridor there are 105 health establishments, and most of them are first-level establishments: there is very small number of second-level facilities. There is evidently scarce availability of blood banks in the frontier corridor for Colombia and Ecuador. The lack of a availability of health and public health laboratories is similar.

The availability of health professionals, doctors, nurses and dentists[5], both in Ecuador and Colombia, and in the frontier corridor, shows an important shortage of

[5] Doctors 2.3 for Ecuador 1.6 for Colombia (per 1000 inhabitants): frontier corridor 0.8 per 1000 inhabitants; nurses (0.4 per 1000) and dentists.,(0.3 per 1000)

such professionals

It is interesting to note the inequity of budget allocations within a single country-Tumaco[6] versus Ricaurte. It should be emphasized that not all municipalities in Colombia have their own funds. Budget allocations for 2007 in the frontier corridor are low, with a health income per capita of the USD 46.42.

In the hospital units of the municipalities Ipiales and Tumaco, the percentage of bed occupancy is acceptable, in relation to the comparison with Tulcán and San Lorenzo. Average occupancy on in the frontier corridor is still below the national standard Ecuador (85%) and for Colombia[7] (in first level institutions, 40%, second level institutions, 80%, and third level, 89%). This indicator needs to identify causes and find strategies to secure improvement.

It was not possible to note the integral nature of care provided for pregnant women, since the coverage figure for prenatal care on the frontier corridor is substantial (77.366%), immunization for the same group was low (16.56%); although the data for DT immunization will not always represent real coverage, since there may be women who have the complete DCT scheme prior to childbirth, however, due to lack of information (vaccination card), their vaccination status is not known. Likewise, the screening for HIV among pregnant women is low, and the Ecuador ASTU show the lowest coverage, given the recent introduction of the activity as a regular service. Finally, institutional childbirth has low coverage in most of the municipalities[8], and only San Lorenzo and Ipiales have acceptable coverage, and as a whole, the frontier corridor coverage is modest (50%), which is compared to non-institutional childbirth of 5%, deserves investigation to identify the causes of the problem, and to determine strategies to have incidence on the population, and improve the indicator.

Not all the biologicals applied on the frontier are comparable. The vaccination schemes for children under 1 which are comparable in the two countries are BCG at birth, three Penta doses and an antipolio before the age of 1, and SRP at 12-23 months.

Average BCG cover in the frontier corridor is close to the national standards of both countries[9], and the ASTU with coverage in excess of 100% should be validated with quick monitoring of coverage. It should be noted that many children are vaccinated in the hospital where the mother gave birth, and therefore some places which have no hospital show very low coverage.

OPV and Penta coverages are close to the national standards both of both countries, but do not meet requirements for useful coverage in vaccination. It is

[6] Tumaco is allocated USD21 vs. Ricaurte USD112 per head.
[7] Ministry of Social Protection Decree 2193/2004. Information supplied by the IPS for public health
[8] Cuaspud 17%, Ricaurte 14%, Tulcán 36%, Tumaco 47%; San Lorenzo 80% and Ipiales m127%
[9] National standards for BCG, OPV, Pentas, SRP is 100%

interesting that Ricaurte, although it has the highest budget per head, has the lowest coverage for the region in Penta and OPV.

Desertion observed between the first BCG vaccination and other biologicals can be attributed to the migratory flows in the region, the rupture pf the schemes vaccination, the unreal denominator (population) and poor data quality. An evaluation of access to primary care establishments to continue the scheme and to complete the three doses show that compliance is well below the standard. There are no studies which can evidence the reasons for this, observed between BCG (indicator of access to the system health system), and the next vaccination administered in primary care units. Finally, the triple virus coverage in the frontier corridor has a very acceptable average, in accordance with national standards.

The following are indicators which attract attention to the corridor

The ratio of professionals per 1000 inhabitants in the frontier corridor is too low. On average, there are 0.8 doctors, 0.4 nurses, and 0.3 dentists. The availability of hospital beds is 1.4. Cuaspud, Cumbal and Ricaurte have no hospitalization services.

Budget allocations to health. The ASTU with the lowest in income per head in the frontier corridor are to come, Tumaco and Ipiales.

Hospital discharges per 1000 inhabitants. The highest rate of hospital discharges among the ASTU offering hospitalization services are San Lorenzo (110.1) and Ipiales (81.2). The average for the frontier corridor is 79.6.

Maternal care coverage. Average coverage for prenatal control in the frontier corridor is 77.4%, the lowest being Tumaco (52%), Cuaspud (60%) and Tulcán (73.1%).

Institutional coverage of childbirth. Average coverage for institutional childbirth on the frontier corridor is 50.6%, the lowest is Ricaurte (14%), Cuaspud (17%), Cumbal (32%) and Tulcán (36.9%). It is interesting to note that Ipiales has 127% coverage.

HIV screening for pregnant women averages 73% in the corridor, the lowest being San Lorenzo (33.2%), Tulcán (53.5%) and Tumaco (70%).

TD immunization coverage in pregnant women. In general, coverage is very low for the entire corridor. This could be due to under-recording.

Vaccination coverage for those aged under 1 is low for the corridor, in relation to polio (76.8%) and Penta (77.6%). Specifically, for each ASTU, some exceed 100%, and it would be worth investigating whether people prefer to move to another municipality to complete the schemes vaccination of their children.

CHAPTER 3

SETTING PRIORITIES

3.1 **Methodological framework**

Setting priorities is the act of selection or ordering of objects, that is, to decide what is to be done first and what is to be done later. It is basic in management, and may refer to:

- Population groups: marginalized populations, high-risk groups, those in the worst condition.
- Regions in the country: the most isolated, the ones with least resources.
- Health problems: most frequent or serious conditions.
- Interventions: the most effective, least expensive, least harmful.

We should mention that the frontier areas in the Andean and Pacific corridors allow for two types of priority. The first is issue-based, and has been developed in this document as part of the analysis: a list has been made of the principal problems which affect the frontier areas in the three components analyzed, and then priority areas are set, for which we have used the Health Needs Indicator methodology software designed by the government of Galicia, EPIDAT v. 3.1, the component of priorities (for more information on the development of this index, please read the Annexes to this document).

As a first activity to achieve priorities in areas, the guide for the Analysis of the Health Situation (ASIS) was socialized among the populations in the Andean frontier areas, and this gives a step-by-step guide with a description of the process required to prepare his health situation analysis for frontier populations, and the method to be used in a setting priority areas. So, based on the guide, the local teams (frontier) and national teams, collected up the indicators required, as designed by the technical team of the six- Member Countries of the Andean Health Organization - the Hipolito Unanue Agreement. This took a long time, and despite the dedication of the teams in collecting the data, there were indicators which could be collected since they were not available locally.

When the first matrix had been completed, the local teams sent information to the central team for validation and subsequent dispatch to the PASAFRO Project. Then, 11 indicators were selected, as being those which best reflect the condition of the population, taking account of the three components, to establish comparisons between ASTU, and to identify critical areas.

The indicators selected by components

As is well known, indicators make situations objective for the purposes of evaluation, comparison, appreciation, and support for decisions. The quality of an indicator is given by its validity (if it really measures what wants to be measured), its repeatability (repeated measurement in similar conditions or moments, reproducing similar results), specificity (it only measures the phenomenon to be measured), and sensitivity (it can measure changes in the object to be measured), the feasibility of preparation (reliable data, available data and calculation), and relevance (able to express important components in health policy).

The selection of indicators for setting priorities in the corridor was conducted as a function of:

1. Availability
2. Representative nature of the various dimensions of health
3. Acceptance and validity
4. Generated by routine information systems, and
5. Sufficiently variability to discriminate between situations.

Therefore, we selected a total of 11 indicators, three for the social, demographic and economic component, four for morbidity-mortality, and four for response to society. The following is a brief description of the suitability of the indicators selected:

Social, demographic and ecological components

1. The general fertility rate (GFR/TGF): This is a demographic indicator referring to the relationship between the number of births occurring in a certain period and the number of women of fertile age in the population in the same period. The period is almost always one year, and can be expressed as the number of births per 1000 women and women of fertile age in a year. This indicator is useful to establish general fecundity of the population, and is more refined than the birth rate, because it limits itself to a more precise denominator, i.e. women of fertile age.

2. Illiteracy among those aged 15 (ANALF). The literacy rate marks a gap in access to education and universal right, when the indicator is used in (among others), to express the way the general level of social and economic development of a society.

3. Unsatisfied basic needs (UBN/NBI). The direct method to identify critical gaps or lacks in the population, and characterizing poverty. It uses indicators and is related directly to 4 areas of basic needs of the individual (a. Housing, b. sanitation, c. basic education and d. minimum income. These data are available in population and housing census exercises.

Health and sickness components

1. Low-birth-weight (LBW/BPN). This variable expresses delays in intrauterine growth or prematurity, and represents an important risk factor for neonatal and infant morbidity and mortality, designed to place a value on the conditions of the woman in a given society, and is widely used as an indicator to analyze variations in population, geography, and variations of the timing of low-birth-weight, and is therefore an indicator of infant survival, and an indirect measurement of the quality of prenatal care.

2. **Global malnutrition in those aged under-5 (DG5**). Malnutrition is a state of impoverishment of the individual caused by deficient consumption of nutrients which does not allow the basic requirements of the organism to be satisfied, and which leads to the impoverishment of physical and intellectual capacity. It is an indicator which forecasts the state of health of the next generation.

3. Infant mortality rate (IMR/TMI). This is a demographic indicator which shows the number of deaths of children in any given population, per 1000 live births during the first year of life. It is directly related to levels of poverty and development of the community, and is used to express survival and quality of infant life based on the level of mortality in early infancy.

4. Maternal mortality rate. (MMR/RMM). The incidence of maternal mortality has an even spread around the world, and it reflects differences between rich and poor. The risk of maternal to mortality is 1/75 in developing regions and 1/7300 in developed regions. Most maternal deaths are avoidable, since there are methods of therapy or prophylaxis for the main causes. High rates of maternal mortality reflect precarious health services addressed to this group.

Components of response of society

1. Coverage of those aged under 1 Pentavalent (C1PENTA): In general, vaccination coverage measures the percentage of the population receiving the vaccine in the schemes of vaccinations of a country, and who are therefore are protected against the related diseases. It is an indicator of the coverage and quality of health services, and that corresponds to the level of social development

2. Prenatal control (PC/CP): This contributes to knowledge of the coverage of l pregnant women before childbirth, and forms part of the group of indicators evaluating the progress made in mother-child care.

3. Doctors per 1000 inhabitants (MED). This is an indicator which measures resources available and degree of use; the numbers of health professionals are sensitive in the appraisal of the capacity of systems to provide and extend health services to the population.

4. Per capita health spending (GSPC). This allows an analysis to be made of health care provided in a country and its regions, and to evaluate plans, management processes, policies, and to make international comparisons

3.2 Prioritization

Once the indicators have been selected as complying with established criteria, Excel tables were drawn up for the input of data for each indicator, and the project validated and processed them.

One critical aspect which we have considered in adding up the scores was the direction of each indicator, such that the final vector would have a single direction, as indicated by the methodology of the Health Needs Indicator (INS), and therefore the sign was changed for indicators which were prejudicial to the population, and they are shown as negative values.

Another aspect which we evaluated before setting priorities was the relevance of placing the population as an indicator. While this indicator is evidently very important because it structures all the components, we have not included it given that each of the indicators selected is present in the population issues, referred to as rates, and not as absolute values.

The results of the prioritization show are shown in Table 38, in which the classification has been given by quartiles, and to refer to them, we will speak of "inadequate" indicators or "adequate" indicators, as the case may be.

Table 38. Priorities by areas Nariño/Tulcán -San Lorenzo 2007

Unidades	Puntajes
Ricaurte	-4.16
Tumaco	-3.99
San Lorenzo	-2.89
Cuaspud	-1.97
Tulcán	1.75
Cumbal	3.51
Ipiales	7.74

Key:

Units Score

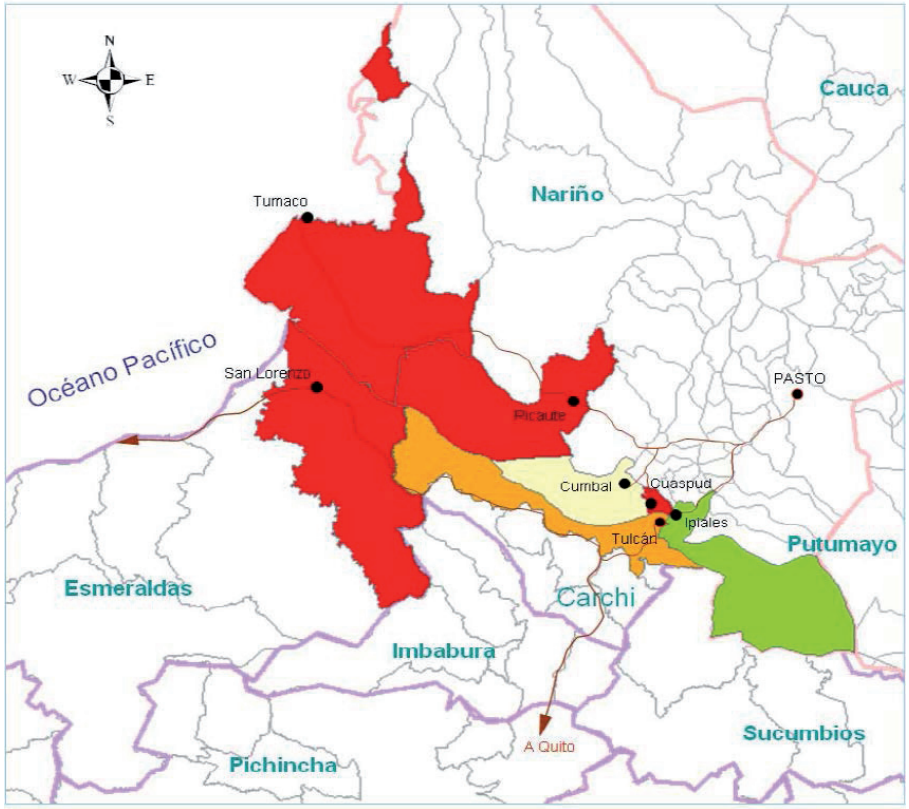
Four level Likert scale

Very adequate *Inadequate* *Adequate* *Very adequate*

The health indicators used in setting the social, demographic and ecological component priorities are: general fertility rate, unsatisfied basic needs, illiteracy; Morbidity and mortality component: low-birth-weight, global malnutrition in the under-5s, infant mortality rate, maternal mortality rate. Organized response to society: vaccination coverage with Pentavalents in those under 1, health spending per capita, prenatal controls, doctors per 1000 population.

The results have been arranged by quartiles, and are coloured for quicker identification, and therefore the first block is coloured red (ASTU with the greatest needs or lacks, greatest risk or very low availability of resources in the offer for health services, summarized in four groups in accordance with the headings). In the first block, there are the four ASTU on the frontier which corresponds to more than half the ASTU in the analysis, with *very inadequate* indicators for public health, which are Ricaurte, Tumaco, San Lorenzo and Cuaspud. The second block is coloured orange, and contains Tulcán; the third is coloured yellow and contains Cumbal, and the only ASTU in the fourth group on the frontier with *very adequate* indicators for public health is Ipiales.

Map 3. Priorities in ASTU 3 and 4 forming the Andean and Pacific frontier corridors. Colombia-Ecuador 2010.



PRIORITIZATION MAP

ASTU	SCORES
Ricaurte	-4.16
Tumaco	-3.99
San Lorenzo	-2.89
Cuaspud	-1.97
Tulcán	1.75
Cumbal	3.51
Ipiales	7.74

Health indicators used:

Global fertility rate
Unsatisfied basic needs
Illiteracy
Low birth weight
Global malnutrition in under 5s
Child mortality rate
Cover of pentavalente in under 1s
Health expenditure per cápita
Prenatal controls
Practitioners / 1.000 inhab.

LEGEND

Capital ASTU 2
Capital ASTU 4

Stratification by components

In addition to the general prioritization, we wanted to take account of approach to the values of stratification by component, and the results shown below will be described for each component, such that when we refer to the indicators of social component we will speak of greater or lesser needs; for the morbidity and mortality component, the lesser risk of falling ill or dying, and for the social response component, we will refer to the availability of resources or otherwise.

Table 39. Stratification of the social, demographic and ecological component. Nariño/Tulcán-San Lorenzo 2007

Unidades	Puntajes
Ricaurte	-4.17
Tumaco	-1.14
Cuaspud	-0.08
Cumbal	0.02
San Lorenzo	0.53
Tulcán	1.36
Ipiales	3.47

Key:

Units Score

Four level Likert scale

Very adequate *Inadequate* *Adequate* *Very adequate*

The health indicators used in the stratification of **social, demographic and ecological component** indicators are the general fertility rate, unsatisfied basic needs and illiteracy.

With regard to the first component, Ricaurte is the ASTU with the lowest value, and so, the greatest needs; followed by Tumaco and Cuaspud; in the third group there are Cumbal, San Lorenzo and Tulcán, in the fourth group is Ipiales, which would represent the ASTU with the best social and demographic indicators.

Table 40. Stratification of the morbidity/mortality component Mariño/Tulcán -San Lorenzo 2007

Unidades	Puntajes
San Lorenzo	-3.46
Tulcán	-1.06
Ricaurte	-0.61
Cuaspud	-0.56
Tumaco	1.7
Ipiales	1.76
Cumbal	2.23

Escala de Likert de cuatro niveles

Muy inadecuado | Inadecuado | Adecuado | Muy adecuado

Key:

Units Score

Four level Likert scale

Very adequate *Inadequate* *Adequate* *Very adequate*

Indicators employed for stratification of the function of the morbidity and mortality component are low-birth-weight, global malnutrition in the under-5s, infant mortality rate and maternal mortality rate.

The ASTU with the highest risk indicators in the health and disease component are San Lorenzo, followed by Tulcán and Ricaurte; in the third group, Cuaspud; and in the fourth, Tumaco, Ipiales and Cumbal.

Table 41. Stratification of the component of organized response to society Nariño/Tulcán -San Lorenzo 2007

Unidades	Puntajes
Tumaco	-4.55
Cuaspud	-1.33
San Lorenzo	0.04
Ricaurte	0.62
Cumbal	1.26
Tulcán	1.46
Ipiales	2.5

Escala de Likert de cuatro niveles

Muy inadecuado | Inadecuado | Adecuado | Muy adecuado

Key:

Units Score

Four level Likert scale

Very adequate *Inadequate* *Adequate* *Very adequate*

The indicators used the stratification for the organized response to society are: vaccination coverage for Pentavalents in the under-1s, health spending per capita, prenatal controls, doctors per 1000 population

Results showed Tumaco as the ASTU with the most *inadequate* indicators for population health, which means that there is very little response to society in accordance with the most important indicators of this component; in the second group is Cuaspud, followed by San Lorenzo and Ricaurte; and in the fourth group, are Cumbal, Tulcán and Ipiales, with good availability of resources, and placed at a *very adequate* level of indicators for this component.

3.3. Discussion

The results of the priority-setting by areas presents the highly conscientious work done by the group, with the purpose of providing knowledge on the condition of the population as a function of the group of indicators of the determinant indicators of health, which would allow comparison of the resulting value between them; however, we wish to emphasize that the result reveals that the entire corridor deserves attention because they are all close to each other, and because there is variability between one location and another in each component, that is, if for the sociodemographic component one ASTU is located on the *very inadequate* quartile or level, it may be *very adequate* in another, or vice versa, and therefore, this should be a small summary of what happens to each ASTU and its priorities.

The ASTU that need to improve their health indicators are placed in ascending value by the result of the prioritization, that is, the first in the list is the one which has the *very inadequate* indicators for the state of the health of the population:

-> Ricaurte This is a mountainous rural ASTU, with low social and demographic scores, which place it in the *very inadequate* quartile for this component. For morbidity and mortality, it is in the *inadequate* quartile, with using the four-level Likert scale, which means that it corresponds to the block with risk to the health of the population, but in respect to response to society, it is in the category of *adequate*.

->Tumaco. On the Colombian Pacific coast, Tumaco has a low value for the social Democratic demographic component, which places it in the *very inadequate* category. It is interesting that in morbidity and mortality, it is in the *very adequate* quartile, which leads us to think that there would be low recording of reports of illnesses, or that there may be other indicators which would better portray this ASTU, for the component of social response is the only ASTU in which it is an *very inadequate* category.

->San Lorenzo. On the Ecuadorian coast, it has scores which place it in the *adequate* category for sociodemographic component. At the same time, it is the only one in *very inadequate* condition in terms of the Likert scale, with regard to morbidity and mortality; and for the social response component, it is in the *adequate* category.

-> Cuaspud. Although it is very close to Ipiales, it has low scores, and is in the category of *inadequate* for the sociodemographic component. It is *adequate* for the morbidity and mortality component, and again, *inadequate* in social response.

->Tulcán. This ASTU is the geographical peer of Ipiales due to its location, and in terms of scores, it is *adequate* for the sociodemographic component, *inadequate* in the morbidity and mortality component and *very adequate* with regard to the response to society.

->Cumbal is in the *adequate* quartile for the sociodemographic component, *very adequate* for morbidity and mortality, and for response to society.

->Ipiales. This is in the *very adequate* quartile for the three components, which may be due to the fact that it is the capital of the NUTE2 Pasto.

For an overview of the location of the ASTU with respect to indicators by components, the following table may be of use.

Table 42. Table of location of categories by components in accordance with Health Needs Indicators. Nariño/Tulcán -San Lorenzo, 2007.

NUTE/ Componente	Social demográfico y ecológico	Morbilidad mortalidad	Respuesta organizada a la sociedad
Ricaurte	Muy inadecuado	Inadecuado	Adecuado
Tumaco	Inadecuado	Muy adecuado	Muy inadecuado
San Lorenzo	Adecuado	Muy inadecuado	Adecuado
Cuaspud	Inadecuado	Adecuado	Inadecuado
Tulcán	Adecuado	Inadecuado	Muy adecuado
Cumbal	Adecuado	Muy adecuado	Muy adecuado
Ipiales	Muy adecuado	Muy adecuado	Muy adecuado

Escala de Likert de cuatro niveles

Muy inadecuado | Inadecuado | Adecuado | Muy adecuado

Key:

Component | Sociodemographic/ecological | Morbidity/mortality | Organized response to society

Four level Likert scale

Very adequate | *Inadequate* | *Adequate* | *Very adequate*

Likewise, account should be taken of the fact that the prioritization for areas will show that more than 50% of the ASTU analyzed in the corridor have very low scores for the Health Needs Indicators, and this indicates a lack of resources to satisfy physical and psychic human needs, which have affect the wearing down of the level and quality of life of the individual, in factors such as food, housing, education, sanitation and access to drinking water, unemployment, lack of income, or low-income levels.

In geographical terms (see Map 3), the frontier shows a distribution with a defined pattern, in which we can see that the ASTU with the lowest values, and therefore with the lowest health indicators, are concentrated towards the western end of the frontier, and two of them (Tumaco and San Lorenzo) are on the Pacific Coast. We therefore consider it important to see what happens with the nearby populations, forming a geo-statistical analysis, to discover the existence of conglomerates of attention.

Chapter 4

PRINCIPAL CONCLUSIONS
INTERVENTIONS REQUIRED BY THE CORRIDOR

CONCLUSIONS

We consider that this document is a product of vital importance for frontier management, in the context of the PASAFRO Project, and it is a first effort to make a joint analysis of the health situation of the Nariño/Tulcán-San Lorenzo frontier corridor. For this reason, a number of difficulties have had to be faced, both in obtaining data, and the processing and analysis of information, since the information came from different sources which had to be reconciled with each other, amongst other factors, and as mentioned before, this is the result of a continuous process of binational work with technical teams of two countries, coordinated with ORAS/CONHU, and this is the source of strength both in analysis, the prioritization, and in proposals for interventions.

The sociodemographic analysis, jointly with the health-disease and social response components, allows a profile to be structured for the state of health of the frontier corridor, in order to characterize, measure and explain the health-disease process, and the determining factors which includes this region of Colombia and Ecuador.

In this frontier zone, the same conditions which determine its underdeveloped status become material with potential. The young population with sufficient capacity to work, variety of territory and climate, agricultural diversity, and the possibility for organized frontier trade development, amongst other things, are a source of social investment.

In the **social, demographic and ecological component**, the fertility indicator is high for the population of the frontier area, and this forces us to propose mechanisms for family planning.

Illiteracy in the population of corridor, clearly defines the lack of compliance with policies to defend the universal right to primary education, and this is a matter which is essential to broach at local level, since it is decisive in the state of health of the population.

One important group of frontier population has been deprived of basic services, a situation which expresses the identification and intervention of regional government and/or the competent agencies.

The **morbidity and mortality** component of the frontier, shows that the principal health problems are related to conditions of nutrition in early childhood, infant mortality, maternal mortality, deaths from ARI and AD, hypertension and violence. With regard to mandatory-reporting diseases, malaria should be given priority in prevention and control. We consider that arterial hypertension is also an indicator which needs more detailed research and analysis, in order to establish its variables, and the gender and age of the most affected frontier population. Maternal mortality is another public important public health problem in the corridor, and this will allow us to measure the degree of development of multisectoral actions deployed in these populations.

In the **social response component,** the vaccination indicator is an imprecise piece of information regarding the immunization of the population, due to important under recording. Further, immunization, prenatal control, doctors per 1000 population and public spending per capita on health indicate the capacity of health systems and required a regular evaluation of conditions, since this will define plans, programs and management and political processes in health, tending to contribute to the quality of health services.

In conclusion, this document describes aspects of context, information on damage and risks to health, and describes the principal interventions which the health sector on the frontier will need as useful information for decision making at all levels; and hence, it can help to improve the quality of life of the population of this area.

In the **setting of priority areas**, more than half the ASTU analyzed are located in the first quartile, which means that there are deficiencies in immunization, and the corridor has high rates of malnutrition, maternal mortality, etc. The following is a list of ASTU which require which need to improve their health indicators, in ascending order (the lowest indicator represents the worst health indicators). This is the value which produces the order of quality.

->	Ricaurte	-4.16
->	Tumaco	-3.99
->	San Lorenzo	-2.89
->	Cuaspud	-1.97
->	Tulcán	1.75
->	Cumbal	3.51
->	Ipiales	7.74

PRINCIPAL INTERVENTIONS NEEDED BY THE CORRIDOR

The team has identified the principal problems of the corridor, and as a function of that, proposes possible lines of intervention in the Andean and Pacific corridors of the Colombia-Ecuador frontier by component, taking account of the fact that some of these interventions are in competition with other sectors, and that therefore coordinated work needs to be done through the ASTU 2, 3 and 45 administrations.

Proposed interventions in the Andean/Pacific frontier corridors

One of the principal problems for the ASIS has been that of obtaining frontier data, and this is a point to which we should address ourselves, since the availability of information supported by valid and reliable data is a non-prerequisite for the objective analysis and evaluation of the health situation, and decisions made on the basis of evidence, and health programming. We therefore note that it is important to realize that the corridor should continue to work on systems for data generation, and in the quality of data generated.

Social and demographic component

In this component, the corridor should place an emphasis on education, and better access to health services.

Education:

1. The education of the population is the best instrument to reduce to close gaps, and well-managed education will become a vicious circle, which begins with the good education of the mother, who is the centre of the household, and on whom the children depend for good food - a well-fed child will have will perform well at school, and this will make him a potential candidate for escaping from poverty.

2. Non-formal education for the adults (formation for employment, formation for the creation of SMEs).

3. Formal education for adults, to reduce the illiteracy rate in the zone, and to become complemented by issues of values and schools for parents.

4. Improve educational quality. This is a long-term investment, but will bring with it the development of the corridor.

5. The corridor has a high general fertility rate, and therefore strategies should be proposed to reduce current figures by programs and family planning, sexual and reproductive education, and therefore indicators should be identified to allow an evaluation of the comportment of the corridor over time.

Services:

1. Increase the coverage and quality of household public services (water, sewerage)
2. Improve accessibility to healthcare not only in geographical terms, but also an economic and cultural terms
3. Ricaurte, Cuaspud and Cumbal are rural centres, and therefore their health establishments should be prepared to face health problems related to rural activities

Morbidity and mortality, and social response components

We have grouped these components together because they are closely linked. We will therefore say that issues of maternal and infant health must be improved:

Maternal health

The improvement in maternal health should be one of the principal objectives on the frontier agenda, to reduce the risk of pregnancy and to avoid maternal mortality with therapy or prophylaxis for the principal causes, and for this, the following should be secured:

- Access to oxytocin to reduce the risk of haemorrhage.
- Reduction of septicaemia, with aseptic techniques.
- Monitoring pre-eclampsia, and correct administration of medicaments such as magnesium sulphate.
- Qualified midwifery.
- Health establishments should be equipped with instruments for early detection and verification of childbirth problems, and taking necessary measures, amongst others Caesarean section.
- Advisory services on STD, HIV, AIDS, and reports of the number of counselling sessions conducted.

Further, it is suggested that the following be improved:

1. Coverage of prenatal controls (taking account of accessibility, infrastructure and equipment, human resources and quality of care).
2. Attention to childbirth (taking account of accessibility, infrastructure and equipment, human resources and quality of care).
3. HIV testing coverage for pregnant women.

For infants:

The corridor should improve on the following points:

1. Attention to the newborn (taking account of accessibility, infrastructure, equipment, human resources, and quality in neonatology and paediatrics)
2. Improve vaccination coverage
3. Coverage in the program of care for children under 10
4. Coverage of the AIEPI strategy
5. Deworming programs
6. School meals programs
7. Creation of care facilities for ARI rooms, and strengthening of existing facilities

Education programs:

1. Management of AD and ARI in the home, and recognition of warning signs
2. Measures of biosecurity and protection in the prevention of ARI
3. Personal hygiene, handling of food, treatment of drinking water.
4. Family nutrition

Transmissible diseases:

1. Malaria program
2. Chronic, non-transmissible illness
3. Health education programs
4. Programs to promote physical activity
5. Line of mental health and avoidable violent injuries
6. Coverage of mental health programs

Non-transmissible diseases:

- It is important to have knowledge of arterial hypertension, and the sex and ages most affected.
- Programs of meals for the elderly

Healthy environment line:

1. In the school
2. At home
3. At work

With regard to the health service network:

The frontier corridor has establishments of different levels of complexity which need to be articulated into a health service network by levels of attention, in order to provide a response to common health problems in the population, on both sides, which will also bring together a referral and counter-referral network.

Immunization

The problem of low coverage in vaccination in Tumaco should be mitigated through support from the ASTU2 and central Government.

The API of the Ecuadorian Ministry of Health is developing software which will allow personal and historical information to be recorded as of 2010, identifying the number of doses received by each person, and at what point each person enters or leaves the cohort which should be vaccinated; however, it should seek mechanisms which will improve the service across the entire frontier area, since attention on one side only does not secure eradication of the problem.

Training

- Existence and training or refresher courses for human resources in health.
- Accessibility in health care (health services provided with quality, promptly and respect for culture)
- Strengthening of the information, education and communication strategy.

GLOSSARY OF TERMS

Illiteracy. Lack of elementary instruction in a country, where we find people who cannot read.

Primary health care. This is essential assistance, based on practical methods and technologies, scientifically and socially acceptable, within the reach of all individuals and families in the community, through full participation, and at a cost which the community in the country can support, in each and every stage of development, with the spirit of self responsibility and self-determination. Primary health care is an integral part of the national health system, and it is the central function and main core of that system, and of overall social and economic development of the community. It represents the first level of contact of the individual, the family and the community with the national health system, bringing healthcare as close as possible to the place of residence and place of work, and constitutes the first element in the current process of health systems (see WHO-UNICEF, 1978).

BCG. Bacillus Calmette Guerin. The vaccination protecting against tuberculosis, named after its discoverer.

Quality of life. Quality of life is defined as the perception of the individual of his position in life in the cultural context and in the system of values in which he lives and with respect to his goals, expectations, standards and occupations. It is an extensive and complex concept which embraces physical health, psychological state, level of independence, social relationships, personal beliefs, and relationships with the main characteristics of one's surroundings.

Constitutional Court. The senior organ in the justice system.

Population growth. Population growth corresponds to the balance between the number of births and the number of persons who migrate into the area, and the number of deaths and persons who migrate out of the area.

Deficiency. "Any loss or abnormality of a structure or psychological, physiological or anatomical function. or "an anatomical or functional alterations which affects the individual in the activity of his organs".

Demography. The study of the human population, its size, distribution and typical characteristics of members of population groups.

Unemployment. Refers to the lack of work. An unemployed person is a person who forms part of the active population (and is of working age), and who seeks employment without finding it. The situation entails the impossibility to work, despite his wish to do so.

School desertion. Temporary or permanent abandonment of formal studies by an individual (Ramiro Espino de Lora). School desertion is an educational problem which affects the development of society, and occurs principally due to lack of economic resources or to the disintegration of the family.

Health determinants: The set of personal, social, economic and environmental factors which determine the state of health of the individual or the population
The public health determinants are specific mechanisms which different members of socio-economic groups affect in varying degrees of health or sickness. The health determinants, according to Lalonde, Canada's Health Minister, are:

- Lifestyle. This is the determined which most influences health and one which is the easiest to modify with activities in health promotion or primary prevention.
- Human biology. This determinant refers to genetic inheritance which cannot be modified today with available medical technology.
- Health system: This is the health determined which perhaps most influences health, and yet it is the health determinant which received most funding to care for the health of the public, at least in developed countries
- Environment. This refers to the contamination produced in the air, water or soil which affects the health of the individual, both when it is the biological, physical or chemical Contamination, or when it is what is known as "sociocultural or psychosocial" contamination, in which we include dependence, violence, stress, competitiveness, etc.

According to these health determinants, State public health states should invest more in:
a) health promotion, so that the population will require for healthy lifestyles, and
b) environment.

Disability:. The WHO defines disability as "the loss of secondary function capacity, with a deficit in all of functioning, whose condoms is a weakening of intellectual functioning and the capacity to map to meet the daily demands of the social environment". The consequences of disability depend on the form and depth with which it alters the adaptation of the individual to the medium. Disability may be given to definitive, or recoverable (to the extent that it is possible to improve certain aspects); or, in some, it can be compensated (through the use of prosthetics or other resources.

Dispensaries. Charitable establishments which provide medical and pharmaceutical assistance to the sick, but without giving them lodging or hospitality.

District. Each of the subdivisions of a territory or population for an administrative or juristic purpose.

DPT (Vaccination). Immunizes for diphtheria, pertussis, and tetanus.

Ecological. A part of biology which deals with relations between organisms and the medium in which they live.

AD. Acute diarrhoea

Fertile age. The age of the products of conception calculated from the time at which fertilization takes place. Also known as the Fertilization Age.

Effectiveness. When we speak of effectiveness, we refer to the capacity or ability which a person, an animal or a machine or device or any element may show, to obtain a certain result based on an action.

Efficiency. Refers to the resources employed in results obtained. Therefore, it is a capacity or quality which is much appreciated by business or by organizations, since in practice, all that they do has the purpose of achieving some goal or objective, with human, financial, technological, and physical resources, knowledge, etc.), limited and (in many cases) in complex and very competitive situations. Defines the cost-benefit ratio in the performance of tasks.

Elisa. A method on laboratory analysis – enzyme-linked immune absorption.

Emigration. Leaving one's own country or region to establish oneself in another country or region. Forms part of a wider concept of migrations of population, which includes both emigration (departure for other places) and immigration (the arrival of persons from other places). It could be said that immigration ends where immigration begins

And second, a seaport is a means whose basic functions are to provide refuge to vessels, and to allow persons or goods to be transshipped from one mode of transport to another, one of them normally being an oceangoing vessel.

Epidemiology. Epidemiology is the study of the distribution and determinant causes of events related to the health of defined populations and the application of the study to the control of health problems.

Equity means impartiality. In health, equity means that the needs of the individual determine the distribution of opportunities for welfare.
Equity. Cultural and geographical accessibility, increased use of health services by those who most need them.

Schooling. Years of instruction or study in which an individual has received or is receiving.

Life expectancy at birth (used in demographic profiles). Average number of years which a newborn child can be expected to live, if in the course of his life he is exposed to the mortality rates specific to his age and sex prevalent at the time of his birth, for a specific year, or in his given country, territory or geographical area.

Life expectancy. This is an estimate of the number of years of life remaining to a person, taking the basis of the mortality rates by age for a given year

State of health. Description or measurement of health and individual or population at a specified moment in time, according to certain identifiable standards, particularly with reference to health indicators.

State. The legal, political and good political organization encharged by society with the government and management of the common weal. It is the entity which is vested with the power, sufficient and necessary autonomy and authority to perform its functions

Risk factor. Social, economical biological conditions, forms of conduct or environment is associated with or causing an increase in susceptibility to a specific illness, deficient health, or lesions.

Fecundity. This refers to the average number of children which women have. To measure this accurately, there must be an precise delimitation of the variable which we wish to measure, since the figure which expresses it will be very different depending on whether we consider all women who live who are alive at a given moment in time in a country, or only fertile women, eliminating those who died before they reach fertile age. It is also possible to estimate fecundity rates by ages or fecundity rates by cohorts. The capacity to have descendants, the capacity for reproduction

Pyroclastic flows. This is mixture of solid particles or particles and gases fused at high-temperature, which can behave like a liquid with great mobility and destructive power. Certain types of flows are known as *burning clouds*. These flows are classified by the nature of their origin and characteristics of the products which they form when the volcanic material floating in the hot gases precipitated to the ground. The aspect of pyroclastic flows during eruption is impressive.

Geo statistics. This is a discipline which concerns itself with the statistical analysis of spatially distributed variables in a given ambit.

Geo-referencing. Geo-referencing is the positioning which defines the location of a special object (represented by a point, vector, area or volume), in a given system of coordinates and datum. This process is used frequently in GIS. Geo-referencing, in the first place, has a technical and scientific definition applied to the existence of things in physical space, through the establishment of relations between raster or vector images on a geographical projection or system of coordinates. Therefore, geo-referencing becomes the central issue for data modelling by GIS.

Pregnant women. The state of pregnancy or gestation (carrying a child in one's womb) is a physiological status of the woman which starts with the condition of fertilization, and ends with childbirth

Ethnic group. Populations that have maintained their identity over history, as collective subjects, who had evidence of origin, history and cultural characteristics of their own, and whose social, cultural and economic practices and conditions distinguish them from those formed by the hegemonic society, and therefore has legal recognition by the State.

Overcrowding. The term ""overcrowding" refers to the lamentable situation in which human beings live or in or occupy a given space in numbers superior to the capacity of that space to contain them, in accordance with the parameters of comfort, safety and hygiene (homes with more than three persons per room). Overcrowding is a very important problem today, since the world population is very large and density of population is extremely high in some spaces of this planet.

Incidence. The number of new cases during a specified period of time. Incidence is frequently expressed as a proportion, in which the number of cases is the numerator, and the population at risk is the denominator.

Health indicator. A health indicator is a characteristic of an individual, population or environment which is able to be measured (directly or indirectly), and which can be used to describe one or more aspects of health of an individual or population (quality, quantity and time).

Health inequity. And inequitable situation would be one in which the differences of distribution of a good, for example health resources, or the macro determinants of health conditions, are financially, technically or morally avoidable, do not reflect free choice, and demand must identify a responsible agent, whether that which originates it or an agent with capacities to rectify unequal distribution

ARI. Acute respiratory infection

Efficacy. This relates to the optimization of all procedures to obtain the best and most expected results. Therefore, efficacy supposes a process of organization, planning and projection whose objective is that the results established can be achieved.

Latitude is the distance in degrees (and angle of inclination) of a point on the surface of the earth with respect to the geographical Equator. The geographical Equator is a line which divides the surface of the Earth into two segments, that is, the greatest circumference of the Earth, has a latitude of 0°

Lethality rate. This expresses in general in the form of a percentage, the number of persons diagnosed to have a particular illness, who die as a result of that illness

in a given period. The term is applied most often to specific outbreaks of acute diseases, in which all patients have been placed under subsequent observation for an appropriate time, to include all deaths attributable to that disease.

Longitude. Longitude measures the distance in degrees between one point on the Earth´s surface and the Meridian, which is known as the Greenwich Meridian. The Greenwich Meridian also divides the surface of the Earth into two sections.

Lumbago. Pain located in the lumbar region, produced by a strained muscle or certain illnesses, such as rheumatoid arthritis, osteoarthritis, or a disc injury.

Environment. The system formed by natural and artificial elements which are interrelated, and which are modified by human action. This is an environment which conditions the way of life of society, and includes natural, social and cultural values present in a given time and place.

MEF. Women of fertile age.

Migration. Migration refers to all displacements of the population produced from one place of origin and another place of destination, entailing a change of habitual residence in the case of persons, or of habitat in the case of migrating animal species.

Morbidity. The term morbidity comes from the medical and scientific vocabulary, and is used to indicate the number of the individuals considered to be ill or victims of a clinical disease in a given space at a given time. Morbidity is therefore a statistical datum of great importance to be able to understand the evolution and advance or retreat of an illness, the reasons for its arrival and possible solutions.

Mortality. We take the concept of mortality as a characteristic of existence, we should define it as what is necessarily opposed to life. Mortality is the condition of being mortal, therefore, of being susceptible to death. However, the term mortality is usually related to statistical studies applied to populations. Mortality than appears as a number which seeks to establish the number of deaths in a given population determined by age groups or specific illnesses, and generally expressed in units per 1,000, per 10,000 or per 100,000 inhabitants.

Multi-ethnic. This refers to certain ethnic groups identified: in societies, a nation, people or state, which bring together different ethnic groups, regardless of differences in culture, race and history. They have a common social identity which is greater than a "nation" in the conventional sense of the word.

Municipality. (Columbia definition) a collection a set of inhabitants of the same town governed ruled by a Mayor and Council. A free city, governed by its own laws.

Birthrate. Birthrate refers to a statistical estimate of the births of people which take place in a given place and in a given time. The rate is expressed as a number of births per 1000 population in a given population during one year.

OVP. The oral polio vaccine. Protects against poliomyelitis

Penta, Pentavalent. The vaccine contains dead bacteria of *Bordetella pertussis*, which causes whooping cough, tetanus and diphtheria toxoids, the antigen of the hepatitis B virus, and the Haemophilus influenzae or Hib-type B. And its application provides protection against diphtheria, whooping cough, tetanus, type B influenza and hepatitis-B.

Birth weight. This refers to the weight of a baby immediately after birth. It is directly correlated to the gestation or age of the mother, and can be estimated during pregnancy by measuring uterine height. If the baby is born in the normal range of weight for its gestation or age, this is known as "appropriate for gestational age (AGA), while those born below the limit defined for gestational age have been exposed to fetal development which predisposes them to health complications, and to health competitions in the mother.

Population pyramid. The population pyramid is a type of histogram which is made up of bars whose height is proportional to the number of the population represented in a given place in the world, by sex and age. In graphic terms, it is read as follows: the bars of a double histogram arranged horizontally on the abscissa line, will indicate the age groups in the population belonging to the two sexes, the males to the left and the females to the right.

Population. The set of subjects or events which present one or more characteristics in common. Therefore, a population is determined by the characteristics which are selected, depending on the interest of the study.

Policy (public policy). Social processes which lead to the taking of decisions and their execution, establishing values for entire societies. Policies are major orientations for government or administrative action in public affairs, interplays, or processes of accumulation or non-accumulation of power, the product of interaction between the various actors in society.

Health policy. Declaration or official directive within institutions (especially Government), defining priorities and parameters for action in response to health needs, available resources, and other political pressures.

Prevalence. The number of new cases of an illness or the number of times an illness appears during a given period of time. This is expressed as a ratio for which the number of cases is the numerator, and the population at risk is the denominator.

Setting priorities. Setting priorities is a process in which various options or problems are assigned values or order, and those which have greater relevance and those in which an intervention or solution will provide an evident improvement to the former situation are identified.

Seaport. A seaport is an area of land and sea joined to the sea by a navigable connection, considered in essence as an entity with natural and artificial means or installations.

Focal point. The term in health which identifies the person who coordinate the activities of health risk management.

Refugees. Any person who is outside his own country of his nationality, or, in the case of not having a specific nationality, outside the country where he habitually resides, and cannot or does not wish to return to that country, and cannot at or does not wish to protect himself there, due to persecution or to a strong and well-founded fear of persecution for reasons of revolution, war, race, religion, nationality, membership of a social group in particular, or political opinion.

SRP/MMR. The triple virus vaccine, protects against measles, mumps and rubella which, if not avoided, may be serious.

Screening. (Infection) The selection or separation of individuals with viral infections through the application of rapid tests.

Raw/Gross birthrate. (Employed in demographic profiles). This is the ratio for a given year between the number of live births in a population and the number of inhabitants of that population. The numerator is the number of births during the year and the denominator is the total population (estimated at the half-year, usually), where these births have occurred. (A7) Unit of measurement: per 1000 inhabitants.

Annual population growth rate. (Used in demographic profiles) the average annual change in the population size of a given country, territory or geographical area during a specific period. Expresses the ratio between the annual increase in population size and the total population for that year, usually multiplied by 100. The annual increase in population size is defined as the sum of the differences between births less deaths and the difference between emigrants and immigrants, in a given country, territory or geographical area for a given year. (A6). Unit of measurement, percent.

Maternal mortality rate. Of every 1000 children born, the number who died before reaching their first birthday

Mortality rate. Number of deaths during a year, as a percentage of the population, or for every 1000 population

Birthrate. Number of live births a year expressed as a percentage of the population, or per 1000 population

Total fecundity rate. The number of children which a woman will have on average during her life, calculated by country or region. Between 1980 and 1995, the average fertility rate in low-income and medium-income countries fell from 4.12 3.1, while in high-income countries, it fell from 1.9 to 1.7.

Rates. The ratio between the number of times a phenomenon has been observed divided into the maximum number of times which the same problem might have been observed, in a given place and at a given time. The result of this ratio should be multiplied by a constant, usually a multiple of 10, to adjust to realities of the population.

Vertical transmission. In HIV infections, this corresponds to the transmission of HIV from mother to child during pregnancy, or in childbirth or during breastfeeding

Traumatism. An accidental event caused by a mechanical agent, which when acting on tissues with sufficient force and intensity causes alterations in the same, with the total or partial histic destruction, of variable extent, depth and gravity.

Vulnerability. Due to the presence of a certain number of characteristics of genetic, environmental, biological or psychosocial nature, which acting individually or together, sets off a process. This gives rise to the notion of risk in medicine.

ANNEXES.

Annex 1. Methodology of the Health Needs Index

The health situation of a geographical area or population group is characterized by a number of variables and linkage. Sometimes, information must be synthesized into an index which takes account of the various aspects of health needs., Unsatisfied health needs are not only expressed in terms of morbidity and mortality indicators. Given their affinities as health determinants, this is also an important source of information for the evaluation of health needs (the social indicator focus). In this sense, the need is expressed as damage or risk to health, or as a lack. One of the simplest and most robust procedures to calculate the needs in the index is known as the social indicator method, developed in the United States for the allocation of funds, and which is still in force.

Before generating in these indicate index for health, there must be a definition of the suitability of the various indicators within it, including the following characteristics:

1. That it should represent important dimensions of health. In this sense, it is assumed that different conditions express needs in different dimensions, such as health problems, socioeconomic level, access to health services, etc.

2. That it should be valid, in the sense that it measures what it claims to measure.

3. That it should be sufficiently sensitive to be able to distinguish between elements

4. That it should be independent, that is, it should not reflect other indicators.

Once indicators for the index have been identified, there are further problems to be solved: standardization of units of measurement in the indicators, which will vary from one to another, prior to calculating a single and summary indicator. A simple statistical and statistically robust procedure consists of standardizing all units into a single one. For this, standardized scores are applied (Z scores), which was one of the most commonly-employed methods to measure and characterize individuals with respect to their populations.

The scores are calculated on the basis of two widely known measurements, the average and standard deviation of distribution frequencies in population. The Z-score for each geographical unit for each indicator is obtained as the difference between the observed value and the expected (average) value, divided by the standard deviation, using the following formula:

$$Z_i = \frac{X_i - X}{S}$$

Where X_1 is the observed value, X is the average and S is the standard deviation.

It is suggested that the values for Z should be rounded up or down to integers to facilitate final classification.

In turn, the Health Needs Index for each geographical unit is calculated from the algebraic sum of the various Z-scores of each indicator, with the following formula

$$INS=z_1 + z_2 + \ldots. + Z_n$$

Finally, the results of the sum are arranged to identify the groups (i.e. geographical areas or populations) with the greatest needs.

One critical consideration in the sum of the Z-scores is the direction of each indicator, such that the final vector should have a single direction. That is to say, that indicator should be aligned in a single direction, whether positive or negative. For example, if the maternal or infant mortality rate is used, and one unit has a high score, this means that it is in a situation of need. However, if the illiterate population percentage is used, and there is a high percentage, this means that the population is in a low-need situation. If the intention is to use both indicators, the sign for the health index needs to be changed (that is, change its direction), so that they would have the same orientation.

Health Needs Index

In order to generate a health needs index, a set *k* of health and social economic indicators was taken (all with the same sign), to measure geographical units (countries, regions, etc). For each geographical unit included, the values of indicators were standardized using Z-scores. The result is the health needs index for each geographical unit, in ascending order.

Annex 2. Equivalent of ASTU in Andean countries

ASTU LEVEL	BOLIVIA	COLOMBIA	ECUADOR	PERU	VENEZUELA	CHILE
0	Country	Country	Country	Country	Country	Country
1	Regions	Regions	Regions	Regions	Regions	Regions
2	Departments	Departments	Departments	Departments	Departments	Departments
3	Provinces	Groups of municipalities	Cantons	Provinces	municipalities	Provinces
4	Municipalities	municipalities	Parish	Districts	Parish	Communes Municipalities

Annex 65

PINEDA-MEDINA, JUAN AND NAIZOT, ANNE-LISE/ FLACSO-ECUADOR, SOCIAL IMPACT STUDY OF TERRITORIAL THREATS IN GUADUALITO AND BALSAREÑO VILLAGES, AWA TERRITORY. ADVANCES IN THE ENVIRONMENTAL IMPACT STUDY IN GUADUALITO AND BALSAREÑO.

One. General introduction. The principal territorial threats in Awa territory.

ANNEX 8

Social impact study of territorial threats in the Centres of Guadualito and Balsareño
Awá Territory

Advances in the environmental impact study in Guadualito and Balsareño

Coordinators: Juan Pineda-Medina, Anne-Lise Naizot

FLACSO – Ecuador

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General Introduction: The principal territorial threats in Awá Territory

The historical, drugs, social and environmental context of the advance of the Palm-Plantation frontier, stripping by timber companies, and mining.

A. The expansion of the African palm industry in Ecuador

1. A historical view of the expansion of palm planting in Ecuador and Esmeraldas

The origin of the African palm plantations in Ecuador goes back to 1953-1954 in Santo Domingo de los Colorados, Province of Pichincha and Quinindé Province of Esmeraldas, where small-scale plantations were started. The expansion began in 1957, with an increase in the area planted of 1,020 ha (Carrión in Nuñez 1998).

In the 1960s and 1970s, the producing model implied a rapid development of the African palm crop in Ecuador (Carrión and Cuvi, 1985). From that time onwards, the State encouraged the expansion of this agricultural industry (see next paragraph). But it is particularly since 1990 that Esmeraldas, specifically the Canton of San Lorenzo was affected by the growing of African palm.

a. Factors in the expansion of the African palm crop

One of the decisive factors in the expansion of the African palm crop in Esmeraldas lies in the integration of that region with the rest of the country, with a first-order highway system. The most important highways are: -Ibarra-San Lorenzo, and the coastal road which joins the south of Manabí with Esmeraldas as far as Mataje on the border with Colombia. "While the highway network was a response to the request of the local communities to have contact with the other communities and peoples, this was the road down which the timber companies and African palm growers imposed their law, and engaged in irrational extractive activities, disrespecting and displacing the Afro-Ecuadorian communities and indigenous peoples" (Proposal for the updating of the expansion of the African palm plantations in the Canton of San Lorenzo, Province of Esmeraldas, document supplied by Altropico).

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b. Figures of expansion in Ecuador

The oil palm in the crop is present in 11 of the 22 provinces of Ecuador. Pichincha,

Esmeraldas and Rios represent almost 70% of national production[1]. In Esmeraldas, the African palm area is 79,719.02 ha. In Pichincha, 34,201.27 ha, and in Los Rios, 31,977.28 ha. The national total is 207,285.31 ha (source: Census ANCUPA-SIGAPRO MAP-2005 Prepared by DPA/MAG).

African palm plantations increased from 97,850ha in 1994 to 207,285 ha in 2008 (ANCUPA). However, for Buitrón, these figures are conservative. "There are a large number of companies and subsistence plantations which are not registered in the growers associations" (Buitrón, 2000). At the turn of the century, some 31,000 ha of woodland had already been transformed into single-crop African palm plantations, near the Ibarra-San Lorenzo road (Buitrón, 2001, cited by Barrera at al, 2005:86). According to the Awá Centres Federation FCAE, there are 40,000 ha of woodland which had been felled to make way for industrial plantations of African palm.

The major growing companies present in the study area, according to a report which recorded the expansion of single-crop African palm plantations in the north of Esmeraldas on June 30 and July 1, 2007, are Palmeras de los Andes, Alzamora, Ales Palma, Palasema and Gaisa. Those of Labores Agricolas, Palmeras de los Andes, Palmeras del Pacifico and Ales Palma are closest to the two Esmeraldas centres of the Awá people, where the study was made, Guadalito, surrounded by plantations, and Balsareño, where the plantation frontier has not reached them yet.

2. The State, Ministry of the environment and palm growers; the sociopolitical organization of the African palm industry

a. State policy and the impunity of the palm growing

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The Ecuadorian State has a clear responsibility in the expansion of the agricultural frontier, and indeed, of the single-crop palm oil palm and African palm plantations. "The production of African palm in Ecuador is a clear and almost extreme example of the dominating position occupied by the State in the development of the crop. Its actions took place in the context of an economic policy (prices, credit, land, etc), and in a legal framework designed to protect national production, and in the creation of a program for research and technical expert assistance" (Carrión and Cuvi, 1985:77).

At the level of the institutions and Government, the expansion of this crop was favored by the lack of control of invasions, the conflict of competences between INEFAN and INDA (Morales, 2004), and the awards made to the growing

[1] Elizabeth Bravo Biocombustibles, cultivos energéticos y soberanía alimentaria en América Latina, Encendiendo el debate sobre biocombustibles, Red por una América Latina Libre de Transgénicos, Acción Ecológica, Quito

companies made in the context of agrarian development policies.

One clear example of this role of the State is Executive Decree 2961 of August 8, 2002, signed by President Gustavo Noboa, who declared 56,000 ha of the Canton of San Lorenzo as an agricultural zone, in areas considered to be permanent forest protection and zones of ancestral ownership.

Due to pressure from the ecological and environmentalist organizations, the Ministry of the Environment, at the end of 2000, initiated eight lawsuits for the felling of native woodland. The sanctions from these trials show a certain impunity for the palm industry: "For Palmeras de los Andes, the judgment has been reversed under appeal, due to errors in the location of the property. For Palesma, a fine of US$67,908 has been imposed for felling 250ha of secondary woodland." Ecuafinca has been fined 10 minimum salaries. Palmeras del Pacifico was acquitted by the Forestry District of Esmeraldas, for lack of evidence. Aiquisa received a fine of 10 minimum salaries. The case against Agricola San Lorenzo was annulled under appeal due to administrative errors. Teobroma was fined 10 minimum salaries, and Ales Palma also 10 minimum salaries (the minimum salary is US$4 per day (Buitrón, 2001).

In the Esmeraldas section of the territory, the single crop African palm industry has grown exponentially in the last 10 years, and today it works in the context of policies for the implementation of incentives for the so-called "biofuels", which are the basis for future expansion of the crop in the area. Executive Decree 2332 published in Gazette No. 482 of December 15, 2004, declared the production of biofuels to be of “national interest”, as a component in the formulation of

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fuels consumed in Ecuador, and the agricultural production destined for the preparation of biofuels. This Decree also created the Biofuels Consultative Council, which is accountable to the President of the Republic, with the Minister of Energy in the chair. The Ministry of Energy has created the National Biofuels Program. With the development law for biofuels (November 14, 2007), Ecuador takes a further step forward. It creates the National Biofuels Council. Its composition secures the predominance of the voice of State and of the companies involved in the production of "biofuels" (of the 14 members, only two come from "civil society" (one delegate from the universities and polytechnics of Ecuador, appointed by CONESUP, and one delegate from the environmentalist organizations). The others are five Ministers and seven delegates from the business groups, including a delegate from ANCUPA, a delegate of APALE, a delegate of the Association of bio ethanol producers of Ecuador, and of the Association of biodiesel producers of Ecuador, etc). Through the biofuels development law, tax benefits and other incentives were set up for investment projects for the production of biofuels, both in the production phase of raw material, and in the industrial phase (tax benefits), and it was made mandatory to mix fossil and biofuels.

b. Access to the land: social marginalization from concentration of land-ownership.

In Ecuador, the palm growers have developed three strategies for access to land:

- Concessions in the Ecuadorian Amazon, granted by the State, and loans from the Inter-American Development Bank.
- Purchase of land directly or through intermediaries.
- Acquisition of common land, in ancestral possession, which according to the Ecuadorian Constitution cannot be sold.

The interest in expanding the palm industry in the north – Esmeraldas - led to a boom in land dealings. The main characteristics of the networks for land purchase shows the ridiculous prices at which the dealers, middlemen, and in general the growing companies bought the land from the subsistence farmers or the Afro-Ecuadorian

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or indigenous communities. The distribution of the proceeds was highly inequitable, since the middlemen sold the land to the growing companies at a higher price. In other cases, and particularly in the Ricaurte area, it was the companies and themselves who bought the land from the subsistence farmers and communities, as prices even lower than those paid by the middlemen (Buitrón, 2000). "Through these mechanisms, the companies have been acquiring rights for themselves which were rights to possession for farmers and settlers, and occupying lands of forest heritage of the State, over 60,000 ha of woodland" (Buitrón, 2000)[2]. Further, as Speiser states (1993), the growing of palm is one of the activities that concentrates land ownership most.

The acquisition of land by the palm growers is often accompanied by violent practices of persuasion and threats. The pressures exerted on impoverished populations cause social suffering.

With regard to the social and environmental impacts of the palm industry, please refer to Part III of this study.

B. The timber companies and the deforestation in El Choco

1. The history of deforestation in north-western Ecuador: Esmeraldas

a. The extraction of timber: creating situations of conflict

Since the 1970s, Ecuador had implemented a policy of concessions over State-owned forestry land for the timber companies. The wood in these areas soon became exhausted, and the companies began to access the remaining natural woodland belonging to the State, indigenous and Afro Ecuadorian land and

[2] Some investments in this area belong to the brother of former President Jamil Mahuad Witt and National Congress President Juan José Pons-Arizaga (La Hora, 16/03/2000 cited by Buitrón 2000)

subsistence farmers, by paying rent (to the Chachi), by invasion, by purchase, or by appropriation of smallholdings and AfroEcuadorian possessions, generating highly conflictive situations.

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There are records of situations of conflict throughout the region: conflict due to the implementation of the Ecoforest 2000 Project, on settlers´ lands in 1991, involving Fundación Juan Manuel Durini, IFC, GEF-World Bank, and the company Endesa Botrosa; the case of the Parish of Malimpia in the Canton of Qunindé, involving INDA, and the timber company Bosques Tropicales S.A. (Botrosa), the case of "the El Pambilar property ", the conflict which arose from the implementation of the outsourcing of forestry control STCF in 2002. These are just a few examples of the potential conflict caused by of the opening up of primary or secondary forests, legally or otherwise, for exploitation by the timber companies. One of the general aspects of the relations between the timber companies and the indigenous peoples with regard to commercial felling is the substitution of State services with direct relationships with the economic agents[3]. As Chavez and Garcia say, (2004) the absence of the State has given more power to economic actors, and has meant that communities come to deal directly with these actors in the case of conflict. "The expectations generated by the offer of state services are a negative factor, for them and for other indigenous and AfroEcuadorian communities, since in their absence, direct relationships have had to be formed with economic or social agents based on mechanisms of domination established by the latter, to meet their needs, and this is beneficial for them but contributes to the destructuring and dependence of the communities. The internal processing of change is not always prompt or effective, and the invasion of their spaces by the outside world is continuous and increasingly frequent, and this causes an increase in internal demand, and new problems" (Chavez and Garcia, 2004:161)

The access to Awá territory was facilitated by the construction of three roads, which ended on the boundaries of their territory. At a workshop held in Ibarra with FCAE on January 17, 2005, in the context of a UNDP-GEF consultancy for reformulation of the Project for El Choco in the Province of Esmeraldas, Roberto Fuentes, Coordinator of the Natural Resources Program for the Awá territory at the time, and according to Barrera et al (2005), states that the timber company offered to build roads to the communities in exchange for the wood. Guadualito, the parish of Tululbí, was one of the first centres to enter into direct negotiations with the Robalino timber company at the end of the 1980s (according to Aida, when she was a girl there was a road; according to Luz ..

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…María too: this suggests that the road was built around the 1980s, between 1979 and 1985), and this led to the construction of the highway which passes

[3] I will deal with the matter of the “absence of the State” later

through the middle of it. In Guadualito, this negotiation led to the deforestation or 60% of the 2,400 ha of forest (Barrera et al, 2005).

Direct negotiation with the companies may become a source of major internal conflict, as can be seen in the La Union case today.

b. Figures of deforestation

Deforestation begins in the second half of the 20th century, with the expansion of the agricultural frontier, the arrival of settlers, and the growth in external demand for agricultural products. In the 1970s, deforestation first occurred along the coast. During this period, the tropical woodlands of the northwest were left relatively intact. In 1974, only 6% of the Santiago basin had been converted into agricultural land. Deforestation accelerated in the 1980s. Between 1983 and 1993, the deforested areas tripled from 56,552 ha to 152,222 7 ha, affecting 27.9% of the area under study. The annual rate of deforestation in this period was 1.95% (Sierra, 1998:141). Further, the important impact of the selective felling of fine hardwoods such as *chanúl* (*humiriastrum* sp.) and *guayacan* (*tacecuia* sp.) must not be ignored. This form of felling affected area of some 1 km along the rivers. The diversity, structure and physiognomy of the woodlands are affected significantly by this type of felling (Myers, 1980). The potential impact of selective felling could affect 187,000 ha, that is, 47% of the area under study (Sierra, 1998:141). Government archives (ITTO/*Instituto Ecuatoriano Forestal y de Areas Naturales y de Vida Silvestre*, 1993, *Estrategias para la Industria Sostenida en el Ecuado*r, Ministry of Agriculture, Quito, Ecuador), indicate that between 1983 and 1992 2,205,146 m³ of wood were transported outside the region under study. If the average volume of wood is 37 m³/ha (Sierra, 1998:144), the author calculates that this quantity of wood corresponds to an area of 60,950 ha of natural woodland, that is, an average of 6,772.2 ha a year. The data generated by Sierra for the period of the study (1983-1992) show that 86,107.5 ha have been the deforested, that is, an average of 9,567.5 ha per year. Therefore, some 70.1% of deforestation between 1983 and 1992 can be explained by the extraction of wood in itself. It is commonly accepted that 50-75% of the forest canopy was opened up during selective commercial operations, with the felling of trees and the construction …

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…of roads (Amelung and Diehl, 1992, Burgess 1993, Guppy 1984, Repetto 1988, Schmidt 1987). It should also be noted that official figures underestimate the area deforested by commercial activity. No account is taken of the gigantic losses occurring during felling, which had been estimated as 45% of the initial volume (ITTO/INEFAN 1993). Further, these figures do not include deforestation produced by the expansion of the agricultural frontier. In 1996, it is calculated that 75% of the humid tropical forests of North-West Ecuador had been deforested (S, 2001:330). Esmeraldas produces 60% of construction wood and ply-board in Ecuador (Rival, 2004). More recent data indicate that at the beginning of the 1990s forest cover was 1,080,000 ha (9% of the country's total forest surface), and by 2001, only

40.51% of the province remained with natural cover, which means some 600,000 ha (Ecociencia, Sistema de monitoreo socio ambiental, 2004).

2. The social organization of deforestation.

One important result of Sierra´s research (1998, 2001) on of the dynamics of deforestation in north-west Ecuador is that the extraction and exploitation of wood in this region is related to the domestic market. This is very unlike the general model of analysis, which describes the relationship between deforestation and external markets. The final markets for sawn timber are the Ecuadorian furniture market, and the local construction industry. "In 1992, the construction sector consumed 60% of sawn timber produced in Ecuador. What remains is processed by the wood manufacturers, and a small amount is exported (ITTO7INEFAN 1993) (Sierra, 1998:151)".

In addition to the domestic character of the wood market in Ecuador, Sierra draws attention to another central characteristic of extraction in the region. It is performed by a large number of small companies or informal primary producers, generating long production chains with a large number of middlemen, and inequitable distribution of prices along that chain. As Barrera notes (2005:75) "With regard to the exploitation and trading in wood, a network of middlemen has been constructed, formed by companies, traders, and third parties who have kept the price of wood down for the producer. The direct beneficiary of this strategy is the Ecuadorian woodworking industry, which (…) does not assume the environmental costs of deforestation (…) In general, the industry is not the direct exploiter of natural resources, this function is performed by a system of intermediation which guarantees a constant flow …

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…of trees into the industry". In this system, the primary producers may be local (family units, the determination of rules for use and access to natural resources are set by the communities themselves), or external (semi-formal businesses, or people contracted by matchwood or whitewood companies to sell, cut into planks, and sometimes transport the wood bought from the families, and in general, intermediaries). Most of the wood in log or trunk form is extracted by local primary producers, and represents 31% of total wood production. Families also produce sawn timber directly or otherwise, and this represents 46% of the wood extracted from local forest (Sierra, 1998:149). In general, the local producers fell, cut and transport some 77% of the wood exploited in north-west Ecuador. The growth in the rates of deforestation in the 1980s coincides with the introduction of many band saws in the region, facilitating commercial felling (22). Depending on the type of articulation between primary producers and markets, production may be spontaneous or controlled. The spontaneous deforestation is the work of local families, who extract the wood without any kind of formal or informal agreement with specific buyers. They assume all the costs of production, and more importantly, the risk (sudden rises in prices, transport problems), and sell the

production to existing buyers in regional markets. Controlled deforestation is effected under formal or informal agreements, which regulates the offer of wood to specific buyers (retailers of sawn timber, veneer companies). These are the small or medium scale wood companies (retail sellers of sawn timber, factories, veneer companies) who induce felling by providing band saws. By contrast, the external primary producers extract the wood with capital- intensive techniques (heavy machinery), and are specialized in veneers, panels and logs. They operate as intermediaries or contractors for the major panel producers, and are responsible for opening up roads and organizing timber exploitation.

Commercial felling begins with the establishment of formal and legal agreements with the owners of the forest. The local inhabitants give exclusive rights for exploitation and their work. In exchange, they receive a road, and in general are paid a fee for each tree felled (Sierra 1998:150-151). As Razetto says (1995) 75% of the volume of wood used by the …

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…wood industry in Venezuela, Colombia, Ecuador, Bolivia and Peru is extracted by small-scale producers, and sold to middlemen or major companies.

At the level of the political organization of deforestation, it should be noted that the large-scale exploitation of forest resources by the timber industry has implied a series of "strategies protected by laws and regulations regarding forest resources, and the ownership and land ownership. One common legal form has been land concessions for the exploitation of wood in the State´s Forestry Heritage". (Barrera, 2005:75). According to INDA figures between November 1997 and March 2000 8,334.36 ha were delivered to Botrosa, and 189,867.52 v ha to Endea, in the province of Esmeraldas. The State as is identified as being one of those responsible for the rapid loss of forest

In the case of the Awá territory, despite the official position of FCAE, that it does not allow exploitation for and by the timber companies in the region, buyers and middlemen for these companies exert pressure to enter into direct negotiations with some centres. FCAE denounced the situation to the Ministry of Environment, which "admitted its inability to control corruption of public servants, themselves, and has not offered any kind of some specific support for the Awá to end illegal extraction, and the constant pressures of the timber companies" (Barrera, 2005:77). In the face of this situation, FCAE decided to play the role of intermediary. However, illegal felling or spontaneous deforestation continues to be an important trend in the Awá territory, and the inequitable pattern of the distribution of resources along the production chain has been maintained. In order to counter these threats, FCAE and international conservationist organizations as well as cooperation agencies and local environmental organizations have been promoting programs for sustainable forest management (MFS), and transformation of wood (CTF.)

C. Mining in Ecuador

1. A general view of mining in Ecuador

A historical look at mining in Ecuador

"As we know [mining] has been a model cause of profitable activity in economic terms, …

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…a source of political jobbery in social terms, and authoritarian in political terms" Alberto Acosta

Mining has never represented an important element in the national economy of Ecuador. However, successive governments and the mining sector itself have acted to transform the country into a binding producer in preference to other uses of the soil, such as agriculture, and the protection of biodiversity. In the last ten years, legal and political mechanisms have been developed to expand mining in Ecuador.

The exploitation of metal minerals has been a factor for many years in Ecuador, at small-scale. Gold is the main mineral extract exploited since the beginning of the 20th century, in the area of Zaruma and Portovelo, in the south-west.

- The 1960s- the "Development Decade"

In this decade, the recommendations of ECLAC were applied, and measures designed to avoid popular uprisings were introduced, including the agrarian reform, the substitution of imports with State support for private industry, or State intervention. In mining, the first General Mining Law had been passed in 1937, along with the law of Gold Deposits, for mining used as a subsistence activity.

- The military dictatorships, "Petrolism "

The mining sector began to structure itself in the 1970s. The Mining Development Law of 1974, in addition to ratifying the State ownership of mineral resources, establishes the State's power to engage in mining activities directly or otherwise. The mining industry has been styled as "a public utility", and the commercialization of minerals extracted exclusively belongs to the State" (Mining Diagnosis of Ecuador, in a document supplied by Alberto Acosta). Small mining was promoted, encouraging the formation of cooperatives of small and medium producers. Conflicts arose due to invasion and seizure, against international concessions.

- The economic crisis of the 1980s

The 1980s is known a "the Lost Decade" in Latin America. The world recession,

and the effect of adjustment programs improved in posed by the IMF and World Bank dealt harsh blows to the "peripheral" economies. In the field of mining, neoliberalism was the spirit of Decree-Law 06 which…

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… implemented the Mining Law of 1985. After 1986, there was an aggressive exploration campaign by local and foreign companies throughout Ecuador.

- Business model and public corruption: the 1990s

As of 1990, the sector became consolidated, protected by new State laws. In legal terms, in the decade 1991-2000, settlements were legalized, mining rights were allocated, a single ministerial authority was created, and an administrative authority came into being. In 1991, Law 126, the Mining Law, was introduced, with a regime of concessions, and the first environmental regulations. But this was soon considered to be insufficient to generate a process of private investment. The law recognizes the figures of cooperative mining and mining condominiums, in addition to the delivery of assistance to these organizations. After 1995, the Ministry of Energy and Mines, with World Bank finance, implemented the PRODEMINCA project, to encourage the growth of mining activities, with the participation of private capital in the best possible conditions.

- The neoliberal model, 2000-2009

In 2000, Law 126 was reshaped into a neoliberal form. The legal context for its provisions on mining, since 1991, contained rather weak rules about environmental prevention. However, the 200 reform was disastrous for Ecuador. It was prepared in the context of the World Bank PRODEMINCA project, and was intended to open up Ecuador to transnational mining industry[4], through a liberalization of mining activity, consistent with the adjustment policies applied in Ecuador by governments friendly to consensus with Washington. This legislation established what could we could call a “mining absolutism”. It stipulated that concessions could not be extinguished by environmental damage or for social ill-effects. "In other words, this important reform fostered attractive conditions for mining and large-scale mining investment on disastrous conditions for Ecuador, such that, as noted, even for the Government, this law turned out to be tremendously prejudicial to the interests of the State and to local communities affected by that activity" (*Diagnóstico legal de la minería en Ecuador, INREDH*).

[4] Through the creation of mineralogical databases: amendments to local legislation such as the Trole Law, weakening of fiscal and environmental controls,, mandatory delivery of concessions applied for, prohibition against suspension of mining activities by the authorities, promotion of corporate tax incentives (0 royalties) such that the commercialization of mining was exempt from value-added tax (IVA) etc.” Diagnóstico legal de la minería en Ecuador, INREDH)

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Today, as a result of the opening up of the country to large-scale industrial mining, activities of exploration and exploitation of mines are progressing in many different places. "The area intended for development of mining exploitation covers more than 20% of Ecuadorian territory, that is, 5,629,751 ha of soil for mining concessions, which include protected areas, protective forest zones, indigenous territories, zones with archaeological remains, protected areas, high slope zones, agricultural land, and in some cases, all these characteristics come together in a single mining concession "(Mining diagnosis in Ecuador, document provided by Alberto Acosta).

It should be noted again, that the contribution of mining to GDP is minimal. Nonetheless, it is considered that Ecuador's mining potential is equivalent to 70% of the current value of its oil reserves. "In geographical terms, in 2008, 31.99% of concessions (1,728) are concentrated in the south of Ecuador. El Oro, 7.21%: Loja, 14.69% and Zamora Chinchipe, 10.08%" (ibid).

Today, major transnational mining companies in Ecuador include Iamgold (Toronto), International Minerals Company, (Scottsdale Arizona), Corriente Resources/Ecuacorrientes (Vancouver), and Kinross Gold (Toronto). Iamgold and IMC have their largest projects in the province of Azuay, and Corrientes and Kinross are in Zamora Chinchipe and Morona Santiago. Other companies are Dynasty Minerals and Metals, with their main projects in El Oro, Loja and Zamora Chinchipe; Salazar Resources in Azuay, Bolívar and Pichnicha; Nortec Ventures in Azuay; Atlas Moly, Cornerstone Resources, Channel Resources and Coastport are in Azuay and Loja.

Below is a map of Ecuador's mining concessions, as at March 2007 (source: DECOIN), and a mining concessions map for the life corridor Chiles-Mataje (source: Altropico).

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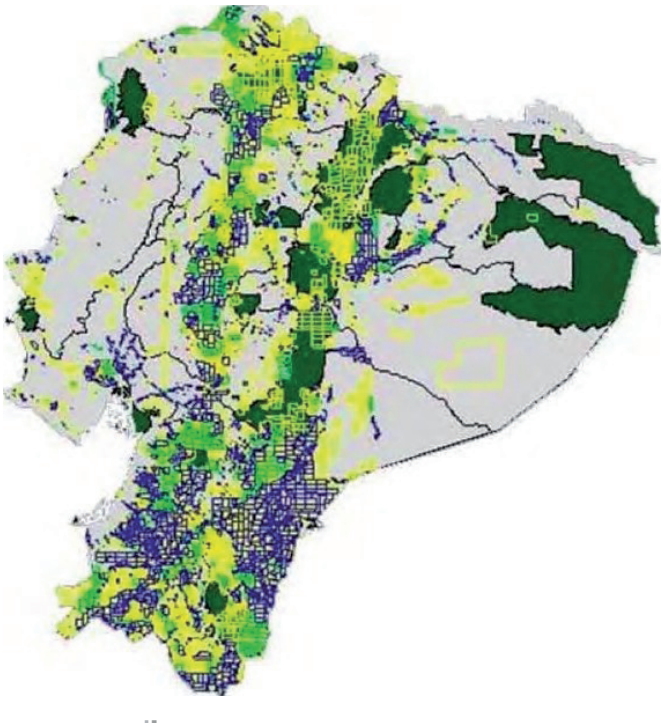

Yellow:	Inactive
Green	In process
Blue	Granted

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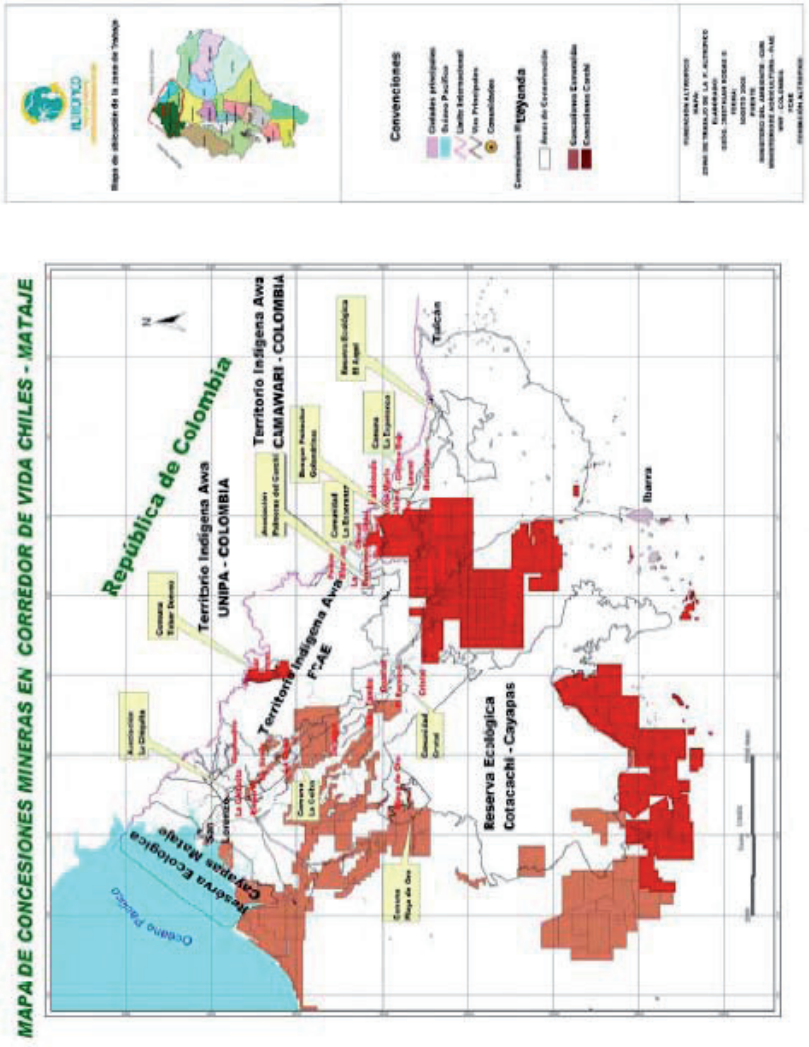
Annex 65

MINING CONCESSION MAP IN THE LIFE CORRIDOR CHILES-MATAJE



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b. Potential conflict in mining in Ecuador

Socio-environmental conflict related to the mining industry has proliferated in recent years (see social impact of mining in this report). Below, the map shows that mining concessions in many cases are superimposed on territories of indigenous peoples and nationalities, and the potential for conflict of mining in Ecuador can be plainly seen.

Map of indigenous peoples in Ecuador: in pink, the mining concessions to the adverse effects to indigenous territories

Source: Mining Diagnosis of Ecuador, document supplied by Alberto Acosta

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Map of Ecuador.Red hands are showing the resistance of the various populations of Ecuador to mining exploitation, and most coincide with the corridor of mining concessions.

Source: Mining Diagnosis of Ecuador, document supplied by Alberto Acosta

C. Types of metal mining activity in Ecuador[5], and description of the different phases of mining.

- **Typology**

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In the first place, a distinction must be made between two general types of mining: mining for metal minerals, and mining for non-metal minerals[6].

- **Medium and large mining projects**

"In metal mining, medium and large-size business activity is still marginal. In the last 10 years, most of the local and foreign companies have engaged in exploration activities. Some have left, due to the fall in the international prices of gold, and also

[5] The definitions are taken from Sandoval-Moreano´s study F. 2002 Fundación Ambiente y Sociedad
[6] This type of mining extracts non-metal resources . In Ecuador these would include clay, ferruginous sands, baritone, chalk, kaolin, feldspar, marble, silicon, gypsum, coal etc. As stated by Fabia, Sandoval Moreano (2002), " mining for metals has a marginal influence on the Ecuadorian economy, but non-metal minerals are the supplies needed by civil construction and have an impact across the country.

due to conflict with local populations" (Sandoval, 2002).

- **Small-scale mining**

Small-scale mining may be defined as an urban activity which is somewhere between partisan or subsistence mining and medium-sized commercial mining. It is the most important set segment in mining in Ecuador "due to the large amount of material extracted and processed, and because it concentrates the majority of the workforce reported for the mining sector" (Sandoval, 2002). Small-scale mining was fundamentally organized into cooperatives, making way for the mining associations in the 1990s.

- **Subsistence and Artisan mining.**

Subsistence mining is defined as "that which mainly uses manual instruments, and typically is a family activity, extracting small quantities of mineral, which serve to sustain the family economy directly or as a complement" (Sandoval, 2002). "In metal mining, artisan activities are scattered in areas which traditionally there has been the extraction of gold" (ibid)

– **Phases in the mining process**

- Prospecting

The first stage in a mining process consists of the search for areas containing minerals to be developed into mining projects, through the collection of rock samples and sediment to confirm the existence or otherwise of minerals, and it can be said that this is the least offensive part of the process.

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- Exploration

In this phase, the deposit is located, its metal content is verified, and studied for profitability. In this phase, camps, and roads are constructed, highways are opened, heavy machinery such as giant trucks is brought in, and power lines are installed, amongst other things.

- Production

This mainly consists of preparation of the deposit, and extraction and transport of minerals.

- Treatment

The treatment of minerals extracted is intended to raise useful content. This involves milling (stone and rock) in enormous mills. In other words, it is a set of physical, chemical and metallurgical processes, to which the mineral is subjected after exploitation, in order to raise its useful content" (Article 7-Phases of mining activity).

- Forging or smelting

The use of fire to raise the level content of the metal.

- Refining

The process intended to convert metallic products into high-purity metal (Article 27, Phases of mining activity).

- Commercialization

Dealing in minerals

- Closedown and rehabilitation

This phase consists of work related to the closedown of operations and the restoration of the area intervened by the mine, amongst others. Costs may be very high.

Each phase of the mining activity generates different social and environmental impacts (see Synthesis).

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2. *The new Mining Law*[7]*. An unconstitutional law and a serious threat to the indigenous peoples*

The new law came into effect with its publication in the official Gazette *Registro Oficial* 517 of Thursday, January 29, 2009. In general, the law regulates the granting of mining concessions. "Concessions may not be delivered to persons who have had any conflict of interest in the sector. According to the version of the law, the activity is prohibited in protected areas, and it is said that in order to initiate an activity in this area, it will be mandatory to have permits from the appropriate ministries, from The Telecommunications Department, from the civil aviation authority DAC, and from the Cultural Heritage Institute IPC. Mining territories, in their widest extent, will be reordered in accordance with the National Development

[7] The Mining Law approved by the National Assembly includes 158 articles, seven general provisions, nine transitory provisions and two final provisions.

Plan. Sanctions will be set for illegal exploitation, clandestine dealing, invasion into mining areas, etc. With regards to royalties, it is established that a mining concession will pay not less than 5% on marginal sales, in addition to 25% income tax, and 12% of profits as determined in the law. In general, 60% of royalties should be used in productive projects through the Municipalities, and 50% of that to Government agencies. Further, all forms of precarious employment and the contracting of Ecuador in personnel will be regulated" (source: INREDH).

The opposition of social and indigenous movements to this law, and consequent mobilizations, were immediate. The main arguments of civil society and some lawyers are given below:

The law presents a series of violations. "The system of approval and the content of several articles of the law are contrary to the Constitution and to international human rights protection instruments" (source: INREDH). They are harmful to the indigenous peoples specifically. For this reason, CONAIE and representatives of the water system of certain parishes and communities in Azuay proposed an action for unconstitutionality against the law. This was a collective effort, in which other organizations such as INREDH, Pachamama, Lianas, the Amazon Legal Network RAMA, and Acción Ecológica, also took part as advisers.

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The visible violations of the Constitution and other legal errors are synthesized below, as taken from the current Mining Law. The information given here was compiled from three main sources: the article by INREDH "*Diagnótico Legal de la minería en Ecuador*" http:www.biodiversidadla.org/content/view/full/50457; the open letter of Alberto Acosta to the members of Constitutional Tribunal, an article of Mario Melo “LEY DE MINERÍA NO RESPETA LOS DERECHOS COLECTIVOS Y ES INCONSTITUCIONAL".

a. Violation of the right to prior consultation of the indigenous nationalities

The Mining Law was not consulted with the indigenous peoples, communities or nationalities before adoption. That is unconstitutional, since the Constitution recognizes consultation prior to legislation for the indigenous communities, peoples and nationalities. This matter is regulated in Section 37.17, in which it says that the indigenous communities, peoples and nationalities must "*be consulted prior to the adoption of a legislative measure which may affect any of their collective rights*". Further, the decision to validate the Mining Law should have complied with the terms of Article 6 of ILO Convention 169 on indigenous and tribal peoples, of which Ecuador is a party, that is *“a) to consult with interested peoples through appropriate procedures, and in particular, through their representative institutions, whenever there are legislative or administrative measures which may affect them directly*". **There was no prior consultation by the State, either of the national community, nor of the indigenous nationalities of Ecuador**. The Mining Law

was adopted in violation of Section 57.17 of the Constitution and Article 6 of ILO Convention 169, and therefore, since the procedure or by the Constitution was not followed, and the Mining Law is unconstitutional in form.

b. Violation of the principle of division and hierarchy in laws

Final Provision 2 of the Law is openly unconstitutional and arbitrary. It says that **"The norms of the Mining Law prevail over other laws, and may only be amended or repealed by express provision of another law specifically destined for that purpose". The** Constitution of the Republic of Ecuador, Chapter 2, Functions of the Legislature, Section 3. Legislative Procedure, …

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…Article 133 states as follows: *"Laws will be organic and ordinary. Organic laws are 1. Those that regulate the organization and functioning of its divisions created by the Constitution. 2. Those that regulate the exercise of constitutional rights and guarantees. 3. Those that regulate the organization, competences, powers and functioning of autonomous decentralized administration. 4. Those related to the regime of political parties and the electoral system. The issue, reform, repeal and construction of a generally mandatory nature of organic laws will require an absolute majority of the members of the National Assembly. Other laws will be ordinary laws, and may not amend or prevail over an organic law*".

Therefore, and in accordance with the matter in question, the Mining Law is an ordinary law, and as such cannot amend or prevail over organic laws. When it imposes the character and hierarchy of the law in final provision 2, it is stated that "***its norms will prevail over other laws***", there is an attempt to invent, outside the provisions of the Constitution, a denomination which does not exist, and even less, does not respond to the hierarchical order established by the Constitution, that is, it is a piece of legislation whose character and hierarchical order has not been defined, and this places it totally outside the Constitutional legal order, contrary to respect for the block of constitutionality of rights, **and that is sufficient reason for the entire Mining Law to be declared unconstitutional. Laws which regulate economic and productive environments cannot be senior to laws which regulate human rights, as might be the law of food sovereignty, or the law of water, amongst others**.

c. Violation of the rights to territory of the indigenous nationalities

The Mining Law in force contains precepts that allow **displacement, division and encumbrance of the territory of indigenous nationalities,** through the monetary and discretionary establishment of easements for mining activities.

Articles 15, 28, 59, 100 and 103 contravene Articles 57(4), 57(8)) and 57 (11) of the Constitution of the Republic of Ecuador.…

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…
***"Article 15. Public utility**. Mining activities are declared to be a public utility in all their phases, within mining concessions and otherwise. In consequence, the constitution of easements as necessary will be in order, within the context and limits established in this Law, considering the prohibition and the exception indicated in Article 407 of the Constitution of the Republic of Ecuador.*

***Article 59. Complementary constructions and installations**. The holders of mining concessions may construct and install within their concessions treatment plants, forges and refining installations, waste accumulation deposits, buildings, camps, deposits, ducts, pumping plants and motors, ditches, workshops, electricity transmission lines, ponds, communications systems, roads, railways, and other systems of local transport, canals, docks, and other means of embarkation, and may enter into activities as required for the development of their operations and installations, subject to the terms of this Law, to current environmental law, and to all other provisions of law corresponding to it, subject to agreement with the owner of the service, or, if related easements have been given, in accordance with the terms of the Constitution of the Republic, this law, and general regulations.*

***Article 100. Types of easement**. From the moment at which a mining concession is established, all the installation of treatment plants, forges or refining facilities are authorized, the surface of the property will be subject to the following easements: a) that of being completely occupied as required for the installations and constructions proper to the mining activity. The holder of the mining concession will mandatorily pay the owner of the property a sum of money for the use and enjoyment of the easements, and also make payment for damages caused. If there is no agreement, the Mining Regulation and Control Agency will determine that amount; b) easements for rights of way, water supplies, railways, aerodromes, ramps, causeways, conveyor belts, and other systems of transport and location; c) Those established in the law for the regime of electricity sector, for electricity installations; and, d) Others as necessary to develop mining activities.*

***Article 103. Constitution and extinction of easements**. The constitution of an easement over a property, free area or concessions, is essentially transitory, and will be granted through public deed, and if ordered by a resolution of the Mining Regulation and Control Agency, it will be registered. These instruments will be entered on the Mining Register. These easements are extinguished along with mining rights, and may not be used for purposes …*

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… other than those proper to the concession or plant; and may be expanded or restricted depending on the activities of the concession or plant."

The Mining Law also states that "liberty of prospecting", which allows any person to invade the territory of the indigenous nationalities in order to undertake prospecting work:

Article 28. Freedom of to prospect*. Any individual or legal entity, whether Ecuadorian or not, public or mixed or private, or community, association, family or independent, except those prohibited by the Constitution and this Law, may freely prospect, in order to search for mineral substances, except in protected areas and those contained within the boundaries of the mining concessions, in urban areas, populations, archaeological zones, assets declared to be a public utility, and special mining areas. In these cases, a favourable administrative act must be obtained in advance, as referred to in Article 26 above".*

Analysis:
Article 57.4 of the Constitution contains the rights of indigenous communes, communities, peoples and nationalities to territory; and it establishes that "**the territories of the indigenous peoples and nationalities will be inalienable, may not be embargoed, and are indivisible.**" This provision is also breached by the Mining Law. **An easement is a form of dividing property, since the owner continues to be such, but the effective control of the land passes to a third party. This is equivalent to the possibility of dividing indigenous territory, and indeed, to embargo on it.**

Therefore, Articles 15, 28, 100 and 103 are in violation of the rights of the indigenous nationalities to territory.

The Mining Law violates the "indivisibility of the indigenous to the territories of the indigenous peoples and nationalities", since Articles 15, 28, 59, 100 and 103 of the Mining Law allowed mandatory easements over the territories of indigenous peoples, and the right to receive indemnities for them. In other words, the law permits that the territory should be occupied and must be subject to rights of way, (due to installations and constructions proper to the mining activity; transit, water supplies, railway lines, aerodromes, any other system of transport and communications, and anything useful to mining activity: Article 100), and only provides for an indemnity to be paid to the owner of the territory. Further, the …

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… owners of the mining concessions "may agree" on easements with the owners of the property (Article 101). The word "may"-meaning an optional possibility-should not be confused with the word "must", which indicates an obligation. **The owner of the property does not have the option to deny or oppose an easement.**

- **The Mining Law violates the special characteristic of indigenous territories as being inalienable and not subject to embargo**. The Law allows enforced

displacement of the indigenous nationalities without following the exceptional procedure of the Declaration of the Rights of Indigenous Peoples, ILO Convention 169 and the jurisprudence of the InterAmerican Court of Human Rights, that is, informed and prior consent. This is contained in the character of public utility of the mining activity. According to Article 323 of the Constitution, the State may EXPROPRIATE property for reasons of **PUBLIC UTILITY**, for the purpose of "the executing plans for social development, sustainable management of the environment, and collective welfare". This means that the lands and territories of the communities, or private property, which opposes the engagement in mining activity, can be expropriated with the simple allegation of some kind of "collective welfare".

Not only is this an attack on the principle of informed and prior consent, analyzed elsewhere, but also is opposed to the principle of the higher protection of the rights of indigenous peoples for their territories, which form part of the "block of constitutionality", in observance of Article 3, and in harmony with Article 57 of the Constitution, in which "*the indigenous communes, communities, peoples and nationalities will be recognized and guaranteed, in accordance with the constitution and with that, covenants, declarations and arranged international human rights instruments, to have the following collective rights*:"

The third reason for unconstitutionality of Articles 15, 28, 59, 100 and 103 of the Mining Law is the fact that **they impose a non-sustainable economic activity on the territory of indigenous nationalities, when the Constitution states that the activities for the sustenance of indigenous nationalities must be respected, in particular, that management of biodiversity and of their territory.**

The fourth reason for unconstitutionality of Articles 15, 28, 59, 100 and 103 of the Mining Law implies that any individual or legal entity, whether Ecuadorian or foreign, **"has the faculty to prospect, in order to look for mineral substances". This means, that people can enter when they wish and where they wish, without asking for the owner's permission** (that is, freely), to …

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… make mining studies, except in cases expressly indicated in the law: protected areas, mining concessions, urban zones, population centres, archaeological zones, goods declared to be of public utility and special mining areas. Consequently, they may freely enter the private rural property (farms, land), belonging to individuals, and the collective properties of indigenous communities, communes, peoples and nationalities. The "legal prospecting" in these terms is an attack on the right to ownership protected by Article 66.26 of the Constitution, and international human rights instruments such as the American Convention on Human Rights (Article 21). It is also an attack on the law of inviolability of domicile, protected by Section 66.22 of the Constitution, and it is discriminatory, because the law does protect urban zones and population centres, but leaves rural areas in conditions of vulnerability,

thus breaching Section 66.4 of the Constitution.

d. Violation of the right to prior consultation of indigenous nationalities

Article 57 of the Ecuadorian Constitution states that: "*the following collective rights are recognized and guaranteed for the indigenous communes, communities, peoples and nationalities in accordance with the Constitution and pacts, conventions, declarations and other international instruments of human rights:* ***the right to prior, free and informed consultation****, within a reasonable time, with regard to plans and programs for prospecting exploitation and commercialization of nonrenewable resources which are to be found in their lands, and which may have an environmental or cultural ill-effect upon them; to take part in the benefits with which these projects may come to have, and to receive indemnities for social, cultural and environmental damages caused. The consultation should be made with the competent authorities, and will be mandatory and opportune. If the consent of the community consulted is not obtained, procedure will be in accordance with the Constitution and the law".*

ILO Convention 169 states the following:

"Article 6.1. *Upon applying the provisions of this convention, Governments will consult the peoples interested, through appropriate procedures and in particular, through their representative institutions, whenever legislative or administrative measures which may directly and adversely affect them are proposed, in order to establish the means through which the interested peoples may freely participate, at least to some extent as other sectors of …*

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… the population, and at all levels, in the adoption of decisions in elective institutions and administrative bodies and others, responsible for policies and programs which concern them, to establish the means for full development of institutions and initiatives of those people, and in appropriate cases, to provide the funds the resources required for this purpose. 2. Consultations conducted in application of this Convention will be affected in good faith and appropriate to the circumstances, in order to arrive at an agreement, or to achieve consent with regard to measures proposed.

Article 15. 1. *The rights of interested peoples to natural resources existing on their lands must be especially protected. These rights comprise the right of those people to take part in the initialization, administration and conservation of those resources. 2. If the ownership of the minerals or underground resources is vested with the State, or the State has rights over other resources existing in those lands, the Government will establish or maintain procedures designed to consult the interested peoples, in order to determine whether the interests of those peoples will be adversely affected, and to what extent, before commencing or authorizing any*

program production or exploitation of resources existing on their lands. The interested peoples will participate, where possible, in the benefits earned by these activities, and will receive an equitable indemnity for any damage which may be suffered as a result of those activities".

The Mining Law, Articles 28, 87, 88 and 90 are a violation of the right to prior consultation and consent.

Article 90 of the Mining Law speaks of a special consultation procedure for indigenous peoples and nationalities. This special procedure for prior consultation is based on the content of Article 398 of the Constitution.

It must be remembered that Article 398 of the Constitution refers to prior consultations of an environmental nature[8], which is totally different from the consultation established in Article 57 of the Constitution, which recognizes that indigenous communities, communes, peoples and nationalities are entitled to prior consultation "in accordance with the Constitution, and pacts, conventions and declarations and other international human rights instruments".

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Article 90 of the Mining Law confuses these two types of consultation, and the Constitution states that the consultation of indigenous peoples and nationalities will be conducted "in accordance with Article 398 of the Constitution", thus attempting to **ignore the right to consent which has been internationally recognized for indigenous peoples. This diminishing of the law of the indigenous communities, peoples and nationalities is unconstitutional.**

Article 87 of the Mining Law is also a violation of the right to prior and informed consultation. Article 87 states that: "*The right to information, participation and consultation. The State is responsible for implementing processes of social participation and consultation, and public institutions which are appropriate, and in accordance with the principles of the Constitution and current law. This competency may not be delegated to any private instance. These processes will be designed to promote the sustainable development of the mining activity, with due care for the rational use of mining resources, respect the environment, social participation in environmental matters, and the development of communities in the area of influence of the mining property of the project. If the process of consultation produces a majority of objectors from the respective community, the decision to develop the project will be adopted by motivated resolution of the Minister responsible. All mining concessions will respect the right of the individual to have access to the process of information, participation and consultation in environmental management of mining activities. For all processes or consultation,*

[8] The environmental consultation is made with communities affected by decisions carrying environmental risk, in which case a majority opposition by those consulted will be decided upon by the senior administrative authority (Art. 398) This provision is valid for all persons in Ecuador.

the Ministry of Finance will provide an appropriate budget, through the sector Ministry."

As we can see by a simple reading of Section 87.1 of the Mining Law, it is clear that the purpose established is that of participation and social consultation, and nowhere is a mention of prior information for the community, and much less of any prior consultation of the community. **Possibly the legislature intended to say that prior consultation is the same as social consultation, but the concepts are entirely different**. Further, prior consultation should be effected with the indigenous communities or nationalities that live in the territorial area to be intervened. Despite this, the terms of Article 87 of the Mining Law leave this to the discretion of the consulting agency, such that the consultation may be effected in any part of society. **This fact is an evident risk, due to the daily practice used by the State in its various consultation processes in the matter of oil. That is, where everyone is consulted except the community directly involved**.

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Article 28 of the Mining Law establishes the freedom of prospecting, already analyzed, and this represents a clear violation of the law to prior and informed consultation.

Article 88 of the Mining Law states that "*As of the granting of the mining concession and throughout its stages, the concession holder will provide adequate reports to the competent authorities, autonomous decentralized administrations, communities and entities which represent social and environmental or industry interests, with regard to possible positive and negative impacts of mining activity*.

This Article drastically limits the right to information and participation by the indigenous communities, peoples or nationalities, who are prevented from participation in any process of consultation or information until the concession is produced. This is in contravention to the terms of Article 37 of the Constitution. **At no time is there provision for prior consultation of the community, before the concession has been produced**.

e. Violation of the principle of exceptionality of private activity in strategic sectors

Article 316 of the Constitution states that the State may only delegate participation in strategic sectors to private enterprise as a matter of exception. The Mining Law ignores this provision of the Constitution regarding exceptions, and gives it the same treatment as a State-owned enterprise and to private enterprise in the access to mining concessions. Articles 1, 2, 22, 30 and 31 of the Mining Law do not define cases in which this delegation may be made, and leave the matter of "exceptionality " of each concession open to arbitrary interpretation.

f. Deliberate creation of the risk of disaster

The Mining Law allows activities to be undertaken in prospecting and production in areas of high risk, or high vulnerability, such as deposits of explosives or inflammable materials, dams, areas intended for capture of water for human consumption or irrigation or similar; pipelines, gas lines and polyducts, refineries and other oil installations; airports and aerodromes"; generating plants, power grid towers and lines, etc (see Article 26). Intrinsically, these areas are …

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… disaster risk areas, and any alteration of them due to mining activities may increase the risks and generate emergencies and crises of different magnitudes, which will adversely affect the local population or the country as a whole.

Further, Articles 24 and 25 permits mining in protected areas, if the President of the Republic so decides.

Article 25. Protected areas. Extractive activities for nonrenewable resources are prohibited in protected areas. Exceptionally, these resources may be exploited upon any reasoned petition of the President of the Republic, and subject to a declaration of national interest by the National Assembly, in accordance with the terms of Article 407 of the Constitution of the Republic of Ecuador.

Article 71 of the Constitution recognizes rights to nature, where life is reproduced and lived. The text states that Nature is entitled to be respected integrally for its existence and, maintenance and regeneration of vital cycles, and structures, from functions and evolutionary processes.

The Mining Law opens the door to large-scale opencast mining activities, an extractive mode which is incompatible with the conservation and sustainable use of the environment, particularly in zones of high ecological diversity and high social sensitivity.

g. The creation of conflict. An open door to the criminalization of protest

In addition to these unconstitutional measures, as Alberto Acosta notes in his letter to the members of the Constitutional Tribunal, "**The possibilities of conflict are imminent if we consider that Article 63 of the Mining Law leaves it open to the interpretation of the concession-holder that the inhabitants of the areas where extractive activities are to take place might be criminalized. It is necessary to take account of the fact that there are already cases of litigation opened against subsistence farmers by the mining companies, due to their opposition to mining".**

***Article 63**. Administrative Protection*

The holder or legal possessor of a mining right may act through the Mining

Regulation and Control Agency to impede the illegal exercise …

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…of mining activities occupation or any other act which may imminently perturb the right to protection given in this chapter.

The State, through the Mining Regulation and Control Agency, will give administrative protection to the holders of mining rights in the face of denunciations of ***entry, despoliation, invasion or any other form of disturbance*** *which impedes the exercise of mining activities.*

It should be noted that not only Article 63 can be used to criminalize people who oppose mining activities in their territories: Article 64 and 65 may also be used in this sense:

Article 64. Order to abandon and evict. *The Mining Regulation and Control Agency, based on the resolution granting protection, and at the request of the claimant, will issue a resolution ordering the illegal occupant to abandon the area object of the claim for protection, within a maximum of three days, and in the event of failure to do so, may evict him.*

If despite this measure, the illegal occupant does not abandon the area, the Mining Regulation and Control Agency, at the request of a party, will issue an order to evict, and the ***police authorities*** *competent in that province will be responsible for executing it.*

Article 65. Sanctions against the invaders of mining areas. *Persons who, in order to obtain personal advantage or advantage for third parties, individually or collectively, invade special mining areas, areas under concession, and areas which have permits for artisan mining, violating the rights of the State or of the holders of the mining rights, will be sanctioned by a fine of 200 Basic Unified Salaries, and the seizure of tools, equipment and production obtained, without prejudice to claims for protection and criminal punishment as appropriate.*

Conclusion

This synthesis of the general context (national, political, legal and social), in which the Awá territory is involved, is focused on the principal threats to the territory. The advance of the palm-plantation frontier, and violent practices of the plantation companies, conducted with impunity, the social dynamics of deforestation, and the social and economic marginalization of primary producers, the legal framework and the political orientation of mining activities, are so many different aspects that they cannot be ignored when constructing strategies for territorial defense. The information presented here seeks to shed some light on the general context in which …

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…**these activities take place, providing accurate information on laws and social processes that accompanies them.**

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II. Diagnosis of the current situation of Guadulaito and Balsareño, in the face of threats to territory

A. Social mapping workshop in Guadualito

The social mapping workshop took two days, and was well attended. In general, this workshop provided an opportunity for community reflection on certain threats to territory, especially from the African palm growers, and was an opportunity also to visualize problems which allowed several individuals in the community to have clearer notions of the social and environmental situation of the community.

On the first day, work was done in groups, maps were drawn freehand and stuck to the wall. On the second day, there was plenary work, and the information that is generated by the conversation was organized. In this exercise, only a few people spoke: Aida, Felipe, Dumar, Alirio.

Another general point which needs to be made is that some people in the community considered that some of the roads on the maps had been wrongly located, and that when they drew their own maps, the main map was changed.

Map 1. State of the territory in the past (see Annex 2)

Coordinator: Vitorio Paí

This map is a recreation of what Guaudalito territory had been in the past, and involved animated and active participation especially from the young, who were advised by Don Vitorio Paí who indicated the existence of several trees and animals.

In a general sense, this map drew attention to the recall of abundant resources and forest coverage. At that time, the limit of the Centre was not relevant, and forest cover extended everywhere. Another important aspect is that there was no road, and all that was shown was a track with some small branches off it, but the drawing also included the school and the …

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…houses, which had arrived long afterwards, and which are today close to the road. In that sense, the map is "timeless". This map also illustrates several Awá,

usually fishing or hunting, which again indicates that they recall the territory as a place of abundance.

The great diversity of trees[9], plants and animals is another outstanding aspect of this map, since it shows that important value was given to the environment in general. Among the diversity of plants, in particular, there are other medicinal plants, and especially those used for the curing of children.

The conversation also referred to aspects such as mobility, since previously, most transport had been on water. Nowadays, that is hardly used.

Map 2. Guadalito, and the arrival of the plantations (see Annex 3)

Coordinator. Dumar Mairongo (Altropico technical officer).

This map was mainly drawn up with the participation of Dumar, who knew details of the current state of the Centre, and had taken part in the process of water sample-taking in the process of the claims against the plantations. The others did not participate much in preparing the map. There is a common notion in the communities that technical officers have more knowledge, and in this case this may have limited the participation of others.

This map is an accurate presentation of how the territory looks today, placing emphasis on vegetation cover, and particularly the advance of single-crops of palm, all around the perimeter of the Centre. There are also some very general details of the vegetation within the Centre, the location of the roads, rivers and houses, and contamination.

The advance of the palm plantations:

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This map illustrates the coverage of the plantations, also showing which belongs to which of the companies, and in what order they were sown (it shows which are the oldest and which are the newest plantations). In there is an approximate indication of the dates of plantation. The map allows the identification of the trend in the advance of the plantations, and it seems very probable that the property of the company Robalino has not yet been planted, and may be acquired by the companies, or maybe invaded by other communities for subsequent onward sale to the plantation companies.

Information from the community provided the information that the first company in their territory was *Labores Agricolas*, which acquired land to the north of Guadualito. In about 1993, the company built the road known as the "Labores Road", and they began to plant that land. Today, the plantations have arrived some

[9] Their names were later put up with contributions from everyone present

500 m[10] from the edge of the Centre. This "margin" separating the plantation from the Centre still has forest cover, but it has been very intervened.

As the map shows, almost all the inlets and rivers[11] that pass through the Centre, and which provide the body to community with water, rise in the territory planted out by *Labores Agricolas.*

A second company, Palmeras de los Andes, started to plant out land to the west of the Centre at about the same time. Today, this company has bought land up to the boundary of the Centre, but there is an intervened fringe of forest of some 1 km wide which has not yet been planted out, and which separates the western edge of the plantation from the Centre. Nonetheless, people in the community suspect that this margin will shortly be planted out, and that the plantation will reach the western edge of the Centre of Guadualito.

The most recent companies arriving close to the Centre have been Callaluz[12] and probably Nelly Palma, and they settled on land to the south of Guadualito some eight years ago. The distance between the edge of Guadualito and the beginning of the plantations of these companies is greater, …

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…and they calculate two hours walk to cover the distance. These plantations are the youngest, and confirmed the direction in which the palm plantations are expanding, since they started at the north end, and have been expanding anticlockwise to surround the Centre.

According to conversations generated in the preparation of this map, the companies have developed strategies to advance their plantations, purchasing plots of land here and there as they become available, and then exerting pressure[13] on the lands still to be acquired and to plant more palm. With the passage of time, the cover of single-crop plantations is becoming continuous, as can be seen in the map in Annex 3.

The land to the east of the Centre belongs to the Robalino company[14], and has not yet been planted out, but persons in the community suspect that it will very shortly be purchased by a African palm plantation company. At present, the land although it has no find material, still has important forest cover important and valuable forest cover, since it is the only land with these characteristics close to the Guadualito

[10] Half a day´s walk from the northern point of Guadualito to the start of the plantations, according to members of the community
[11] Except Barbasco inlet
[12] People in the community say that they suspect the company has close relations with Labores Agricolas
[13] There are a wide range of kinds of pressure, including violence. No details were reported during the workshop
[14] The company no longer operates locally, but had a presence and activities important to the Centre. This will be detailed in the Relationships map.

Centre.

The preparation of this map also illustrated the pressures and the situation of this land of Robalino which has been subjected to the pressure of invasion by Afro descendant communities, in particular Ricaurte. In fact, one settler[15] invaded the Robalino land, and has already sold it to a plantation company, and it will shortly be planted out. This fact illustrates a process which could become a mass movement, and which implies a strong pressure on the company Robalino to sell its property to the plantation companies before it is taken over by the invaders. The invasions have been a regular occurrence in these territories around Guadualito, as have been a constant concern to the community itself.

In this map, it is also possible to see important features such as the 145 contaminated inlets [16], and the water samples were taken in the process of the …

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…claims against the plantation companies in 2004, with the support of Altropica and Ecolex. These seven sampling points had been indicated with blue circles with a black border (see Annex 3), and were placed on map[17] by Dumat Mairongo, who took part in the water sampling himself. In particular, there is the contamination of the R. Guadualito as it passes directly through the village, and is the most accessible water source for the community. The Sabalera is also contaminated, and is close to some of the houses.

The production of this map, and the visualization of the plantations generated an interesting process of community reflection led by Felipe Cuajivoy, who drew attention to the fact that Guadualito is almost entirely surrounded by palm plantations, and that the only forest area it has is under strong pressure from invasion, and subsequent planting.

Map 3 Health and contamination (see Annex 4)

Coordinator Felipe Cuajivoy (Health Promoter and Coordinator of the Esmeraldas region).

The main purpose of this map is to illustrate and give a special view of the contamination effects caused by the palm plantations. The contamination of rivers and inlets, and the appearance of diseases such as skin blotches and intestinal

[15] Marcelino. See Annex 3. Map of Guadualito today.
[16] The contamination of water is dealt with in greater detail in the next map.
[17] Estero Savalera. Three points, one on the Labores Agrícolas plantation, another just alter the boundary of the territory where the river joins the other inlet and the third a third of the way from the road to the boundary (the family closest to this is that of Timoteo Cantincuz. River Guadualito: one point on the plantation, another before it joins the Guabo inlet, another on the Guabo inlet and another just before it passes through the community, where the people bathe, wash clothes or collect water for human consumption retention of water-area of use of the settlement.

infection were points of emphasis in the map.

The map had a special contribution from Felipe Cuajivoy, who has a detailed knowledge of a detailed and very accurate knowledge of contamination and the degree to which it has been dispersed in water sources, the families affected, the location, and the names of their members. There was also active participation by Jair Delgado, Alirio Paí Cantincúz and Aida Cantincúz.

Sources and scope of contamination:

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This map again illustrates the location of the plantations, and the springs and courses of the inlets and rivers. In particular, there is the fact that almost all the inlets including the Rio Guadualito which passes through the village, rise in the middle of the plantations. For each of the inlets, there is an indication as to where is the point at which contamination has arrived, and is an illustration of the location will almost all the houses in the Centre, showing whether there are sick persons in each of them, or not. The map also gives details of vegetation within the Centre, illustrating that the southern zone of the Centre has more highly intervened vegetation, and the northern part still has some forest cover, although it is secondary forest, or very intervened forest, with no fine wood.

Contamination:

The contamination of water sources was one of the most worrying concerns of the Centre. As the map shows, the most contaminated inlets are Achiote; Savalera and Guadualito. Barbasco is less contaminated, since it has some woodland (20 ha or so), around its source, and it does not pass through plantations.

Most contaminated inlets receive contributions from chemicals from the two principal routes, through water run-off which comes from the plantations, dragging fertilizers and pesticides (this is constant contamination), and direct discharges of pesticides which the plantation workers pour into the inlets to fish (the community say that the workers wash the pumps with which they fumigate the palm trees in the inlets). The first form of contamination generates **chronic contamination,** characterized by the **permanent presence of small quantities in water sources**, **with chronic and long-term effects on those who consume the water**. The second form of contamination is called **acute contamination**, and is characterized by the **eventual appearance of large quantities of contaminant contaminating the materials in the water, and this may cause strong reactions to health, or even death**.

During the dry season when the flow of water is lower, the degree of contamination seems to increase considerably, since the chemicals are more concentrated.

People in the community have simple ways of knowing whether the water is contaminated or not at any given time, and the juices specifically observing the presence or absence …

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…of aquatic fauna. When there have been episodes of strong contamination of fish, shrimp and turtles, they die. The *chalitas i*n particular are fish which are particularly sensitive to contamination, and also an indicator used by the community to discover the state of the water.

The map also illustrates that the these indicators from the fauna have been able to establish the approximate limits to which the poison has reached in each of the rivers (see Annex 4, Health and Contamination map). The black dotted line shows the limit of the poison. This village is established because up to that point, aquatic fauna have disappeared at moments of high contamination, or absent see if contamination is prominent in the inlet[18]. For the inlet Achiote, which is one of the most highly contaminated, but does not enter the territory, there is no known limit to dispersion of the poison. Nonetheless, the family that lives at the head of the inlet has suffered illnesses, and one of the children has died. It is assumed that this is due to contamination.

The production of this map also allowed discussion of the generation of accurate information on the process of contamination, and this implies **permanent monitoring** in order to detail aspects such as the identification of contaminating elements with precision, the impact on health, biodiversity, and dispersion and scope of contamination, amongst other things.

The map also shows the drinking water tank that was constructed in an IOM project; it channels a non-contaminated water source which rises within the territory, and reaches the settlement. In this map, there are also the smallholdings of the various families (see yellow points, see Annex 4, Health and Contamination map), but there are no indications of contamination of the soil.

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The map also illustrates the location of the extraction plant of Palmeras de los Andes, which generates strong contamination in the streams that pass through the Afro-Ecuadorian community of La Chiquita.

[18] In the Savalera inlet, the limit of the poison lies above the waterfall located at the crossing over the road leading to the family that lives on the Achiote inlet and the river. On the Guadualito the limit of the "poison" is beyond the road crossing near the houses of Guillermo, Vitorio and Leonardo. In the inlet La Junta, the "poison" reaches down below the crops of Alirio and his parent. In the La Grande the limit is well outside the territory in the direction of Ricaurte. It is estimated that the contamination is generated in the south-east of the territory where the advances of the palm plantations can be seen (probably Nelly Palma). No limits for the poison are mentioned by Barbasco.

Disease

Given Felipe Cuajivoy´s very detailed knowledge of the dynamics of the health in the community, this map gives detailed illustration of the families who have a sick member, and indicates what type of sickness or condition they have.

The most important diseases in the community are **intestinal infections and skin blotches. There's also mention of headaches and vomiting.**

The map indicates that the worst-affected families are those of José Marcelino Cantincúzc and Horacio (known as "the shrimps", given that they are on the banks of the Achiote, which has its source in the plantations; and during its course, does not enter the territory, and always runs close to the plantations of the Labores Agricolas. This closeness to the plantations can imply a process of permanent contamination. As mentioned above, one girl has died in this family, and it is presumed that her death was related to water contamination.

Another important aspect is that the community says that "the River Guadualito is contaminated, but people are used to bathing in it", as confirmed by Felipe Cuajivoy.

During conversations outside the workshop with other members of the community, information was obtained that for families from the community that had migrated to San Lorenzo in the past (some nine years ago), and then had gone to work with the plantation companies. Only one of these families left recently (about a year ago).

In synthesis, considering the general phenomenon of contamination and sickness in the community, there was no clear pattern which gave a direct link to the accident of that link through access to contaminated water with the appearance of skin blotches or the intestinal illnesses. This indicates **that more information studies are required** in order to establish …

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…more accurate associations between contamination and the various illnesses which have appeared in the community.

Map 4. Relations of the Centre with other actors (see Annex 5).

This map is a schematic illustration of relationships established by the community with actors around it, or institutions with which it has had important relations such as the Ministry of Environment and the NGOs supporting the community in different ways.

The map was made on the second day of the workshop. It generated a

conversation in the plenary, and approached a number of different subjects[19] (148). The conversation was guided by Juan Oineda-Medina, and Anne-Lise Naizot, and the information was recorded on a sheet of paper pinned to the wall. In this conversation, there was particular participation from Felipe Cuajivoy, Aida Cantincúz and Alirio Paí and Efraín Álvarez.

Relations between Guadualito and the plantation companies

This is a sensitive matter for the community, since the arrival and advance of the plantation companies has entailed **serious environmental and social damage,** and has produced legal conflict.

In general terms, the community´s relations with the companies have been rather conflictive and without dialogue, and with no spaces for mediation. There was emphasis on the lack of respect which the companies and their workers have towards the Guadualito Centre.

The most important aspect of this relationship has been the lawsuit which Guadualito, together with the Afro community of La Chiquita, has brought against the plantation companies and the Ministry of the Environment. The lawsuit has been principally supported by the Fundación Ecolex and Altrópico.

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The lawsuit was initiated by a number of communities in addition to Guadualito and Chiquita, but they gradually withdrew, until only these two communities were left, and the process continues.

The lawsuit has been a long one, and has implied a number of different criminal actions against the plantation companies and the Ministry of the Environment, for failure to perform their functions. A brief summary of the case appears below. For more detailed information, see *Part III: Synthesis of environmental and social impact of palm plantation, timber and mining activities.*

The legal demonstration that the plantation companies contaminate the environment is the main achievement. Nonetheless, this process continues, and there is permanent confrontation since the companies continue with their daily practices and argue that they are making a contribution to the area by the generation of employment.

Prospects and opinions.

It is important to remember that the proceedings in this lawsuit had taken a long time (some six years), and there have been a number of reverses and disappointments with regard to observance of the law. For the communities, this

[19] For this collective conversation a sheet of questions was prepared for use as a guide to the topics covered .

failure to observe the law, and the certainty that there are alliances between the Government agencies and the economic and business influences, have generated feelings of impotence, lack of confidence, abandonment, fear and despair. The community feels afraid, because people realize that the plantation companies are major economic powers, and they feel vulnerable in certain circumstances, such as for example, when they have to pass by one of the plantations.

The legal proceedings began with an administrative action, which led to an environmental audit. Given the irregularities in this process, and the decision in favour of the plantations, the community with the advice of Ecolex, started a action for protection under the Constitution, which has also been managed irregularly, and with excessive delays (see *Part III: Synthesis of environmental and social impact of palm plantation, timber and mining activities).*

This entire process is generating a wide range of reactions in the community. The following were some of the statements made during the workshop, illustrating community sentiment with regard to the fear, impotence and despair which they feel.

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"There is no justice for the poor" (Felipe Cuajivoy)
"If we have to die, we will die, if we had come out and fight, we will come out and fight" (Aida Cantincúz)
"Economic power is stronger than the law itself" (Efrain Alvarez)
"It's a distant hope with respect to the law, because power has been seized from it" (Felipe Cuajivoy)
"Four years have gone by, and we haven't achieved anything" (Efrain Alvarez)
"There was a deal, and it ends with the Ministry selling out to the plantation companies."
"If you object, you also risk your life" (Efrain Alvarez)
"They don´t care who´s down here " (Felipe Cuajivoy)

Relations with the Ministry of the Environment

Relations with the Ministry of the Environment (MAE) have been indirect, through the lawsuit against the plantation companies. The community emphasized that in the process of the environmental audit made by the Ministry, together with the Pontificia Universidad Católica del Ecuador (PUCE) in 2005, ended up in favour of the plantation companies because only a few of the various parameters to be evaluated were in fact analyzed. (See details in *Part III: Synthesis of environmental and social impact of palm plantation, timber and mining activities).*

Some members of the community said that the Ministry and PUCE sold out to the plantation companies, because they had close ties to them, and met in San Lorenzo to drink during the week of the audit. The community said also that the Ministry had said that it had lost a camera containing much of the evidence of

contamination, and interpreted this to be a simple mockery of the audit process, and in particular, of the community. Relations with the Ministry synthesized by the expression "There's no justice for the poor" (Felipe Cuajivoy, community leader).

These irregular processes in the Ministry, and delays and corruption, have generated feelings of disappointment and confusion as to the cause of the lawsuit. This, in addition to …

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…the lack of information in the community on the types of legal action and results of legal process.

Statements made by leaders illustrate the degree of disappointment with legal process, which has been seen as the last alternative, and now they have lost all hope of that too. "It's a last alternative, and if that doesn't work, we understand that is the end for us" (Aida Cantincúz-President of the Guadualito Centre).

Relations with Ecolex

Initially, relations were very good, given the support provided by that organization under an agreement signed in 2004. However, at the time of the workshop, the community said it had received no information on progress in the lawsuit for some two years, and this gave them a feeling of distance from Ecolex. In this regard, the community said that it needed Ecolex to keep them informed frequently (once a month).

During the workshop, a letter arrived from Ecolex requesting participation of a representative of the community at a meeting in El Borbón, to be held on Friday, June 19, to give information on the results of the suit for constitutional protection. The community expressed its annoyance at the place of the meeting, because it was dangerous and expensive to go there, and underlined its wish for the Ecolex organization to come to meet at the Guadualito Centre and socialize, since this is where the plaintiff is living. However, the next day they decided to go.

From information obtained from the workshop, it could be established that the results of the actions of constitutional protection only determines that the company should use Green Seal agricultural chemicals and cease to use Red Seal agricultural chemicals, in the plantation. As a result of this, Ecolex thinks that another suit shall be brought, and it has made great progress in the preparation phase but the case has not formally been initiated (see details in *Part III: Synthesis of environmental and social impact of palm plantation, timber and mining activities).*

Relations with the Afro communities

Relations with African communities has a number of perspectives and dimensions. In a general sense, these relationships do not contain many spaces for dialogue, except with regard to the claims …

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…against the plantation companies. Further, tensions have been maintained principally at the level of discourse.

On the one hand, the African communities of Ricaurte are always seen to be a threat to invade their lands, because they say that the Awá have taken away their ancestral territory. The tension had some high points during the march in 2006, when the Ministry gave an order for joint management by the Afrodescendants and Awá of all the territory of Esmeralda. The community said that there were rumours during the march that the Afro-descendants of Ricaurte were going to seize the communities, since most of the people in the community were taking part in the march.

At several points in the workshop, community leaders said that the Afrodescendant communities had sold their territory to the plantation companies. In subsequent conversations with Efraín Alvarez, information was obtained that various Afrodescendant communities Guadualito had in fact sold the land to the companies, initially for a very low amount (US$200/hectare), but the communities then complained to the companies at the low price, and received another US$300 for the land already sold. It seems that this process was repeated once more. Finally, the Afro descendant communities were left without many of their ancestral lands, and they are now employed at very low pay by the companies. Their contracts are totally informal, and they have no employment benefits. Further, the companies are almost the only alternative for many Afro descendants who are forced to find work with them.

The land to the east of the Centre which now belongs to the Robalino company has also brought tension with Afrodescendants, because people in Guadualito believe that Afrodescendants want to invade that land and sell it on to the plantations.

Further, relationships with other Afrodescendant communities such as La Chiquita had been those of allies in the battle against the plantations. This process of alliances initially involved other communities and several organizational meetings were held in San Lorenzo. Today, only Guadualito and La Chiquita remain in the lawsuit.

Relations with Altrópico

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With Altrópico, relations go back further, when the process of organization and legalization of territory began. Members of the community recognize the support which Jaime Levy (currently president of Altrópico), gave to the community at the start. They also recognize the support which it initially gave community in the legal proceedings against the plantation companies. It is important to note that the relationship with Ecolex was encouraged by Altrópico, which accompanied the proceedings closely from the beginning. During the workshop, some members of the community said that Altrópico had now distanced itself from the legal proceedings.

Altrópico has continued to support the community through productive projects, including the Wimal bees, for the production of honey. This project in its operational stage means that some families have hives, and extract honey which is then purchased by Altrópico. Dumar Mairongo is a technical adviser for the project, and is very close to the community. Some members of the community said that there was confusion with regards to the project in particular, in relation to agreements for prices at which Altrópico was to buy honey. They also showed discontent with regard to the knowledge, which was principally developed in the community, and now Altrópico is using it the same bees for projects in other communities.

Relationships with the Mayor of San Lorenzo

The relationships with the Mayor of San Lorenzo have improved greatly in recent times, particularly with the most recent holder of the office. Members of the community say that the Mayor now recognizes the community, and supports them in some matters, such as the contribution of US$1000 for their General Assembly.

The community has also established ties of loyalty with the present Mayor, and it seems that they have been an important electoral support for him in the most recent elections.

Relations with FCAE

The relationship with CAE is perhaps more complex, and one with a longer history. During the plenary, there was discussion of a range of points, and was an analysis of transformation over this relationship over time. It is important to note that during the workshop, Jairo Churta (leader of FCAE) …

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…took part, and is also close to the community. At some point, the community started to talk to Jairo directly, particularly complaining about some matters, detailed below:

- *Claims against the plantations*. In general, they strongly emphasize the lack of support, the distance, and some poor communications in the process of

confrontation, claims and meeting with the plantation companies. The community said that it needed support in the legal proceedings (information, coordination with other actors, logistical support, presence and political and moral presence), and they considered that the presence of FCAE at meetings in disputes with the growers (was central).

- *Health*. On several occasions, members of the community particularly Felipe Cuajivoy, the Health Promoter, mentioned the need to set up a health centre with a doctor, given that the range of action of the promoter is very limited, and that the community needs exceed the support which he can give.

- *Conversation with Jairo Churta as representative of FCAE and youth leader:* the community leaders particularly asked Jairo to make some complaints to FCAE. In particular, these complaints were based on the fact that FCAE has distanced itself from them, and does not visit the Centres.

- *Claims or general petitions*

It was again mentioned that the rice husker was needed.

There was a general desire that FCAE should give more presence, support, and communication with the Centre.

FCAE was asked to provide more support and coordination with the Provincial Council on matters of the road, which is in poor condition.

It was emphasized that the project should ensure that they include everyone in the community, in order not to create tensions.

There was much mention of the need to create a local school for the Guadualito, Mataje, Balsareño, Pambilar and Rio Bogotá Centres (Esmeraldas communities), since in Baboso (where there is a school at present), it is difficult to get, and because Baboso also acts as a school for Imbabura, for the Esmeraldas region. They proposed Guadualito as the centre for this. It should be noted …

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…that in Guadualito, migration to San Lorenzo for education purposes (school for children) is very high.

There was a proposal to implement the growing, transport and commercialization of agricultural products such as fruit (pawpaw, *borojó, guava, arazá, Guanábana*, cocoa, oranges, lemons, yucca, corn, *chiros*, peppers, etc), and this automatically implies improvements in conditions of mobilization in the area.

They complained that the (Coast) zone leader is not doing his duties properly. There needs to be more presence of the local leader in the Centres.

B. Social mapping workshop in Balsareño

One important aspect of this workshop was the confusion with regard to **the southern boundary of the Balsareño centre**. The community did not recognize the point to the south, and for them, the line does not pass points shown on the map[20], but it cuts off that point, and follows the course of the Palabi river. For them, that point does not exist. We also wish to stress that the boundary of the centre seems strange on the maps: it seems to correspond more to the course of the river than to the line drawn. This point is important, since the crops of La Sirena are inside the territory, according to the map.

Map 1. The territory 40 years ago (see Annex 6)

This map is like a photograph of the state of the territory at the time the foundation of the Centre. It acts as a point of reference to visualize and understand subsequent changes in the territory

History of foundation of the Centre

Lisandro and Andrés Pascal told the story of the foundation of the Balsareño Centre some 40 years ago (see Annex 6). The production of this map was a most valuable opportunity …

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…for sharing collective memory, and for an account of the past. That memory may be mentally kept alive in collective spaces such as the workshops, or at internal planning meetings.

The Territory

This map shows the state of the territory and its environmental aspect (vegetation cover, biodiversity, deforested areas….).

In those days, there were limited stretches of scrub, located all along the banks of the Palabi upstream (see Annex 6). It is possible that the scrub appeared when the woodland close to the river was removed. It is therefore possible that at that time, there was scrub up to the point at which the river ceases to be navigable. Extraction began to take place in the southern part of the Centre´s territory, close to the Palabi river and the main settlement.

[20] The sketch was provided by WCS. The FCAE maps have the same boundary

There were few crops, and those that there were, were close to La Sirena (see Annex 6). The first plantations and crops were on the banks of the Palabi close to the community, and wood extraction began there (see Annex 6).

The community's perception is that the territory was covered with forest, except for the scrub mentioned, all round Ricaurte, and in the lots of La Sirena owned by mestizo settlers (the Rodriguez), and on title of private property. The perception of the older members of the community is that at that time there was abundant vegetation on that territory, and there was biodiversity, that it was almost uninhabited, extensive, full of timber, and the only transit was on the rivers. It was wild country, with sufficient resources for all, as shown on the map with the names of the animals, trees and plants found at the Centre (see Annex 6).

The map also shows the access roads and means of transport.

At that time, there were no roads. The first to be opened was that from Mataje (see Annex 6). At that time, everyone travelled by river.

The growth of the population was rapid and significant (births, and possibly migration).

At that time, they began to organize things to open up the territory in general, and the Centre in particular.

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It was also mentioned that in the past, people ate much more wild meat. When talking about the possible origins of the current illnesses, the greatest source of ill-feeling was identified as a change of diet[21] .

Map 2. The territory today, Health and Contamination (see Annex 7)

This map shows territorial changes today. More than anything, there is a focus on the three principal threats to the Balsareño territory: the plantations, the dynamics of timber extraction, and mining.

Changes in vegetation cover

In general, the forests and scrub are marked (see Annex 7). There is more scrub in places where wood has been extracted.

The rivers and inlets are marked (see Annex 7)

[21] They ate more fresh meat and loc al vegetables; but now the children want rice, tuna, beans, noodles, sugar and oil; and the older people say that this causes a good part of the diseases that the children suffer today.

The names of the trees found in the hills and by the river banks are noted (see Annex 7)

Some of the crops of the families are marked. It is important to note that downstream from the La Sirena, towards the settlement, there are two crops belonging to 2 families, one of the two being Demetrio Pascal (see Annex 7), who is sick with strong stomach pains, high temperatures, vomiting, diarrhea, etc.

The crops are close to the rivers and in general, the cultivation is most intensive around the Palabi River. There is important forest cover, but there are no meadows.

Palm plantations

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The palm plantations and the names of the companies are marked. In general, the people at the Centre are not very clear exactly where the plantations are, nor about nor about the companies. In Balsareño the plantation frontier is further away than at Guadualito, which has been totally surrounded. The community mentions the presence of two plantation companies.

To the north-east, there is Palmeras del Pacifico (see Annex 7), with plantations between seven months and three years old. The approximate distance between the plantations of this company and the Centre is 2-3 km.

Some 1-2 km downstream from the boundary of Balsareño, on the right bank looking towards the sea, there is the property of Mr Vidal (see Annex 7), with an area of some 300 ha, and a meadow which goes from the river, and 150 ha planted with palm. It is possible that this gentleman has had negotiations with Palmeras del Pacifico, since the road passes by his property and reaches down to the bottom, connected to an another property, belonging to a relative of his, bordering the Centre, to the north, was built five years ago, according to the community, by the same company.

It can be seen when travelling down river, and in general, that the plantation frontier is advancing, in many cases up to the river banks.

It is presumed that the other company is Ales Palma, because some members of the community saw canoes with that name in their plantations. The crops of that country spread to the south of the Centre, and to a distance of some 2 m from the territory boundary, with the exception of the southern point of territory (confusion), which region which comes to about 300 m from the crops (see Annex 7), according to Lisandro, whose father-in-law lives there. The palms of that company are 2.5-4 m tall, and it is assumed that they were planted some 10 years ago. It should be noted that the land which separates the crops of the boundary of the territory have already been sold to this company, thus pushing the plantation frontier even further

to the south east of the territory.

Mining

Members of the community say that a year ago, a mining company whose name and origins no one knows, started an exploration phase at La Sirena, on the River Palabi where the river leaves the territory of the Centre (see Annex 7). The community became aware of this exploration activity when it noted changes in the colouring of the water, and a large amount of …

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…sediment released by the activity of dredges. These activities were interrupted, and were resumed some three months ago, producing the same effects.

During the workshop, we noted these changes in the colour of the waters of the Palabi. On July 22, the river was very muddy in the morning, and Virgilio Nastacruz, who came from Pambilar to Balsareño in the morning, said that he had seen a suction machine and two dregdes close to the Negritos inlet on the River Palabi, in the upper part of La Sirena. Some hours later, the river had returned to its normal colour (see photos).

According to local comment, the activity at present is exploration

It is assumed that the company is looking for gold. But according to all probabilities, the extraction phase is imminent.

The community reported that the company had already bought 3 ha from people in La Sirena, on the other side of the River Palabi (see Annex 7)

As noted, the people in the community do not know the names of the company or where it comes from. During the workshop, there was a report of the high risk of contamination of water with heavy metals (mercury, cyanide), commonly used in gold extraction, and the serious consequences that this would have on human health. The community agreed to obtain information on the mining company: who are they? What is the company's name? Where do they come from?

Roads and highways

There roads and highways are marked as leading out of the Centre, and passing close to it.

There are drawings of the roads for Mataje-Balsareño, Balsareño-La Ceiba (see Annex 7, Map 2, Balsareño)

The two highways come close to the boundary of the Centre

One road goes from Ricaurte to the La Honda Inlet, passing through the property of Mr Vidal. The community told us that this road was built some five years ago by Palmeras del Pacifico. It is been used since then by a relative of …

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… Mr Vidal (Marco Cabezas), whose property adjoins the territory of the Centre (see Annex 7-mMap 2, Balsareño), to bring out wood.

The other highway comes from La Pana, at San Francisco, passing through La Ceiba, and enters La Sirena. This road is very close to the boundary, crossing the River Palabi. It is properly graded through to Palabii. It was built 8-9 years ago by the company SETRAFOR. It has been used to extract wood by the La Sirena community. This road may increasingly facilitate the future mining activities of the company, since it was the road used for the penetration of machinery, and will be the road used for extraction by the company.

Forest and woodland management[22]

There are three programs for simplified forestry exploitation at family level in the territory of the Centre and its surrounding area (see Annex 7, Map 2, Balsareño).

There was talk of the dynamics of wood extraction, the problems with the middlemen, the CTF, the simplified forestry plans at family level, etc

Diagnosis of forest management in Balsareño

The simplified forestry management plans in the Centre had been suspended for the time being. There have been problems with the forest promoters (changes of price), follow-up (sporadic), and a lack of a steady budget. Therefore, the diagnosis of the current forest management in Balsareño is as follows: based on what had already been done a year ago (marking the trees, but without felling them), the program must be drawn up for a new penetration to make a forest inventory, and to reformulate previous programs, since the original ones are now out of date, and then present them to the Ministry of the Environment to legalize the exploitation.

The Balsareño community expressed its desire to continue with exploitation of forests, at the same time as voicing a series of concerns arising from previous problems (amongst others, there needs to be more continuous and serious follow-up by the promoters, …

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… in order to avoid tensions or problems with the Ministry of Environment). There

[22] The information compiled here was generated in the social mapping workshop of July 21. 2009 and the follow-up workshop on forestry organized by Neptali Pozo and Nils Fischbein on July 22.

is a consensus among the participants as to the benefit for all the community of legalizing this exploitation of the forest.

The various criteria of the PAFSi (Environmental Regulation 039) was again mentioned, and a request was made for more respect for them (most of all, the legal distance between each Chaúl and the next).

There was emphasis on the need for a broader discussion with other centres engaged in forest management (Mataje, Pambilar). They also insisted that the situation with the middlemen is unfair, and that it does them damage.

The new CTF project was socialized. There is interest in the CTF (the sale of wood at a better price), and limited interest for the time being in transforming the wood into finished product.

Crops

Crops have been approximately marked. There are two on the banks of the Palabo downstream from La Sirena (one of the two belongs to Don Demetrio). It is unlikely that there will be contamination of soil from mercury or cyanide from mining in the future, although we have no certainty of that. What is of more concern is the human activity on the River, by people who have their crops there, and in general, in the whole community.

It was said that people fumigate the crops with Gramoxone (glyphosate) and Atakill (insecticide for ants).

Contamination of water

Some people said that for 2-3 years they had stopped drinking water in the River Palabi, considering the contamination caused by Pambilar[23]), and La Sirena.

There have been episodes of contamination of water by the communities that fish with poison, perhaps coming from San Francisco, and also from higher up beyond Pambilar. The first fish affected by the poison and contamination in general, are the *guañas.*.

Mining activity in La Sirena generates turbidity in the waters of the Palibi, upstream of the community. Considering that this is still in the exploration stage, it is assumed that this is …

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…merely sediment removed by the river itself, and small quantities of oil and diesel from the machines (dredges, extractors). Upstream of La Sirena, the river is

[23] Refuse, sewage

cleaner. Downstream, where it joins the Tululbí, we noted an increase in general contamination (turbid water, crops of African palm on the banks, refuse, organic matter).

The Balsareño community has piped water sources, which are not contaminated, from the Vuelta Mico, a stream which rises within the territory.

Of course, people do bathe and wash their clothes in the river, especially children; but if the mining company in future dumps mercury or cyanide into the water, the population of the Centre may be seriously affected. The risk is high.

There was information on practices in washing gold. Specifically, it was said that mercury or cyanide is used, and there was information on serious consequences to human health and aquatic fauna of the presence of these heavy metals and water. Emphasis was placed on the risk run by the community, and that was mention of the possibility of making a denunciation quickly, when the extractive activities of the mine began.

It is very important to have information and control of this activity from now onwards. Therefore, there must be continuous control, that is, a system for monitoring the water to see precisely whether there is mercury or cyanide in it. In general, one of the most appropriate ways to generate change in this is by recourse to law.

Contamination of the soil

There is no information or evidence that the soil has been contaminated. The use of Gramoxone and Atakill has been mentioned, and this may have repercussions on the health of the members of the commune.

Health

There were a number of different diseases in Balsareño. In general, it is considered that the change of diet (eating food from the "outside", restriction in the diversity of food) is the main source of illness in the Centre. The main symptoms and the possible sources are described below

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- Dengue has not reached Balsareño
- It was noted that despite an outbreak in the past, not many Awás died of cholera
- The commonest symptoms are: headaches, stomach aches, diarrhoea, fever, vomiting, pain in the eyes. They say that it is "something we have all our lives, there´s no cure for it now", and "An Awá´s life is hard". These symptoms may be linked to water quality (poor quality due to sewage in the river). In future, these conditions may be aggravated, when people come into contact with mercury or cyanide.

-Malaria

-White spot disease (spot is related to is attributed to fumigations by Colombia: the cloud reaches them, and also causes the spot; and also attributed to mining, although extraction has not yet begun)

-The reports of skin rashes, occasionally, from those bathing in the river.

Several of these symptoms may also be the result of crop fumigation with Gramoxone and Atakill. An accurate study is needed to establish the sources of these diseases precisely, and to take appropriate precautions

Map 3. Relationships of the Centre with external actors (Annex 8)

In the generation of this map, a collective discussion was started on the history and evolution of relations of the community with the outside communities and actors. (For details of the process of the workshop, see Annex 8)

In general, it was said that there was no intense or dynamic relationship with the nearby communities (La Sirena, Ricaurte), and this gave the impression that each community is independent, and that there are few family or commercial ties.

The following is a description and scheme by issues of the information generated in this conversation, with a related map

Ricaurte.

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In general, it was said that there has been no conflict with the Afro descendants, and that they are able to pass through their territories and communities without problems. Subsequently, it was noted that initially, when Lisandro Pascal and his family arrived, there were few relations or conflicts with the Ricaurte community. Given the small population, there was no competition for resources or land, and Lisandro Pascal says "There was no conflict with the black people, and they were just taking their wood out".

However, it was mentioned that some of the older members of the community said that there could be no dealings with the black people; but it was also noted that this was now changing.

It was reported that when the process of marking out boundaries, supported by Jaime Levy, began, the construction of this boundary was intended to avoid conflict from invasions. At that time, there were only 5-10 people in Balsareño. It was indicated that the mediation with IERAC was conducted "Because we don't want problems with those from outside". Nonetheless, the Afrodescendants of Ricaurte

began to say that the Awá had taken their land away. There was no mention of the existence of direct confrontation with Ricaurte, but there was an expression of the tensions due to territory, but this was expressed mainly in terms of discourse. Tension was permanent, and when the Minister of the Environment (Ana Albán) gave the order for co-management, this took on a greater dimension.

The march was mentioned, and particular emphasis was placed on the fact that this measure re-affirmed the Awá possession of the land in opposition to any possible claims by Ricaurte, but Ricaurte still says that the Awá had taken their land away.

At present, the situation is stable, and there was no mention of the existence of important relations with Ricaurte[24]. Nonetheless, when other issues were discussed such as the strengthening of the organization and future prospects, Lisandro Pascal and other community leaders expressed their concern at the possible the potential invasion of territory and dispute for land by the Afrodescendants of Ricaurte, if this there was any weakening of the organization. In general, it was said that in future it can be foreseen that there will be conflict with Ricaurte particularly if the Awá organizational process is weakened.

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Information was also obtained on "commercial" relations between people in Ricaurte, especially conversations which arose in the forest management workshop run by Neptali Pozo and Nils Fischbein.

It was established that the wood which the community extracts from its territory is sold to middlemen mainly in Ricaurte[25]. During the Forest Management workshop, it was repeated that this relationship is quite inequitable, given that the middlemen set the prices for the wood very low (US$1.25 per plank of *sande* or *cuangare*, and US$ 1.50 for a metre of *chanúl:* and they also can choose unilaterally, to pay late.

La Sirena

The La Sirena community has been there since before Lisandro and Andres Pascal arrived, and this is fully recognized by the Balsareño community.

This community was initially composed of the Rodriguez family, who are identified as *mestizo* settlers.

In general, it was said that there are independent dynamics, and little relationship

[24] It is presumed that the main economic relations refer to the sale of wood, where some people in Ricaurte act as middlemen. The point is analyzed later.
[25] When we passed through Ricaurte we watched the process of collection and transport of wood by the middlemen. There were several heaps of planks and trucks loading up to take the material to stores on the road to San Lorenzo near the crossing with San Francisco

between them, although subsequently they mentioned encounters such as football matches.

The Balsareño community recognizes that the process of marking out boundaries was started by the people of La Sirena and when limits of their territory were established, there was no conflict about boundaries. It is important to note that the maps available for the workshop did not make it easy to locate La Sirena territory, and the community wan not consistent with its mapping. Nonetheless, there was a general identification of the territory of the community.

At present, the main issue related to La Sirena is the presence of mining machinery on the River Palabí close to that community. It was said that the mining company has employed people from La Sirena, and it is presumed that there are good relations between them.

It is important to note that although there were many questions asking for further details of the La Sirena community and its actions, it was not possible to obtain information, and this allowed …

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…the assumption that there are no permanent interactions with them, and that the two communities live in relative independence from each other.

The community agreed to obtain more information on the mining company, in order to start action at any time it proves necessary.

Fundación Altrópico

Jaime Levy is recognized in the community as a fundamental pillar of support in the process of organization, appropriation and demarcation of territory. It was said that he invited people into the organization, arguing the threat of invasion and slavery and enslavement. It was also said that only was supportive and an adviser for the organizational process in forming relations with IERAC.

Information was also compiled on Altrópico and some of its current projects, especially the Wimal Bee[26], with which the community expressed his satisfaction. Atrópico is identified as an NGO providing support, with which there had been stable relations for some time. With regard to the fish-breeding project, they also expressed satisfaction, already said that production had mostly been used for consumption within the community, and the existence of prop and that there were problems related to the lack of clear information on the process itself. It was mentioned that initially they had started out with the dynamics of a collective fish-breeding project, but it just did not work out in the long term, and the fishponds have now been closed down.

[26] There are now 7 families in the Project with 2-3 hives each

FCAE

The relationship of the community with FCAE is strongly mediated by the personal perceptions of FCAE.

As an initial point, it was said that the relationship with FCAE has not changed much over time, and has been stable and consistent. There was emphasis on the fact that health area is that which has most changed with the incorporation of a Health Promoter. It was also said that FCAE is a fundamental point of support in the defence of the territory, but there were also complaints of the relative lack of presence of FCAE in the community, and the fact that …

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…management and technical staff spent their time in the offices. However, it was also recognized that the task of defending the territory keeps FCAE managers very busy.

It is important to note that the communities expressed concern with what they interpret to be an internal conflict in FCAE. They also said that they can see a high rotation of directors, and this is seen to be potential instability, and sometimes lack of commitment.

With regard to internal conflict in FCAE as perceived by the community, concern was expressed, in particular on questions of defense of territory. Specifically, it was said that if things continue in conflict, it is probable that there will be the threat of invasion in the future by the Afros, with increasing strength, and that in general this will produce a weakening of the territory, and therefore of the indigenous authority. They say that "if the organization is weakened, they will do away with the forests", and that this will favour the entry of the companies into the territory, leaving the inhabitants of the Centre in a very precarious position in terms of employment, as day labourers.

This position reinforces the approach that FCAE is the source of the defence of the territory, and that its internal weakening is particularly worrying for the Balsareño community.

In this context, there was mention also of recent threat of mining settling in La Sirena, and it there were reflections on contamination of water.

There were discussions of some actions as measures of control such as the coordination of a process of dialogue between FCAE and competent government authorities (Minister of Mines and Energy), the organization of regular control of water quality in Balsareño, and internally, the control of water-associated practices (refrain from using river water).

In respect of these proposals, Lisandro Pascal referred to the situation in Minas Viejas (and the unbalanced situation of the political scene), and the serious contamination of the River Tululbí ("You can't even dip your toes in it"), indicating that include internal control would be very difficult, and that direct interlocution between the community and the government authorities would also be difficult. He says that "We are nothing here, in comparison to them, but we can control the Federation, which controls the Ministry..."

In this regard, it was therefore proposed that the management (FCAE) should take up the task of defending territory and exerting pressure on the Government to observe the law and to respect the territorial autonomy …

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… of the Awá. There was mention of the possibility of a denunciation of the mining company in La Sirena.

There was also mention of environmental education as an important tool for the defense of territory.

After this discussion, Humberto Pascal (Health Director of FCAE) spoke, and summarized some of the points made with regard to the poor presence of FCAE in the community; he argued that FCAE did provide support, naming some of the projects and actions taken. Lisandro Pascal made some complaints to claim more continuous follow-up by FCAE, and support through the strengthening of cultural aspects such as Awá traditional medicine. Humberto made comments on the new health model to be implemented.

The Mayor of San Lorenzo

It was said that in general, the Awá were looked down upon when they went to San Lorenzo, particularly by Afrodescendant political leaders. It was repeated that the Awá had not been listened to, nor properly treated by the Mayor and the other authorities.

It was repeated that this situation has changed significantly, and that the Mayor of San Lorenzo today supports them, and takes the Awá into account. Salvador Pascal said that in part this was due to the fact that the Awá leaders today are young, and have established good relations with San Lorenzo. It was also said that the older leaders have more tensions with the politicians of San Lorenzo.

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III Synthesis of environmental and social impact of plantations, timber and mining.

Introduction

This synthesis provides valuable information for FCAE, intended to complement the knowledge already available on the impact of African palm plantations, the extraction of timber by the companies or by the middlemen, and mining activities.

There are details of environmental, social and territorial impacts of the three activities studied.

The synthesis provides an orderly deployment of the risks associated with the plantations, timber and mining, for the populations of the Centres affected.

It aims to act as a basic information base for the Awá Centres Federation of Ecuador in preparing their strategies for territorial defense.

A. Palm plantations

1. Environmental impact

There are details of the principal environmental impacts of palm plantations in Esmeraldas in general[27], and in Guadualito. In Balsareño, the plantations are downstream of the Centre, and there is therefore no contamination of water due to the use of agricultural chemicals in the plantations.

a. The general impact is "The replacement of agriculture and wild ecosystems of high diversity by thousands of units of a single species, causing **strong genetic erosion, and loss of biodiversity**" (Barrett at al, ibid).

b. The palm industry **increases the dynamics of deforestation**. The timber companies, after taking away the fine wood and whitewood sell the land they own to …

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…the plantation companies, and then start the process of deforestation, by burning off and planting, generating **destruction and causing irreversible degradation of large extensions of humid tropical woodland.**

c. The reduction in certain species in Esmeraldas in recent years has affected the following valuable woods": guayacán (*Tabebuya guayacan)*, chanúl (*Humiria* sp.), tillo (*Brosimun alicastrum),* sande *(Brosimun utile* ssp. *ovatifolium),* mascarey (*Hyeronima alchorneoides)*, guión (*Pseudolmedia laevis)*, chalviande (*Virola*

[27] Data from Barrera et al (2005:86) and Buitrón (2000) were used to indicate general environmental impacts of palm plantations

sebifera), laguno (*Vochysia ferruginea)*, maría (*Calophyllum brasiliense)*, matapalo (*Ficus insipida)*, anime (*Dacryodes olivifera)*, cedro (*Cedrela odorata)*, cedrillo (*Tapirira guianensis)*, balsa (*Ochroma* sp.), guarumo (*Cecropia* sp.). amongst others. Non-commercial species include tagua (*Phytelephas aecuatorialis)*, chapil (*Jessenia bataua)*, caña guadua (*Guadua angustifolia)*, pambil (*Iriartea deltoidea)* and others"

d. The single crops are a front whose expansion **exerts pressure on protected areas**, particularly in the **Cayapas-Mataje Ecological** Reserve in the Province of Esmeraldas.

e. **Contamination.** It is difficult to quantify and qualify the contamination produced by the plantation. Nonetheless, there are many indicators and results in a prior study (Altrópico, 2004). We suggest that these results be taken, along with those of this study, to make an environmental and social follow-up as a matter of urgency. The palm industry uses **important volumes of insecticides, fungicides and herbicides (pesticides)**, or "technological packages… to combat exhaustion of the soil and the threat of pests" (Barrera et al, ibid). The most common insecticides are *endosulfan* (organochlorine), and *carbofuran* (carbamate, prohibited in the US and Canada), *malathion* (organophospates); the commonest herbicide is glyphosate; the commonest fungicide is carboxin, amongst others (Nuñez, 1998). The insecticides used had been classified as highly hazardous and moderately hazardous by the World Health Organization. They also use chemical fertilizers. This utilization of high volumes of agricultural chemicals causes contamination of water and soil. Of water samples taken in Guadualito and La Chiquita, it is established that the concentration of chemical elements encountered exceeds the limits recommended the human consumption, irrigation, cattle and aquatic life (Nuñez, 2004). The contamination by these agricultural chemicals causes damage to flora and fauna, damages the health of agricultural workers, and those who live next to the plantations, or who use …

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…water contaminated by the spraying of these agricultural chemicals, as is the case in Guadualito. **The dynamics of contamination are diverse:**

- **Contamination of water**
- **Sources of contamination:**

There are differentiated sources of contamination of water. Contamination of the water by the use of agricultural chemicals in palm plantations has specific and non-specific sources.

-Specific sources:

"Specific contamination occurs with the regular spillage of mixtures or loads of

solutions in soils and water, the washing of containers and spray pumps, and the elimination of solutions applied, waters with residues, bags and recipients in drainage ditches, inlets and rivers, and filtrations in the place of storage. This contamination is characterized by high but momentary concentrations, causing acute toxicity. Research has shown that these activities are responsible for a significant part of the total concentration of pesticides in surface waters" (Ana Maria Nuñez, 2004).

One important part of the contamination in the rivers Guadualito can be attributed to the palm plantation workers, who are also the worst affected by the agricultural chemicals. When the workers want to fish, it is said that they simply toss poison into the river. This needs a more careful study of this point, in all its details. What specific products are thrown into the river? Are they the same products with which the workers fertilize or fumigate the crops?

-Non-specific sources

Non-specific contamination is produced by the loss of agricultural chemicals, even with appropriate management (Rao and Hornsby, 1999).

It is important to note that the source of drinking water in Guadualito is another stream within the territory, which is not contaminated, and this minimizes to a great extent the possible impact of contamination of water on human health.

The closer the river is to a plantation, the greater the potential contamination.
…

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…

- **Contamination processes**

The contamination of water is the result of a combination of various practices and biological, geographical and biochemical elements.

-Water can be contaminated by **edaphic** (soil) **processes**.

-Water can also be contaminated by **surface run-off**.

“Surface run-off carries the agricultural chemicals in the water across the surface of the soil towards surface waters, or is lixiviated in other places. The agricultural chemicals infiltrated into the soil first come to a non-saturated zone, from which they migrate into a saturated zone until arriving at a groundwater system. The layers which permit this movement of the water are called *aquifers.* If the upper surface of the layer of non-saturated water is able to rise or fall in the aquifer without being physically restricted by a stratum of lesser permeability, they are *non-confined aquifers*. This type of aquifer allows groundwater which contains

agricultural chemicals to be discharged into bodies of water such as rivers and inlets. This contamination is characterized by low concentrations of trace chemicals in the water over long periods of time, producing chronic toxicity due to prolonged exposure" (Ana Maria Nuñez, 2004).

- Finally, water can be contaminated by **lixiviation**.

"The loss of agricultural chemicals arises from the lixiviation of the chemicals through the root zone, or the abandonment of the limits of the crop in solution, or adsorbed in sediment particles in the surface run-off water (Goss and Wauchope, 1990). The lixiviation is the transport of agricultural chemicals by water from the surface soil into the subsoil" (Anna Maria Nuñez, 2004).

- Contamination of soil

So far, no mention has been made of contamination or loss of soils in Guadualito. The crops are located in areas where contamination from the rivers does not reach, or reaches them in very small quantities.

There is no process of erosion in Guadualito, because the territory is flat.

- **Main environmental damage:**

- Contamination and destruction of aquatic life. The water in the rivers and inlets is used to prepare solutions and to wash equipment which has handled chemicals, and this causes the regular death of fish throughout the year, and the reduction of fauna. "The processing of the fruit of the …

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… African palm generates a large amount of waste matter, which is commonly deposited on the banks of the rivers, generating contamination and affecting aquatic life" (Barrera et al (2005:86). This waste material in the rivers comes from the palm oil extraction plants, which contain an important volume of fatty residues, and these alter the levels of oxygenation of the water (Alerta Verde, 1996). In Guadualito, is the reason for the loss of fish and shrimp, and a drastic reduction in population of tortoises in the Salavera and Achiote inlets, and the R. Guadualito.

Deterioration in the health of domestic animals and fauna and flora in areas close to the plantations. After deforestation around and within the wider Regional Centre, certain animals typical of the habitats intervened have begun to colonize parts of the intervened woodland forest, and old scrub in the territory of the Centre (*guacharacas*). This produces a net reduction in the population of fish, shrimp and tortoises".

- Loss of soil (impoverishment), erosion, compaction

The single-crop of the African palm **contributes to climate change** due to the destruction of forests (net release of carbon, contributing to global warming).

Deforestation and drainage and drying works round the inlets prior to the plantation also cause **profound changes in the water regime** (Buitrón, 2000).

Smoke and gases from the oil extraction plant processes produce **contamination of the air** and supplementary water.

2. Social and territorial impact

a. General and specific social impact

The most important social impact in the expansion of the single-crop African palm are:

- Direct threat to food security and to the "health" of communities affected
- Diverse impact on food security and on traditional forms of medicine.

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Due to the loss of the forests, the collection of fruit and hunting disappears, along with traditional medicine and traditional agriculture. In order to keep themselves supplied, problems arise in malnutrition, or inappropriate nutrition (Cedis, 1985). There are is also a scarcity of material for the construction of houses, canoes and utensils.

- **Disease**

In particular, the use of agricultural chemicals and fertilizers in large quantities in the production of African palm (Nuñez, 1998) in the study area generates environmental contamination and very serious impact on human health[28] (African Centre for Biosafety, Network for a Latin America Free of Transgenics 2007). Farmers, workers[29] and families who live in the plantations and neighbouring communities are affected by contamination from agricultural chemicals, directly through contact with the product, or indirectly through ingestion or the use of contaminated water. The most common forms of poisoning occurred due to the

[28] In a document that Altrópico supplied to me – "Proposal to update the expansion of African palm in the San Lorenzo Canton, Province of Esmeraldas" it is stated that the Ministry of Health itself published a memorandum (80404-DNPC-SCA-MA) indicating that intoxication by pesticides in the Province of Esmeraldas has increase 300% between 1999 and 2003. And that, as a consequence of land sales, hundreds of families have been displaced into the swelling urban slums of San Lorenzo,. Esmeraldas, Guayaquil, Ibarra and Quito."r

[29] 58% of farmworkers on the palm plantations present differing degrees of exposure to carbamate and organophosphate pesticides (F. Natura in Nuñez 1998). Farmworkers do not have the protective equipment required to use agricultural chemicals.

handling of carbamate, organo-phosphoric and organochlorine insecticides (Buitrón 2000). Pesticides and fertilizers cause diseases of the liver and skin, due to contact ingestion of contaminated water contaminated by slow-decomposing pesticides, from the palm plantations (Buitrón 2000).

In Guadualito, the increase in disease was documented. A deeper and more detailed analysis needs to be made of the origins of these diseases (see Recommendations).

- *The symptoms:*

Stomach pains, for example, could be attributed to excess nitrates in the water, but could also be linked or reinforced by other factors.

Skin blotches and headaches are the commonest symptoms.

- ***Types of toxicity and their potential and real impact on health.***

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The harmful effects for human health are determined by the degree of toxicity. There are two types of toxicity: acute and chronic.

"Acute toxicity is the capacity to cause immediate effect (in less than seven days), due to a single exposure to the chemical. This is determined by dermal and oral toxicity, exposing the skin or ingesting the chemical in test with animals. At a value of less than LD_{50} (lethal dose), the toxic effect of the chemical is greater. Pesticides used in the production of palm are extremely hazardous, due to the high toxicity for acute conditions, and these are Carbofuran and Terbufos. The moderately hazardous pesticides are Endosulfan and Paraquat. Malathion is slightly hazardous. The pesticides Captam, Carboxin and Glyphosate do not represent acute toxicity. However, Captan has serious and reproductive and carcinogenic effects. If glyphosate exceeds a concentration of 0.7 mg/litre in water for consumption, it causes kidney disorders and difficulties in reproduction" (Ana Maria Nuñez, 2004).

“The chronic toxicity of a pesticide is determined by its capacity to cause damage due to prolonged exposure to small doses of the active ingredient. Some of the chronic effects are: birth defects, fetal toxicity, the production of carcinogenic tumours and non-carcinogenic tumours, genetic changes, nervous and blood disorders. Moderately hazardous pesticides are Endosulfan and Paraquat. Malathion is slightly hazardous. The pesticides Captan Carboxin and Glyphosate do not represent acute toxicity. However, captan has serious reproductive and carcinogenic effects. If the glyphosate exceeds 0.7 mg/litre in water for consumption, it causes kidney disorders and difficulties in reproduction" (ibid).

- ***Sources of disease***

There may be several sources of disease. One is the use of water and practices associated with water use. For example, in Guadualito it is "usual" to bathe and wash in the river. During times of greatest concentration of agricultural chemicals in the water, there is a greater vulnerability for the child population (they play with the foam generated in the river), and the risk of skin diseases, and others, for the population in general. Another source may be the consumption of water, and therefore there must be follow-up of water quality, with respect to what comes from the source of drinking water. In general, the generation of a process of environmental education, levels of hazardous toxicity for the population, may provide elements of control in the daily practices of the population (see Recommendations).

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- Structural problems in health

Traditional medicine is not sufficient to combat the appearance of new diseases. This situation produces an increase in the dependence on modern medicine that is not accessible locally. Given the difficulties of access (geographical and economic) to health in general, local care must be given greater capacity and better quality. In Guadualito, it is emphasized that the Promoter can only use medicines such as *paracetamol*, etc, which are not sufficient or appropriate to cure diseases on the ground. Prescriptions are needed for other cases, and there must be bought in San Lorenzo. The lack of economic resources and difficulties of transport are very significant.

- **Internal conflict in the "communities".**

In some cases, there may be a second-degree weakening of social structures. To the extent that purchases or invasions of land occur, or are "negotiated", at the level of "community" or centre, there may arise conflict between Centres or communities of the same nationality, and problems or disagreements between the first-level organizations and the second and third level. In the case of Guadualito, there is no internal conflict, because no land has been sold. There is also no conflict between the Centre organization (second level), and FCAE (first level) for the same reason. However, more support is required from FCAE in legal processes in progress against the plantation companies (see Recommendations).

- **Domination in employment, social and economic marginalization, poverty.**

Agricultural labour is controlled by a system of contractors, who take responsibility for employment and payment of the workers. In this way, the companies eliminate direct contracts with the workers, encourage continuous changes of personnel, and

avoid mandatory employment obligations, such as payment of Social Security and other bonuses, holidays, over time, etc (Buitrón, 2000; Speiser, 1993). Work is “casual labour”, principally during harvest time. "In the plantation companies, men women and children work round-the-clock, on a wage of US$5 a day, with no protection against the toxic agricultural chemicals used in the crops or social security, and none of the mandatory legal benefits" (African Centre for Biosafety, "Report on verification of the expansion of African palm crops in North Esmeraldas, 2007). The more technically advanced and the larger the plantation, the smaller the number of agricultural workers employed. In Guadualito, four families work in a nearby plantation.

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- **Violation of collective rights.**

None of these companies has permission to fell the forests, and they operate without environmental management plans, violating the collective rights of the local communities, recognized by the Constitution of Ecuador and ILO Convention 169, to which Ecuador is a party, including the right to be consulted when activities which will affect them are to be mounted" (Buitrón, 2000).

- **Impact on relations of the Guadualito Centre with external actors**

➢ Relations with FCAE

More presence and support is required in the process of struggle against the plantation companies. There is a feeling that FCAE has distanced itself with regard to the claims against the plantations. The legal proceedings are lengthy, but there needs to be more trust in the administration of justice by FCAE and the members of the Centre.

➢ Relations with the plantations

Relations are ones of confrontation and fear. During the workshop, we noted a clear lack of hope with regard to the lawsuit against the Labores Agricolas and Palmeras de los Andes. There is a sense of feeling of abandonment (by the organizations so far committed to the legal process).

This disappointment and despair have been expressed as follows:

"It's been about four years, and we have achieved nothing", Efrain Alvarez

The sense of fear is ever-present. When they walk through the palm plantations, they already find problems and threats (several testimonies, Monitoring 2004), and people are aware of the risks they run in the plantations", "And if you object, your life is at risk".

Relations between the members of the Centre and the non-Awá workers in the plantations is tense, due to the contamination which the practices generate ("They don't care who lives down here", Felipe).

- Minister of Environment (State)-Universidad Católica de Quito

Relations with the Ministry of the Environment are ones of mistrust and annoyance. There is a prevailing feeling of injustice, since the Ministry was found in favour of the plantations in the Environmental Audit of 2005. It is stressed that there are family relationships between the former Minister of the Environment and the lawyer for the plantations and the timber businesses in the area. This and the feeling of injustice and corruption are expressed as

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follows by several people "There is no justice for the poor", Felipe Cuajivoy, "If we have to die, we'll die; if we have to go out to fight, we'll go out to fight", Aida Cantincúz, "Economic power is stronger than the law itself", Efrain Alvarez; "It's a distant hope with the law now, because power has been seized", and "There was a deal which ends with the Ministry selling itself out to the plantation companies".

- Afro communities-La Chiquita

There are good relations with La Chiquita (they are a party to the lawsuit. The relations of confrontation with the invaders (it particular, the Afro-descendant collectives in Ricaurte). The dynamics of the invasion of land by Afro-descendant individuals and families has been reinforced by the pressure of the plantation companies on territory.

b. Territorial impact

- **Increased threats and pressure on territory**

In general, there is an important territorial impact in the displacement caused by the sale of land to the plantation companies, and conflicts between communities and within communities for access to land. The sale of land can generate conflict between communities, and individuals who have sold their land seek out other land to settle into. In Guadualito, in the past I have been various invasions by Afro-descendant collectives to extract wood. With the dynamics of the palm industry, the pressure on territory increases. According to the community, some Afro-descendant families have sold their lands under pressure from the plantation companies, and have been looking for new lands to settle on, and seek to invade the Centre´s territory.

- **Migrations due to the plantation companies**

Four families migrated from what Guadualito to work in the plantations. They live in

San Lorenzo[30]. The possibility was mentioned of leaving the community, perhaps more to emphasize the difficulties of the situation caused by the plantations. However, migration may increase in the future, as it is one of the only alternatives to generate income, and population growth is important.

- **Potential impact on the defense of territory and unity of territory.**

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Several organizations have contributed to the lawsuit in Guadualito, building greater unity in the community for the defense of their territory and opposition to the plantation companies. However, the process is weakening, and there is a prevailing perception that nothing more can be done (disappointment); this may potentially be a source of weakening of the territory (the mention of leaving). The results of the case (indemnities) may cause tensions at the time of distribution.

Conclusion

Loss of biodiversity, contamination of river water due to the use of agricultural chemicals, precarious contracting of the neighbouring population, disease, violation of collective rights, increased pressures on the territory,-there are so many effects which produce vulnerability and social marginalization. In this context, the African palm industry may be seen as a continuity of the enclave economy in Esmeraldas, and the historical process of concentration of land holdings in the hands of large landowners, cattle breeders, extractive industries (timber) and agricultural industry. *The toxicity of the African palm is an environmental racism which generates social and environmental suffering in the populations affected.*

B. The timber industry

1. Environmental impact

In general, there are two basic factors which determine the degree of impact on the environment of timber extraction. The first is accessibility, and the second is presence of species of wood with high commercial value. It could be established that in Awá territory there is a direct correlation between accessibility and timber extraction. These arguments indicate that the critical point is the construction of roads. Once a road is built, it is very difficult for the community to control extraction, and dynamics are systematically established which marginalize them in social and economic terms (see Social Impact below), and deteriorate the ecosystem significantly.

[30] In total, eight Guadualito families live in the Nueva Esperanza district if San Lorenzo. But it should be noted that the main reason for their migration was the need to find education for their children.

There are various types of wood extraction, with different impact on the environment. Initially, we find the selective felling of fine woods, which has been the commonest process in …

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… Awá territory such as Guadualito, Balsareño and other places. Next, comes extraction of white wood, with lower commercial value, but greater abundance.

One key factor which determines the degree of impact is the use of heavy machinery. Selective extraction of fine wood is usually effected with heavy machinery, as in Guadualito. The impacts of this type of extraction are greater for several reasons: 1) the volume of wood extracted: the quantity of trees which may be felled and extracted with the help of a tractor is enormously greater than the number of trees extracted with horses. 2) Given that for each usable tree felled a clearing is opened up in the forest, which knocks down more trees, with impact on coverage and the opening of clearings is high. 3) Compaction the soil and destruction of soil seed banks: the passage of tractors over the forest soils in addition to eliminating all the vegetation in the undergrowth (the plants in the lower level of the forest), compresses the soil and destroys the seeds in it, and therefore the recovery of the forest after extraction is completed is enormously delayed. The soil seed bank is a key factor in rapid recovery of the ecosystem.

The felling timber has many other impacts which could depend on the scale analyzed.

As we have seen, the effects explained in the preceding paragraph are specific-scale effects, that is, effects which can be seen at the point of extraction. There are another series of very serious impacts which are not always evident on the smaller scale. Among them, there is a loss of diversity in the ecosystem.

Ecosystems are articulated assemblies of species, which fulfill specific functions, and configure a meshing of distinguishable structures. These three attributes of woodland (diversity, structure and function) are important points of analysis. The extraction of timber generates a loss of diversity not only among mature trees, but also the fauna associated with the species locally extinguished. For example, the *Caoba* is a tree which is presumed likely to be extinct, since it is the species with low-density natural conditions, and highly prized as timber. Also, the *Chanúl* which is indeed not extinct, consists of juvenile individuals which are not good sources of seeds, and this endangers the viability of the population.

The ecosystems have characteristic structures for their state of maturity, and while this is not a static situation, there are structural parameters which allow identification of the degree of …

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…maturity of a forest. When there are strong processes of selective felling with machinery, the structure of the forest changes drastically, and it becomes an ecosystem which, having been one with a good capacity to fulfill its functions as a regulator of water, the decomposition, protection, erosion, refuge for fauna, etc, now becomes an ecosystem which does not have the same capacities to retain water, with different rates of decomposition of organic matter, with the lower capacity to protect against soil erosion, and a small capacity to offer resources or habitats for fauna.

In the case of Guadualito, where the structure of the forest has drastically changed, and what was once mature forest is now a highly intervened one, or secondary forest, including scrub, the functions as a regulator of the local climate, surface run-off and quality of forest as a refuge for fauna, have radically changed.

In Guadualito, the change in the composition of animals may be greater. One of the groups of animals which are particularly sensitive to these changes in ecosystems are the primates. People say that effectively there has been a reduction in the local population of monkeys, but that recently due to lack the loss of vegetation cover in the area, the monkeys are coming back to the forests which the plantation companies felled. Other groups which quickly disappeared with the advance of the extraction process are the large mammals, which are now to be found in very small numbers.

Given the conditions of accessibility, the extraction of wood in Balsareño has not been on the same scale. Nonetheless, there is now no longer any *Caoba,* and the *Chanúl* has been restricted to the most inaccessible parts (on the edge of Mataje).

There are other large-scale processes, mainly associated with the opening up of roads and the advance of the agricultural frontier. When the process of extraction of wood is massive, and felling is wholesale, there is a phenomenon known as the fragmentation of the habitat. Fragmentation refers to the fact that initially there were large areas of continuous forest, and with the advance of the settlers, the land has become a matrix of palm plantations with some small patches of forest[31].

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In synthesis, the process of selective felling has different impacts, depending on the degree and use of machinery. The most notable consequences are the change of structure in the forest, with impact on former populations, and the functions of the entire ecosystem. The loss of biodiversity must be analyzed in greater detail, and to do this, inventories must be taken to compare with historical data (rarely available).

[31] For a more detailed analysis of the fragmentation process, see Catan G and J. Oineda, 2008, *Fragmentación del habitat y sus consecuencias*. In G Kattán and L.G.Naranjo (eds) *Regiones biodiversas. Herramientas para la planificación de sistemas regionales de áreas protegidas*. WCS, Ecoandina, WWF. Cali, Colombia 93-103

In the study made, the process of felling in Guadualito has been most intensive, giving the effect mentioned. One fact which may aggravate the situation is the advance of the plantation frontier, which threatens to isolate the Centre. If this happens, the recovery of the forest will be much slower, since it has not been able to receive the contribution of seeds from nearby areas. In the longer term, and supposing that the current felling around the Centre is suspended, there could be recovery of coverage, and perhaps of structure, but it would be difficult to recover the composition of species, given the isolation.

In Balsareño, the process of felling has been less intensive, but it is still relatively uncontrolled, and with no criteria of sustainability. The selective felling of trees may be sustainable only with strong parameters of sustainability, that is, considering the replacement rates of individuals of the species. In this regard, we suggest that these be the most important parameters to take into account include forestry product projects such as that which is proposed for the Forest and Territory project.

2. Social and territorial impact

- **The economic marginalization of primary producers**, that is, of the local people. The primary producers occupy the lowest level in the production chain, in which the middlemen and the medium or large scale businesses have a "low-price" policy for buying, and they then "snatch" part of the resources of the local population. Sierra says that "When prices fall, the primary producers absorb a disproportionate part of the losses, and when they rise, they recover a disproportionately small part of the gains" (Sierra, 2001: 336). In general, it is indicated that "The prices of Ecuadorian timber were always below the international prices" (Sierra, 1998:153) (ITTO/INEFAN, 1993: Magill 1993).

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- **Social marginalization of primary producers.** The marginalization of primary producers is also social. The company's transfer the risks to local producers. "To transfer the risks to primary producers reduces vulnerability to climatic conditions (access by road), and secured constant offer of wood. Also, since commercial felling in northwest Ecuador is labour-intensive, the timber companies avoid the costs associated with a permanent workforce (salaries), leaving the production to local producers" (Sierra, 1998:154).

- **Social tensions.** There are several types of social tension which arise from the dynamics of illegal deforestation in the territory, and in Esmeraldas Centres.

  - **Tensions with the middlemen,** who take advantage of the difficulties of transport and access to national and international markets, to apply a low-

price policy, and several types of effective ´blackmail´ which produced vulnerability and dependence on the part of the primary producers.

- **Tensions with other communities**, and especially the Afro descendant collective nearby. As deforestation around Balsareño and Guadualito increases, so does pressure on territory in the Centres, and so, the risk of invasion for illegal felling.

- **Conflict with the timber companies**. Likewise, when deforestation becomes more acute over large parts of the country, and in areas bordering the territory, the pressure of the timber companies on indigenous territories and ancestral lands increases.

- **Potential conflict with the competent environmental authority**. Illegal felling is a major risk for Awá territory in a legal and political sense, because it is a case of lack of respect for forestry regulations established by the Ministry of the Environment, as applied to the category of Forest Reserve. But the conflicts or tensions with Government authorities go further than that. The forestry policy of the State consists of granting forestry concessions without respecting territorial and collective rights of local populations, and this represents a major source of territorial risk, for the territory and the Awá people. In parallel to the policies for forestry concessions, we should note that the physical absence of the State has given more power to the economic actors (in this case, the timber companies), and has led the communities to deal directly with them in the case of conflict. The situation creates vulnerability for the local population, who suffer from asymmetry of power. The companies develop mechanisms for this domination …

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…to meet their needs, and in many cases the local population, having no economic upturn alternative, is dependent on these actors, and subject to the rules of the game that they establish.

- **Tensions within the communities**. Illegal felling can produce tensions or conflict between primary producers as well. When prices are low, the temptation to cut down trees on the property of one's neighbour may arise, or there may be reluctance or delay in payment to the primary producers, generating tensions between the producer and his workers, if he contracts them to fell and transport the wood, etc.

    - The dynamics of the illegal felling timber may come to produce organizational weakening in general. Since they negotiate directly with the timber companies, the communities may have tensions with the federation, particularly because the illegal felling represents an important

risk to the territory.

- **Organizational weakening produces territorial weakening.**

C. Mining

1. Environmental impact

Mining can be differentiated into large-scale mining, small-scale mining, and artisan mining. There is no large-scale mining in Awá territory. There is small-scale mining in some communities, and is a type of activity which is difficult to control, with shortfalls in technical knowledge, little or no environmental consideration, and major environmental and social impact. The majority of small-scale mining is illegal; this is the case of mining in the Awá territory. In general, the extent of environmental impact depends on many social and ecological factors, including the type of mining, the mineral exploited, substances used in the treatment process, the local terrain, geology and rainfall, amongst other factors.

In Awá territory, the principal mining activity is small-scale alluvial gold extraction (from the rivers). Even small-scale mining does not disdain the use of some machinery, such as dredges.

Alluvial gold mining has several phases with diverse consequences for the environment. In the exploration phase, machinery goes up and down stretches the river identifying the best place…

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… to settle down, and this causes disturbance of the water, possibly contaminating it with sediment removed and with oil or grease and diesel fuel from the machines which operate in the rivers, and also cause noise and local vibrations of the ground. The removal of sediment from the location of places with the great greatest quantity of mineral often implies topographical alterations to the normal flow of streams and rivers, with a direct impact on the aquatic habitats of fish, shrimp, and other aquatic organisms. The removal of sediment and disturbance of the river water does not always have a strong impact on fish communities, but the impact can be considerable if the disturbance is permanent. Further, the increased turbidity of the water has a negative impact on the landscape, a point which is often undervalued.

Perhaps it is in this phase that the contamination with oil, grease and fuels from the machines causes the greatest impact. It is important to note that in Awá territory, the rivers are often sources of drinking water. So, standards of grease in water permissible for human consumption are strict.

The exploitation phase for small-scale mining is one of the productive activities

which causes most contamination. This is mainly due to the use of mercury (Hg) and cyanide to separate gold from the other materials with which it is naturally bound.

Generally, gold in rivers is united to other minerals, for which it is normally necessary to go through an initial process of concentration, which may use gravimetric processes. Subsequently, there is a process of amalgamation. This means joining the gold to the mercury, and separating it from the other minerals, and subsequently separate it from the mercury through evaporation[32].

In small-scale mining, there are several possible amalgamation processes, but almost all of them are harmful to the environment and to the miner. Amalgamation may be manual, or with manual or mechanized mills. In manual amalgamation, the miner comes into contact …

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…directly with the mercury, and suffers processes of intoxication to the skin, which will be discussed later[33].

Once the amalgam has been made, the gold must be separated from the mercury, and this is done by heating it to more than 375°C. This is generally done with a blowtorch or gas stove. "Unfortunately, this thermal separation is often practised in a very direct and elementary manner, an "open furnace" or open “torch", releasing mercury vapour, which is highly toxic, directly into the atmosphere, contaminating the environment, endangering the worker´s health and that of the population in the neighbourhood" (Wotruba et al 1998; 102).

The mercury vapour settles around the place where the burning took place, and contaminates soil, water sources and food (Wotruba et al 1998). Often also, mercury deposits and the residues of the amalgamation process are thrown away applying no environmental criteria, contaminating the environment and people.

Effects of contamination on fish and humans

The residues of mercury released into the environment are accumulated in sediments of the rivers or in the soil in the form of methylmercury, which is transformed by bacterial action into organic mercury, or more accurately, methylmercury. Methylmercury may easily pass into the trophic chains of aquatic ecosystems, causing problems of growth and permeability in plants, but bio accumulating in fish, which generally do not die even with levels of up to 106 times

[32] Cf. Wotruba H et al 1998 Manejo ambiental en la pequeña minería. Aspectos y estrategias generales: medidas técnicas para reducir la contaminación tomando como ejemplo el uso del mercurio el la pequeña minería aurífera. Medmin, Cosude, La Paz, Bolivia, 302p.
[33] Women and children are commonly found to be engaged in this work.

the WTO recommended value for human consumption[34].

The process of bioaccumulation refers to a magnification of the content of the mercury content which starts to accumulating organisms which are higher up the trophic chain. So, producers or humans can be ingesting large amounts of mercury when consuming fish from contaminated water.

Intoxication with mercury
…

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…
Intoxication can occur during the process of amalgamation, and in evaporation, or through the consumption of contaminated fish or food. As mentioned above, there are two types of poisoning - chronic and acute. Acute poisoning refers to specific intoxication with large amounts of mercury, for example in the process of manual amalgamation, or a process of evaporation. Chronic poisoning refers to slow but permanent intoxication with small or large doses of mercury, for example with the repeated consumption of fish or other food which have accumulated mercury or intoxication by recurrent inhalation.

The following are the main symptoms of acute and chronic poisoning due to inhalation of mercury in the process of evaporation of the amalgam.

Symptoms of acute poisoning due to mercury vapour inhalations	symptoms of chronic poisoning from recurrent in mercury inhalations
• Chest pains • Difficulty in breathing • Cough • Taste of metal • Nausea • Diarrhea • Abdominal pains • Vomiting • Headaches and occasional albuminuria • Acute gastroenteritis with a latency of 24 hours • After 3-4 days, there may be kidney insufficiency and other complications, can be recovered in two weeks • In the event of severe intoxication, there are psychopathological symptoms	• In intense exposures, there are symptoms in the mouth, kidneys, stomach and intestines and respiratory system • Neurological symptoms • Mouth: gingivitis, alveolar destruction, pigmentation of the gums, simulation, tongue tremors, difficulty in speaking, alteration of taste sensitivity and smell. • Nasal irritation and epistasis • Loss of appetite and anemia • Reduction of visual acuity, the crystalline goes opaque. • Mercury accumulates in kidneys, liver, brain. It is transmitted in mother's milk. It is eliminated through the urine.

[34] Values calculated on the basis of data in Wotruba H. et al 1998:89

and muscle tremors	But in some cases, it has been seen to develop nephrotic syndrome. • Irritability, excitability, insomnia, reduced capacity to concentrate, depression, melancholy, timidity, fatigue, memory alterations.

* Information taken from Wotruba H et al 1998:90-91

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Given that the mercury accumulated in living organisms has another form (methylmercury or organic mercury), the intoxication through this route may have very serious consequences to human health. Methylmercury dissolves in grease, and passes the blood-brain and placental barriers. It also has mutagenic and teratogenic potential. Symptoms from this kind of intoxication occur some weeks afterwards. The symptoms are: restricted field of vision, mumbled pronunciation and unclear writing, abnormal hypersensitivity, dermal irritation, nasal hemorrhage, depression, irritation of the nervous system (Wotruba H. et al, 1998; 91).

Other environmental effects associated with alluvial gold mining

The release of mercury into water may have severe effects on amphibian populations. Further, if fish indeed tolerate large quantities of mercury in their organism, the mutagenic effects and the effect on eggs may also be severe. In this sense, fish populations in the rivers may be threatened.

Further, mining settlements cause immigration into exploration areas. This may bring about strong pressures on forest ecosystems in the neighbourhood, and affect hunting, and may cause disturbance (machinery noise, etc), for animal populations in the area.

It is fundamental to take account of the fact that the installation of machinery for small mining requires the construction of roads. These roads are a strong threat to forests in general, and are an open door to timber extractors and hunters. In Awá territory, this phenomenon is already occurring with the construction of the road which passes through La Unión to Tobar Donoso.

The arrival of the timber companies and the process of settlement which follows a road building project are serious, and have severe consequences for the environment. For details, please see the chapter on the impact of the timber industry.

Conclusions

Awá territory is beginning to undergo strong process of small-scale mining. The

oldest of them is on the river Tululbí. In this case, the communities downstream are Afro-Ecuadorian (mainly Ricaurte). This may have severe impact on health.

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In the Balsareño community, it is likely that there will be impacts from small-scale mining activities in progress in La Sirena: the situation is extremely serious, since the Balsareño community may have its principal source of water contaminated with mercury. In this situation, it is essential for the community to organize itself and to take preventive measures, ideally holding up the mining initiative.

The most serious consequences of small-scale mining are those which affect human health. This therefore requires that the process of training of health promoters should be started so that they will be able to identify and attend to community problems associated with these mining activities.

2. Socio-economic and territorial impacts

- **Division of communities and weakening of social and indigenous organization**

The strategy of the mining companies seeks to divide communities, to alienate part of the population, and make community organization fragile, so that it will lack unity and strength in its negotiations or in the definition of a position with regard to mining. The strategies are many, from direct threats, to "social actions for the community" (the s*ocial responsibility of the mining companies*" is a rhetorical device to legitimize the advancement of their activities), such as for example the construction of a road, a school, a community hall, payment of teachers´ salaries, etc. These strategies are common to the oil companies, the timber companies and the plantation companies.

Once they have secured allies within the communities, the **mining companies are a serious threat to the unity of the Awá people as a whole**. Since the companies deploy strategies to convince the community or simply buy it out, obviating the mediation with the political expression of the Awá people (FCAE), this may generate conflict between communities and the federation. The companies generate other channels of economic and social privilege for the communities. The little they do in the communities does not represent any economic sacrifice for them. But equally, it does not require commitment on the part of the communities. The Federation is discredited and de-legitimized, since the communities also start to expect that the Federation will be a donor of funds, which is not is FCAE´s primary role.

Violations of collective human rights

- Violations of the right to consultation

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As noted in the report[35] presented to the Inter-American Commission for Human Rights, the Ecuadorian State is not fulfilling its duty to consult with the community prior to taking environmental decisions related to mining activities.

-Violations of the right to land and territory
- Militarism and armed groups
- Violation of the right to have a healthy environment
- Violation of the right to health

- **Poverty.** The resources generated by mineral extraction are never redistributed to the local population, and at the same time alternatives for economic sustenance tend to disappear. When the soil has been contaminated, mining damages agriculture, and makes land infertile or increasingly degrades it, particularly in tropical soils. When the area is deforested, mining also destroys another economic alternative of the local population: forestry resources. In general, there is a loss of the means of sustenance. Agriculture and fishing may be severely diminished by contamination or exhaustion of water. Local production and food decreases as mining as employment in mining replaces farming. The local population becomes impoverished, as its cost of living increases. At national level, there is a strong relationship between mining and poverty, as can be seen from the chart below.

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COUNTRIES	DEGREE OF MINING DEPENDENCE 1995	IDH REPORT POSITION 1995	IDH REPORT POSITION 2006	CHANGE 1995-2006

[35] Several authors, 2007. Informe sobre la situación de las personas y los pueblos afectados por actividades mineras y petroleras en el Ecuador. CEDS, DECOIN, CEDHU, Acción Ecológica Ecuador.

Annex 65

PAÍSES	GRADO DE DEPENDEN-CIA MINERA 1995[1]	POSICIÓN IDH INFORME 1995[2]	POSICIÓN IDH INFORME 2006[3]	CAMBIO 1995-2006
Botswana	35,1	131	122	(+9) minería de diamantes
Sierra Leona	28,9	176	174	(+2)
Zambia[a]	26,1	153	165	(-12)
Emiratos Árabes	18,2	45	49	(-4)
Mauritania[a]	18,4	147	153	(-6)
Papua Nueva Guinea	14,1	133	139	(-6)
Liberia	12,5	127	159	(-32)
Nígera	12,2	173	177	(-4)
Chile	11,9	38	38	(0)
Guinea[a]	11,8	162	160	(+2)
República Democrática del Congo[a]	7,9	152	167	(-15)
Bolivia[a]	5,8	114	115	(-1)
Togoa	5,1	145	147	(-2)
República Central Africana	4,8	166	172	(-6)
Perú	4,7	80	87	(-7)
Ghana[a]	4,6	129	136	(-7)
Angola[a]	3,6	160	161	(-1)
Zimbabwe	3,4	130	151	(-21)
Islandia	3,1	5	2	(+3)
Noruega	2,5	2	1	(+1)
Australia	2,4	4	3	(+1)
Costa Rica	**< 1%**	**34**	**48**	**(-14)**
Ecuador	**< 1%**	**73**	**83**	**(-10)**

[a] Países altamente endeudados según el Banco Mundial (Sectores Extractivos y Pobreza. Oxfam América.1995).

* Highly indebted countries according to the World Bank (Extractive sectors and poverty)

The position in the Human Development Indicator is the classification of the State in accordance with its UNDP Human Development Index, which positions States by using a combined measure of income, health and education. Classification varies from 1 (the highest level of human development), to 175 (the lowest).

Ecuador has no dependence on mining, but the example of other countries indicates a general trend, in which dependence on mining activity in a national economy causes the population of that country to suffer from extremely low levels of human development. Further, mining development policies may generate greater dependence in the future.

- **Migration and displacement.**

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In addition to social conflict such as that which Ecuador has experienced when resisting projects (such as Intag), one of the most harmful impacts of the major mining project is the relocation of communities in order to make way for the mines, particularly where the mine is the only economic activity of great importance.

- **Disease, general deterioration of human health.**

All phases and all types of mining activity have serious impact on human health. These impacts are closely related to environmental impacts. Dust and contamination of the air causes respiratory diseases and irritation of the eyes and skin, especially among children.

Frequently, drinking water and irrigation water are poisoned. Contaminated of water from the mines can poison crops many miles away from the mine. Mining extraction is usually accompanied by a high level of contamination from heavy metals in water and soil: mercury, lead, arsenic, cyanide, etc. Below is a table of the main diseases caused by poisoning from lead, mercury, cyanide or arsenic.

Lead. The presence of lead in the human body is dangerous, because it is absorbed by the bones, in which it accumulates for a lifetime. The effects of lead are chronic when exposure is given for a long period of time. The presence of lead in children under six is dangerous, because it has permanent effects including damage to the nervous system and the kidneys, weakening of the muscles and bones growth. Also, it has been shown that it can provoke an adverse effect on the intellectual performance of children.

Mercury. Mercury has a number of effects on humans, which may be all be simplified into the following principal effects: damage to the nervous system, damage to brain functions, damage to DNA and chromosomes, allergic reaction, skin irritation, tiredness, headaches, negative effect on reproduction, damage to sperm, birth defects and abortions. Damage to the brain functions may cause degradation to the ability to learn, personality changes, tremors, changes in vision, deafness, lack of coordination of the muscles and loss of memory. The damage to chromosomes is known to cause mongolism.

Cyanide. Cyanide is strongly toxic for humans. The symptoms of acute toxicity of irritation of the mucus, burning in the muscles and pharynx, headache, dizziness, confusion, anxiety, …

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…nausea, vomiting, convulsions, tachycardia, chest pains, pulmonary oedema, automation of rapid and slow restoration and gasping, reddish or brilliant pink colouring of the skin. Chronic effects (produced by exposure to low doses over a long time) are palpitations, irritation and chest tensions, headaches, vertigo, tiredness, alterations in appetite and sleep, nausea and vomiting, dermatitis, scarlatiniform rashes and popular rashes, enlargement of the thyroid gland, thyroid dysfunction in the metabolism of vitamin B12.

Arsenic. Arsenic is one of the most toxic elements which can be found. Exposure can also occur in contact with the skin with soil or water containing arsenic. Various effects on health, such as irritation of the stomach and intestines, diminished production of red and white blood cells, changes in skin and irritation of the lungs. It is suggested that taking of significant quantities of inorganic arsenic may intensify the possibilities of developing cancer, especially possibilities of cancer of the skin, lungs, liver and lymph glands. Very high exposures to inorganic arsenic may cause infertility and abortion in women, or disturbance of the skin, loss of resistance to infection, disturbance of the heart and damage to the brain in men and women. Finally, inorganic arsenic may also damage DNA.

- **Delinquency, alcoholism and prostitution**

Several studies, including some from the World Bank, also forecast an increase in crime and other social problems such as alcoholism in mining areas. It has been proven that in mining areas tend to be higher indices of venereal disease and AIDS, due to prostitution.

- **Conflict and violence**

"*a country whose exports of commodities represent 25% of GDP has eight times as high a risk of facing civil war in the country whose commodity exports represent only 5% of GDP "(Ian Bannon and Paul Collier, Natural Resource and Violent Conflict, World Bank 2003)*

In recent years, Ecuador has gone through a series of violent social and environmental conflicts, generated in relation to large-scale mining activities. Some of the examples of these conflicts are:

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-The conflict of the San Felipe de Molletura commune in the parish Molleturo de Cuenca, Azuay, with the Ecuador Gold S.A. and IMC mining project, which has 48,000 ha of concession.

-The Cantons Limon, San Juan Bosco and Gualaquiza in the Province of Morona Santiago, in conflict with the Panantsa and San Carlos de Corriente Resources Inc concessions.

- Intag in the Canton Cotacachi, Imababura in conflict with the Intag mining project of Ascendant Copper Corporation (currently Copper Mesa)

- Parroquia Jima, Canton Sigsig Province of Azuay, in latent conflict due to the Ecuador Gold, Expausa, Ascendant Explotación and Ecuaoro Resources and to the entrepreneur Jefferson Sagbay.

These cases, and in general all cases of conflict are marked by lack of observance and respect for fundamental rights such as prior consultation and participation, and ignorance of the principle of precaution. The tactics of approach and "community relations" are similar, and can include disinformation and deceit in the early phases, passing to repression and violence at moments of higher-level conflict, using the forces of law and order or their own "private security" forces. Each case includes a succession of conflicts due to water and land, but in addition, due to natural Heritage and cultural heritage.

Militarism and the appearance of the armed groups are processes that commonly accompany mining activity.

Mining can be transformed into an important source of finance to support irregular armed groups, and often violate human rights, and leading to the *paramilitarization* of a region. Some 70% of forced displacement in Colombia between 1995 and 2002 was produced in mining areas (Source, DECOIN).

- **Division, occupation and loss of territory** (see analysis of the current Mining Law, a serious threat to indigenous peoples, in the general introduction to this report).

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IV. Recommendations

A. Environmental.

Principal recommendation. Form an internal environmental monitoring team to perform continuous environmental follow-up.

General recommendation. A careful and rigourous study must be made of the specific and precise impact of the palm plantation activities and the miners in the areas of environment and health. Very accurate information must be obtained on the effects the palm industry and the miners cause, directly or indirectly, and what elements of these activities generate impact, in order to lend legitimacy to actions subsequently taken, in order to improve the situation of the Centres affected.

- Form an internal monitoring team for each centre affected by these activities-Guadualito, Balsareño, Pambilar, La Unión, Rio Bogotá), in order not to depend on external technical personnel, and to effect continuous and environmental and social follow-up. For this purpose, we recommend that there be a process of detailed training, which will be sufficiently long to ensure that the handling of equipment, the methods of monitoring water and soil with specific procedures, and the treatment of data and analysis, can all be conducted in the Centre itself.

- There must be support from FCAE in the formation of each Centre´ s monitoring team, to contract training staff committed to the cause, the organization of a week-long workshop, with the various essential elements required for successful environmental monitoring (knowing how to take water samples, with what frequency, and where, handling of equipment, etc.)

- This logistical support is required for the coordination, functioning and work of the monitoring team in each centre, in particular, there should be a the presence of personnel from FCAE, to coordinate external trainers or technical personnel in the beginning, **to ensure the transport of samples to laboratory immediately, etc.**

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B. Health:

- A detailed biomedical study should be made of the origins of diseases and their symptoms.

The objective is to be able to say with precision what diseases or illnesses are

produced indirectly or directly by the palm plantations, which diseases are produced by acute toxicity, and which by chronic toxicity.

For this purpose, we suggest that account be taken of a series of questions. How often, and when, do some things occur - vomiting, blotches, and headaches?

- Financing should be sought to implement this biomedical study

-Articulate this study to the health model
- Provide continuous information to those affected

C. Legal and conservation

- Support of FCAE in claims or other legal actions taken by the communities.
- For this, intensive and continuous communication should be maintained with the Centres, and information should always be kept fully up to date.
- Conservation projects should be better integrated into daily and local life (family properties), with a gender dimension (potential), as a complement to other activities already implemented or about to be implemented.

D. Forestry

- Focus efforts on the legalization of forestry exploitation
- And on the process of environmental education. Awareness, so that people will take account of the criterion of sustainability in each family.

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E. Palm plantation

- Support of FCAE for legal actions started by the communities affected. Strengthen ties with Ecolex.
- Start up an internal monitoring system for water quality.
- Work on spaces of dialogue with the plantation companies, so that they will respect national environmental regulations.
- In the longer term, consideration should be given to a program of ecological restoration, which could include the following components: ensure that there is it a strip of forest separating the Plantation is from the territory, and around the rivers (at least 10 m), as a protective corridor.
- Generation and support of local development alternatives (fruit production of food, supporting transport and commercialization), to the extent it is desirable and possible, in Guadualito. Make a new evaluation of the purchase of the Robalino property.

F. Mining

- Support communities in their legal actions
- Awareness. This should be a long and careful process. It requires a continuous process presence of FCAE in the Centres affected, and long work in restoring social relationships
- Balsareño: as of now, there must be continuous follow-up of the mining activity
- Strengthening ties with the various actors engaged in the anti-mining battle, such as the indigenous movement in general (and its various organizations,

such as CONAIE, CONAICE….), and social organizations committed to that battle such as DECOIN of Intag, and Ecolex. These organizations, in particular DECOIN can contribute a great deal to FCAE in the defense of territory, in the face of the threat from mining (information, networks, lawyers, etc.)

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V. ANNEXES

Annex 1. Description of the development of workshops and participants

I. General description of the two workshops

A. Guadualito

On Tuesday-Wednesday June 16-17, a social mapping workshop was held to enquire into the social impacts of palm plantations and other territorial threats. The entire community was invited to attend the workshops. On Tuesday, there were some 10-12 adults present. In particular, Felipe Cuajivoy and Dumar Mairongo were present, and they were the coordinators of the "Health and Contamination" and “Guadualito” maps respectively. They also provided this very valuable information, enriching the process of dialogue. As a draughtsman, we had special participation of Aida Cantincúz, Jair, Alirio Paí and other members of the community.

At Felipe Cuajivoy´s suggestion, on the first day of the workshop the maps were stuck to the wall, and drawn standing up. This meant, partly, that the coordinators of the group had a privileged position to draw, and thus did not facilitate the participation of others. The fact that the coordination group were also responsible persons with posts of responsibility in the community could also have been reason not to encourage others to participate. With the map "Guadaulito in the past", the dynamics were slightly different, because Vitorio Paí, although he did the drawing himself, asked for advice from others in the group on biodiversity found in the past.

On the second day, some new participants arrived, and several other people had been there the day before also came. On this day, that was no separation by groups, and work was done on the relationships map in plenary. The workshop ended at midday.

B. Balsareño

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At first, this significant amount of time was spent with all the participants on map locations. The detailed drawings were then taken and transferred to a large sheet, and conversations began with the participants, to find them accurately on the map, and so that everyone would clearly understand the limits of the Centre and the courses of the rivers, and correct whatever seems to them to be out of date or wrong.

After this important and necessary session for location, two groups were formed, responsible for the two territorial maps of the Centre. They were encouraged to draw, and little by little, with coordination, indications and guidance from key questions, participants began to draw the maps.

III. List of participants:

A. Guadualito

1. Aida Cantincúz	11. Magdalena García	21. Elena María Cantincúz
2. Felipe Cuajivoy	12. Lucrecia Cantincúz	22. Inés Mariana Guango
3. Jairo Churta (FCAEjuventud)	13. Cecilia Cantincúz	23. Delfina Guango
4. Alírio Paí Cantincúz	14. Vitorio Paí	24. Jose Marcelino Cantincúz
5. Leonardo Rodríguez	15. Yecni Erica Rodríguez	25. Luis Antonio Delgado
6. Jairo Cantincúz	16. Guillermo Paí	26. Clemencia Nastacuáz
7. Luz María Cuajivoy *President)*	17. Raúl Eduardo Noguera	27. Herminda Paí
8. Rosalva Guanga	18. Demetrio Cantincúz	28. Fidel Cuajivoy
9. Hermes Rodríguez	19. Jair Delgado	
10. Dumar Mairongo	20. Efrén Álvarez	

…

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…

B. Balsareño

Participants

1. Salvador Pascal	15. Norberto Pascal	29. Rafael Pay
2. Marcelo Pascal	16. Carlos Pascal	30. Rosa Pay
3. Augusto Llanos (?)	17. Gloria Cantincúz	31. María Amparo

4. Carmen Pascal	18. Carmela Cantincúz	32. Emerita Cantincúz
5. Rosa Guanga	19. Demetrio Pascal	33. Virgilio Nastacuaz
6. Manuel Pay	20. Lisandro Pascal	34. Germán Cantincúz
7. Jilber Taicuz	21. Lucho Pay	35. Medardo Pascal
8. Francisco Pascal	22. Alfonso Taicuz	36. Robertina Pascal
9. Julio Pascal	23. Ricardo Pascal	37. Neftali Pozo
10. Aura Pascal	24. Alberto Taicuz	38. Norman Pascal
11. Rosa Pascal	25. Oscar Pay	39. Rubén Pascal
12. María Alaria Pascal	26. Gloria Pascal	40. Andrés Pascal
13. Marlene Taicúz	27. Fausto Pascal	Cantincúz
14. Mauricio Taicuz	28. Marina Pay	41. Mario Paí
		42. Jairo Pascal

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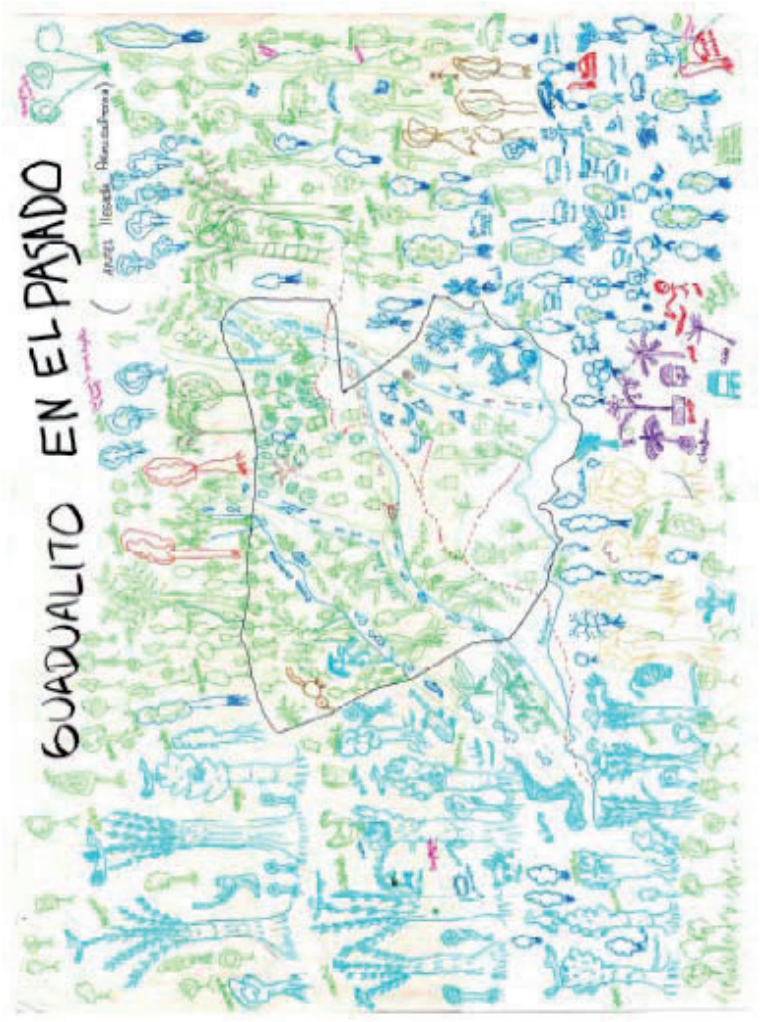
Annex 2. Guadualito Map 1. The territory in the past



[Page 227]

List of biodiversity drawn on the map

Arboles:

-cuagaripo
-naguare
-ceibo
-uva
-garza
-chanul
-guao
-guagai
-caucho
-tachuelo
-damajagua
-mare
-machare
-cuayacan
-acora
-yarumo
-tirapuete
-higueron
-amarillo
-laurel
-tete
-arai
-chiparo
-cuero de sapo
-mispero
-sapotillo
-piaste
-caimitillo
-copal
-cuangare
-tangare
-canderillo
-mascarei
-goma
-mata palo
-chamulillo
-chillalde
-balsa
-peinemono
-caldiente (chalviende)
-cucharillo
-arai
-sande

Lianas

-zaragoza
-yare
-matamba
-pilde
-juanquereme
-palma nativa

Hierbas

-rampira
-chauare
-tres dedos
-cuinul

Plantas cultivadas

-chiro
-yuca
-chontaduro
-borojo
-verde
-caña

Animales:

-culebra
-vibora
-conejo
-pumuya
-perezoso
-patillo
-guanta
-zorra
-ardilla
-armadillo
-guatin
-venado
-leon
-tigre
-iguana
-chasa
-pichilingo
-munchira
-oso
-cuzumbe
-tatabra
-mono
-perro
-patos
-paletón (tucán)

Árboles = trees
Hierbas = Herbs
Plantas cultivadas = cultivated crop
Liana = liana

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Annex 3. Guadualito Map 2. The territory after the arrival of the palm plantations

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The production of this map was really the responsibility of Dumar Mairongo. This map was also made with a sheet of paper stuck to the wall, and was drawn standing up. Some of those present came up to look at the map, but few took part. Nonetheless, once the map had been finished, there were some very important reflections about the serious threat of the palm plantations.

Dumar, as technical expert, had had experience in the workshops using similar methodologies to this. The scanty participation by others in the group may be due to the fact that they felt inhibited because Dumar was a qualified technical person, and had substantial knowledge.

Once the map was finished, it was complemented by some information, such as the age of the crops, etc, with the participation of all others present.

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Annex 4. Guadualito Map 3. Health and Contimination

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General Notes

This map was also made on a sheet of paper stuck to the wall, with Felipe drawing standing up. Given that this map approached the specific issue of health, and since Felipe is the Health Promoter of the community, the others following this group did not play an active part in the drawing, but were eager to hear the information presented there.

Felipe used this map to provide details of all aspects of health and contamination of which he was which he had knowledge. This information is therefore very up-to-date, and Felipe indicated that he would be keen to see the health monitoring for the entire community, on a permanent basis.

As can be seen in the map, there are also details of the location of the plantations and vegetation inside the Centre.

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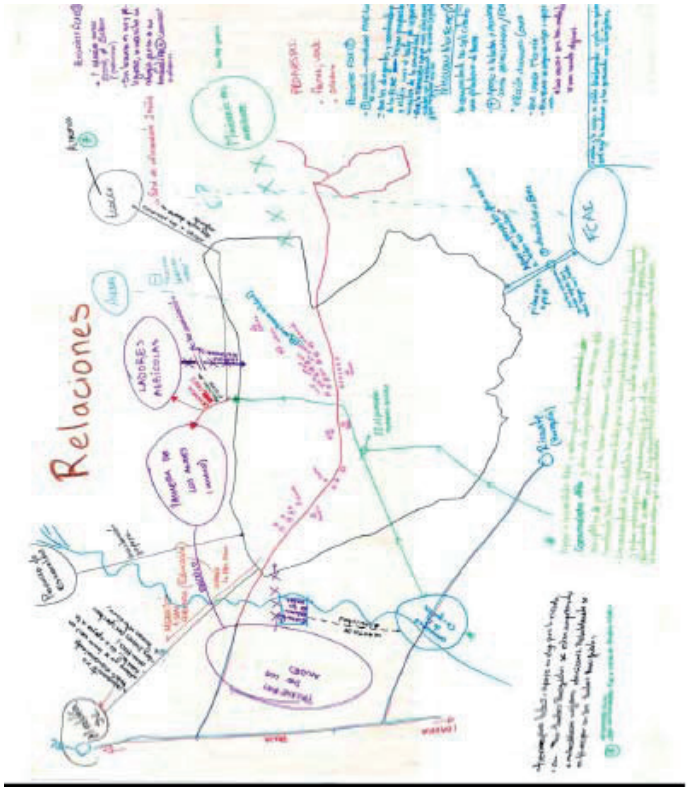
Annex 5. Guadualito Map 4. Relationships **of the Centre with external actors**



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General Notes

The map "relationships" was made using different dynamics. Work was done in plenary, and conversations generated on the relationships of the community with a number of external actors. This conversation was guided by a sheet of questions, and the moderators were Juan Pinesa and Anne-Lise Naizot, who made up a schematic information map, and the issues discussed. Efrain Alvarez was also participating, and subsequently made a major contribution with information on the

process of timber extraction. On this second day, work stopped at the lunch hour.

The generation of this conversation, which approached such delicate issues as relations with the plantations, the lawsuit, relations with FCAE, etc, has generated certain concerns in the community. Alirio Paí, former president of Guadualito, asked about the purpose and use which the information would be given. Subsequently, when the subject of relationships of Guadualito with FCAE was discussed, Felipe made some complaints to Jairo Churta about the youth programme, and in general, support given by FCAE.

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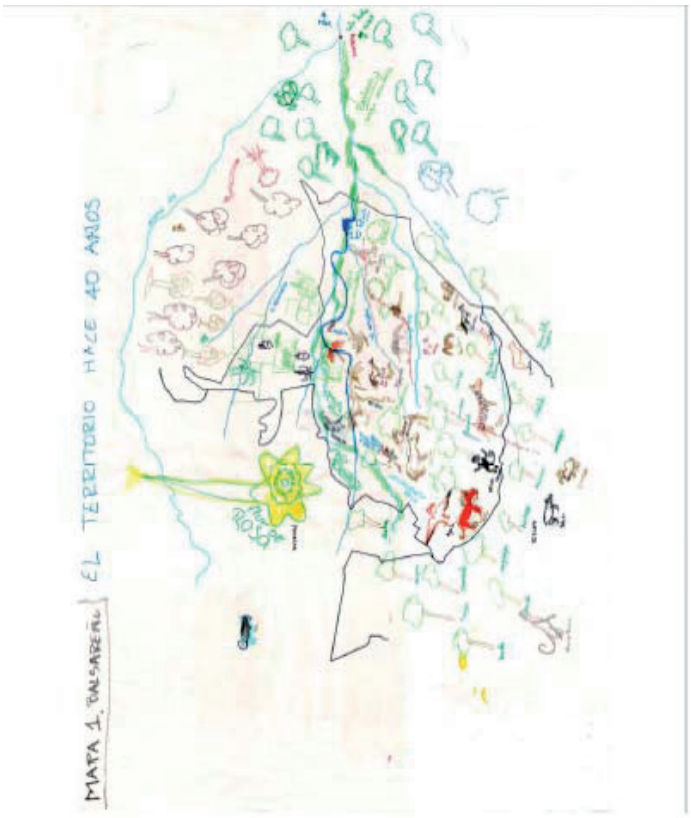
Annex 6. Balsareño Map 1. The territory 40 years ago



[Page 235]

Coordination: Juan Pineda

General notes

Older adults people took part in this map, led by Lisandro Pascal. More and more people gradually began to arrive.

The history of the Centre

Lisandro Pascal and Andrés Pascal were the first to arrive, with their families, when Lisandro was about 17 and Andres was nine. They came on the Palabi River, from Mataje. When they arrived, there was no settlement there, and they built the first houses. In La Sirena there were very few people, perhaps two. Ricaurte at that time was a small village or hamlet, with 5-15 houses. When Lisandro and Andres arrived, they opened up the road from Mataje to the village. They also opened up a track close to the *Natividad* stream. All travel was done by river.

A territory covered with forests

Aside from the scrub described in the main document, the territory is described as being covered with forest.

The following is a table with the principal names of the trees, plants, crops and animals mentioned in the map.

Trees	Plants/crops	animals
Arboles	plantas/cultivos mencionados	animales
- caoba (esa especie se extinguió localmente- es la madera más fina de todas). El caoba era escaso incluso cuando llegaron los fundadores. -chanúl -míspero -chalvialde -cuangare	- chontaduro -plátano -caña -frutas -chiros -verdes	-mono bueno -tatabra -conejo -guatuza -mico (mono negro) -león (puma) -tigre (juaguar) -tigrillo -guanta

…

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…

-sande		-zorro
-waguaripo		-ardilla
-aníme		-oso hormiguero
- mascarai		-venado
-cuero sapo		-paletón
-chalde		-perico blanco (oso perezoso)
-caimitillo míspero		-choco (oso perezoso)
-caimitillo blanco		-hormiguero
-caucho		-gallina de monte
- guarumo		-pava
-laurel		-tucán (paletón)
-guayacán		-armadillo
		-picaflor
		-lechuza
		-mongón (otro mico)
		-pescados: mojara, guaña, tilapia
		-culebra equis
		-nupa (boa constrictor)

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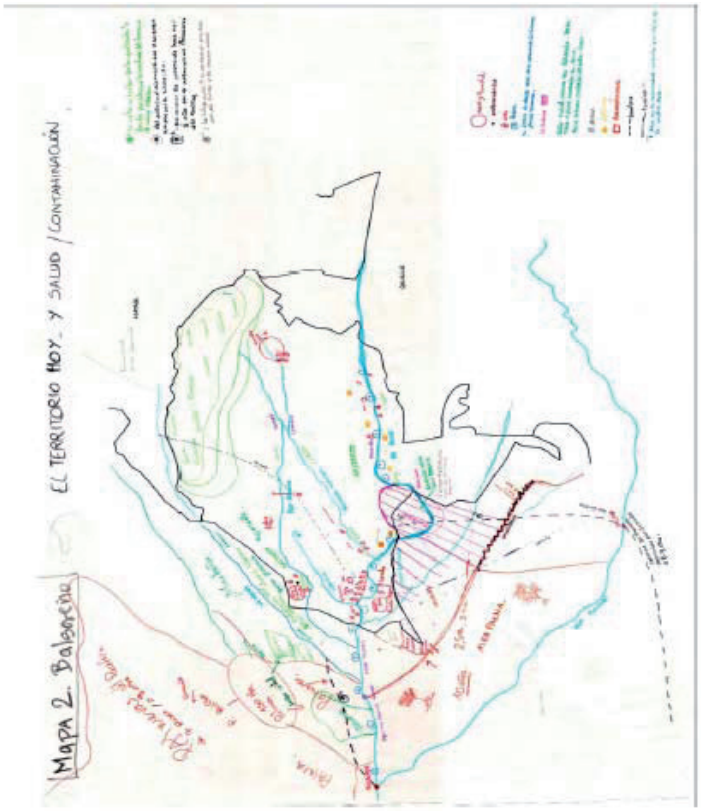
Annex 7, Balsareño Map 2. The territory today and contamination



Coordination: Anne Lise Naizot

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Changes in vegetation cover

The forest lies to the north of the Centre's territory, bordering with Mataje. The scrub has advanced in comparison with the preceding map, but continues to be on the banks of the Bagatá and Palabí rivers.

The rivers and inlets were drawn: the river Bagatá, the Natividad stream, Vuelta Mico (where their water comes from), the Palabí, Balsareño inlet, La Honda, El Negrito inlet (upstream from La Sirena).

Some trees were also named. To the north there is copal, cucharillo, cuangare, chanulillo, guayacanm, sande, waguaripo, cartagena, chanúl, etc.

On the banks of rivers and inlets, they found sane. Chillalde and balsa, amongst others.

In the Centre, there are fruit trees: borojó, palm, jafruit, chontaduro, lemon, etc.

Some of the family crops are located.

In the map on the previous page there is detailed information from the principal document with regards to the plantations, mining, and forest management plans.

On the next page, the two photographs taken about two hours apart, to illustrate the change of colour in the water of R. Palabí, after the activities of the mining company in the morning at La Sirena.

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R. Palabí at 7-8 a.m. on July 21. According to Virgilio Nastacuaz, who had arrived from Pambilar at 6 a.m., two dredges were churning up the water at La Sirena near the Negritos inlet.

R. Palabí three hours later. The river has returned to its usual colour, which means that stability in the water in the morning was produced by exploration activities and disturbance of materials in La Sirena.

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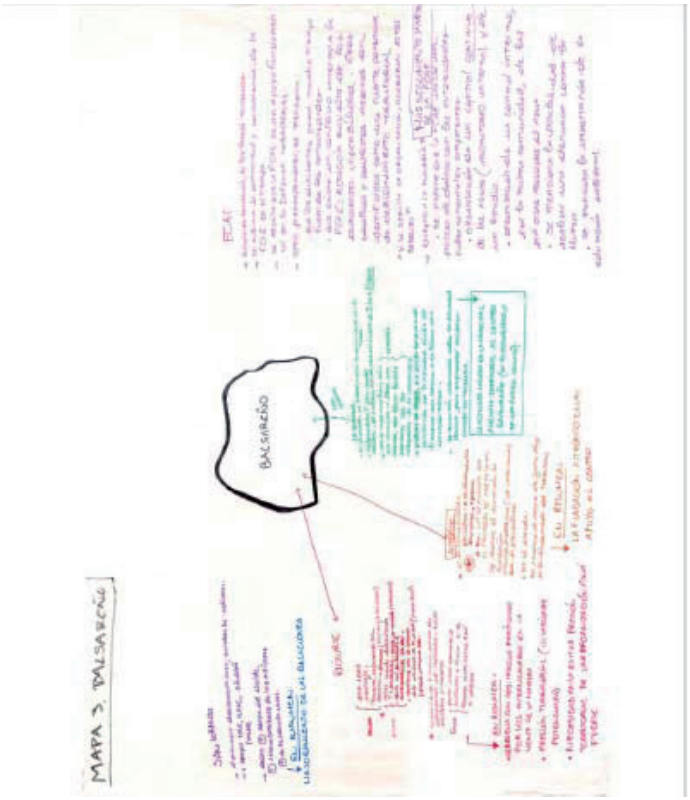
Annex 8. Balsareño Map 3. Relations of the Centre with external actors



[Page 241]

Coordination: Juan Pineda and Anne-Lise Naizot

General notes
This map was made collectively by a single working group. Since the making of the map did not imply an exercise in active drawing, we generated a process which was mainly discussion, on the relationships between the community and surrounding actors, and the information was recorded in graphic form.

This process made an approach to the history and evolution of relations between the community and its social environment. There was active participation of community leaders and others, who confirmed or complemented the information.

This process of conversation was reiterative, and itinerant, raising issues, and then taking them up again several times, in order to confirm specific points, or discuss them in greater depth, or link them to other issues.

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Annex 66

Press item: "Legal Action. Ecuador acuses Colombia before The Hague." Migalhas Latinoamericanas, 1 April 2008

(Published by El Pais-Spain and El Comercio-Ecuador, 01 April 2008.
Available at: http://la.migalhas.com/mostra_noticia.aspx?cod=57448.
Last visited: 10 Dec. 2011)

Legal Action

Ecuador Acuses Colombia before The Hague

[…]

The home team

The former foreign minister Diego Cordovez was appointed agent of Ecuador in the case brought before The Hague.

The team also includes the following lawyers: Pierre-Marie Dupuy (European University Institute), Philippe Sands Q.C. (University College London), Alan Boyle (University of Edinburgh), Paul Reichler (Foley Hoag LLp Law Firm of Washington), and Iñigo Salvador (Universidad Catolica de Quito). The latter is the brother of the Ecuadorian Foreign Minister.

Ecuador states that The Hague has jurisdiction to deal with this case. Its argument is that both countries are parties to the Pact of Bogota, which states that that judicial body will settle any dispute.

[Page 2]

Annex 67

PLAINTIFF QUESTIONNAIRE, *ARIAS/QUINTEROS V. DYNCORP,* D.D.C. (EM VOL. IV, ANNEX 193, WITNESS 5)

(United States District Court for the District of Columbia, Cases No. 1:01-cv01908 (RWR-DAR) and 1:07-cv01042 (RWR-DAR). Cases consolidated for Case Management and Discovery)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

[redacted]

[redacted] Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR)
Venancio Aguasanta Arias, *et al.* Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR) Consolidated for Discovery with Case No. 1:01CV01908 (RWR)

PLAINTIFFS' QUESTIONNAIRE

To Each Individual Plaintiff:

INSTRUCTIONS

1. Each individual plaintiff in the above-captioned cases must complete and sign his or her own copy of this Questionnaire.

2. If a person is responding on behalf of his or her children (or another person or persons) on whose behalf a claim has been filed before this Court, then a separate copy of this Questionnaire must be filled out for each such child or other person.

3. When you read the terms "you" and "your" throughout this Questionnaire, they refer to each person who is claiming injury due to the alleged exposure in this case. In other words, if you are claiming injury to yourself or your

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

property, you must answer the questions about yourself and your property. If you are responding on behalf of your child (or other person), then you must answer the questions about that child or other person on a separate copy of this Questionnaire, clearly marked to show to whom it refers

4. Each question must be answered in full. If you do not know the answer to a question or cannot recall the information needed to answer a question, please say this in your response to the question. If a question is "not applicable" to you, say this in your response. Do not leave any question unanswered.

5. Each individual plaintiff must realize that he or she is under oath and must provide information that is true and correct based on such person's personal knowledge and belief.

6. You may attach as many sheets of paper as necessary to fully answer the questions. This questionnaire also asks you to produce written documents that relate directly to your answers. You must give these documents to your attorney so that they may be copied for use in this lawsuit. **You must not dispose of or alter or modify any documents** or other materials that you have now or that you may later receive relating to any of the subjects addressed in this Plaintiffs' Questionnaire.

7. In filling out this form, please use the following definitions:

(A) **"Health care provider"** means any hospital, clinic, doctor's or nurse's office, infirmary, medical laboratory or other facility that provides medical care or advice. It also means any doctor, physician, surgeon, paramedic, nurse (registered or otherwise), psychologist, psychiatrist, therapist, chiropractor, healer or any other person practicing any kind of healing art (with or without traditional medications) or performing any kind of medical, physical or mental examination or treatment, and any other persons or entities involved in the evaluation, diagnosis, care and/or treatment of you.

(B) **"Document"** means any writing or record of any kind whatsoever that is in your or your family's possession or the possession of your counsel, including but not limited to written letters, papers, notes, e-mails, photographs, charts, cassettes, videotapes, computer discs or tapes, x-rays, drawings, graphs, phonorecords, nonidentical copies and other data compilations of any kind.

I. PRELIMINARY INFORMATION ABOUT YOU AND YOUR CLAIM

A. Name of plaintiff submitting this Questionnaire (NOTE: There must be one form completed for each plaintiff and for each other person claiming injuries): [redacted]

B. Name of person who this Questionnaire applies to: [redacted]

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[redacted]

C. Name of person who filled out this Questionnaire, if different from plaintiff (include the preparer's name, company, address, and relationship to plaintiff):
Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-work product. Subject to, and without waiving, said objections, responding party responds as follows: This Questionnaire and the computer responses were generated with assistance of counsel

D. Are you seeking relief for personal injury to yourself? Yes ☒ No ☐

E. Are you seeking relief for personal injury to someone else? Yes ☒ No ☐

If yes, who? FOR MY CHILDREN AND WIFE

Please mark the reason why this person cannot act on his or her own.

Minor ☐ Impaired ☐ Death ☐ Other Reason ☐

(Note: A separate copy of this Questionnaire should be completed for each person seeking damages).

F. Are you seeking damages for injury to your property (crops or animals)? Yes ☒ No ☐

If yes, do you claim:

Damages to your crops? Yes ☒ No ☐

Damage to farm animals or pets? Yes ☒ No ☐

G. Are you seeking damages for injury to any other types of property? Yes ☐ No ☒
If yes, what kind? WATER

II. PERSONAL INFORMATION

A. Paternal Last name: [redacted]

Maternal Last name: [redacted]

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First name: [redacted]

Middle Name: [redacted]

Any other names by which you have ever been known:

Ecuadorian identification number: [redacted]

B. Gender: Male ☒ Female ☐

Height: 1.64

Weight: 130

C. Are you Ecuadorian? Yes ☒ No ☐

If not, what is your country of citizenship? ECUADOR

Racial/Ethnic Background: Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows: MIXED RACE

If you answered Indigenous or Indian, do you belong to an indigenous tribe or community? Yes ☐ No ☒

If yes, which one?

E. What language do you speak? SPANISH

F. Do you clearly understand the language used in this Questionnaire and the questions asked in this Questionnaire? Yes ☒ No ☐

G. Date of Birth: [redacted]

H. Present home address: [redacted]

Village or City: RECINTO SALINAS Province: SUCUMBIOS

If you do not live in a city or town, identify the nearest town to your home and provide the directions to get to your home from that town. (Use road names, river names and North, South, East, West directions to describe how to get to your home)

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[redacted]

How long have you lived at this address?
28 YEARS

What was the reason that caused you to move to your present home address?
MY PARENTS BROUGHT ME

Who has lived with you at this address?
MY PARENTS AND MY SIBLINGS AND LATER ON WITH MY WIFE AND MY CHILDREN

I. Prior Home Addresses. Please provide the following information for the last ten (10) years:

Prior address (including closest town, province, and country)	Dates you lived at this address: Starting	Until	Persons who lived with you at this address

J. Telephone Number (if any):

K. Current Occupation: FARMER

Name of employer (If self-employed, say this):

Name of immediate supervisor (if any):

Employer's address (work):

Employer's telephone no. (work):

How long have you worked there?

L. Prior Employers. Please fill in the following information for the last ten (10) years (Include any military service, and if self-employed, say this):

Prior employers (names and addresses)	Dates you worked for this employer: Starting	Until	What did you do there?

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M. In any of your work in the last ten (10) years (including your current work or home farming), have you used or handled pesticides and/or herbicides?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of pesticides and/or herbicides did you use and *when* did you use them?

If you applied the pesticides and/or herbicides, how did you do it?

If you applied them, [the pesticides], describe any kind of protection you used for yourself while you were using the pesticides and/or herbicides.

If you applied pesticides, did you or anyone else in your family wash the clothes you wore when using the pesticides and/or herbicides?
Yes☐ No☐

If yes, please describe who did this, how often it was done, and the manner in which your clothes were washed or cleaned.

Do you believe you have experienced any kind of medical problems as a result of handling pesticides/herbicides in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☐

If yes, what kind of medical problems and *when* did you have them?

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N. Has any member of your immediate family used or handled pesticides and/or herbicides during the last ten years (as a part of your work or home farming)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what members of your family and what type of pesticides and/or herbicides did they use?

If yes, where and how did those members of your family (or any other person) wash the clothes they used while using pesticides and/or herbicides?

O. In your work or in your home farming in the last (10) years, have you been in the vicinity of or close to other people using herbicides and/or pesticides (where you could see other people)?

Yes☐ No☒

If yes, what kind of herbicides and/or pesticides did they use?

If yes, where and how did you wash your clothes that you wore after you were close to where other people used the herbicides and/or pesticides?

P. In any of your work in the last (10) years (including your current work or home farming), did/do you use or handle chemicals (other than the herbicides or pesticides identified in the previous answer.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of chemicals fertilizers, or other artificial chemical products did you use and when did you use them?

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If yes, describe any kind of protection you used for yourself while using the chemicals.

Do you believe you have experienced any kind of medical problems as a result of using chemical fertilizers or other types of artificial chemical products in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☐

If yes, what kind of medical problems and *when* did you experience them?

Q. Have you ever been convicted of a crime in the past ten years? Yes☐ No☒

If yes, what crime?

Did you go to jail or prison? Yes☐ No☒

If yes, how long?

R. Have you ever been rejected for a job for which you applied or for a military position because of a medical, physical, psychiatric or emotional condition?
Yes☐ No☒

If yes, what job or position?

If yes, *when* did this happen? (Include all instances when this happened).

If yes, what was your medical condition or disability (for each such instance)?

S. Have you ever filed a claim or claims with the Ecuadorian or Provincial government where you live or with an employer or with an insurance company or any other entity for compensation or the payment of medical expenses or lost earnings due to an injury or a medical disability of any kind?
Yes☐ No☒

If yes, please fill in the following information for the last ten (10 years):

Date claim filed	Filed with whom?	What	What happened with

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		injury/disability was claimed?	your claim?

T. Do you have medical insurance of any kind? Yes☒ No☐

If yes, what company or program provides your medical insurance? CAMPESINO INSURANCE

U. Have you ever filed a lawsuit against anyone (aside from this suit), including any oil companies?
Yes☐ No☒

If yes, please identify: (1) what kind of lawsuit it was, (2) when you filed it, (3) the company or people you sued, (4) what Court or other tribunal it was before, and (5) what was the result of the suit. (If any of your lawsuits are still pending, say this.) (Attach additional pages if necessary to describe multiple lawsuits.)

III. FAMILY INFORMATION AND EDUCATIONAL HISTORY

A. Have you ever been married? Yes☒ No☐

B. If yes, *for each spouse and former spouse,* please identify the following:
1. Spouse's name: [redacted]
2. Date of marriage: [redacted]
3. Spouse's date of birth: [redacted]
4. Spouse's occupation: HOMEMAKER
5. Spouse's address (if different than yours):

C. Immediate Family members. Please provide the following information about each of your parents, your sisters, your brothers and your children. **(Add additional sheets if necessary.)**

Name	Relationship to you	Date of birth	Date of death (if applicable)	Cause of death (if applicable)	Main occupation
[redacted]	FATHER	4/1/51			FARMER
[redacted]	MOTHER				HOMEMAKER
[redacted]	BROTHER				FARMER

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[redacted]					
	BROTHER				FARMER
	BROTHER				STUDENT
	BROTHER				FARMER
	SISTER	6/29/81			HOMEMAKER
	SISTER				HOMEMAKER
	DAUGHTER	1/30/95			STUDENT
	DAUGHTER	8/22/00			STUDENT

D. Education.

How many years did you go to school? 8 Years

What was the highest grade you completed? SECOND GRADE

Where did you go to school? (List all schools by name and location)
[redacted]

Do you know how to read? Yes ☒ No ☐

Do you know how to write? Yes ☒ No ☐

Do you have any degrees or certifications? Yes ☒ No ☐

If yes, what are they and what year did you get them?
[redacted]

IV. YOUR LIVING CONDITIONS

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A. Please answer the following questions about your home, food and water:

1. What size is your house and of what materials is it made?
   6 X 6 METERS WOODEN

2. Where do you get your water? A SPRING

3. What is the source of your water? THE MOUNTAIN

4. Do you have running water inside your home? Yes ☐ No ☒

5. Do you filter your water? Yes ☐ No ☒

   If yes, how?

6. Where do you get the food for you and your family? AT THE MARKET IN LAGO AGRIO AND ON THE FARM

7. How do you cook your food? (On a stove, grill, charcoal or firewood)
   STOVE

   Do you eat raw crab meat? Yes ☐ No ☒

   Do you use crab juice as medicine? Yes ☐ No ☒

   Do you buy and eat food in public places (Such as open air markets or places that sell prepared foods to the public)? Yes ☒ No ☐

   If yes, have you observed the conditions in which that food was prepared and handled before you purchased and ate it? Yes ☐ No ☒

B. Please answer the following questions regarding sanitation:

1. How is sewage (waste and waste water) from your home disposed of?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
IN THE WOODS

2. Where does the sewage from your home go to (e.g., into the soil, into a body of water: sewer, river, stream, lake, etc.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

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IT STAYS IN THE WOODS

3. Do you have a toilet inside your home? Yes ☐ No ☒

4. Do you use an outhouse? Yes ☐ No ☒

5. How is sewage disposed by the other homes and farms around you?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
   IN THE WOODS AND THE SEPTIC TANK

6. How do you dispose of your trash? (e.g., do you burn it? Do you bury it? Do you send it to a landfill?)

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
   WE BURN THE PLASTICS AND THE REST WE THROW IN THE WOODS

7. How far is the closest landfill to your house?

8. Where you live, is the trash dumped into a public area or public water channel?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

C. Please answer the following questions regarding oil operations (oil perforation, oil well, oil pits, gas stations or oil facilities) close to your house or place work:

1. How far is the nearest oil operation from your home? (and describe what is it)
   28 KM, PETROLEUM WELLS

2. Has your home, farm or work area ever experienced oil pollution as a result of oil operations?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls

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for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒
If yes, *when* did this happen?

3. Have you ever been injured in any way by oil pollution?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

   If yes, what were the injuries and *when* did they occur?

4. Do you think that anyone in your family been injured in any way by oil operations?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒
   If yes, what and *when* were the injuries they suffered?

D. Please answer the following questions regarding volcanoes:

1. How close do you live to the Reventador volcano, and/or to any other volcano? FAR

2. Do you think that you or your family members have ever been injured in any manner as a result of the eruptions or volcanic emissions of the Reventador volcano, or any other volcano?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

   If yes, *when* did this happen and what were the personal damages that you suffered?

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3. Do you think anyone in your town, vicinity, or community suffered personal damages of any kind as a result of the volcanic eruptions?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

If yes, explain what happened and *when* it happened

E. Please answer the following questions regarding floods:

1. Have you, your home or your farm been affected in any way as a result of a flood in the last 10 years?
Yes ☒ No ☐

If yes, describe *when* this occurred and what damages you or your property suffered?
IT OCCURS ONCE A YEAR, THE PASTURE LAND BECOMES BARREN AND THE CHICKENS WILL NO LONGER EAT

If yes, did the floods cause you to leave your home? Yes ☐ No ☒

F. Please answer the following questions about people moving into your town, vicinity, or community.

1. Do you think that your village or community has experienced an influx of people from Colombia in the last ten (10) years? Yes ☐ No ☒

2. Do you believe that your village, vicinity, or community has experienced an influx of people from other places (other than Colombia) in the last ten (10) years? Yes ☒ No ☐

If yes, where did these people come from? PROVINCIA DE LOJA Y CARCHI

V. YOUR ALLEGED EXPOSURE TO THE "PLAN COLOMBIA" HERBICIDE

A. Are you familiar with "Plan Colombia?" Yes ☒ No ☐

If yes, what do you know about "Plan Colombia" and *when* did you learn this?

Responding party incorporates the General Objections previously set forth.

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Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows: THEY FUMIGATED ON THE OTHER SIDE OF THE FONTIER IN THE YEAR 2000

If yes, identify the people with whom you have spoken about "Plan Colombia," what they told you, and when these conversations took place?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows: THE NEIGHBORS AND THE NEWS THAT THERE WAS THE MILITARY FUMIGATING THE FRONTIER IN THE YEAR 2000

B. Why do you believe that you and/or your property was exposed to a "Plan Colombia" herbicide? BECAUSE AFTER THE FUMIGATIONS, THAT'S WHEN THE DAMAGES TO THE PLANTS OCCURRED

C. When were you and/or your property exposed to herbicide? (If more than once, list all dates of exposure by day, month and year.) FROM 2000 TO 2006

D. **For each instance of alleged exposure to your body**, please answer the following questions (use additional sheets of paper as necessary):

1. Where were you when the exposure occurred? ON THE FARM

2. How close were you at that time to the border between Ecuador and Colombia? 200 METERS

3. How do you know this?

4. Please mark an "X" on the attached map of Northern Ecuador to show where you were at the time of the alleged exposure and list the date(s) of exposure beside each "X". Have you marked the map in this way?
   Yes ☒ No ☐

   If no, why not?

5. What time of day did the exposure occur? 11 AM

6. What was the weather like that day? (Include the approximate temperature and whether there was precipitation) SUNNY AND WITHOUT RAIN

7. Did you see an airplane at the time of the exposure?
   Yes ☒ No ☐

   If yes, what did it look like? (color, size, letters, flags or other markings on

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plane, etc.)
WHITE AIRPLANES

8. Did you see more than one airplane at the time of the exposure?
Yes ☒ No ☐

If yes, please state how many you saw and describe what each looked like:
3 WHITE AIRPLANES

9. Did you see a helicopter at the time of the alleged exposure?
Yes ☒ No ☐

If yes, how many? YES - GREEN

If yes, what did the helicopter(s) look like (color, size, letters, flags or other markings)?

10. Did you see anything else in the air? Yes ☐ No ☒

If yes, what else did you see?

11. Did you see the spray or a "cloud" or "fog" of spray? Yes ☐ No ☐

If yes, what color was it?

12. Did you see residue on the ground after the spraying? Yes ☒ No ☐

If yes, what did it look like? A WHITE CLOUD THAT LINGERED THERE

13. Did you hear anything? Yes ☒ No ☐

If yes, what did you hear? THE NOISE OF THE AIRPLANES, HELICOPTERS, AND GUNFIRE

14. Did you smell anything unusual? Yes ☒ No ☐

If yes, what did it smell like? A POISONESS SMELL

15. Do you contend that your body was exposed to the spray?
Yes ☒ No ☐

If yes, did you feel anything on your skin? Yes ☒ No ☐

If yes, what did you feel? ITCHINESS

If yes, what did you do with the clothing that you wore that day and when did you do it? (Include whether they were washed or destroyed)
WE WASHED IT

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16. After the spraying ceased, did you see any changes to the plants in your vicinity?

Yes ☒ No ☐

If yes, what changes did you see and how long after the spraying did you see the changes? THE COFFEE BEGAN TO YELLOW AND FALL TO THE GROUND, THE CORN WOULD NO LONGER PRODUCE, THE YUCCA BECAME HARD, THE FRUITS BEGAN TO FALL, AFTER 8 DAYS

17. After the spraying ceased, did you see any change in the wildlife, birds or fish in your vicinity? Yes ☒ No ☐

If yes, explain exactly what you saw and how long after the spraying you saw it? THE FISH DIED AND THIS BEGAN THE THIRD DAY

18. After the spraying ceased, did you observe any change in the appearance, odor or taste of any bodies of water (rivers, creeks, ponds, lakes, well water, etc.) in your vicinity? Yes ☒ No ☐

If yes, please describe the change(s) you observed and state how long after the spraying you observed this.
BY THE SECOND DAY IT TASTED SOUR AND IT HAD A POISONESS SMELL

E. **For all plaintiffs alleging personal bodily injuries due to the alleged exposure**, please also answer the following questions for each instance of alleged exposure. (Use additional sheets of paper as necessary.)

1. What were your symptoms? (Please provide detail on both external and internal symptoms.)
ITCHINESS ALL OVER THE BODY, FEVER, HEADACHES

If yes, how long after the alleged exposure did your symptoms occur?
3 DAYS

2. Did you go to a Health Care Provider (as defined on p. 2) based on your exposure to the "Plan Colombia" herbicide? Yes ☐ No ☒

If yes, when did you go, and how long after the exposure was this?

If yes, where did you go? (identify the name and address of the Health Care Provider)

If yes, how far was this from your home?

If yes, which person(s) at the Health Care Provider's office did you see about the herbicide exposure?

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3. What did those person(s) tell you about your injury or condition?
Did the person(s) tell you that your injuries or condition was caused by the "Plan Colombia" herbicide? Yes ☐ No ☐

4. Did the Health Care Provider take a sample of your blood or urine?
Yes ☐ No ☐

5. Did the Health Care Provider give you medicine (including herbal or home remedies) or a prescription for medicine? Yes ☐ No ☐

If yes, what was the medicine and what was it for?

If yes, did you buy the medication or was it given to you?
Yes ☐ No ☐

If yes, describe when and where you bought or obtained it and how much you paid for it.

How long did you use the medicine?

Did you take all the medicine you obtained? Yes ☐ No ☐

6. If you did not go to a Health Care Provider but thought that you were injured by the exposure, did you do anything to alleviate your injury, including any herbal or home remedies? Yes ☒ No ☐
If yes, what did you do? WE TOOK MEDICINAL WATERS

7. What specific type(s) of bodily illness or injury do you allege were caused by your exposure to the "Plan Colombia" herbicide?
ITCHINESS OF THE BODY, FEVER, HEADACHES

8. Do you believe you have an increased risk of future injury or harm (which has not yet appeared on or in your body) as a result of your alleged exposure to the "Plan Colombia" herbicide? Yes ☒ No ☐

If yes, please explain what future health risks you believe you face, why you think this would be affiliated with "Plan Colombia", and identify any Health Care Providers or other people who have told you this and set out what each such person (except your attorneys) said to you about future injury or harm.
WE GOT GASTRITIS DUE TO DRINKING THE CONTAMINATED WATERS

F. **For all plaintiffs claiming damage to crops** from the alleged exposure, please also

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answer the following questions **about each instance of alleged exposure** (use additional sheets if necessary):

1. Where was your field of crops (identify by distance and direction from your home)? 200 METERS ON THE FRONTIER

What was the date and time of day your crop(s) were exposed to the "Plan Colombia" herbicide?
SINCE 2000 TO 2006, AT 11 IN THE MORNING

3. How close is that field to the border between Colombia and Ecuador? km or 200 meters

4. Please mark a small circle ("0") on the attached map to show where your exposed field was and mark the date of the alleged exposure by each "O." Have you marked the map?
Yes ☒ No ☐
If no, why not?

5. Do you own the land where your crops were growing? Yes ☒ No ☐

If not, who owned the land when the spraying took place?

6. How big was your field or patch of crops exposed to the herbicide? 15 HECTARES IN TOTAL
What kinds of crops were planted there? COFFEE, CORN, RICE, YUCCA, AND COCOA BEANS

7. How long after the exposure did you notice injury to the crops and what did you first see when the damage began? 8 DAYS; THE FLOWERS FROM THE COFFEE BEANS BEGAN TO FALL AND THE LEAVES TURNED YELLOW

How long did it take for the injury to be complete? 1 YEAR

What was the end result of the alleged exposure? (Describe what percentage of your crop was damaged or destroyed) 100%

8. Did you sell or trade the crops that remained in your field after the alleged exposure? Yes ☐ No ☒

If yes, to whom?

If yes, did you tell the buyer that you believed the crop had been exposed to a "Plan Colombia" herbicide? Yes ☐ No ☐

9. How soon after the alleged exposure did you plant new crops in the same field? 6 MONTHS

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10. Why do you believe your crops were damaged by the "Plan Colombia" herbicide?
BECAUSE THE PRODUCTION FELL AFTER THE FUMIGATIONS

11. What kinds of pesticides and/or herbicides did you use on the same crops before their alleged exposure to the "Plan Colombia" herbicide?

12. Where did you buy the pesticides and/or herbicides that you used?
(Include name and address of the supplier.)

G. **For all plaintiffs claiming injuries to farm animals or pets**, please also answer the following questions **about <u>each</u> instance of alleged exposure** (use additional sheets as necessary):

1. What kind of animals were exposed? COWS, HORSES, PIGS, AND CHICKENS

2. Where were your animals when they were allegedly exposed (identify by distance from your home)? ON THE FARM

3. How close was this to the Colombian-Ecuadorian border? 200 METERS

4. Please place a "?" on the attached map to show where your animals were at the time of their alleged exposure and put the date(s) of exposure by each "?".

   Have you marked the map in this way? Yes ☒ No ☐
   If no, why not?

5. How long after the exposure did it take for your animals to get sick? 15 DAYS

6. What happened to the exposed animals? (Identify for each kind of animal: how many died; how many got sick but survived; how many were unaffected)
   2 HORSES, 4 COWS, 2 CALVES, 10 PIGLETS, 1 PIG, 25 CHICKENS DIED; 8 COWS, 10 CHICKENS, 1 PIG GOT SICK

7. For the animals that died, did a veterinarian, a professional or other person examine the corpses to determine the cause of death? Yes ☐ No ☒

   If yes, who was this, when did it happen, and what did he/she tell you? (Identify by name, title, and business address)

   If yes, when did this person examine the animal corpses in relation to when they died?

8. For the animals that got sick but survived, did a veterinarian, a professional or other person examine and diagnose the sick animals?
   Yes ☐ No ☒

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If yes, who came, when did they come, and what did they tell you? (Identify by name, title, and business address)

9. Did anyone collect blood samples or other tissue samples from your animals (dead or alive)? Yes ☐ No ☒
If yes, who took the samples? (Identify name, title and business address)

If yes, did you get copies of any results from the tests done on the animal blood or tissue samples? Yes ☐ No ☐

If you got written results, please attach them to your answers to these questionnaires.

10. Why do you believe that your animals' illness or death was caused by the "Plan Colombia" herbicide?
BECAUSE THEY WERE ALL HEALTHY AND LATER AFTER THE FUMIGATIONS THEY BEGAN TO GET SICK AND DIE

H. Reports to Third Parties.

1. Other than the Health Care Providers or animal care professionals identified above, did you complain to anyone or to any organization (government or non-government) about the alleged spraying of herbicide?
Yes ☐ No ☒

If yes, whom did you speak with and when did you do this?

If yes, what did you say to this person or organization?

What did the person or organization say back to you?

Did that person or organization take samples of your blood or urine due to your alleged exposure to the "Plan Colombia" herbicide? Yes ☐ No ☐

If yes, who did this and when did it happen?

VI. YOUR MEDICAL BACKGROUND

A. Check the medical conditions that you have *at the present time* and the conditions that you have had *at any time in the past.*

Condition	I have now	I have had in the past
Cancer	☐	☐
If cancer, what kind?		

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Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

Heart disease or heart attack	☐	☐
Angina, chest pain	☒	☐
Brain tumor	☐	☐
Epilepsy	☐	☐
Diabetes	☐	☐
Liver disease	☐	☐
Pancreatitis	☐	☐
Polio	☐	☐
Malaria	☐	☒
Dysentery	☒	☐
Asthma or other respiratory illness, shortness of breath	☐	☐
Blood clots or abnormalities of blood vessels	☐	☐
Anemia or other blood disorders	☐	☐
High blood pressure	☐	☐
AIDS or HIV-positive test results	☐	☐
Medical condition	☐	☐
Arthritis	☐	☐
Kidney disease or transplant	☐	☐
Dengue fever	☐	☐
Cholera	☐	☐
Changas	☒	☐
High cholesterol	☐	☐
Influenza	☐	☐
Diarrhea	☒	☐
Infections (bacterial or fungal)	☒	☐
Measles	☐	☐
Chicken pox	☐	☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

Mumps	☐	☐
Diptheria	☐	☐
Whooping cough	☒	☐
Scarlet fever	☒	☐
Leishmaniasis	☐	☐
Onchocerciasis	☐	☐
Alcoholism	☐	☐
Malnutrition	☐	☐
Migraine headaches	☒	☐
Fainting or serious dizziness	☐	☐
Medical condition	☐	☐
Osteoporosis	☐	☐
Broken bones	☐	☐
Skin rash or skin irritation	☒	☐

B. For each of the conditions that you checked above, please fill out the information below:

Condition No. 1

Date of onset: THE YEAR 2000
Did you see a Health Care Provider (as defined on page 2 above) about this condition?
Yes ☐ No ☒

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 2

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

Date of onset:
Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 3

Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 4
Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐
If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

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[Translators: Use this field to describe further medical conditions if there are more than 4, using same format:]

NOTE: Attach additional sheets of paper if you have more than 4 conditions to describe.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

C. Have you had any surgeries in the last 20 years? Yes ☐ No ☒
If yes, *when?*
For what?

If yes, who performed the surgery? (include name and address)

D. Drug and Medicine Use:

Do you take any drugs and/or medicines on a regular basis, including plants, herbs, roots or traditional remedies (ancestral) for medicinal uses? Yes ☒ No ☐

If yes, please list all of the drugs and medicines (including plants, herbs, roots or traditional remedies) that you take at this time: CHAMOMILE WATER, SALSAPARRILLA, TORONJIL

Have you formerly taken drugs and/or medicines (including plants, herbs, roots or traditional remedies) on a regular basis that you do not take now? Yes ☒ No ☐

If yes, please list all such drugs and/or medicines and identify *when you* took them: CHAMOMILE WATER, SALSAPARRILLA, TORONJIL

F. History of the Use of Tobacco and Similar Products:

Have you ever smoked cigarettes? Yes ☐ No ☒

Do you currently smoke cigarettes? Yes ☐ No ☒

If yes, please fill in: I have smoked packs or cigarettes per day for years, of the following brands of cigarettes:

If you smoked earlier but do not now, please fill in: I stopped smoking in Before that, I smoked packs or cigarettes per day for years, of the following brands of cigarettes:

Have you ever smoked cigars or pipe tobacco? Yes ☐ No ☒

If you currently smoke cigars and/or a pipe, please fill in: I presently smoke (fill in number of) cigars and/or pipes per day.

If you smoked cigars or pipes earlier but do not now, please fill in: I stopped smoking (fill in "cigars" or "pipes" or "both") in (date)

Before that I smoked (fill in number) per day.

Have you ever smoked other substances based on ancestral custom or personal preference? Yes ☐ No ☒

If yes, identify what you smoked, *when* you started, and how long you have smoked

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

it.

Have you ever chewed tobacco or similar chewing material? Yes ☐ No ☒

If yes, what was it, *when* did you begin to chew it, and how long have you done this?

G. Drinking History:

Do you currently drink alcohol of any kind? Yes ☒ No ☐

If yes, how many drinks per week do you consume? 6 BEERS A MONTH

If you do not drink alcohol now but you did in the past, how many drinks per week did you consume in the past?
When was this?

Do you drink other fermented beverages that contain a smaller amount of alcohol?
Yes ☐ No ☒

If yes, explain how much of this you drink and when you have consumed it.

H. Have you ever missed work for more than 2 weeks straight for reasons related to your health in the last 20 years? Yes ☐ No ☒ If yes, *when?*

If yes, please state the dates you missed work, your employer at the time, and the health condition that caused your absence from work:

Did you see a Health Care Provider about the health problem that caused you to miss work? Yes ☐ No ☐

If yes, please identify the Health Care Provider's name, address and *when you* visited that provider.

I. In addition to the Health Care Providers identified in the preceding answers in this Questionnaire, have you gone to any more Health Care Providers (as defined on p. 2) in the last twenty (20) years? Yes ☐ No ☐

If so, please provide the following information:

Date	Name and Address of	For what illness or	What diagnosis and treatment did you

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

	Health Care Provider	injury?	receive?

J. Reproductive History (To be answered by all wives and mothers; to be answered by husbands and fathers only if they are filling out this Questionnaire for their wives):

Have you (or your wife if a husband is answering this question) ever had a miscarriage? Yes ☐ No ☐
If yes, please state how many times and when each happened.

Have you ever experienced any still-births or deaths of your children shortly after they were born? Yes ☐ No ☐

If yes, please state how many times and *when* each happened.

If yes, did you see a Medical Care Provider about the still-births or infant deaths? Yes ☐ No ☐

If yes, please identify who you saw, *when* you saw them, and what they told you about each such incident?

VII. SPECIFICATION OF DAMAGES BEING SOUGHT AND SUPPORTING DOCUMENTATION

A. What *amount* of damages are you seeking?

For physical injury to yourself: $YES

For damage to your crops: $YES

For damage to your animals: $YES

For lost wages or income: $

For anything else? If so, describe: $YES

WATER

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

TOTAL $ 0

B.

C. Do you seek damages to reimburse you for medical bills and expenses that you paid? Yes ☐ No ☒

If yes, how much did you pay? $

If yes, did you pay in cash or with something else? (If something else, describe what it was):

D. Do you seek damages to reimburse you for *other* out-of-pocket expenses or fees?
Yes ☐ No ☒
If yes, how much in expenses or fees did you pay, how did you pay then, and what were the payments for?

E. Do you seek damages for lost wages or loss of time from work?
Yes ☐ No ☒

If yes, *when* did this happen? (List all instances)

If yes, how long were you unable to work?

If yes, how much in wages or income did you lose? $

How do you calculate this amount?

If you claim lost wages, identify the employer(s) (by listing each name and address) who did not pay you for the relevant period of time. If self-employed, describe the basis for your alleged lost earnings.

Did you try to find new work during the period of time for which you seek lost wages or income? Yes ☐ No ☐

If yes, where did you apply or inquire and what happened following your application or inquiry?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

F. Do you seek damages for the loss of legal crops? Yes ☒ No ☐

If yes, please provide the following information:

Kind of Crop	Amount of crop that died / was lost	Monetary Value(s)you place on the Crops that Died	Basis for your Value(s)
COCOA BEANS	1 HECTARE	$2000	$2000 PER HECTARE
COFFEE	4 HECTARES	$12000	$3000 PER HECTARE
PLANTAINS	1.5 HECTARES	$1050	$700 PER HECTARE
CORN	3	$900	$300 PER HECTARE
YUCCA	1/2 HECTARE	$100	$200 PER HECTARE
PASTURE LAND	6 HECTARES	$1800	$300 PER HECTARE

G. Do you seek damages for farm animals or pets that died?

Yes ☐ No ☐

If yes, please provide the following information:

Kind of Animal	Number that Died	Monetary value(s) you place on the dead animals	Basis for your Value(s)
COWS	4	$1600	$400 PER COW
CALVES	2	$400	$200 PER CALF
HORSES	2	$600	$300 PER HORSE
PIGLETS	10	$300	$30 PER PIG
PIG	1	$100	$100 PER PIG
CHICKENS	25	$200	$8 PER CHICKEN

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

VIII. WITNESSES TO YOUR CLAIMS

Please identify all persons whom you believe possess information concerning your alleged exposure to the "Plan Colombia" herbicide and/or the alleged injuries or other harm resulting to you from the exposure *(other than your attorneys and the Health Care Providers identified elsewhere in this Questionnaire):*

Name and address: [redacted]

(What knowledge does this person have?) SHE KNOWS ABOUT THE FUMIGATIONS AND THE DAMAGES

Name and address: [redacted]

(What knowledge does this person have?) HE KNOWS ABOUT THE FUMIGATIONS AND THE DAMAGES

Name and address:

(What knowledge does this person have?)

Name and address:

(What knowledge does this person have?)

IX. DOCUMENT REQUESTS AND AUTHORIZATIONS

A. If you are claiming personal injuries to yourself:

1. Please provide a copy of any and all medical and other documents (as defined on p. 2), including records, test results and all medical bills *in your or your attorney's possession* that relate to any visit you made or any treatment you received from a Health Care Provider (as defined on p. 2) in the last twenty (20) years.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

2. Please complete and sign a copy of the Exhibit A "Authorization for Release of Medical Records" for each Health Care Provider you have identified in your responses to this Questionnaire. Deliver the Authorizations to each Health Care Provider identified on the form and give the documents that the Providers produce to you (along with a copy of the corresponding Authorization for Release given or sent to each Provider) to your attorney so that these medical records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit A "Authorization for Release of Medical Records" with the name of the Medical Care Provider left blank for future use if the defendants establish that you saw or were treated by additional Medical Care Providers in the last twenty (20) years.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

B. **If you are claiming reimbursement for any medical expenses or other out-of-pocket expenses related to your alleged exposure:**

1. Please attach a copy of the receipts, bills, invoices or any other documents in your or your attorney's possession that demonstrate the amount of the expenses for which you seek reimbursement.

C. **If you are claiming lost wages or earnings:**

1. Please attach copies of any and all documents in your possession about the total amount of salary or wages that was paid to you and the total amount of any other income that was generated by you for each year in the last ten (10) years. This shall include but not be limited to: pay-stubs, cancelled checks, income tax forms or other documents that disclose income received by you each year for the last ten (10) years from any source.

2. Please complete and sign the attached Exhibit B "Authorization for Release of Employment Records" for each of your employers in the last ten (10) years as identified in your answers to this Plaintiffs' Questionnaire. Deliver the Authorizations to each such employer identified on the form and give the documents that the employers produce to you (along with a copy of the corresponding Authorization) to your attorney so that these records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit B "Authorization" with the name of the employer left blank for future use if the defendants establish that you had additional employers in the last ten (10) years.

D. **If you are claiming loss based on injury or damage to your legal crops:**

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the land and/or that you owned the crops on that land, which you claim were destroyed, (ii) the amount of crops that were destroyed, and (iii) the monetary value of the destroyed crops.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

E. If you are claiming loss based on injury to farm animals or pets:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the animals you claim were injured or killed, (ii) the number of animals that died, (iii) the monetary value of the animals that died, and (iv) any other expenses you are claiming relative to this alleged loss.

F. If you are claiming any other kind of loss or damage in this case:

1. Please attach copies of any and all documents that demonstrate or support such other claimed loss or damage and the *amount* of damages you seek for that loss or damage.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

X. VERIFICATION

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on (DATE) JUNE 11, 2008 (Signature)

Plaintiff's Signature
Print Plaintiff's Name: [redacted]

(Signature)
Signature of witness attesting to Plaintiff's Signature
Witness's name: [redacted]
Date: JUNE 11, 2008
Witness's Address: QUITO, ECUADOR
Witness's Relationship to Plaintiff: NO RELATIONSHIP

Plaintiff's Picture

Plaintiff's Fingerprint

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Questionnaire respondent is the same person as: EM, Vol. IV, Annex 193, Witness 5

CERTIFICATE OF ACCURACY OF TRANSLATION

I Susan Valentini affirm that I am fluent in English and Spanish and that the translations of the attached documents are true and correct to the best of my knowledge.

SUSAN VALENTINI

Annex 68

PLAINTIFF QUESTIONNAIRE, *ARIAS/QUINTEROS V. DYNCORP,* D.D.C. (EM VOL. IV, ANNEX 197, WITNESS 9)

(United States District Court for the District of Columbia, Cases No. 1:01-cv01908 (RWR-DAR) and 1:07-cv01042 (RWR-DAR). Cases consolidated for Case Management and Discovery)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Case #: [redacted]

[redacted] Plaintiffs, v. DYNCORP, *et al.* Defendants.	)	Case No. 1:07CV01042 (RWR)
Venancio Aguasanta Arias, *et al.* Plaintiffs, v. DYNCORP, *et al.* Defendants.	)	Case No. 1:07CV01042 (RWR) Consolidated for Discovery with Case No. 1:01CV01908 (RWR)

PLAINTIFFS' QUESTIONNAIRE

To Each Individual Plaintiff:

INSTRUCTIONS

1. Each individual plaintiff in the above-captioned cases must complete and sign his or her own copy of this Questionnaire.

2. If a person is responding on behalf of his or her children (or another person or persons) on whose behalf a claim has been filed before this Court, then a separate copy of this Questionnaire must be filled out for each such child or other person.

3. When you read the terms "you" and "your" throughout this Questionnaire, they refer to each person who is claiming injury due to the alleged exposure in this case. In other words, if you are claiming injury to yourself or your

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

then you must answer the questions about that child or other person on a separate copy of this Questionnaire, clearly marked to show to whom it refers

4. Each question must be answered in full. If you do not know the answer to a question or cannot recall the information needed to answer a question, please say this in your response to the question. If a question is "not applicable" to you, say this in your response. Do not leave any question unanswered.

5. Each individual plaintiff must realize that he or she is under oath and must provide information that is true and correct based on such person's personal knowledge and belief.

6. You may attach as many sheets of paper as necessary to fully answer the questions. This questionnaire also asks you to produce written documents that relate directly to your answers. You must give these documents to your attorney so that they may be copied for use in this lawsuit. **You must not dispose of or alter or modify any documents** or other materials that you have now or that you may later receive relating to any of the subjects addressed in this Plaintiffs' Questionnaire.

7. In filling out this form, please use the following definitions:

(A) **"Health care provider"** means any hospital, clinic, doctor's or nurse's office, infirmary, medical laboratory or other facility that provides medical care or advice. It also means any doctor, physician, surgeon, paramedic, nurse (registered or otherwise), psychologist, psychiatrist, therapist, chiropractor, healer or any other person practicing any kind of healing art (with or without traditional medications) or performing any kind of medical, physical or mental examination or treatment, and any other persons or entities involved in the evaluation, diagnosis, care and/or treatment of you.

(B) **"Document"** means any writing or record of any kind whatsoever that is in your or your family's possession or the possession of your counsel, including but not limited to written letters, papers, notes, e-mails, photographs, charts, cassettes, videotapes, computer discs or tapes, x-rays, drawings, graphs, phonorecords, nonidentical copies and other data compilations of any kind.

I. PRELIMINARY INFORMATION ABOUT YOU AND YOUR CLAIM

A. Name of plaintiff submitting this Questionnaire (NOTE: There must be one form completed for each plaintiff and for each other person claiming injuries): [redacted]

B. Name of person who this Questionnaire applies to: [redacted]

C. Name of person who filled out this Questionnaire, if different from plaintiff (include the preparer's name, company, address, and relationship to plaintiff): Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

work product. Subject to, and without waiving, said objections, responding party responds as follows: This Questionnaire and the computer responses were generated with assistance of counsel

D. Are you seeking relief for personal injury to yourself? Yes ☒ No ☐

E. Are you seeking relief for personal injury to someone else? Yes ☐ No ☒

If yes, who?

Please mark the reason why this person cannot act on his or her own.

Minor ☐ Impaired ☐ Death ☐ Other Reason ☐

(Note: A separate copy of this Questionnaire should be completed for each person seeking damages).

F. Are you seeking damages for injury to your property (crops or animals)?
Yes ☒ No ☐

If yes, do you claim:

Damages to your crops? Yes ☒ No ☐

Damage to farm animals or pets? Yes ☒ No ☐

G. Are you seeking damages for injury to any other types of property?
Yes ☐ No ☒
If yes, what kind?

II. PERSONAL INFORMATION

A. Paternal Last name: [redacted]

Maternal Last name: [redacted]

First name: [redacted]

Middle Name: [redacted]

Any other names by which you have ever been known:

Ecuadorian identification number: [redacted]

B. Gender: Male ☐ Female ☒

Height: 1.55 METERS

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Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

Weight: 165 Lbs

C. Are you Ecuadorian? Yes ☒ No ☐

If not, what is your country of citizenship?

D. Racial/Ethnic Background: Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows: MIXED RACE

If you answered Indigenous or Indian, do you belong to an indigenous tribe or community? Yes☐ No☒

If yes, which one?

E. What language do you speak? SPANISH

F. Do you clearly understand the language used in this Questionnaire and the questions asked in this Questionnaire? Yes ☒ No☐

G. Date of Birth: [redacted]

H. Present home address: [redacted]

Village or City: CORAZON ORENCE Province: SUCUMBIOS

If you do not live in a city or town, identify the nearest town to your home and provide the directions to get to your home from that town. (Use road names, river names and North, South, East, West directions to describe how to get to your home)
[redacted]

How long have you lived at this address?
25 YEARS

What was the reason that caused you to move to your present home address?
BECAUSE THERE WAS LAND TO WORK ON

Who has lived with you at this address?
MY SONS MY HUSBAND

I. Prior Home Addresses. Please provide the following information for the last ten (10) years:

Prior address (including closest town, province, and country)	Dates you lived at this address: Starting	Until	Persons who lived with you at this address

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

J. Telephone Number (if any):

K. Current Occupation: HOUSEWIFE

Name of employer (If self-employed, say this): I HAVE ALWAYS WORKED ALONE IN MY LAND

Name of immediate supervisor (if any):

Employer's address (work):

Employer's telephone no. (work):

How long have you worked there?

L. Prior Employers. Please fill in the following information for the last ten (10) years (Include any military service, and if self-employed, say this):

Prior employers (names and addresses)	Dates you worked for this employer: Starting	Until	What did you do there?

M. In any of your work in the last ten (10) years (including your current work or home farming), have you used or handled pesticides and/or herbicides?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of pesticides and/or herbicides did you use and *when* did you use them?

If you applied the pesticides and/or herbicides, how did you do it?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

If you applied them, [the pesticides], describe any kind of protection you used for yourself while you were using the pesticides and/or herbicides.

If you applied pesticides, did you or anyone else in your family wash the clothes you wore when using the pesticides and/or herbicides?
Yes☐ No☒

If yes, please describe who did this, how often it was done, and the manner in which your clothes were washed or cleaned.

Do you believe you have experienced any kind of medical problems as a result of handling pesticides/herbicides in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of medical problems and *when* did you have them?

N. Has any member of your immediate family used or handled pesticides and/or herbicides during the last ten years (as a part of your work or home farming)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what members of your family and what type of pesticides and/or herbicides did they use?

If yes, where and how did those members of your family (or any other person) wash the clothes they used while using pesticides and/or herbicides?

O. In your work or in your home farming in the last (10) years, have you been in the vicinity of or close to other people using herbicides and/or pesticides (where you could see other people)?

Yes☐ No☒

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

If yes, what kind of herbicides and/or pesticides did they use?

If yes, where and how did you wash your clothes that you wore after you were close to where other people used the herbicides and/or pesticides?

P. In any of your work in the last (10) years (including your current work or home farming), did/do you use or handle chemicals (other than the herbicides or pesticides identified in the previous answer.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of chemicals fertilizers, or other artificial chemical products did you use and when did you use them?

If yes, describe any kind of protection you used for yourself while using the chemicals.

Do you believe you have experienced any kind of medical problems as a result of using chemical fertilizers or other types of artificial chemical products in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of medical problems and *when* did you experience them?

Q. Have you ever been convicted of a crime in the past ten years? Yes☐ No☒

If yes, what crime?

Did you go to jail or prison? Yes☐ No☒

If yes, how long?

R. Have you ever been rejected for a job for which you applied or for a military position because of a medical, physical, psychiatric or emotional condition?

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Yes☐ No☒

If yes, what job or position?

If yes, *when* did this happen? (Include all instances when this happened).

If yes, what was your medical condition or disability (for each such instance)?

S. Have you ever filed a claim or claims with the Ecuadorian or Provincial government where you live or with an employer or with an insurance company or any other entity for compensation or the payment of medical expenses or lost earnings due to an injury or a medical disability of any kind?
Yes☐ No☒

If yes, please fill in the following information for the last ten (10 years):

Date claim filed	Filed with whom?	What injury/disability was claimed?	What happened with your claim?

T. Do you have medical insurance of any kind? Yes☐ No☒

If yes, what company or program provides your medical insurance?

U. Have you ever filed a lawsuit against anyone (aside from this suit), including any oil companies?
Yes☐ No☒

If yes, please identify: (1) what kind of lawsuit it was, (2) when you filed it, (3) the company or people you sued, (4) what Court or other tribunal it was before, and (5) what was the result of the suit. (If any of your lawsuits are still pending, say this.) (Attach additional pages if necessary to describe multiple lawsuits.)

III. FAMILY INFORMATION AND EDUCATIONAL HISTORY

A. Have you ever been married? Yes☒ No☐

B. If yes, *for each spouse and former spouse,* please identify the following:
1. Spouse's name: [redacted]
2. Date of marriage: FROM 1981 TILL 2008
3. Spouse's date of birth: 08/14/60
4. Spouse's occupation: FARMING

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5. Spouse's address (if different than yours):

C. Immediate Family members. Please provide the following information about each of your parents, your sisters, your brothers and your children. **(Add additional sheets if necessary.)**

Name	Relationship to you	Date of birth	Date of death (if applicable)	Cause of death (if applicable)	Main occupation
[redacted]	HUSBAND	08/14/60			FARMER
[redacted]	SON	09/10/91			STUDENT
[redacted]	SON	10/22/93			STUDENT
[redacted]	SON	10/12/02			STUDENT
[redacted]	SON	10/23/92			STUDENT

D. Education.

How many years did you go to school? 4 Years

What was the highest grade you completed? 4TH GRADE

Where did you go to school? (List all schools by name and location)
SANTO DOMINGO I DON'T REMEMBER THE SCHOOL

Do you know how to read? Yes ☒ No ☐

Do you know how to write? Yes ☒ No ☐

Do you have any degrees or certifications? Yes ☐ No ☒

If yes, what are they and what year did you get them?

Annex 68

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IV. YOUR LIVING CONDITIONS

A. Please answer the following questions about your home, food and water:

1. What size is your house and of what materials is it made?
   WOOD 6X5

2. Where do you get your water? FROM THE RAIN

3. What is the source of your water? RAIN

4. Do you have running water inside your home? Yes ☐ No ☒

5. Do you filter your water? Yes ☒ No ☐

   If yes, how? IT BOILS

6. Where do you get the food for you and your family? IN THE MARKET IN THE FARM

7. How do you cook your food? (On a stove, grill, charcoal or firewood)
   STOVE

8. Do you eat raw crab meat? Yes ☐ No ☒

9. Do you use crab juice as medicine? Yes ☐ No ☒

   Do you buy and eat food in public places (Such as open air markets or places that sell prepared foods to the public)? Yes ☐ No ☒

   If yes, have you observed the conditions in which that food was prepared and handled before you purchased and ate it? Yes ☐ No ☒

B. Please answer the following questions regarding sanitation:

1. How is sewage (waste and waste water) from your home disposed of?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows: WELL

2. Where does the sewage from your home go to (e.g., into the soil, into a body of water: sewer, river, stream, lake, etc.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

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WELL

3. Do you have a toilet inside your home? Yes ☐ No ☒

4. Do you use an outhouse? Yes ☐ No ☒

5. How is sewage disposed by the other homes and farms around you?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
   WELL

6. How do you dispose of your trash? (e.g., do you burn it? Do you bury it? Do you send it to a landfill?)

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
   IT IS BURIED AND IT BURNS

7. How far is the closest landfill to your house? 100 METERS

8. Where you live, is the trash dumped into a public area or public water channel?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☒ No ☐

C. Please answer the following questions regarding oil operations (oil perforation, oil well, oil pits, gas stations or oil facilities) close to your house or place work:

1. How far is the nearest oil operation from your home? (and describe what is it)
   TWO KILOMETERS

2. Has your home, farm or work area ever experienced oil pollution as a result of oil operations?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

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Yes ☐ No ☒
If yes, *when* did this happen?

3. Have you ever been injured in any way by oil pollution?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

   If yes, what were the injuries and *when* did they occur?

4. Do you think that anyone in your family been injured in any way by oil operations?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒
   If yes, what and *when* were the injuries they suffered?

D. Please answer the following questions regarding volcanoes:

1. How close do you live to the Reventador volcano, and/or to any other volcano?
   FAR I DON'T KNOW THE KILOMETERS

2. Do you think that you or your family members have ever been injured in any manner as a result of the eruptions or volcanic emissions of the Reventador volcano, or any other volcano?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

   If yes, *when* did this happen and what were the personal damages that you suffered?

3. Do you think anyone in your town, vicinity, or community suffered personal damages of any kind as a result of the volcanic eruptions?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for

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speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

If yes, explain what happened and *when* it happened

E. Please answer the following questions regarding floods:

1. Have you, your home or your farm been affected in any way as a result of a flood in the last 10 years?
Yes ☒ No ☐

If yes, describe *when* this occurred and what damages you or your property suffered?
IN 2003 THE RIVER OVERFLEW AND THE PLANTAINS AND YUCA WERE DAMAGED

If yes, did the floods cause you to leave your home? Yes ☐ No ☒

F. Please answer the following questions about people moving into your town, vicinity, or community.

1. Do you think that your village or community has experienced an influx of people from Colombia in the last ten (10) years? Yes ☒ No ☐

2. Do you believe that your village, vicinity, or community has experienced an influx of people from other places (other than Colombia) in the last ten (10) years? Yes ☐ No ☒

If yes, where did these people come from?

V. YOUR ALLEGED EXPOSURE TO THE "PLAN COLOMBIA" HERBICIDE

A. Are you familiar with "Plan Colombia?" Yes ☒ No ☐

If yes, what do you know about "Plan Colombia" and *when* did you learn this?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows: OF THE FUMIGATIONS THAT HAVE BEEN DONE IN THE TERRAINS

If yes, identify the people with whom you have spoken about "Plan Colombia," what they told you, and when these conversations took place?

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Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows:WITH COLOMBIAN FRIENDS IN SCHOOL IN MEETINGS THAT WE HAD IN THE SCHOOL ABOUT THE CHILDREN

B. Why do you believe that you and/or your property was exposed to a "Plan Colombia" herbicide? BECAUSE THE PLANTS DIED AND THEY DRIED AND I LIVE NEAR COLOMBIA AND ALL THE ANIMALS HAVE DIED

C. When were you and/or your property exposed to herbicide? (If more than once, list all dates of exposure by day, month and year.) IN THE YEAR 2002 2003

D. **For each instance of alleged exposure to your body**, please answer the following questions (use additional sheets of paper as necessary):

1. Where were you when the exposure occurred?

2. How close were you at that time to the border between Ecuador and Colombia?

3. How do you know this?

4. Please mark an "X" on the attached map of Northern Ecuador to show where you were at the time of the alleged exposure and list the date(s) of exposure beside each "X". Have you marked the map in this way?
Yes ☐ No ☐

If no, why not?

5. What time of day did the exposure occur?

6. What was the weather like that day? (Include the approximate temperature and whether there was precipitation)

7. Did you see an airplane at the time of the exposure?
Yes ☐ No ☐

If yes, what did it look like? (color, size, letters, flags or other markings on plane, etc.)

8. Did you see more than one airplane at the time of the exposure?
Yes ☐ No ☐

If yes, please state how many you saw and describe what each looked like:

9. Did you see a helicopter at the time of the alleged exposure?
Yes ☐ No ☐

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If yes, how many?

If yes, what did the helicopter(s) look like (color, size, letters, flags or other markings)?

10. Did you see anything else in the air? Yes ☐ No ☐

If yes, what else did you see?

11. Did you see the spray or a "cloud" or "fog" of spray? Yes ☐ No ☐

If yes, what color was it?

12. Did you see residue on the ground after the spraying? Yes ☐ No ☐

If yes, what did it look like?

13. Did you hear anything? Yes ☐ No ☐

If yes, what did you hear?

14. Did you smell anything unusual? Yes ☐ No ☐

If yes, what did it smell like?

15. Do you contend that your body was exposed to the spray?
Yes ☐ No ☐

If yes, did you feel anything on your skin? Yes ☐ No ☐

If yes, what did you feel?

If yes, what did you do with the clothing that you wore that day and when did you do it? (Include whether they were washed or destroyed)

16. After the spraying ceased, did you see any changes to the plants in your vicinity?
Yes ☐ No ☐

If yes, what changes did you see and how long after the spraying did you see the changes?

17. After the spraying ceased, did you see any change in the wildlife, birds or fish in your vicinity? Yes ☐ No ☐

If yes, explain exactly what you saw and how long after the spraying you saw it?

18. After the spraying ceased, did you observe any change in the appearance, odor or taste

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

of any bodies of water (rivers, creeks, ponds, lakes, well water, etc.) in your vicinity?
Yes ☐ No ☐

If yes, please describe the change(s) you observed and state how long after the spraying you observed this.

E. **For all plaintiffs alleging personal bodily injuries due to the alleged exposure**, please also answer the following questions for each instance of alleged exposure. (Use additional sheets of paper as necessary.)

1. What were your symptoms? (Please provide detail on both external and internal symptoms.)

If yes, how long after the alleged exposure did your symptoms occur?

2. Did you go to a Health Care Provider (as defined on p. 2) based on your exposure to the "Plan Colombia" herbicide? Yes ☐ No ☐

If yes, when did you go, and how long after the exposure was this?

If yes, where did you go? (identify the name and address of the Health Care Provider)

If yes, how far was this from your home?

If yes, which person(s) at the Health Care Provider's office did you see about the herbicide exposure?

3. What did those person(s) tell you about your injury or condition?
Did the person(s) tell you that your injuries or condition was caused by the "Plan Colombia" herbicide? Yes ☐ No ☐

4. Did the Health Care Provider take a sample of your blood or urine?
Yes ☐ No ☐

5. Did the Health Care Provider give you medicine (including herbal or home remedies) or a prescription for medicine? Yes ☐ No ☐

If yes, what was the medicine and what was it for?

If yes, did you buy the medication or was it given to you?

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If yes, describe when and where you bought or obtained it and how much you paid for it.

How long did you use the medicine?

Did you take all the medicine you obtained? Yes ☐ No ☐

6. If you did not go to a Health Care Provider but thought that you were injured by the exposure, did you do anything to alleviate your injury, including any herbal or home remedies? Yes ☐ No ☐
If yes, what did you do?

7. What specific type(s) of bodily illness or injury do you allege were caused by your exposure to the "Plan Colombia" herbicide?

8. Do you believe you have an increased risk of future injury or harm (which has not yet appeared on or in your body) as a result of your alleged exposure to the "Plan Colombia" herbicide? Yes ☐ No ☐

If yes, please explain what future health risks you believe you face, why you think this would be affiliated with "Plan Colombia", and identify any Health Care Providers or other people who have told you this and set out what each such person (except your attorneys) said to you about future injury or harm.

F. **For all plaintiffs claiming damage to crops** from the alleged exposure, please also answer the following questions **about each instance of alleged exposure** (use additional sheets if necessary):

1. Where was your field of crops (identify by distance and direction from your home)?

What was the date and time of day your crop(s) were exposed to the "Plan Colombia" herbicide?

3. How close is that field to the border between Colombia and Ecuador? km or meters

4. Please mark a small circle ("0") on the attached map to show where your exposed field was and mark the date of the alleged exposure by each "O." Have you marked the map?
Yes ☐ No ☐
If no, why not?

5. Do you own the land where your crops were growing? Yes ☐ No ☐

If not, who owned the land when the spraying took place?

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6. How big was your field or patch of crops exposed to the herbicide?
What kinds of crops were planted there?

7. How long after the exposure did you notice injury to the crops and what did you first see when the damage began?

How long did it take for the injury to be complete?

What was the end result of the alleged exposure? (Describe what percentage of your crop was damaged or destroyed)

8. Did you sell or trade the crops that remained in your field after the alleged exposure? Yes ☐ No ☐

If yes, to whom?

If yes, did you tell the buyer that you believed the crop had been exposed to a "Plan Colombia" herbicide? Yes ☐ No ☐

9. How soon after the alleged exposure did you plant new crops in the same field?

10. Why do you believe your crops were damaged by the "Plan Colombia" herbicide?

11. What kinds of pesticides and/or herbicides did you use on the same crops before their alleged exposure to the "Plan Colombia" herbicide?

12. Where did you buy the pesticides and/or herbicides that you used?
(Include name and address of the supplier.)

G. **For all plaintiffs claiming injuries to farm animals or pets**, please also answer the following questions **about <u>each</u> instance of alleged exposure** (use additional sheets as necessary):

1. What kind of animals were exposed?

2. Where were your animals when they were allegedly exposed (identify by distance from your home)?

3. How close was this to the Colombian-Ecuadorian border?

4. Please place a "?" on the attached map to show where your animals were at the time of their alleged exposure and put the date(s) of exposure by each "?".

   Have you marked the map in this way? Yes ☐ No ☐
   If no, why not?

5. How long after the exposure did it take for your animals to get sick?

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6. What happened to the exposed animals? (Identify for each kind of animal: how many died; how many got sick but survived; how many were unaffected)

7. For the animals that died, did a veterinarian, a professional or other person examine the corpses to determine the cause of death? Yes ☐ No ☐

   If yes, who was this, when did it happen, and what did he/she tell you? (Identify by name, title, and business address)

   If yes, when did this person examine the animal corpses in relation to when they died?

8. For the animals that got sick but survived, did a veterinarian, a professional or other person examine and diagnose the sick animals?
   Yes ☐ No ☐

   If yes, who came, when did they come, and what did they tell you? (Identify by name, title, and business address)

9. Did anyone collect blood samples or other tissue samples from your animals (dead or alive)? Yes ☐ No ☐
   If yes, who took the samples? (Identify name, title and business address)

   If yes, did you get copies of any results from the tests done on the animal blood or tissue samples? Yes ☐ No ☐

   If you got written results, please attach them to your answers to these questionnaires.

10. Why do you believe that your animals' illness or death was caused by the "Plan Colombia" herbicide?

H. Reports to Third Parties.

1. Other than the Health Care Providers or animal care professionals identified above, did you complain to anyone or to any organization (government or non-government) about the alleged spraying of herbicide?
Yes ☐ No ☒

If yes, whom did you speak with and when did you do this?

If yes, what did you say to this person or organization?

What did the person or organization say back to you?

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Did that person or organization take samples of your blood or urine due to your alleged exposure to the "Plan Colombia" herbicide? Yes ☐ No ☐

If yes, who did this and when did it happen?

VI. YOUR MEDICAL BACKGROUND

A. Check the medical conditions that you have *at the present time* and the conditions that you have had *at any time in the past.*

Condition	I have now	I have had in the past
Cancer	☐	☐
If cancer, what kind?		
Heart disease or heart attack	☐	☐
Angina, chest pain	☐	☐
Brain tumor	☐	☐
Epilepsy	☐	☐
Diabetes	☐	☐
Liver disease	☐	☐
Pancreatitis	☐	☐
Polio	☐	☐
Malaria	☐	☐
Dysentery	☐	☐
Asthma or other respiratory illness, shortness of breath	☐	☐
Blood clots or abnormalities of blood vessels	☐	☐
Anemia or other blood disorders	☐	☐
High blood pressure	☒	☐
AIDS or HIV-positive test results	☐	☐
Medical condition	☐	☐
Arthritis	☒	☐
Kidney disease or transplant	☒	☐

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Dengue fever	☐	☐
Cholera	☐	☐
Changas	☐	☐
High cholesterol	☐	☐
Influenza	☐	☐
Diarrhea	☐	☐
Infections (bacterial or fungal)	☐	☐
Measles	☐	☐
Chicken pox	☐	☐
Mumps	☐	☐
Diptheria	☐	☐
Whooping cough	☐	☐
Scarlet fever	☐	☐
Leishmaniasis	☐	☐
Onchocerciasis	☐	☐
Alcoholism	☐	☐
Malnutrition	☐	☐
Migraine headaches	☒	☐
Fainting or serious dizziness	☒	☐
Medical condition	☐	☐
Osteoporosis	☐	☐
Broken bones	☐	☐
Skin rash or skin irritation	☐	☒

B. For each of the conditions that you checked above, please fill out the information below:

Condition No. 1

Date of onset: MAY 2008
Did you see a Health Care Provider (as defined on page 2 above) about this condition? Yes ☒
No ☐

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If yes, who did you see? (include name and address) HEALTH CENTER VINICIO IZA

What did the Health Care Provider tell you about the condition?
ALLERGY

Did the Health Care Provider give you drugs or therapy? Yes ☒ No ☐

If yes, what kind? CREAMS "CANESTEN" "TEMPRE" "BENDAZOL"

Did you take the drugs prescribed for you? Yes ☒ No ☐

Condition No. 2

Date of onset: 2002 2004
Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☒ No ☐

If yes, who did you see? (include name and address) SUB CENTER SAN FRANCISCO

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☒ No ☐

If yes, what kind? PILLS

Did you take the drugs prescribed for you? Yes ☒ No ☐

Condition No. 3

Date of onset: ALMOST ALWAYS

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☒ No ☐

If yes, who did you see? (include name and address) HEALTH CENTER SAN FRANNCISCO

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☒ No ☐

If yes, what kind? PILLS

Did you take the drugs prescribed for you? Yes ☒ No ☐

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Condition No. 4
Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐
If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

[Translators: Use this field to describe further medical conditions if there are more than 4, using same format:]

NOTE: Attach additional sheets of paper if you have more than 4 conditions to describe.

C. Have you had any surgeries in the last 20 years? Yes ☐ No ☒

If yes, *when?*
For what?

If yes, who performed the surgery? (include name and address)

D. Drug and Medicine Use:

Do you take any drugs and/or medicines on a regular basis, including plants, herbs, roots or traditional remedies (ancestral) for medicinal uses? Yes ☒ No ☐

If yes, please list all of the drugs and medicines (including plants, herbs, roots or traditional remedies) that you take at this time: "RUDA", CHAMOMILE, "ROSEMARY", BASIL

Have you formerly taken drugs and/or medicines (including plants, herbs, roots or traditional remedies) on a regular basis that you do not take now? Yes ☐ No ☒

If yes, please list all such drugs and/or medicines and identify *when you* took them:

F. History of the Use of Tobacco and Similar Products:

Have you ever smoked cigarettes? Yes ☐ No ☒

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Do you currently smoke cigarettes? Yes ☐ No ☒

If yes, please fill in: I have smoked packs or cigarettes per day for years, of the following brands of cigarettes:

If you smoked earlier but do not now, please fill in: I stopped smoking in Before that, I smoked packs or cigarettes per day for years, of the following brands of cigarettes:

Have you ever smoked cigars or pipe tobacco? Yes ☐ No ☒

If you currently smoke cigars and/or a pipe, please fill in: I presently smoke (fill in number of) cigars and/or pipes per day.

If you smoked cigars or pipes earlier but do not now, please fill in: I stopped smoking (fill in "cigars" or "pipes" or "both") in (date)

Before that I smoked (fill in number) per day.

Have you ever smoked other substances based on ancestral custom or personal preference? Yes ☐ No ☒

If yes, identify what you smoked, *when* you started, and how long you have smoked it.

Have you ever chewed tobacco or similar chewing material? Yes ☐ No ☒

If yes, what was it, *when* did you begin to chew it, and how long have you done this?

G. Drinking History:

Do you currently drink alcohol of any kind? Yes ☒ No ☐

If yes, how many drinks per week do you consume? ONLY WHEN THERE IS A PARTY

If you do not drink alcohol now but you did in the past, how many drinks per week did you consume in the past?
When was this?

Do you drink other fermented beverages that contain a smaller amount of alcohol? Yes ☐ No ☒

If yes, explain how much of this you drink and when you have consumed it.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

H. Have you ever missed work for more than 2 weeks straight for reasons related to your health in the last 20 years? Yes ☐ No ☒ If yes, *when?*

If yes, please state the dates you missed work, your employer at the time, and the health condition that caused your absence from work:

Did you see a Health Care Provider about the health problem that caused you to miss work? Yes ☐ No ☐

If yes, please identify the Health Care Provider's name, address and *when you* visited that provider.

I. In addition to the Health Care Providers identified in the preceding answers in this Questionnaire, have you gone to any more Health Care Providers (as defined on p. 2) in the last twenty (20) years? Yes ☐ No ☒

If so, please provide the following information:

Date	Name and Address of Health Care Provider	For what illness or injury?	What diagnosis and treatment did you receive?

J. Reproductive History (To be answered by all wives and mothers; to be answered by husbands and fathers only if they are filling out this Questionnaire for their wives):

Have you (or your wife if a husband is answering this question) ever had a miscarriage? Yes ☐ No ☒
If yes, please state how many times and when each happened.

Have you ever experienced any still-births or deaths of your children shortly after they were born? Yes ☒ No ☐

If yes, please state how many times and *when* each happened. 2 BABIES ONE BABY DIED A MONTH AFTER BIRTH AND THE OTHER TEN DAYS AFTER BIRTH

If yes, did you see a Medical Care Provider about the still-births or infant deaths? Yes ☒ No ☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

If yes, please identify who you saw, *when* you saw them, and what they told you about each such incident? IN LAGO AGRIO MARCO VINICIO IZA IN THE YEAR AROUND 11 YEARS

VII. SPECIFICATION OF DAMAGES BEING SOUGHT AND SUPPORTING DOCUMENTATION

A. What *amount* of damages are you seeking?

For physical injury to yourself:	$
For damage to your crops:	$I DON'T KNOW
For damage to your animals:	$I DON'T KNOW
For lost wages or income:	$I DON'T KNOW
For anything else? If so, describe:	$
TOTAL	$0

B.

C. Do you seek damages to reimburse you for medical bills and expenses that you paid? Yes ☒ No ☐

If yes, how much did you pay? $

If yes, did you pay in cash or with something else? (If something else, describe what it was): CASH

D. Do you seek damages to reimburse you for *other* out-of-pocket expenses or fees? Yes ☒ No ☐
If yes, how much in expenses or fees did you pay, how did you pay then, and what were the payments for?

E. Do you seek damages for lost wages or loss of time from work?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

Yes ☒ No ☐

If yes, *when* did this happen? (List all instances)
IN THE YEAR 2003

If yes, how long were you unable to work? ABOUT 8 MONTHS

If yes, how much in wages or income did you lose? $I DON'T KNOW

How do you calculate this amount?

If you claim lost wages, identify the employer(s) (by listing each name and address) who did not pay you for the relevant period of time. If self-employed, describe the basis for your alleged lost earnings.

Did you try to find new work during the period of time for which you seek lost wages or income? Yes ☒ No ☐

If yes, where did you apply or inquire and what happened following your application or inquiry? WITH THE NEIGHBORS IF THEY GAVE ME WORK

F. Do you seek damages for the loss of legal crops? Yes ☒ No ☐

If yes, please provide the following information:

Kind of Crop	Amount of crop that died / was lost	Monetary Value(s)you place on the Crops that Died	Basis for your Value(s)
PLANTAIN	1 HECTAR	1500	50 BUNCHES EACH ONE AT 3 DOLLARS
COFFEE	1/2 HECTAR	3000	5 QUINTALS OF COFFEE EACH 15
YUCA	1/2 HECTAR	40	4 DOLLARS A SACK
BEAN	12X8	200	I HAD GROWN BEAN TOMATO CUCUMBER ONION PIMENTON
COCOA	50 PLANTS	200	20 POUNDS
CORN	2 HECTARS	600	40 QUINTALS
RICE	1/2 HECTAR	200	8 QUINTALS

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

G. Do you seek damages for farm animals or pets that died?

Yes ☒ No ☐

If yes, please provide the following information:

Kind of Animal	Number that Died	Monetary value(s) you place on the dead animals	Basis for your Value(s)
CHICKENS	100	800	EACH CHICKEN AT 800 DOLLARS
PIGS	4	750	EACH ONE IN 180 DOLLARS

VIII. WITNESSES TO YOUR CLAIMS

Please identify all persons whom you believe possess information concerning your alleged exposure to the "Plan Colombia" herbicide and/or the alleged injuries or other harm resulting to you from the exposure *(other than your attorneys and the Health Care Providers identified elsewhere in this Questionnaire):*

Name and address: [redacted] CORAZON ORENCE

(What knowledge does this person have?) LITTLE

Name and address: [redacted]. UNION LOJANA

(What knowledge does this person have?) LITTLE

Name and address:

(What knowledge does this person have?)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

Name and address:

(What knowledge does this person have?)

IX. DOCUMENT REQUESTS AND AUTHORIZATIONS

A. If you are claiming personal injuries to yourself:

1. Please provide a copy of any and all medical and other documents (as defined on p. 2), including records, test results and all medical bills *in your or your attorney's possession* that relate to any visit you made or any treatment you received from a Health Care Provider (as defined on p. 2) in the last twenty (20) years.

2. Please complete and sign a copy of the Exhibit A "Authorization for Release of Medical Records" for each Health Care Provider you have identified in your responses to this Questionnaire. Deliver the Authorizations to each Health Care Provider identified on the form and give the documents that the Providers produce to you (along with a copy of the corresponding Authorization for Release given or sent to each Provider) to your attorney so that these medical records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit A "Authorization for Release of Medical Records" with the name of the Medical Care Provider left blank for future use if the defendants establish that you saw or were treated by additional Medical Care Providers in the last twenty (20) years.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

B. If you are claiming reimbursement for any medical expenses or other out-of-pocket expenses related to your alleged exposure:

1. Please attach a copy of the receipts, bills, invoices or any other documents in your or your attorney's possession that demonstrate the amount of the expenses for which you seek reimbursement.

C. If you are claiming lost wages or earnings:

1. Please attach copies of any and all documents in your possession about the total amount of salary or wages that was paid to you and the total amount of any other income that was generated by you for each year in the last ten (10) years. This shall include but not be limited to: pay-stubs, cancelled checks, income tax forms or other documents that disclose income received by you each year for the last ten (10) years from any source.

2. Please complete and sign the attached Exhibit B "Authorization for Release of Employment Records" for each of your employers in the last ten (10) years as identified in your answers to this Plaintiffs' Questionnaire. Deliver the Authorizations to each such employer identified on the form and give the documents that the employers produce to you (along with a copy of the corresponding Authorization) to your attorney so that these records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit B "Authorization" with the name of the employer left blank for future use if the defendants establish that you had additional employers in the last ten (10) years.

D. If you are claiming loss based on injury or damage to your legal crops:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the land and/or that you owned the crops on that land, which you claim were destroyed, (ii) the amount of crops that were destroyed, and (iii) the monetary value of the destroyed crops.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

E. If you are claiming loss based on injury to farm animals or pets:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the animals you claim were injured or killed, (ii) the number of animals that died, (iii) the monetary value of the animals that died, and (iv) any other expenses you are claiming relative to this alleged loss.

F. If you are claiming any other kind of loss or damage in this case:

1. Please attach copies of any and all documents that demonstrate or support such other claimed loss or damage and the *amount* of damages you seek for that loss or damage.

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Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

X. VERIFICATION

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on (DATE) 06/04/08

(Signature)
Plaintiff's Signature
Print Plaintiff's Name: [redacted]

(Signature)
Signature of witness attesting to Plaintiff's Signature
Witness's name: [redacted]
Date: 06/04/08
Witness's Address: Quito, Ecuador
Witness's Relationship to Plaintiff: None

Plaintiff's Picture

Plaintiff's Fingerprint

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 197, Witness 9

CERTIFICATE OF ACCURACY

I, Luis E. Tellez, swear under penalty of perjury that I am fluent in both English and Spanish and that the translation of the attached document is true and correct.

Signature

November 17, 2008

Annex 69

PLAINTIFF QUESTIONNAIRES, *ARIAS/QUINTEROS V. DYNCORP,* D.D.C. (EM VOL. IV, ANNEX 199, WITNESS 11) PERSONALLY AND ON BEHALF OF HER DECEASED DAUGHTER

(United States District Court for the District of Columbia,
Cases No. 1:01-cv01908 (RWR-DAR) and 1:07-cv01042 (RWR-DAR).
Cases consolidated for Case Management and Discovery)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Case #:

[redacted] Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR)
Venancio Aguasanta Arias, *et al.* Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR) Consolidated for Discovery with Case No. 1:01CV01908 (RWR)

PLAINTIFFS' QUESTIONNAIRE

To Each Individual Plaintiff:

INSTRUCTIONS

1. Each individual plaintiff in the above-captioned cases must complete and sign his or her own copy of this Questionnaire.

2. If a person is responding on behalf of his or her children (or another person or persons) on whose behalf a claim has been filed before this Court, then a separate copy of this Questionnaire must be filled out for each such child or other person.

3. When you read the terms "you" and "your" throughout this Questionnaire, they refer to each person who is claiming injury due to the alleged exposure in this case. In other words, if you are claiming injury to yourself or your

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

property, you must answer the questions about yourself and your property. If you are responding on behalf of your child (or other person), then you must answer the questions about that child or other person on a separate copy of this Questionnaire, clearly marked to show to whom it refers

4. Each question must be answered in full. If you do not know the answer to a question or cannot recall the information needed to answer a question, please say this in your response to the question. If a question is "not applicable" to you, say this in your response. Do not leave any question unanswered.

5. Each individual plaintiff must realize that he or she is under oath and must provide information that is true and correct based on such person's personal knowledge and belief.

6. You may attach as many sheets of paper as necessary to fully answer the questions. This questionnaire also asks you to produce written documents that relate directly to your answers. You must give these documents to your attorney so that they may be copied for use in this lawsuit. **You must not dispose of or alter or modify any documents** or other materials that you have now or that you may later receive relating to any of the subjects addressed in this Plaintiffs' Questionnaire.

7. In filling out this form, please use the following definitions:

(A) **"Health care provider"** means any hospital, clinic, doctor's or nurse's office, infirmary, medical laboratory or other facility that provides medical care or advice. It also means any doctor, physician, surgeon, paramedic, nurse (registered or otherwise), psychologist, psychiatrist, therapist, chiropractor, healer or any other person practicing any kind of healing art (with or without traditional medications) or performing any kind of medical, physical or mental examination or treatment, and any other persons or entities involved in the evaluation, diagnosis, care and/or treatment of you.

(B) **"Document"** means any writing or record of any kind whatsoever that is in your or your family's possession or the possession of your counsel, including but not limited to written letters, papers, notes, e-mails, photographs, charts, cassettes, videotapes, computer discs or tapes, x-rays, drawings, graphs, phonorecords, nonidentical copies and other data compilations of any kind.

I. PRELIMINARY INFORMATION ABOUT YOU AND YOUR CLAIM

A. Name of plaintiff submitting this Questionnaire (NOTE: There must be one form completed for each plaintiff and for each other person claiming injuries): [redacted]

B. Name of person who this Questionnaire applies to: [redacted]

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

[redacted]

C. Name of person who filled out this Questionnaire, if different from plaintiff (include the preparer's name, company, address, and relationship to plaintiff):
Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-work product. Subject to, and without waiving, said objections, responding party responds as follows: This Questionnaire and the computer responses were generated with assistance of counsel

D. Are you seeking relief for personal injury to yourself? Yes ☒ No ☐

E. Are you seeking relief for personal injury to someone else? Yes ☒ No ☐

If yes, who?for my daughters

Please mark the reason why this person cannot act on his or her own.

Minor ☐ Impaired ☐ Death ☒ Other Reason ☐

(Note: A separate copy of this Questionnaire should be completed for each person seeking damages).

F. Are you seeking damages for injury to your property (crops or animals)? Yes ☒ No ☐

If yes, do you claim:

Damages to your crops? Yes ☒ No ☐

Damage to farm animals or pets? Yes ☒ No ☐

G. Are you seeking damages for injury to any other types of property? Yes ☒ No ☐
If yes, what kind? Terrain and harvests

II. PERSONAL INFORMATION

A. Paternal Last name: [redacted]

Maternal Last name: [redacted]

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

First name: [redacted]

Middle Name: [redacted]

Any other names by which you have ever been known:

Ecuadorian identification number: [redacted]

B. Gender: Male☐ Female☒

Height: 1.62

Weight: 150 lbs

C. Are you Ecuadorian? Yes ☒ No ☐

If not, what is your country of citizenship?

D. Racial/Ethnic Background: Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows: Lago Agrio

If you answered Indigenous or Indian, do you belong to an indigenous tribe or community? Yes☒ No☐

If yes, which one?

E. What language do you speak? Quichua

F. Do you clearly understand the language used in this Questionnaire and the questions asked in this Questionnaire? Yes ☒ No☐

G. Date of Birth: [redacted]

H. Present home address: [redacted]

Village or City: San Francisco Province: Sucumbios

If you do not live in a city or town, identify the nearest town to your home and provide the directions to get to your home from that town. (Use road names, river names and North, South, East, West directions to describe how to get to your home)

[redacted]

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

How long have you lived at this address?
30 years

What was the reason that caused you to move to your present home address?
my parents live in this community

Who has lived with you at this address?
The San Francisco Indigenous Association II organization

I. Prior Home Addresses. Please provide the following information for the last ten (10) years:

Prior address (including closest town, province, and country)	Dates you lived at this address: Starting	Until	Persons who lived with you at this address
San Francisco, Sucumbios, Ecuador			the community

J. Telephone Number (if any):

K. Current Occupation: farmer and domestic chores

Name of employer (If self-employed, say this):

Name of immediate supervisor (if any):

Employer's address (work):

Employer's telephone no. (work):

How long have you worked there? 6 months

L. Prior Employers. Please fill in the following information for the last ten (10) years (Include any military service, and if self-employed, say this):

Prior employers (names and addresses)	Dates you worked for this employer: Starting	Until	What did you do there?
Lake Agrio	2002		farmer, ironing, washing clothes

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

			and cooking.

M. In any of your work in the last ten (10) years (including your current work or home farming), have you used or handled pesticides and/or herbicides?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of pesticides and/or herbicides did you use and *when* did you use them?

If you applied the pesticides and/or herbicides, how did you do it?

If you applied them, [the pesticides], describe any kind of protection you used for yourself while you were using the pesticides and/or herbicides.

If you applied pesticides, did you or anyone else in your family wash the clothes you wore when using the pesticides and/or herbicides?
Yes☐ No☐

If yes, please describe who did this, how often it was done, and the manner in which your clothes were washed or cleaned.

Do you believe you have experienced any kind of medical problems as a result of handling pesticides/herbicides in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☐

If yes, what kind of medical problems and *when* did you have them?

N. Has any member of your immediate family used or handled pesticides

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

and/or herbicides during the last ten years (as a part of your work or home farming)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what members of your family and what type of pesticides and/or herbicides did they use?

If yes, where and how did those members of your family (or any other person) wash the clothes they used while using pesticides and/or herbicides?

O. In your work or in your home farming in the last (10) years, have you been in the vicinity of or close to other people using herbicides and/or pesticides (where you could see other people)?

Yes☐ No☒

If yes, what kind of herbicides and/or pesticides did they use?

If yes, where and how did you wash your clothes that you wore after you were close to where other people used the herbicides and/or pesticides?

P. In any of your work in the last (10) years (including your current work or home farming), did/do you use or handle chemicals (other than the herbicides or pesticides identified in the previous answer.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of chemicals fertilizers, or other artificial chemical products did you use and when did you use them?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

If yes, describe any kind of protection you used for yourself while using the chemicals.

Do you believe you have experienced any kind of medical problems as a result of using chemical fertilizers or other types of artificial chemical products in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☒ No☐

If yes, what kind of medical problems and *when* did you experience them?
2001- I have suffered a lot with all of these illnesses and the death of my babies. Due to the fumigations in 2001-2002 I experienced headaches, body ache, diarrhea, skin breakouts, etc.

Q. Have you ever been convicted of a crime in the past ten years? Yes☐ No☒

If yes, what crime?

Did you go to jail or prison? Yes☐ No☒

If yes, how long?

R. Have you ever been rejected for a job for which you applied or for a military position because of a medical, physical, psychiatric or emotional condition?
Yes☐ No☒

If yes, what job or position?

If yes, *when* did this happen? (Include all instances when this happened).

If yes, what was your medical condition or disability (for each such instance)?

S. Have you ever filed a claim or claims with the Ecuadorian or Provincial government where you live or with an employer or with an insurance company or any other entity for compensation or the payment of medical expenses or lost earnings due to an injury or a medical disability of any kind?
Yes☒ No☐

If yes, please fill in the following information for the last ten (10 years):

Date claim filed	Filed with whom?	What	What happened with

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

		injury/disability was claimed?	your claim?
2001	Defense Ministry and California Dyncorp.	illnesses, harvests, the death of my girls, my psychological suffering	trial continues
2002	Defense Ministry and California Dyncorp.	illnesses, harvests, the death of my girls, my psychological suffering	trial continues
2003	Defense Ministry and California Dyncorp.	illnesses, harvests, the death of my girls, my psychological suffering	trial continues

T. Do you have medical insurance of any kind? Yes☐ No☒

If yes, what company or program provides your medical insurance?

U. Have you ever filed a lawsuit against anyone (aside from this suit), including any oil companies?
Yes☐ No☒

If yes, please identify: (1) what kind of lawsuit it was, (2) when you filed it, (3) the company or people you sued, (4) what Court or other tribunal it was before, and (5) what was the result of the suit. (If any of your lawsuits are still pending, say this.) (Attach additional pages if necessary to describe multiple lawsuits.)
The lawsuit is presented before the United States against the Glisophate company

III. FAMILY INFORMATION AND EDUCATIONAL HISTORY

A. Have you ever been married? Yes ☐ No ☒

B. If yes, *for each spouse and former spouse,* please identify the following:
1. Spouse's name: illegible
2. Date of marriage: illegible
3. Spouse's date of birth: illegible
4. Spouse's occupation: illegible
5. Spouse's address (if different than yours): illegible

C. Immediate Family members. Please provide the following information about each of your parents, your sisters, your brothers and your children. **(Add additional sheets if necessary.)**

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Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

Name	Relationship to you	Date of birth	Date of death (if applicable)	Cause of death (if applicable)	Main occupation
[redacted]	daughter	03-17-2001	06-25-2001	fumigation	
	daughter	06-30-2003	09-10-2003	fumigation	
	daughter	[redacted]			
	mother	I don't remember			house wife
	sister				house wife
	brother				farmer
	brother				farmer
	brother				farmer
	sister				farmer
	sister				farmer

D. Education.

How many years did you go to school? 6 Years

What was the highest grade you completed? 6th grade

Where did you go to school? (List all schools by name and location)
Rio Upano School in San Francisco; distance learning school Juan Jimenez, Lake Agrio.

Do you know how to read? Yes ☒ No ☐

Do you know how to write? Yes ☒ No ☐

Do you have any degrees or certifications? Yes ☒ No ☐

If yes, what are they and what year did you get them?
In the year 2008 AT Sucumbios, Lake Agrio.

IV. YOUR LIVING CONDITIONS

A. Please answer the following questions about your home, food and water:

1. What size is your house and of what materials is it made?
I do not have a house, I need shelter

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

2. Where do you get your water? river, waterhole, rain

3. What is the source of your water? rain

4. Do you have running water inside your home? Yes ☐ No ☒

5. Do you filter your water? Yes ☐ No ☒

   If yes, how?

6. Where do you get the food for you and your family? fishing, harvest, whatever is left from the fumigation

7. How do you cook your food? (On a stove, grill, charcoal or firewood)
   wood fire

   Do you eat raw crab meat? Yes ☐ No ☒

   Do you use crab juice as medicine? Yes ☐ No ☒

   Do you buy and eat food in public places (Such as open air markets or places that sell prepared foods to the public)? Yes ☐ No ☒

   If yes, have you observed the conditions in which that food was prepared and handled before you purchased and ate it? Yes ☐ No ☐

B. Please answer the following questions regarding sanitation:

1. How is sewage (waste and waste water) from your home disposed of?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
Outside the house

2. Where does the sewage from your home go to (e.g., into the soil, into a body of water: sewer, river, stream, lake, etc.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
in the earth

3. Do you have a toilet inside your home? Yes ☐ No ☒

4. Do you use an outhouse? Yes ☐ No ☒

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

5. How is sewage disposed by the other homes and farms around you?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
   outside the house

6. How do you dispose of your trash? (e.g., do you burn it? Do you bury it? Do you send it to a landfill?)

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
   Outside the house

7. How far is the closest landfill to your house? Does not exist

8. Where you live, is the trash dumped into a public area or public water channel?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

C. Please answer the following questions regarding oil operations (oil perforation, oil well, oil pits, gas stations or oil facilities) close to your house or place work:

1. How far is the nearest oil operation from your home? (and describe what is it)
   There is a gas station 22 km away

2. Has your home, farm or work area ever experienced oil pollution as a result of oil operations?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒
   If yes, *when* did this happen?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

3. Have you ever been injured in any way by oil pollution?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

   If yes, what were the injuries and *when* did they occur?

4. Do you think that anyone in your family been injured in any way by oil operations?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

If yes, what and *when* were the injuries they suffered?

D. Please answer the following questions regarding volcanoes:

1. How close do you live to the Reventador volcano, and/or to any other volcano? 200 km

2. Do you think that you or your family members have ever been injured in any manner as a result of the eruptions or volcanic emissions of the Reventador volcano, or any other volcano?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

   If yes, *when* did this happen and what were the personal damages that you suffered?

3. Do you think anyone in your town, vicinity, or community suffered personal damages of any kind as a result of the volcanic eruptions?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

without waiving, said objections, responding party responds as follows:

Yes ☐ No ☐

If yes, explain what happened and *when* it happened
It does not exist

E. Please answer the following questions regarding floods:

1. Have you, your home or your farm been affected in any way as a result of a flood in the last 10 years?
Yes ☒ No ☐

If yes, describe *when* this occurred and what damages you or your property suffered?
unclear

If yes, did the floods cause you to leave your home? Yes ☐ No ☒

F. Please answer the following questions about people moving into your town, vicinity, or community.

1. Do you think that your village or community has experienced an influx of people from Colombia in the last ten (10) years? Yes ☒ No ☐

2. Do you believe that your village, vicinity, or community has experienced an influx of people from other places (other than Colombia) in the last ten (10) years? Yes ☐ No ☒

If yes, where did these people come from?

V. YOUR ALLEGED EXPOSURE TO THE "PLAN COLOMBIA" HERBICIDE

A. Are you familiar with "Plan Colombia?" Yes ☒ No ☐

If yes, what do you know about "Plan Colombia" and *when* did you learn this?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows:We saw the jet planes fumigating over our Ecuadorian territory with the glisophate

If yes, identify the people with whom you have spoken about "Plan Colombia," what they told you, and when these conversations took place?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows:A soil study was made by both Ecuadorian and Colombian chemical engineers.

B. Why do you believe that you and/or your property was exposed to a "Plan Colombia" herbicide? Before there was no damage, with the herbicide the plants from the fields began to dry-up.

C. When were you and/or your property exposed to herbicide? (If more than once, list all dates of exposure by day, month and year.) Month of September - October, Tueday, Friday, 2001 - 2002.

D. **For each instance of alleged exposure to your body**, please answer the following questions (use additional sheets of paper as necessary):

1. Where were you when the exposure occurred? working on the farm

2. How close were you at that time to the border between Ecuador and Colombia? 2 kilometers or 2000 meters

3. How do you know this? I live on the border.

4. Please mark an "X" on the attached map of Northern Ecuador to show where you were at the time of the alleged exposure and list the date(s) of exposure beside each "X". Have you marked the map in this way?
Yes ☒ No ☐

If no, why not?

5. What time of day did the exposure occur? 9:00 a.m, and at all times of day and night.

6. What was the weather like that day? (Include the approximate temperature and whether there was precipitation) Temperate: they were done at various times.

7. Did you see an airplane at the time of the exposure?
Yes ☒ No ☐

If yes, what did it look like? (color, size, letters, flags or other markings on plane, etc.)
It was a white color jet plane at a height of approxiamtely 200 meters.

8. Did you see more than one airplane at the time of the exposure?
Yes ☒ No ☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

If yes, please state how many you saw and describe what each looked like:
2 jet planes and 1 helicopter accompanied by the Colombian Army

9. Did you see a helicopter at the time of the alleged exposure?
Yes ☒ No ☐

If yes, how many? two

If yes, what did the helicopter(s) look like (color, size, letters, flags or other markings)? the Colombian helicopter was black

10. Did you see anything else in the air? Yes ☒ No ☐

If yes, what else did you see? I saw air fall as rain.

11. Did you see the spray or a "cloud" or "fog" of spray? Yes ☒ No ☐

If yes, what color was it? whitish

12. Did you see residue on the ground after the spraying? Yes ☐ No ☒

If yes, what did it look like?

13. Did you hear anything? Yes ☒ No ☐

If yes, what did you hear? very noisy gun shots, the earth trembled.

14. Did you smell anything unusual? Yes ☒ No ☐

If yes, what did it smell like? poison smell

15. Do you contend that your body was exposed to the spray?
Yes ☒ No ☐

If yes, did you feel anything on your skin? Yes ☒ No ☐

If yes, what did you feel? itching and after scratching red bumps appeared.

If yes, what did you do with the clothing that you wore that day and when did you do it? (Include whether they were washed or destroyed)
The neighbor told me to take off my clothes and change.

16. After the spraying ceased, did you see any changes to the plants in your vicinity?
Yes ☒ No ☐

If yes, what changes did you see and how long after the spraying did you see the changes? after 18 days

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

17. After the spraying ceased, did you see any change in the wildlife, birds or fish in your vicinity? Yes ☒ No ☐

If yes, explain exactly what you saw and how long after the spraying you saw it? Birds fell from the sky, few wildlife

18. After the spraying ceased, did you observe any change in the appearance, odor or taste of any bodies of water (rivers, creeks, ponds, lakes, well water, etc.) in your vicinity? Yes ☒ No ☐

If yes, please describe the change(s) you observed and state how long after the spraying you observed this.
15 days

E. **For all plaintiffs alleging personal bodily injuries due to the alleged exposure**, please also answer the following questions for each instance of alleged exposure. (Use additional sheets of paper as necessary.)

1. What were your symptoms? (Please provide detail on both external and internal symptoms.)
vomit, headache, body ache, skin breakouts, fevers, stomach ache.

If yes, how long after the alleged exposure did your symptoms occur?
5 days

2. Did you go to a Health Care Provider (as defined on p. 2) based on your exposure to the "Plan Colombia" herbicide? Yes ☒ No ☐

If yes, when did you go, and how long after the exposure was this?
Fonakise heatlh brigade

If yes, where did you go? (identify the name and address of the Health Care Provider) Fonakise, Lake Agrio, Red Cross, hospital, clinic - natural medicine

If yes, how far was this from your home? 21 kilometers

If yes, which person(s) at the Health Care Provider's office did you see about the herbicide exposure? health brigade Jami Wasi, Fonakise

3. What did those person(s) tell you about your injury or condition? They said I had an infection as a result from Plan Colombia.
Did the person(s) tell you that your injuries or condition was caused by the "Plan Colombia" herbicide? Yes ☒ No ☐

4. Did the Health Care Provider take a sample of your blood or urine?
Yes ☒ No ☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

5. Did the Health Care Provider give you medicine (including herbal or home remedies) or a prescription for medicine? Yes ☒ No ☐

If yes, what was the medicine and what was it for? some remedies (I do not know the name)

If yes, did you buy the medication or was it given to you?
Yes ☒ No ☐

If yes, describe when and where you bought or obtained it and how much you paid for it. $40.00 dollars for each time I felt sick

How long did you use the medicine? 8 days or more times during fumigation

Did you take all the medicine you obtained? Yes ☒ No ☐

6. If you did not go to a Health Care Provider but thought that you were injured by the exposure, did you do anything to alleviate your injury, including any herbal or home remedies? Yes ☒ No ☐
If yes, what did you do? natural medicines like chuchuguezo and cruz caspi.

7. What specific type(s) of bodily illness or injury do you allege were caused by your exposure to the "Plan Colombia" herbicide?
My skin, an with all my previous diseases, when fumigation ocurred I felt ill with many symptoms.

8. Do you believe you have an increased risk of future injury or harm (which has not yet appeared on or in your body) as a result of your alleged exposure to the "Plan Colombia" herbicide? Yes ☒ No ☐

If yes, please explain what future health risks you believe you face, why you think this would be affiliated with "Plan Colombia", and identify any Health Care Providers or other people who have told you this and set out what each such person (except your attorneys) said to you about future injury or harm.
Because according to my age, different effects may arise, as back pain, etc.

F. **For all plaintiffs claiming damage to crops** from the alleged exposure, please also answer the following questions **about each instance of alleged exposure** (use additional sheets if necessary):

1. Where was your field of crops (identify by distance and direction from your home)?
In the north, about 500 meters.

What was the date and time of day your crop(s) were exposed to the "Plan Colombia"

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

herbicide?
September 25th, 3:00 p.m., it was various days.

3. How close is that field to the border between Colombia and Ecuador? 2 km or200meters

4. Please mark a small circle ("0") on the attached map to show where your exposed field was and mark the date of the alleged exposure by each "O." Have you marked the map?
Yes ☒ No ☐
If no, why not?

5. Do you own the land where your crops were growing? Yes ☒ No ☐

If not, who owned the land when the spraying took place?

6. How big was your field or patch of crops exposed to the herbicide? a size of 15 cm
What kinds of crops were planted there? corn, cacao, rice, yuca, plantain and banana

7. How long after the exposure did you notice injury to the crops and what did you first see when the damage began? spoilage of the leaves

How long did it take for the injury to be complete? 3 years

What was the end result of the alleged exposure? (Describe what percentage of your crop was damaged or destroyed) 80% lost

8. Did you sell or trade the crops that remained in your field after the alleged exposure? Yes ☒ No ☐

If yes, to whom? the few that was left, in the market.

If yes, did you tell the buyer that you believed the crop had been exposed to a "Plan Colombia" herbicide? Yes ☐ No ☒

9. How soon after the alleged exposure did you plant new crops in the same field? After fumigations stopped at the Colombian side.

10. Why do you believe your crops were damaged by the "Plan Colombia" herbicide? In the past I harvested a lot of products. But leaves started to spoil and plants died. I lost everything. "My earnings."

11. What kinds of pesticides and/or herbicides did you use on the same crops before their alleged exposure to the "Plan Colombia" herbicide? organic fertilizer

12. Where did you buy the pesticides and/or herbicides that you used?
(Include name and address of the supplier.)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

G. **For all plaintiffs claiming injuries to farm animals or pets**, please also answer the following questions **about <u>each</u> instance of alleged exposure** (use additional sheets as necessary):

1. What kind of animals were exposed? pig, dogs, chickens

2. Where were your animals when they were allegedly exposed (identify by distance from your home)? near the house

3. How close was this to the Colombian-Ecuadorian border? 2000 meters

4. Please place a "?" on the attached map to show where your animals were at the time of their alleged exposure and put the date(s) of exposure by each "?".

   Have you marked the map in this way? Yes ☒ No ☐
   If no, why not?

5. How long after the exposure did it take for your animals to get sick? 15 days

6. What happened to the exposed animals? (Identify for each kind of animal: how many died; how many got sick but survived; how many were unaffected)
   10 dead pigs, 50 chickens, 2 dogs. None were saved.

7. For the animals that died, did a veterinarian, a professional or other person examine the corpses to determine the cause of death? Yes ☐ No ☒

   If yes, who was this, when did it happen, and what did he/she tell you? (Identify by name, title, and business address)

   If yes, when did this person examine the animal corpses in relation to when they died?

8. For the animals that got sick but survived, did a veterinarian, a professional or other person examine and diagnose the sick animals?
   Yes ☐ No ☒

   If yes, who came, when did they come, and what did they tell you? (Identify by name, title, and business address)

9. Did anyone collect blood samples or other tissue samples from your animals (dead or alive)? Yes ☐ No ☒
   If yes, who took the samples? (Identify name, title and business address)

   If yes, did you get copies of any results from the tests done on the animal blood or

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

tissue samples? Yes ☐ No ☒

If you got written results, please attach them to your answers to these questionnaires.

10. Why do you believe that your animals' illness or death was caused by the "Plan Colombia" herbicide?
Before I did not know. After fumigation, all animals died.

H. Reports to Third Parties.

1. Other than the Health Care Providers or animal care professionals identified above, did you complain to anyone or to any organization (government or non-government) about the alleged spraying of herbicide?
Yes ☒ No ☐

If yes, whom did you speak with and when did you do this? In 2002, to the Environmental Minister

If yes, what did you say to this person or organization? To dialogue with the Colombin President

What did the person or organization say back to you? That nothing happened, that it was a lie.

Did that person or organization take samples of your blood or urine due to your alleged exposure to the "Plan Colombia" herbicide? Yes ☐ No ☒

If yes, who did this and when did it happen?

VI. YOUR MEDICAL BACKGROUND

A. Check the medical conditions that you have *at the present time* and the conditions that you have had *at any time in the past.*

Condition	I have now	I have had in the past
Cancer	☐	☐
If cancer, what kind?		
Heart disease or heart attack	☐	☐
Angina, chest pain	☐	☐
Brain tumor	☐	☐
Epilepsy	☐	☐
Diabetes	☐	☐

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Liver disease	☒	☐
Pancreatitis	☐	☐
Polio	☐	☐
Malaria	☐	☒
Dysentery	☐	☐
Asthma or other respiratory illness, shortness of breath	☐	☐
Blood clots or abnormalities of blood vessels	☐	☐
Anemia or other blood disorders	☒	☐
High blood pressure	☐	☐
AIDS or HIV-positive test results	☐	☐
Medical condition	☐	☐
Arthritis	☒	☐
Kidney disease or transplant	☐	☐
Dengue fever	☐	☐
Cholera	☐	☐
Changas	☐	☐
High cholesterol	☐	☐
Influenza	☒	☐
Diarrhea	☒	☐
Infections (bacterial or fungal)	☒	☐
Measles	☐	☐
Chicken pox	☐	☐
Mumps	☐	☐
Diptheria	☐	☐
Whooping cough	☒	☐
Scarlet fever	☐	☐
Leishmaniasis	☐	☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

Onchocerciasis	☐	☐
Alcoholism	☐	☐
Malnutrition	☐	☐
Migraine headaches	☒	☐
Fainting or serious dizziness	☒	☐
Medical condition	☐	☐
Osteoporosis	☐	☐
Broken bones	☐	☐
Skin rash or skin irritation	☒	☐

B. For each of the conditions that you checked above, please fill out the information below:

Condition No. 1

Date of onset: 2007, anemia
Did you see a Health Care Provider (as defined on page 2 above) about this condition?
Yes ☐ No ☒

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☒

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 2

Date of onset: 2008, all of the diseases
Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☒ No ☐

If yes, who did you see? (include name and address) Heiner Gonzabay Clinis, Lake Agrio

What did the Health Care Provider tell you about the condition?
That there are too many infections and that I needed urine, fecal and blood exams.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☒

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☒
I do not have any money.

Condition No. 3

Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☒

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☒

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 4
Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐
If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

[Translators: Use this field to describe further medical conditions if there are more than 4, using same format:]

NOTE: Attach additional sheets of paper if you have more than 4 conditions to describe.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

C. Have you had any surgeries in the last 20 years? Yes ☐ No ☒
If yes, *when?*
For what?

If yes, who performed the surgery? (include name and address)

D. Drug and Medicine Use:

Do you take any drugs and/or medicines on a regular basis, including plants, herbs, roots or traditional remedies (ancestral) for medicinal uses? Yes ☒ No ☐

If yes, please list all of the drugs and medicines (including plants, herbs, roots or traditional remedies) that you take at this time: Yaji, guantud, guayusa, ginger, aloe vera, cat's claw, chuchuguazo, etc.

Have you formerly taken drugs and/or medicines (including plants, herbs, roots or traditional remedies) on a regular basis that you do not take now? Yes ☐ No ☒

If yes, please list all such drugs and/or medicines and identify *when you* took them:

F. History of the Use of Tobacco and Similar Products:

Have you ever smoked cigarettes? Yes ☐ No ☒

Do you currently smoke cigarettes? Yes ☐ No ☐

If yes, please fill in: I have smoked packs or cigarettes per day for years, of the following brands of cigarettes:

If you smoked earlier but do not now, please fill in: I stopped smoking in Before that, I smoked packs or cigarettes per day for years, of the following brands of cigarettes:

Have you ever smoked cigars or pipe tobacco? Yes ☐ No ☒

If you currently smoke cigars and/or a pipe, please fill in: I presently smoke (fill in number of) cigars and/or pipes per day.

If you smoked cigars or pipes earlier but do not now, please fill in: I stopped smoking (fill in "cigars" or "pipes" or "both") in (date)

Before that I smoked (fill in number) per day.

Have you ever smoked other substances based on ancestral custom or personal preference? Yes ☐ No ☒

If yes, identify what you smoked, *when* you started, and how long you have smoked

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

it.

Have you ever chewed tobacco or similar chewing material? Yes ☐ No ☒

If yes, what was it, *when* did you begin to chew it, and how long have you done this?

G. Drinking History:

Do you currently drink alcohol of any kind? Yes ☐ No ☐

If yes, how many drinks per week do you consume?

If you do not drink alcohol now but you did in the past, how many drinks per week did you consume in the past?
When was this?

Do you drink other fermented beverages that contain a smaller amount of alcohol?
Yes ☐ No ☒

If yes, explain how much of this you drink and when you have consumed it.

H. Have you ever missed work for more than 2 weeks straight for reasons related to your health in the last 20 years? Yes ☒ No ☐ If yes, *when?*

If yes, please state the dates you missed work, your employer at the time, and the health condition that caused your absence from work:
I have not had an employer for 2001, 2002 and 2003 for my heatlh and that of my daughter.

Did you see a Health Care Provider about the health problem that caused you to miss work? Yes ☒ No ☐

If yes, please identify the Health Care Provider's name, address and *when you* visited that provider. In 2002, when the Brigade reached my community

I. In addition to the Health Care Providers identified in the preceding answers in this Questionnaire, have you gone to any more Health Care Providers (as defined on p. 2) in the last twenty (20) years? Yes ☐ No ☒

If so, please provide the following information:

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

Date	Name and Address of Health Care Provider	For what illness or injury?	What diagnosis and treatment did you receive?

J. Reproductive History (To be answered by all wives and mothers; to be answered by husbands and fathers only if they are filling out this Questionnaire for their wives):

Have you (or your wife if a husband is answering this question) ever had a miscarriage? Yes ☒ No ☐
If yes, please state how many times and when each happened. One in March

Have you ever experienced any still-births or deaths of your children shortly after they were born? Yes ☒ No ☐

If yes, please state how many times and *when* each happened. 2 dead girls

If yes, did you see a Medical Care Provider about the still-births or infant deaths?
Yes ☐ No ☒

If yes, please identify who you saw, *when* you saw them, and what they told you about each such incident?

VII. SPECIFICATION OF DAMAGES BEING SOUGHT AND SUPPORTING DOCUMENTATION

A. What *amount* of damages are you seeking?

For physical injury to yourself:	$62,000 dollars
For damage to your crops:	$2,000 dollars
For damage to your animals:	$1,000 dollars
For lost wages or income:	$21,000 dollars
For anything else? If so, describe:	$
TOTAL	$86,000 dollars

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

B.

C. Do you seek damages to reimburse you for medical bills and expenses that you paid? Yes ☒ No ☐

If yes, how much did you pay? $7,000.00

If yes, did you pay in cash or with something else? (If something else, describe what it was): in cash, in products, lending and borrowing money.

D. Do you seek damages to reimburse you for *other* out-of-pocket expenses or fees?
Yes ☐ No ☒
If yes, how much in expenses or fees did you pay, how did you pay then, and what were the payments for?

E. Do you seek damages for lost wages or loss of time from work?
Yes ☒ No ☐

If yes, *when* did this happen? (List all instances)
of Plan Colombia

If yes, how long were you unable to work? 6 years

If yes, how much in wages or income did you lose? $9,500 dollars

How do you calculate this amount? by harvest or hectares

If you claim lost wages, identify the employer(s) (by listing each name and address) who did not pay you for the relevant period of time. If self-employed, describe the basis for your alleged lost earnings.

Did you try to find new work during the period of time for which you seek lost wages or income? Yes ☒ No ☐

If yes, where did you apply or inquire and what happened following your application or inquiry? I wanted to farm again

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

F. Do you seek damages for the loss of legal crops? Yes ☒ No ☐

If yes, please provide the following information:

Kind of Crop	Amount of crop that died / was lost	Monetary Value(s)you place on the Crops that Died	Basis for your Value(s)
yuca	1 hectare		
plantains	1/2 hectare		
rice	1 hectare		
corn	5 hectares		

G. Do you seek damages for farm animals or pets that died?

Yes ☐ No ☐

If yes, please provide the following information:

Kind of Animal	Number that Died	Monetary value(s) you place on the dead animals	Basis for your Value(s)
pigs	10	x 8,000	per pig
chickens	50	x50.00	per chicken

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

VIII. WITNESSES TO YOUR CLAIMS

Please identify all persons whom you believe possess information concerning your alleged exposure to the "Plan Colombia" herbicide and/or the alleged injuries or other harm resulting to you from the exposure *(other than your attorneys and the Health Care Providers identified elsewhere in this Questionnaire):*

Name and address: [redacted]

(What knowledge does this person have?) The same problems from Plan Colombia

Name and address: [redacted]

(What knowledge does this person have?) The same problems

Name and address:

(What knowledge does this person have?)

Name and address:

(What knowledge does this person have?)

IX. DOCUMENT REQUESTS AND AUTHORIZATIONS

A. **If you are claiming personal injuries to yourself:**

1. Please provide a copy of any and all medical and other documents (as defined on p. 2), including records, test results and all medical bills *in your or your attorney's possession* that relate to any visit you made or any treatment you received from a Health Care Provider (as defined on p. 2) in the last twenty (20) years.

2. Please complete and sign a copy of the Exhibit A "Authorization for

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

Release of Medical Records" for each Health Care Provider you have identified in your responses to this Questionnaire. Deliver the Authorizations to each Health Care Provider identified on the form and give the documents that the Providers produce to you (along with a copy of the corresponding Authorization for Release given or sent to each Provider) to your attorney so that these medical records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit A "Authorization for Release of Medical Records" with the name of the Medical Care Provider left blank for future use if the defendants establish that you saw or were treated by additional Medical Care Providers in the last twenty (20) years.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

B. If you are claiming reimbursement for any medical expenses or other out-of-pocket expenses related to your alleged exposure:

1. Please attach a copy of the receipts, bills, invoices or any other documents in your or your attorney's possession that demonstrate the amount of the expenses for which you seek reimbursement.

C. If you are claiming lost wages or earnings:

1. Please attach copies of any and all documents in your possession about the total amount of salary or wages that was paid to you and the total amount of any other income that was generated by you for each year in the last ten (10) years. This shall include but not be limited to: pay-stubs, cancelled checks, income tax forms or other documents that disclose income received by you each year for the last ten (10) years from any source.

2. Please complete and sign the attached Exhibit B "Authorization for Release of Employment Records" for each of your employers in the last ten (10) years as identified in your answers to this Plaintiffs' Questionnaire. Deliver the Authorizations to each such employer identified on the form and give the documents that the employers produce to you (along with a copy of the corresponding Authorization) to your attorney so that these records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit B "Authorization" with the name of the employer left blank for future use if the defendants establish that you had additional employers in the last ten (10) years.

D. If you are claiming loss based on injury or damage to your legal crops:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the land and/or that you owned the crops on that land, which you claim were destroyed, (ii) the amount of crops that were destroyed, and (iii) the monetary value of the destroyed crops.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

E. If you are claiming loss based on injury to farm animals or pets:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the animals you claim were injured or killed, (ii) the number of animals that died, (iii) the monetary value of the animals that died, and (iv) any other expenses you are claiming relative to this alleged loss.

F. If you are claiming any other kind of loss or damage in this case:

1. Please attach copies of any and all documents that demonstrate or support such other claimed loss or damage and the *amount* of damages you seek for that loss or damage.

Annex 69

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 199, Witness 11

X. VERIFICATION

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on (DATE) September 8th, 2008

(Signature)
Plaintiff's Signature
Print Plaintiff's Name: [redacted]

(Signature)
Signature of witness attesting to Plaintiff's Signature
Witness's name: [redacted]
Date: September 10th, 2008
Witness's Address: [redacted]
Witness's Relationship to Plaintiff: sister

Plaintiff's Picture

Plaintiff's Fingerprint

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Case #:

Nestor Emogenes Arroyo Quinteros, *et al.* Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR)
Venancio Aguasanta Arias, *et al.* Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR) Consolidated for Discovery with Case No. 1:01CV01908 (RWR)

PLAINTIFFS' QUESTIONNAIRE

To Each Individual Plaintiff:

INSTRUCTIONS

1. Each individual plaintiff in the above-captioned cases must complete and sign his or her own copy of this Questionnaire.

2. If a person is responding on behalf of his or her children (or another person or persons) on whose behalf a claim has been filed before this Court, then a separate copy of this Questionnaire must be filled out for each such child or other person.

3. When you read the terms "you" and "your" throughout this Questionnaire, they refer to each person who is claiming injury due to the alleged exposure in this case. In other words, if you are claiming injury to yourself or your

property, you must answer the questions about yourself and your property. If you are responding on behalf of your child (or other person), then you must answer the questions about that child or other person on a separate copy of this Questionnaire, clearly marked to show to whom it refers

4. Each question must be answered in full. If you do not know the answer to a question or cannot recall the information needed to answer a question, please say this in your response to the question. If a question is "not applicable" to you, say this in your response. Do not leave any question unanswered.

5. Each individual plaintiff must realize that he or she is under oath and must provide information that is true and correct based on such person's personal knowledge and belief.

6. You may attach as many sheets of paper as necessary to fully answer the questions. This questionnaire also asks you to produce written documents that relate directly to your answers. You must give these documents to your attorney so that they may be copied for use in this lawsuit. **You must not dispose of or alter or modify any documents** or other materials that you have now or that you may later receive relating to any of the subjects addressed in this Plaintiffs' Questionnaire.

7. In filling out this form, please use the following definitions:

(A) **"Health care provider"** means any hospital, clinic, doctor's or nurse's office, infirmary, medical laboratory or other facility that provides medical care or advice. It also means any doctor, physician, surgeon, paramedic, nurse (registered or otherwise), psychologist, psychiatrist, therapist, chiropractor, healer or any other person practicing any kind of healing art (with or without traditional medications) or performing any kind of medical, physical or mental examination or treatment, and any other persons or entities involved in the evaluation, diagnosis, care and/or treatment of you.

(B) **"Document"** means any writing or record of any kind whatsoever that is in your or your family's possession or the possession of your counsel, including but not limited to written letters, papers, notes, e-mails, photographs, charts, cassettes, videotapes, computer discs or tapes, x-rays, drawings, graphs, phonorecords, nonidentical copies and other data compilations of any kind.

I. PRELIMINARY INFORMATION ABOUT YOU AND YOUR CLAIM

A. Name of plaintiff submitting this Questionnaire (NOTE: There must be one form completed for each plaintiff and for each other person claiming injuries):
Cecilia Tanguila

B. Name of person who this Questionnaire applies to: [redacted]

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

C. Name of person who filled out this Questionnaire, if different from plaintiff (include the preparer's name, company, address, and relationship to plaintiff):
Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-work product. Subject to, and without waiving, said objections, responding party responds as follows: This Questionnaire and the computer responses were generated with assistance of counsel

D. Are you seeking relief for personal injury to yourself? Yes ☒ No ☐

E. Are you seeking relief for personal injury to someone else? Yes ☒ No ☐

If yes, who?my daughters

Please mark the reason why this person cannot act on his or her own.

Minor ☐ Impaired ☐ Death ☒ Other Reason ☐

(Note: A separate copy of this Questionnaire should be completed for each person seeking damages).

F. Are you seeking damages for injury to your property (crops or animals)? Yes ☐ No ☐

If yes, do you claim:

Damages to your crops? Yes ☐ No ☐

Damage to farm animals or pets? Yes ☐ No ☐

G. Are you seeking damages for injury to any other types of property? Yes ☐ No ☐
If yes, what kind?

II. PERSONAL INFORMATION

A. Paternal Last name: [redacted]

Maternal Last name: [redacted]

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

First name: [redacted]

Middle Name:

Any other names by which you have ever been known:

Ecuadorian identification number:

B. Gender: Male☐ Female☒

Height: 25

Weight: 6 lbs

C. Are you Ecuadorian? Yes ☒ No ☐

If not, what is your country of citizenship?

D. Racial/Ethnic Background: Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
Kishua

If you answered Indigenous or Indian, do you belong to an indigenous tribe or community? Yes☒ No☐

If yes, which one?

E. What language do you speak? Kishua

F. Do you clearly understand the language used in this Questionnaire and the questions asked in this Questionnaire? Yes ☒ No☐

G. Date of Birth: 03-17-2001

H. Present home address: San Francisco

Village or City: San Francisco Province: Sucumbios

If you do not live in a city or town, identify the nearest town to your home and provide the directions to get to your home from that town. (Use road names, river names and North, South, East, West directions to describe how to get to your home)
[redacted]

How long have you lived at this address?

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

3 months

What was the reason that caused you to move to your present home address?

Who has lived with you at this address?
my community

I. Prior Home Addresses. Please provide the following information for the last ten (10) years:

Prior address (including closest town, province, and country)	Dates you lived at this address: Starting	Until	Persons who lived with you at this address
San Francisco, Sucumbios, Ecuador	March 2001, 3 months		family

J. Telephone Number (if any):

K. Current Occupation:

Name of employer (If self-employed, say this):

Name of immediate supervisor (if any):

Employer's address (work):

Employer's telephone no. (work):

How long have you worked there?

L. Prior Employers. Please fill in the following information for the last ten (10) years (Include any military service, and if self-employed, say this):

Prior employers (names and addresses)	Dates you worked for this employer: Starting	Until	What did you do there?

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

M. In any of your work in the last ten (10) years (including your current work or home farming), have you used or handled pesticides and/or herbicides?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of pesticides and/or herbicides did you use and *when* did you use them?

If you applied the pesticides and/or herbicides, how did you do it?

If you applied them, [the pesticides], describe any kind of protection you used for yourself while you were using the pesticides and/or herbicides.

If you applied pesticides, did you or anyone else in your family wash the clothes you wore when using the pesticides and/or herbicides?
Yes☐ No☐

If yes, please describe who did this, how often it was done, and the manner in which your clothes were washed or cleaned.

Do you believe you have experienced any kind of medical problems as a result of handling pesticides/herbicides in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☐

If yes, what kind of medical problems and *when* did you have them?

N. Has any member of your immediate family used or handled pesticides and/or herbicides during the last ten years (as a part of your work or home farming)?

Responding party incorporates the General Objections previously set forth.

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what members of your family and what type of pesticides and/or herbicides did they use?

If yes, where and how did those members of your family (or any other person) wash the clothes they used while using pesticides and/or herbicides?

O. In your work or in your home farming in the last (10) years, have you been in the vicinity of or close to other people using herbicides and/or pesticides (where you could see other people)?

Yes☐ No☒

If yes, what kind of herbicides and/or pesticides did they use?

If yes, where and how did you wash your clothes that you wore after you were close to where other people used the herbicides and/or pesticides?

P. In any of your work in the last (10) years (including your current work or home farming), did/do you use or handle chemicals (other than the herbicides or pesticides identified in the previous answer.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of chemicals fertilizers, or other artificial chemical products did you use and when did you use them?

If yes, describe any kind of protection you used for yourself while using the chemicals.

Do you believe you have experienced any kind of medical problems as a result of

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

using chemical fertilizers or other types of artificial chemical products in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☐

If yes, what kind of medical problems and *when* did you experience them?

Q. Have you ever been convicted of a crime in the past ten years? Yes☐ No☒

If yes, what crime?

Did you go to jail or prison? Yes☐ No☐

If yes, how long?

R. Have you ever been rejected for a job for which you applied or for a military position because of a medical, physical, psychiatric or emotional condition?
Yes☐ No☒

If yes, what job or position?

If yes, *when* did this happen? (Include all instances when this happened).

If yes, what was your medical condition or disability (for each such instance)?

S. Have you ever filed a claim or claims with the Ecuadorian or Provincial government where you live or with an employer or with an insurance company or any other entity for compensation or the payment of medical expenses or lost earnings due to an injury or a medical disability of any kind?
Yes☒ No☐

If yes, please fill in the following information for the last ten (10 years):

Date claim filed	Filed with whom?	What injury/disability was claimed?	What happened with your claim?
2000	Dyncorp	Death of 2 daughters	on trial
2001	Dyncorp	Death of 2 daughters	on trial
2002-2003	Dyncorp	Death of 2 daughters	on trial

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

T. Do you have medical insurance of any kind? Yes☐ No☒

If yes, what company or program provides your medical insurance?

U. Have you ever filed a lawsuit against anyone (aside from this suit), including any oil companies?
Yes☐ No☒

If yes, please identify: (1) what kind of lawsuit it was, (2) when you filed it, (3) the company or people you sued, (4) what Court or other tribunal it was before, and (5) what was the result of the suit. (If any of your lawsuits are still pending, say this.) (Attach additional pages if necessary to describe multiple lawsuits.)

III. FAMILY INFORMATION AND EDUCATIONAL HISTORY

A. Have you ever been married? Yes ☐ No ☒

B. If yes, *for each spouse and former spouse,* please identify the following:
1. Spouse's name:
2. Date of marriage:
3. Spouse's date of birth:
4. Spouse's occupation:
5. Spouse's address (if different than yours):

C. Immediate Family members. Please provide the following information about each of your parents, your sisters, your brothers and your children. **(Add additional sheets if necessary.)**

Name	Relationship to you	Date of birth	Date of death (if applicable)	Cause of death (if applicable)	Main occupation
[redacted]	mother	[redacted]			housewife
[redacted]	daughter	03-17-2001	06-25-2001	fumigation	
[redacted]	daughter	06-30-2003	09'10'2005	fumigation	
[redacted]	daughter	[redacted]			

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

D. Education.

How many years did you go to school? Years

What was the highest grade you completed?

Where did you go to school? (List all schools by name and location)

Do you know how to read? Yes ☐ No ☐

Do you know how to write? Yes ☐ No ☐

Do you have any degrees or certifications? Yes ☐ No ☐

If yes, what are they and what year did you get them?

IV. YOUR LIVING CONDITIONS

A. Please answer the following questions about your home, food and water:

1. What size is your house and of what materials is it made?
2. Where do you get your water?
3. What is the source of your water?
4. Do you have running water inside your home? Yes ☐ No ☐
5. Do you filter your water? Yes ☐ No ☐

   If yes, how?
6. Where do you get the food for you and your family?
7. How do you cook your food? (On a stove, grill, charcoal or firewood)

Do you eat raw crab meat? Yes ☐ No ☒

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

Do you use crab juice as medicine? Yes ☐ No ☒

Do you buy and eat food in public places (Such as open air markets or places that sell prepared foods to the public)? Yes ☐ No ☒

If yes, have you observed the conditions in which that food was prepared and handled before you purchased and ate it? Yes ☐ No ☐

B. Please answer the following questions regarding sanitation:

1. How is sewage (waste and waste water) from your home disposed of?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

2. Where does the sewage from your home go to (e.g., into the soil, into a body of water: sewer, river, stream, lake, etc.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

3. Do you have a toilet inside your home? Yes ☐ No ☒

4. Do you use an outhouse? Yes ☐ No ☒

5. How is sewage disposed by the other homes and farms around you?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

6. How do you dispose of your trash? (e.g., do you burn it? Do you bury it? Do you send it to a landfill?)

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

7. How far is the closest landfill to your house?

8. Where you live, is the trash dumped into a public area or public water channel?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☐

C. Please answer the following questions regarding oil operations (oil perforation, oil well, oil pits, gas stations or oil facilities) close to your house or place work:

1. How far is the nearest oil operation from your home? (and describe what is it)

2. Has your home, farm or work area ever experienced oil pollution as a result of oil operations?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒
If yes, *when* did this happen?

3. Have you ever been injured in any way by oil pollution?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

If yes, what were the injuries and *when* did they occur?

4. Do you think that anyone in your family been injured in any way by oil operations?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

If yes, what and *when* were the injuries they suffered?

D. Please answer the following questions regarding volcanoes:

1. How close do you live to the Reventador volcano, and/or to any other volcano?

2. Do you think that you or your family members have ever been injured in any manner as a result of the eruptions or volcanic emissions of the Reventador volcano, or any other volcano?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

If yes, *when* did this happen and what were the personal damages that you suffered?

3. Do you think anyone in your town, vicinity, or community suffered personal damages of any kind as a result of the volcanic eruptions?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☐

If yes, explain what happened and *when* it happened

E. Please answer the following questions regarding floods:

1. Have you, your home or your farm been affected in any way as a result of a flood in the last 10 years?
Yes ☐ No ☐

If yes, describe *when* this occurred and what damages you or your property suffered?

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

If yes, did the floods cause you to leave your home? Yes ☐ No ☐

F. Please answer the following questions about people moving into your town, vicinity, or community.

1. Do you think that your village or community has experienced an influx of people from Colombia in the last ten (10) years? Yes ☐ No ☐

2. Do you believe that your village, vicinity, or community has experienced an influx of people from other places (other than Colombia) in the last ten (10) years? Yes ☐ No ☐

If yes, where did these people come from?

V. YOUR ALLEGED EXPOSURE TO THE "PLAN COLOMBIA" HERBICIDE

A. Are you familiar with "Plan Colombia?" Yes ☐ No ☐

If yes, what do you know about "Plan Colombia" and *when* did you learn this?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows:

If yes, identify the people with whom you have spoken about "Plan Colombia," what they told you, and when these conversations took place?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows:

B. Why do you believe that you and/or your property was exposed to a "Plan Colombia" herbicide?

C. When were you and/or your property exposed to herbicide? (If more than once, list all dates of exposure by day, month and year.)

D. **For each instance of alleged exposure to your body**, please answer the following questions (use additional sheets of paper as necessary):

1. Where were you when the exposure occurred?

2. How close were you at that time to the border between Ecuador and Colombia?

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

3. How do you know this?

4. Please mark an "X" on the attached map of Northern Ecuador to show where you were at the time of the alleged exposure and list the date(s) of exposure beside each "X". Have you marked the map in this way?
Yes ☐ No ☐

If no, why not?

5. What time of day did the exposure occur?

6. What was the weather like that day? (Include the approximate temperature and whether there was precipitation)

7. Did you see an airplane at the time of the exposure?
Yes ☐ No ☐

If yes, what did it look like? (color, size, letters, flags or other markings on plane, etc.)

8. Did you see more than one airplane at the time of the exposure?
Yes ☐ No ☐

If yes, please state how many you saw and describe what each looked like:

9. Did you see a helicopter at the time of the alleged exposure?
Yes ☐ No ☐

If yes, how many?

If yes, what did the helicopter(s) look like (color, size, letters, flags or other markings)?

10. Did you see anything else in the air? Yes ☐ No ☐

If yes, what else did you see?

11. Did you see the spray or a "cloud" or "fog" of spray? Yes ☐ No ☐

If yes, what color was it?

12. Did you see residue on the ground after the spraying? Yes ☐ No ☐

If yes, what did it look like?

13. Did you hear anything? Yes ☐ No ☐

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

If yes, what did you hear?

14. Did you smell anything unusual? Yes ☐ No ☐

If yes, what did it smell like?

15. Do you contend that your body was exposed to the spray?
Yes ☐ No ☐

If yes, did you feel anything on your skin? Yes ☐ No ☐

If yes, what did you feel?

If yes, what did you do with the clothing that you wore that day and when did you do it? (Include whether they were washed or destroyed)

16. After the spraying ceased, did you see any changes to the plants in your vicinity?
Yes ☐ No ☐

If yes, what changes did you see and how long after the spraying did you see the changes?

17. After the spraying ceased, did you see any change in the wildlife, birds or fish in your vicinity? Yes ☐ No ☐

If yes, explain exactly what you saw and how long after the spraying you saw it?

18. After the spraying ceased, did you observe any change in the appearance, odor or taste of any bodies of water (rivers, creeks, ponds, lakes, well water, etc.) in your vicinity? Yes ☐ No ☐

If yes, please describe the change(s) you observed and state how long after the spraying you observed this.

E. **For all plaintiffs alleging personal bodily injuries due to the alleged exposure,** please also answer the following questions for each instance of alleged exposure. (Use additional sheets of paper as necessary.)

1. What were your symptoms? (Please provide detail on both external and internal symptoms.)
Diarrhea, vomit, fever, skin breakouts, coughing and stomach ache.

If yes, how long after the alleged exposure did your symptoms occur?

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

30 days

2. Did you go to a Health Care Provider (as defined on p. 2) based on your exposure to the "Plan Colombia" herbicide? Yes ☒ No ☐

If yes, when did you go, and how long after the exposure was this?
2 months

If yes, where did you go? (identify the name and address of the Health Care Provider) Sub-center San Francisco, Dr. Heinbert Gonsabay, traditional medicine (Lake Agrio)

If yes, how far was this from your home? 21 km

If yes, which person(s) at the Health Care Provider's office did you see about the herbicide exposure? They did not know the origin of the disease

3. What did those person(s) tell you about your injury or condition? the infection came from the natural environment

Did the person(s) tell you that your injuries or condition was caused by the "Plan Colombia" herbicide? Yes ☒ No ☐

4. Did the Health Care Provider take a sample of your blood or urine?
Yes ☐ No ☒

5. Did the Health Care Provider give you medicine (including herbal or home remedies) or a prescription for medicine? Yes ☒ No ☐

If yes, what was the medicine and what was it for? Tempra, natural and home-made medicines, generic medicines

If yes, did you buy the medication or was it given to you?
Yes ☒ No ☐

If yes, describe when and where you bought or obtained it and how much you paid for it. at the pharmacy and naturist centers. $1,000

How long did you use the medicine? various times - 60 days

Did you take all the medicine you obtained? Yes ☒ No ☐

6. If you did not go to a Health Care Provider but thought that you were injured by the exposure, did you do anything to alleviate your injury, including any herbal or home remedies? Yes ☐ No ☐
If yes, what did you do?

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

7. What specific type(s) of bodily illness or injury do you allege were caused by your exposure to the "Plan Colombia" herbicide?
fever, vomit, diarrhea, body ache, coughing, skin breakout, genital warts, and physical damage, baby would not develop.

8. Do you believe you have an increased risk of future injury or harm (which has not yet appeared on or in your body) as a result of your alleged exposure to the "Plan Colombia" herbicide? Yes ☐ No ☐

If yes, please explain what future health risks you believe you face, why you think this would be affiliated with "Plan Colombia", and identify any Health Care Providers or other people who have told you this and set out what each such person (except your attorneys) said to you about future injury or harm.

F. **For all plaintiffs claiming damage to crops** from the alleged exposure, please also answer the following questions **about each instance of alleged exposure** (use additional sheets if necessary):

1. Where was your field of crops (identify by distance and direction from your home)?

What was the date and time of day your crop(s) were exposed to the "Plan Colombia" herbicide?

3. How close is that field to the border between Colombia and Ecuador? km
or meters

4. Please mark a small circle ("0") on the attached map to show where your exposed field was and mark the date of the alleged exposure by each "O." Have you marked the map?
Yes ☐ No ☐
If no, why not?

5. Do you own the land where your crops were growing? Yes ☐ No ☐

If not, who owned the land when the spraying took place?

6. How big was your field or patch of crops exposed to the herbicide?
What kinds of crops were planted there?

7. How long after the exposure did you notice injury to the crops and what did you first see when the damage began?

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

How long did it take for the injury to be complete?

What was the end result of the alleged exposure? (Describe what percentage of your crop was damaged or destroyed)

8. Did you sell or trade the crops that remained in your field after the alleged exposure? Yes ☐ No ☐

If yes, to whom?

If yes, did you tell the buyer that you believed the crop had been exposed to a "Plan Colombia" herbicide? Yes ☐ No ☐

9. How soon after the alleged exposure did you plant new crops in the same field?

10. Why do you believe your crops were damaged by the "Plan Colombia" herbicide?

11. What kinds of pesticides and/or herbicides did you use on the same crops before their alleged exposure to the "Plan Colombia" herbicide?

12. Where did you buy the pesticides and/or herbicides that you used? (Include name and address of the supplier.)

G. **For all plaintiffs claiming injuries to farm animals or pets,** please also answer the following questions **about <u>each</u> instance of alleged exposure** (use additional sheets as necessary):

1. What kind of animals were exposed?

2. Where were your animals when they were allegedly exposed (identify by distance from your home)?

3. How close was this to the Colombian-Ecuadorian border?

4. Please place a "?" on the attached map to show where your animals were at the time of their alleged exposure and put the date(s) of exposure by each "?".

   Have you marked the map in this way? Yes ☐ No ☐
   If no, why not?

5. How long after the exposure did it take for your animals to get sick?

6. What happened to the exposed animals? (Identify for each kind of animal: how many died; how many got sick but survived; how many were unaffected)

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

7. For the animals that died, did a veterinarian, a professional or other person examine the corpses to determine the cause of death? Yes ☐ No ☐

   If yes, who was this, when did it happen, and what did he/she tell you? (Identify by name, title, and business address)

   If yes, when did this person examine the animal corpses in relation to when they died?

8. For the animals that got sick but survived, did a veterinarian, a professional or other person examine and diagnose the sick animals?
   Yes ☐ No ☐

   If yes, who came, when did they come, and what did they tell you? (Identify by name, title, and business address)

9. Did anyone collect blood samples or other tissue samples from your animals (dead or alive)? Yes ☐ No ☐
   If yes, who took the samples? (Identify name, title and business address)

   If yes, did you get copies of any results from the tests done on the animal blood or tissue samples? Yes ☐ No ☐

   If you got written results, please attach them to your answers to these questionnaires.

10. Why do you believe that your animals' illness or death was caused by the "Plan Colombia" herbicide?

H. Reports to Third Parties.

1. Other than the Health Care Providers or animal care professionals identified above, did you complain to anyone or to any organization (government or non-government) about the alleged spraying of herbicide?
Yes ☐ No ☐

If yes, whom did you speak with and when did you do this?

If yes, what did you say to this person or organization?

What did the person or organization say back to you?

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

Did that person or organization take samples of your blood or urine due to your alleged exposure to the "Plan Colombia" herbicide? Yes ☐ No ☐

If yes, who did this and when did it happen?

VI. YOUR MEDICAL BACKGROUND

A. Check the medical conditions that you have *at the present time* and the conditions that you have had *at any time in the past.*

Condition	I have now	I have had in the past
Cancer	☐	☐
If cancer, what kind?		
Heart disease or heart attack	☐	☐
Angina, chest pain	☐	☐
Brain tumor	☐	☐
Epilepsy	☐	☐
Diabetes	☐	☐
Liver disease	☐	☐
Pancreatitis	☐	☐
Polio	☐	☐
Malaria	☐	☐
Dysentery	☐	☐
Asthma or other respiratory illness, shortness of breath	☐	☐
Blood clots or abnormalities of blood vessels	☐	☐
Anemia or other blood disorders	☐	☐
High blood pressure	☐	☐
AIDS or HIV-positive test results	☐	☐
Medical condition	☐	☐
Arthritis	☐	☐
Kidney disease or transplant	☐	☐
Dengue fever	☐	☐

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

Cholera	☐	☐
Changas	☐	☐
High cholesterol	☐	☐
Influenza	☐	☐
Diarrhea	☐	☐
Infections (bacterial or fungal)	☐	☐
Measles	☐	☐
Chicken pox	☐	☐
Mumps	☐	☐
Diptheria	☐	☐
Whooping cough	☐	☐
Scarlet fever	☐	☐
Leishmaniasis	☐	☐
Onchocerciasis	☐	☐
Alcoholism	☐	☐
Malnutrition	☐	☐
Migraine headaches	☐	☐
Fainting or serious dizziness	☐	☐
Medical condition	☐	☐
Osteoporosis	☐	☐
Broken bones	☐	☐
Skin rash or skin irritation	☐	☐

B. For each of the conditions that you checked above, please fill out the information below:

Condition No. 1

Date of onset:
Did you see a Health Care Provider (as defined on page 2 above) about this condition?
Yes ☐ No ☐

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 2

Date of onset:
Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 3

Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

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Condition No. 4
Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐
If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

[Translators: Use this field to describe further medical conditions if there are more than 4, using same format:]

NOTE: Attach additional sheets of paper if you have more than 4 conditions to describe.

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

C. Have you had any surgeries in the last 20 years? Yes ☐ No ☐
If yes, *when?*
For what?

If yes, who performed the surgery? (include name and address)

D. Drug and Medicine Use:

Do you take any drugs and/or medicines on a regular basis, including plants, herbs, roots or traditional remedies (ancestral) for medicinal uses? Yes ☐ No ☐

If yes, please list all of the drugs and medicines (including plants, herbs, roots or traditional remedies) that you take at this time:

Have you formerly taken drugs and/or medicines (including plants, herbs, roots or traditional remedies) on a regular basis that you do not take now? Yes ☐ No ☐

If yes, please list all such drugs and/or medicines and identify *when you* took them:

F. History of the Use of Tobacco and Similar Products:

Have you ever smoked cigarettes? Yes ☐ No ☐

Do you currently smoke cigarettes? Yes ☐ No ☐

If yes, please fill in: I have smoked packs or cigarettes per day for years, of the following brands of cigarettes:

If you smoked earlier but do not now, please fill in: I stopped smoking in Before that, I smoked packs or cigarettes per day for years, of the following brands of cigarettes:

Have you ever smoked cigars or pipe tobacco? Yes ☐ No ☐

If you currently smoke cigars and/or a pipe, please fill in: I presently smoke (fill in number of) cigars and/or pipes per day.

If you smoked cigars or pipes earlier but do not now, please fill in: I stopped smoking (fill in "cigars" or "pipes" or "both") in (date)

Before that I smoked (fill in number) per day.

Have you ever smoked other substances based on ancestral custom or personal preference? Yes ☐ No ☐

If yes, identify what you smoked, *when* you started, and how long you have smoked it.

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

Have you ever chewed tobacco or similar chewing material? Yes ☐ No ☐

If yes, what was it, *when* did you begin to chew it, and how long have you done this?

G. Drinking History:

Do you currently drink alcohol of any kind? Yes ☐ No ☐

If yes, how many drinks per week do you consume?

If you do not drink alcohol now but you did in the past, how many drinks per week did you consume in the past?
When was this?

Do you drink other fermented beverages that contain a smaller amount of alcohol?
Yes ☐ No ☐

If yes, explain how much of this you drink and when you have consumed it.

H. Have you ever missed work for more than 2 weeks straight for reasons related to your health in the last 20 years? Yes ☐ No ☐ If yes, *when?*

If yes, please state the dates you missed work, your employer at the time, and the health condition that caused your absence from work:

Did you see a Health Care Provider about the health problem that caused you to miss work? Yes ☐ No ☐

If yes, please identify the Health Care Provider's name, address and *when you* visited that provider.

I. In addition to the Health Care Providers identified in the preceding answers in this Questionnaire, have you gone to any more Health Care Providers (as defined on p. 2) in the last twenty (20) years? Yes ☐ No ☐

If so, please provide the following information:

Date	Name and Address of Health Care Provider	For what illness or injury?	What diagnosis and treatment did you

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

			receive?

J. Reproductive History (To be answered by all wives and mothers; to be answered by husbands and fathers only if they are filling out this Questionnaire for their wives):

Have you (or your wife if a husband is answering this question) ever had a miscarriage? Yes ☐ No ☐
If yes, please state how many times and when each happened.

Have you ever experienced any still-births or deaths of your children shortly after they were born? Yes ☐ No ☐

If yes, please state how many times and *when* each happened.

If yes, did you see a Medical Care Provider about the still-births or infant deaths?
Yes ☐ No ☐

If yes, please identify who you saw, *when* you saw them, and what they told you about each such incident?

VII. SPECIFICATION OF DAMAGES BEING SOUGHT AND SUPPORTING DOCUMENTATION

A. What *amount* of damages are you seeking?

For physical injury to yourself: $100,000

For damage to your crops: $

For damage to your animals: $

For lost wages or income: $

For anything else? If so, describe: $

TOTAL $

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

B.

C. Do you seek damages to reimburse you for medical bills and expenses that you paid? Yes ☒ No ☐

If yes, how much did you pay? $5,000

If yes, did you pay in cash or with something else? (If something else, describe what it was): cash; I sold the the little belongings I had left, I lent out money, and collaboration from others

D. Do you seek damages to reimburse you for *other* out-of-pocket expenses or fees?
Yes ☒ No ☐
If yes, how much in expenses or fees did you pay, how did you pay then, and what were the payments for? $500.00, I still have not paid for my baby

E. Do you seek damages for lost wages or loss of time from work?
Yes ☐ No ☐

If yes, *when* did this happen? (List all instances)

If yes, how long were you unable to work?

If yes, how much in wages or income did you lose? $

How do you calculate this amount?

If you claim lost wages, identify the employer(s) (by listing each name and address) who did not pay you for the relevant period of time. If self-employed, describe the basis for your alleged lost earnings.

Did you try to find new work during the period of time for which you seek lost wages or income? Yes ☐ No ☐

If yes, where did you apply or inquire and what happened following your application or inquiry?

F. Do you seek damages for the loss of legal crops? Yes ☐ No ☐

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

If yes, please provide the following information:

Kind of Crop	Amount of crop that died / was lost	Monetary Value(s)you place on the Crops that Died	Basis for your Value(s)

G. Do you seek damages for farm animals or pets that died?

Yes ☐ No ☐

If yes, please provide the following information:

Kind of Animal	Number that Died	Monetary value(s) you place on the dead animals	Basis for your Value(s)

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Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

VIII. WITNESSES TO YOUR CLAIMS

Please identify all persons whom you believe possess information concerning your alleged exposure to the "Plan Colombia" herbicide and/or the alleged injuries or other harm resulting to you from the exposure *(other than your attorneys and the Health Care Providers identified elsewhere in this Questionnaire):*

Name and address: [redacted] community of San Francisco

(What knowledge does this person have?) She suffered the same problems with Plan Colombia

Name and address: [redacted] San Francisco

(What knowledge does this person have?) fumigation damages

Name and address:

(What knowledge does this person have?)

Name and address:

(What knowledge does this person have?)

IX. DOCUMENT REQUESTS AND AUTHORIZATIONS

A. If you are claiming personal injuries to yourself:

1. Please provide a copy of any and all medical and other documents (as defined on p. 2), including records, test results and all medical bills *in your or your attorney's possession* that relate to any visit you made or any treatment you received from a Health Care Provider (as defined on p. 2) in the last twenty (20) years.

2. Please complete and sign a copy of the Exhibit A "Authorization for Release of Medical Records" for each Health Care Provider you have

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

identified in your responses to this Questionnaire. Deliver the Authorizations to each Health Care Provider identified on the form and give the documents that the Providers produce to you (along with a copy of the corresponding Authorization for Release given or sent to each Provider) to your attorney so that these medical records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit A "Authorization for Release of Medical Records" with the name of the Medical Care Provider left blank for future use if the defendants establish that you saw or were treated by additional Medical Care Providers in the last twenty (20) years.

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

B. If you are claiming reimbursement for any medical expenses or other out-of-pocket expenses related to your alleged exposure:

1. Please attach a copy of the receipts, bills, invoices or any other documents in your or your attorney's possession that demonstrate the amount of the expenses for which you seek reimbursement.

C. If you are claiming lost wages or earnings:

1. Please attach copies of any and all documents in your possession about the total amount of salary or wages that was paid to you and the total amount of any other income that was generated by you for each year in the last ten (10) years. This shall include but not be limited to: pay-stubs, cancelled checks, income tax forms or other documents that disclose income received by you each year for the last ten (10) years from any source.

2. Please complete and sign the attached Exhibit B "Authorization for Release of Employment Records" for each of your employers in the last ten (10) years as identified in your answers to this Plaintiffs' Questionnaire. Deliver the Authorizations to each such employer identified on the form and give the documents that the employers produce to you (along with a copy of the corresponding Authorization) to your attorney so that these records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit B "Authorization" with the name of the employer left blank for future use if the defendants establish that you had additional employers in the last ten (10) years.

D. If you are claiming loss based on injury or damage to your legal crops:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the land and/or that you owned the crops on that land, which you claim were destroyed, (ii) the amount of crops that were destroyed, and (iii) the monetary value of the destroyed crops.

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

E. If you are claiming loss based on injury to farm animals or pets:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the animals you claim were injured or killed, (ii) the number of animals that died, (iii) the monetary value of the animals that died, and (iv) any other expenses you are claiming relative to this alleged loss.

F. If you are claiming any other kind of loss or damage in this case:

1. Please attach copies of any and all documents that demonstrate or support such other claimed loss or damage and the *amount* of damages you seek for that loss or damage.

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Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

X. VERIFICATION

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on (DATE) September 9th, 2008 (Signature)
Plaintiff's Signature
Print Plaintiff's Name: [redacted]

(Signature)
Signature of witness attesting to Plaintiff's Signature
Witness's name: [redacted]
Date: 09-10-08
Witness's Address: San Francisco
Witness's Relationship to Plaintiff: [redacted]

Plaintiff's Picture

Plaintiff's Fingerprint

Questionnaire filed by Witness 11 (EM, Vol. IV, Annex 199) on behalf of her deceased daughter.

CERTIFICATE OF ACCURACY OF TRANSLATION

I, Juan Pablo Castro, swear under penalty of perjury that I am fluent in both English and Spanish and that the translation of the attached document is true and correct.

(Sign Here)

Juan Pablo Castro

November 4, 2008

Annex 70

PLAINTIFF QUESTIONNAIRE, *ARIAS/QUINTEROS V. DYNCORP,* D.D.C. (EM VOL. IV, ANNEX 200, WITNESS 12)

(United States District Court for the District of Columbia, Cases No. 1:01-cv01908 (RWR-DAR) and 1:07-cv01042 (RWR-DAR). Cases consolidated for Case Management and Discovery)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Case #: [redacted]

[redacted] Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR)
Venancio Aguasanta Arias, *et al.* Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR) Consolidated for Discovery with Case No. 1:01CV01908 (RWR)

PLAINTIFFS' QUESTIONNAIRE

To Each Individual Plaintiff:

INSTRUCTIONS

1. Each individual plaintiff in the above-captioned cases must complete and sign his or her own copy of this Questionnaire.

2. If a person is responding on behalf of his or her children (or another person or persons) on whose behalf a claim has been filed before this Court, then a separate copy of this Questionnaire must be filled out for each such child or other person.

3. When you read the terms "you" and "your" throughout this Questionnaire, they refer to each person who is claiming injury due to the alleged exposure in this case. In other words, if you are claiming injury to yourself or your

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

property, you must answer the questions about yourself and your property. If you are responding on behalf of your child (or other person), then you must answer the questions about that child or other person on a separate copy of this Questionnaire, clearly marked to show to whom it refers

4. Each question must be answered in full. If you do not know the answer to a question or cannot recall the information needed to answer a question, please say this in your response to the question. If a question is "not applicable" to you, say this in your response. Do not leave any question unanswered.

5. Each individual plaintiff must realize that he or she is under oath and must provide information that is true and correct based on such person's personal knowledge and belief.

6. You may attach as many sheets of paper as necessary to fully answer the questions. This questionnaire also asks you to produce written documents that relate directly to your answers. You must give these documents to your attorney so that they may be copied for use in this lawsuit. **You must not dispose of or alter or modify any documents** or other materials that you have now or that you may later receive relating to any of the subjects addressed in this Plaintiffs' Questionnaire.

7. In filling out this form, please use the following definitions:

(A) **"Health care provider"** means any hospital, clinic, doctor's or nurse's office, infirmary, medical laboratory or other facility that provides medical care or advice. It also means any doctor, physician, surgeon, paramedic, nurse (registered or otherwise), psychologist, psychiatrist, therapist, chiropractor, healer or any other person practicing any kind of healing art (with or without traditional medications) or performing any kind of medical, physical or mental examination or treatment, and any other persons or entities involved in the evaluation, diagnosis, care and/or treatment of you.

(B) **"Document"** means any writing or record of any kind whatsoever that is in your or your family's possession or the possession of your counsel, including but not limited to written letters, papers, notes, e-mails, photographs, charts, cassettes, videotapes, computer discs or tapes, x-rays, drawings, graphs, phonorecords, nonidentical copies and other data compilations of any kind.

I. PRELIMINARY INFORMATION ABOUT YOU AND YOUR CLAIM

A. Name of plaintiff submitting this Questionnaire (NOTE: There must be one form completed for each plaintiff and for each other person claiming injuries): [redacted]

B. Name of person who this Questionnaire applies to: [redacted]

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

C. Name of person who filled out this Questionnaire, if different from plaintiff (include the preparer's name, company, address, and relationship to plaintiff):
Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-work product. Subject to, and without waiving, said objections, responding party responds as follows: This Questionnaire and the computer responses were generated with assistance of counsel

D. Are you seeking relief for personal injury to yourself? Yes ☐ No ☐

E. Are you seeking relief for personal injury to someone else? Yes ☐ No ☒

If yes, who?My children

Please mark the reason why this person cannot act on his or her own.

Minor ☒ Impaired ☐ Death ☐ Other Reason ☐

(Note: A separate copy of this Questionnaire should be completed for each person seeking damages).

F. Are you seeking damages for injury to your property (crops or animals)? Yes ☒ No ☐

If yes, do you claim:

Damages to your crops? Yes ☒ No ☐

Damage to farm animals or pets? Yes ☒ No ☐

G. Are you seeking damages for injury to any other types of property? Yes ☒ No ☐
If yes, what kind? terrain and fields

II. PERSONAL INFORMATION

A. Paternal Last name: [redacted]

Maternal Last name: [redacted]

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

First name: [redacted]

Middle Name: [redacted]

Any other names by which you have ever been known:

Ecuadorian identification number:

B. Gender: Male☐ Female☒

Height: 150

Weight: 84 lbs.

C. Are you Ecuadorian? Yes ☒ No ☐

If not, what is your country of citizenship?

D. Racial/Ethnic Background: Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
Amazonia Kichua

If you answered Indigenous or Indian, do you belong to an indigenous tribe or community? Yes☒ No☐

If yes, which one?

E. What language do you speak? Kichua

F. Do you clearly understand the language used in this Questionnaire and the questions asked in this Questionnaire? Yes ☒ No☐

G. Date of Birth: [redacted]

H. Present home address: [redacted]

Village or City: San Francisco Province: Sucumbios

If you do not live in a city or town, identify the nearest town to your home and provide the directions to get to your home from that town. (Use road names, river names and North, South, East, West directions to describe how to get to your home)

[redacted]

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

How long have you lived at this address?
30 years

What was the reason that caused you to move to your present home address?
I live right here

Who has lived with you at this address?
The San Francisco Indigenous Association II organization

I. Prior Home Addresses. Please provide the following information for the last ten (10) years:

Prior address (including closest town, province, and country)	Dates you lived at this address: Starting	Until	Persons who lived with you at this address
Lake Agrio, Sucumbios, Ecuador			the community of San Francisco

J. Telephone Number (if any):

K. Current Occupation:

Name of employer (If self-employed, say this):

Name of immediate supervisor (if any):

Employer's address (work):

Employer's telephone no. (work):

How long have you worked there?

L. Prior Employers. Please fill in the following information for the last ten (10) years (Include any military service, and if self-employed, say this):

Prior employers (names and addresses)	Dates you worked for this employer: Starting	Until	What did you do there?
			farmer, houswife, cooking, doing laundry.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

M. In any of your work in the last ten (10) years (including your current work or home farming), have you used or handled pesticides and/or herbicides?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of pesticides and/or herbicides did you use and *when* did you use them?

If you applied the pesticides and/or herbicides, how did you do it?

If you applied them, [the pesticides], describe any kind of protection you used for yourself while you were using the pesticides and/or herbicides.

If you applied pesticides, did you or anyone else in your family wash the clothes you wore when using the pesticides and/or herbicides?
Yes☐ No☐

If yes, please describe who did this, how often it was done, and the manner in which your clothes were washed or cleaned.

Do you believe you have experienced any kind of medical problems as a result of handling pesticides/herbicides in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☐

If yes, what kind of medical problems and *when* did you have them?

N. Has any member of your immediate family used or handled pesticides and/or herbicides during the last ten years (as a part of your work or home

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

farming)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☐

If yes, what members of your family and what type of pesticides and/or herbicides did they use?

If yes, where and how did those members of your family (or any other person) wash the clothes they used while using pesticides and/or herbicides?

O. In your work or in your home farming in the last (10) years, have you been in the vicinity of or close to other people using herbicides and/or pesticides (where you could see other people)?

Yes☐ No☐

If yes, what kind of herbicides and/or pesticides did they use?

If yes, where and how did you wash your clothes that you wore after you were close to where other people used the herbicides and/or pesticides?

P. In any of your work in the last (10) years (including your current work or home farming), did/do you use or handle chemicals (other than the herbicides or pesticides identified in the previous answer.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of chemicals fertilizers, or other artificial chemical products did you use and when did you use them?

If yes, describe any kind of protection you used for yourself while using the chemicals.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

Do you believe you have experienced any kind of medical problems as a result of using chemical fertilizers or other types of artificial chemical products in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☒ No☐

If yes, what kind of medical problems and *when* did you experience them? headache, body pain, vomit, and skin breakouts because of the fumigationof Plan Colombia in 2001 and 2002.

Q. Have you ever been convicted of a crime in the past ten years? Yes☒ No☐

If yes, what crime? Plan Colombia

Did you go to jail or prison? Yes☐ No☒

If yes, how long?

R. Have you ever been rejected for a job for which you applied or for a military position because of a medical, physical, psychiatric or emotional condition?
Yes☐ No☒

If yes, what job or position?

If yes, *when* did this happen? (Include all instances when this happened).

If yes, what was your medical condition or disability (for each such instance)?

S. Have you ever filed a claim or claims with the Ecuadorian or Provincial government where you live or with an employer or with an insurance company or any other entity for compensation or the payment of medical expenses or lost earnings due to an injury or a medical disability of any kind?
Yes☒ No☐

If yes, please fill in the following information for the last ten (10 years):

Date claim filed	Filed with whom?	What injury/disability was claimed?	What happened with your claim?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

2001, 2002	Finance Ministry and California	illness, harvest, health, animals	trial continues

T. Do you have medical insurance of any kind? Yes☐ No☒

If yes, what company or program provides your medical insurance?

U. Have you ever filed a lawsuit against anyone (aside from this suit), including any oil companies?
Yes☐ No☒

If yes, please identify: (1) what kind of lawsuit it was, (2) when you filed it, (3) the company or people you sued, (4) what Court or other tribunal it was before, and (5) what was the result of the suit. (If any of your lawsuits are still pending, say this.) (Attach additional pages if necessary to describe multiple lawsuits.)
The lawsuit is presented before the United States against the Glisophate company

III. FAMILY INFORMATION AND EDUCATIONAL HISTORY

A. Have you ever been married? Yes☒ No☐

B. If yes, *for each spouse and former spouse,* please identify the following:
1. Spouse's name:
2. Date of marriage: 1999 to 2008
3. Spouse's date of birth: 11/14/73
4. Spouse's occupation: Housewife
5. Spouse's address (if different than yours): is not the same address

C. Immediate Family members. Please provide the following information about each of your parents, your sisters, your brothers and your children. **(Add additional sheets if necessary.)**

Name	Relationship to you	Date of birth	Date of death (if applicable)	Cause of death (if applicable)	Main occupation
[redacted]	husband				
	myself				
	son				
	daughter				
	son				
	son				
	daughter				
	brother				

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[redacted]	sister				
	brother				

D. Education.

How many years did you go to school? 6 Years

What was the highest grade you completed? 6th grade

Where did you go to school? (List all schools by name and location)
Rio Upano School

Do you know how to read? Yes ☒ No ☐

Do you know how to write? Yes ☒ No ☐

Do you have any degrees or certifications? Yes ☐ No ☒

If yes, what are they and what year did you get them?

IV. YOUR LIVING CONDITIONS

A. Please answer the following questions about your home, food and water:

1. What size is your house and of what materials is it made?
   6 x 6, which 36 m suqared, mixed materials
2. Where do you get your water? river, waterhole
3. What is the source of your water? navigation
4. Do you have running water inside your home? Yes ☐ No ☒
5. Do you filter your water? Yes ☐ No ☒

   If yes, how?
6. Where do you get the food for you and your family? hunting, fishing, short-cycled crops, whatever was left from the fumigation
7. How do you cook your food? (On a stove, grill, charcoal or firewood)
   wood fire

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

Do you eat raw crab meat? Yes ☐ No ☒

Do you use crab juice as medicine? Yes ☐ No ☒

Do you buy and eat food in public places (Such as open air markets or places that sell prepared foods to the public)? Yes ☐ No ☒

If yes, have you observed the conditions in which that food was prepared and handled before you purchased and ate it? Yes ☐ No ☐

B. Please answer the following questions regarding sanitation:

1. How is sewage (waste and waste water) from your home disposed of?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
outside the house

2. Where does the sewage from your home go to (e.g., into the soil, into a body of water: sewer, river, stream, lake, etc.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
in the earth

3. Do you have a toilet inside your home? Yes ☐ No ☒

4. Do you use an outhouse? Yes ☐ No ☒

5. How is sewage disposed by the other homes and farms around you?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
Outside the house

6. How do you dispose of your trash? (e.g., do you burn it? Do you bury it? Do you send it to a landfill?)

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
Outside the house

7. How far is the closest landfill to your house? does not exist

8. Where you live, is the trash dumped into a public area or public water channel?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

C. Please answer the following questions regarding oil operations (oil perforation, oil well, oil pits, gas stations or oil facilities) close to your house or place work:

1. How far is the nearest oil operation from your home? (and describe what is it) exists at a distance of 22 kilometers

2. Has your home, farm or work area ever experienced oil pollution as a result of oil operations?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒
If yes, *when* did this happen?

3. Have you ever been injured in any way by oil pollution?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

If yes, what were the injuries and *when* did they occur?

4. Do you think that anyone in your family been injured in any way by oil operations?

Responding party incorporates the General Objections previously set forth.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

If yes, what and *when* were the injuries they suffered?

D. Please answer the following questions regarding volcanoes:

1. How close do you live to the Reventador volcano, and/or to any other volcano? 200 kilometers

2. Do you think that you or your family members have ever been injured in any manner as a result of the eruptions or volcanic emissions of the Reventador volcano, or any other volcano?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

   If yes, *when* did this happen and what were the personal damages that you suffered?

3. Do you think anyone in your town, vicinity, or community suffered personal damages of any kind as a result of the volcanic eruptions?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☐

   If yes, explain what happened and *when* it happened
   does not exist

E. Please answer the following questions regarding floods:

1. Have you, your home or your farm been affected in any way as a result of a flood in the last 10 years?
   Yes ☒ No ☐

   If yes, describe *when* this occurred and what damages you or your property suffered?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

If yes, did the floods cause you to leave your home? Yes ☐ No ☒

F. Please answer the following questions about people moving into your town, vicinity, or community.

1. Do you think that your village or community has experienced an influx of people from Colombia in the last ten (10) years? Yes ☒ No ☐

2. Do you believe that your village, vicinity, or community has experienced an influx of people from other places (other than Colombia) in the last ten (10) years? Yes ☐ No ☒

If yes, where did these people come from?

V. YOUR ALLEGED EXPOSURE TO THE "PLAN COLOMBIA" HERBICIDE

A. Are you familiar with "Plan Colombia?" Yes ☒ No ☐

If yes, what do you know about "Plan Colombia" and *when* did you learn this?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows:We saw the jet planes fumigating over our Ecuadorian territory with Glisophate

If yes, identify the people with whom you have spoken about "Plan Colombia," what they told you, and when these conversations took place?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows:The Colombian engineers conducted a soil study

B. Why do you believe that you and/or your property was exposed to a "Plan Colombia" herbicide? Before there was no damage, the herbicide dried the leaves of the harvest

C. When were you and/or your property exposed to herbicide? (If more than once, list all dates of exposure by day, month and year.) month of September, october, Tuesday, Friday 2001-2002.

D. **For each instance of alleged exposure to your body**, please answer the following

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

questions (use additional sheets of paper as necessary):

1. Where were you when the exposure occurred? working in the farm

2. How close were you at that time to the border between Ecuador and Colombia? 2 kilometers or 2000 meters.

3. How do you know this? I live on the border

4. Please mark an "X" on the attached map of Northern Ecuador to show where you were at the time of the alleged exposure and list the date(s) of exposure beside each "X". Have you marked the map in this way?
Yes ☒ No ☐

   If no, why not?

5. What time of day did the exposure occur? 9:00 a.m., 2:00 p.m.

6. What was the weather like that day? (Include the approximate temperature and whether there was precipitation) Temperate or cloudy

7. Did you see an airplane at the time of the exposure?
Yes ☒ No ☐

   If yes, what did it look like? (color, size, letters, flags or other markings on plane, etc.)
it was white jet plane at a height of approximately 200 meters

8. Did you see more than one airplane at the time of the exposure?
Yes ☒ No ☐

   If yes, please state how many you saw and describe what each looked like:
two jet planes and a helicopter accompanied by the Colombian Army

9. Did you see a helicopter at the time of the alleged exposure?
Yes ☒ No ☐

   If yes, how many? one

   If yes, what did the helicopter(s) look like (color, size, letters, flags or other markings)? Colombian helicopter

10. Did you see anything else in the air? Yes ☐ No ☒

    If yes, what else did you see?

11. Did you see the spray or a "cloud" or "fog" of spray? Yes ☒ No ☐

    If yes, what color was it? white colored

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

12. Did you see residue on the ground after the spraying? Yes ☒ No ☐

If yes, what did it look like? poison smell

13. Did you hear anything? Yes ☒ No ☐

If yes, what did you hear?

14. Did you smell anything unusual? Yes ☒ No ☐

If yes, what did it smell like? poison smell

15. Do you contend that your body was exposed to the spray?
Yes ☒ No ☐

If yes, did you feel anything on your skin? Yes ☒ No ☐

If yes, what did you feel? itching

If yes, what did you do with the clothing that you wore that day and when did you do it? (Include whether they were washed or destroyed)
the neighbor told me to take off my clothes and change

16. After the spraying ceased, did you see any changes to the plants in your vicinity?
Yes ☒ No ☐

If yes, what changes did you see and how long after the spraying did you see the changes? after 8 days

17. After the spraying ceased, did you see any change in the wildlife, birds or fish in your vicinity? Yes ☒ No ☐

If yes, explain exactly what you saw and how long after the spraying you saw it? less wildlife

18. After the spraying ceased, did you observe any change in the appearance, odor or taste of any bodies of water (rivers, creeks, ponds, lakes, well water, etc.) in your vicinity? Yes ☒ No ☐

If yes, please describe the change(s) you observed and state how long after the spraying you observed this.
15 days

E. **For all plaintiffs alleging personal bodily injuries due to the alleged exposure**, please also answer the following questions for each instance of alleged exposure. (Use additional sheets of paper as necessary.)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

1. What were your symptoms? (Please provide detail on both external and internal symptoms.)
vomit, headache, body pain, fever, skin breakouts

If yes, how long after the alleged exposure did your symptoms occur?
5 days

2. Did you go to a Health Care Provider (as defined on p. 2) based on your exposure to the "Plan Colombia" herbicide? Yes ☒ No ☐

If yes, when did you go, and how long after the exposure was this?
Fonakise heatlh brigade

If yes, where did you go? (identify the name and address of the Health Care Provider) Fonakise

If yes, how far was this from your home? 21 kilometers

If yes, which person(s) at the Health Care Provider's office did you see about the herbicide exposure? Jami Wasi Fonakise health brigade

3. What did those person(s) tell you about your injury or condition? They said it was because of the fumigation from Plan Colombia
Did the person(s) tell you that your injuries or condition was caused by the "Plan Colombia" herbicide? Yes ☒ No ☐

4. Did the Health Care Provider take a sample of your blood or urine?
Yes ☒ No ☐

5. Did the Health Care Provider give you medicine (including herbal or home remedies) or a prescription for medicine? Yes ☒ No ☐

If yes, what was the medicine and what was it for?

If yes, did you buy the medication or was it given to you?
Yes ☒ No ☐

If yes, describe when and where you bought or obtained it and how much you paid for it. $40.00 dollars

How long did you use the medicine? 30 days

Did you take all the medicine you obtained? Yes ☒ No ☐

6. If you did not go to a Health Care Provider but thought that you were injured by

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

the exposure, did you do anything to alleviate your injury, including any herbal or home remedies? Yes ☒ No ☐
If yes, what did you do? natural medicine like chuchuguazo and cruz caspi

7. What specific type(s) of bodily illness or injury do you allege were caused by your exposure to the "Plan Colombia" herbicide?
the skin

8. Do you believe you have an increased risk of future injury or harm (which has not yet appeared on or in your body) as a result of your alleged exposure to the "Plan Colombia" herbicide? Yes ☒ No ☐

If yes, please explain what future health risks you believe you face, why you think this would be affiliated with "Plan Colombia", and identify any Health Care Providers or other people who have told you this and set out what each such person (except your attorneys) said to you about future injury or harm.
Because depending on age other effects might take place like back pain.

F. **For all plaintiffs claiming damage to crops** from the alleged exposure, please also answer the following questions **about each instance of alleged exposure** (use additional sheets if necessary):

1. Where was your field of crops (identify by distance and direction from your home)?
North, at about 500 meters

What was the date and time of day your crop(s) were exposed to the "Plan Colombia" herbicide?
September 25th at 3:00 p.m.

3. How close is that field to the border between Colombia and Ecuador? 2 km or2000meters

4. Please mark a small circle ("0") on the attached map to show where your exposed field was and mark the date of the alleged exposure by each "O." Have you marked the map?
Yes ☒ No ☐
If no, why not?

5. Do you own the land where your crops were growing? Yes ☒ No ☐

If not, who owned the land when the spraying took place?

6. How big was your field or patch of crops exposed to the herbicide? a size of 15 cm
What kinds of crops were planted there? corn, cacao, rice, yuca, plantains

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

7. How long after the exposure did you notice injury to the crops and what did you first see when the damage began? spoilage of the leaves

How long did it take for the injury to be complete?

What was the end result of the alleged exposure? (Describe what percentage of your crop was damaged or destroyed) 80% lost

8. Did you sell or trade the crops that remained in your field after the alleged exposure? Yes ☒ No ☐

If yes, to whom? in the market

If yes, did you tell the buyer that you believed the crop had been exposed to a "Plan Colombia" herbicide? Yes ☐ No ☒

9. How soon after the alleged exposure did you plant new crops in the same field? 20 days

10. Why do you believe your crops were damaged by the "Plan Colombia" herbicide? because leaves dried up and plants died

11. What kinds of pesticides and/or herbicides did you use on the same crops before their alleged exposure to the "Plan Colombia" herbicide? organic fertilizer

12. Where did you buy the pesticides and/or herbicides that you used? (Include name and address of the supplier.)

G. **For all plaintiffs claiming injuries to farm animals or pets**, please also answer the following questions **about <u>each</u> instance of alleged exposure** (use additional sheets as necessary):

1. What kind of animals were exposed? pig, chicken, dog
2. Where were your animals when they were allegedly exposed (identify by distance from your home)? near the house
3. How close was this to the Colombian-Ecuadorian border? 2000 meters
4. Please place a "?" on the attached map to show where your animals were at the time of their alleged exposure and put the date(s) of exposure by each "?".

   Have you marked the map in this way? Yes ☒ No ☐
   If no, why not?

5. How long after the exposure did it take for your animals to get sick? 15 days

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

6. What happened to the exposed animals? (Identify for each kind of animal: how many died; how many got sick but survived; how many were unaffected)
10 pigs, 30 chickens and 2 dogs dead. None survived.

7. For the animals that died, did a veterinarian, a professional or other person examine the corpses to determine the cause of death? Yes ☐ No ☒

If yes, who was this, when did it happen, and what did he/she tell you? (Identify by name, title, and business address)

If yes, when did this person examine the animal corpses in relation to when they died?

8. For the animals that got sick but survived, did a veterinarian, a professional or other person examine and diagnose the sick animals?
Yes ☐ No ☒

If yes, who came, when did they come, and what did they tell you? (Identify by name, title, and business address)

9. Did anyone collect blood samples or other tissue samples from your animals (dead or alive)? Yes ☐ No ☒
If yes, who took the samples? (Identify name, title and business address)

If yes, did you get copies of any results from the tests done on the animal blood or tissue samples? Yes ☐ No ☒

If you got written results, please attach them to your answers to these questionnaires.

10. Why do you believe that your animals' illness or death was caused by the "Plan Colombia" herbicide?
Because after fumigation all animals died

H. Reports to Third Parties.

1. Other than the Health Care Providers or animal care professionals identified above, did you complain to anyone or to any organization (government or non-government) about the alleged spraying of herbicide?
Yes ☐ No ☒

If yes, whom did you speak with and when did you do this?

If yes, what did you say to this person or organization?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

What did the person or organization say back to you?

Did that person or organization take samples of your blood or urine due to your alleged exposure to the "Plan Colombia" herbicide? Yes ☐ No ☒

If yes, who did this and when did it happen?

VI. YOUR MEDICAL BACKGROUND

A. Check the medical conditions that you have *at the present time* and the conditions that you have had *at any time in the past.*

Condition	I have now	I have had in the past
Cancer	☐	☐
If cancer, what kind?		
Heart disease or heart attack	☐	☐
Angina, chest pain	☐	☐
Brain tumor	☐	☐
Epilepsy	☐	☐
Diabetes	☐	☐
Liver disease	☒	☐
Pancreatitis	☐	☐
Polio	☐	☐
Malaria	☐	☒
Dysentery	☐	☐
Asthma or other respiratory illness, shortness of breath	☒	☐
Blood clots or abnormalities of blood vessels	☐	☐
Anemia or other blood disorders	☒	☐
High blood pressure	☐	☐
AIDS or HIV-positive test results	☐	☐
Medical condition	☐	☐
Arthritis	☐	☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

Kidney disease or transplant	☐	☐
Dengue fever	☐	☐
Cholera	☐	☐
Changas	☐	☐
High cholesterol	☐	☐
Influenza	☐	☐
Diarrhea	☒	☐
Infections (bacterial or fungal)	☐	☐
Measles	☐	☐
Chicken pox	☐	☐
Mumps	☐	☐
Diptheria	☐	☐
Whooping cough	☒	☐
Scarlet fever	☐	☐
Leishmaniasis	☐	☐
Onchocerciasis	☐	☐
Alcoholism	☐	☐
Malnutrition	☐	☐
Migraine headaches	☒	☐
Fainting or serious dizziness	☒	☐
Medical condition	☐	☐
Osteoporosis	☐	☐
Broken bones	☐	☐
Skin rash or skin irritation	☒	☐

B. For each of the conditions that you checked above, please fill out the information below:

Condition No. 1

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

Date of onset: 2007
Did you see a Health Care Provider (as defined on page 2 above) about this condition?
Yes ☐ No ☒

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☒

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 2

Date of onset:
Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☒

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 3

Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☒

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☒

If yes, what kind?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 4
Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐
If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

[Translators: Use this field to describe further medical conditions if there are more than 4, using same format:]

NOTE: Attach additional sheets of paper if you have more than 4 conditions to describe.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

C. Have you had any surgeries in the last 20 years? Yes ☐ No ☒
If yes, *when?*
For what?

If yes, who performed the surgery? (include name and address)

D. Drug and Medicine Use:

Do you take any drugs and/or medicines on a regular basis, including plants, herbs, roots or traditional remedies (ancestral) for medicinal uses? Yes ☒ No ☐

If yes, please list all of the drugs and medicines (including plants, herbs, roots or traditional remedies) that you take at this time: Yaje, Guantud and Guayusa

Have you formerly taken drugs and/or medicines (including plants, herbs, roots or traditional remedies) on a regular basis that you do not take now? Yes ☐ No ☒

If yes, please list all such drugs and/or medicines and identify *when you* took them:

F. History of the Use of Tobacco and Similar Products:

Have you ever smoked cigarettes? Yes ☒ No ☐

Do you currently smoke cigarettes? Yes ☒ No ☐

If yes, please fill in: I have smoked packs or cigarettes per day for years, of the following brands of cigarettes:

If you smoked earlier but do not now, please fill in: I stopped smoking in Before that, I smoked packs or cigarettes per day for years, of the following brands of cigarettes:

Have you ever smoked cigars or pipe tobacco? Yes ☐ No ☒

If you currently smoke cigars and/or a pipe, please fill in: I presently smoke (fill in number of) cigars and/or pipes per day.

If you smoked cigars or pipes earlier but do not now, please fill in: I stopped smoking (fill in "cigars" or "pipes" or "both") in (date) 10 years

Before that I smoked (fill in number) a little per day.

Have you ever smoked other substances based on ancestral custom or personal preference? Yes ☐ No ☐

If yes, identify what you smoked, *when* you started, and how long you have smoked it.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

Have you ever chewed tobacco or similar chewing material? Yes ☐ No ☒

If yes, what was it, *when* did you begin to chew it, and how long have you done this?

G. Drinking History:

Do you currently drink alcohol of any kind? Yes ☒ No ☐

If yes, how many drinks per week do you consume? a little

If you do not drink alcohol now but you did in the past, how many drinks per week did you consume in the past? a little
When was this? 2 years

Do you drink other fermented beverages that contain a smaller amount of alcohol?
Yes ☐ No ☒

If yes, explain how much of this you drink and when you have consumed it.

H. Have you ever missed work for more than 2 weeks straight for reasons related to your health in the last 20 years? Yes ☐ No ☒ If yes, *when?*

If yes, please state the dates you missed work, your employer at the time, and the health condition that caused your absence from work:

Did you see a Health Care Provider about the health problem that caused you to miss work? Yes ☐ No ☐

If yes, please identify the Health Care Provider's name, address and *when you* visited that provider.

I. In addition to the Health Care Providers identified in the preceding answers in this Questionnaire, have you gone to any more Health Care Providers (as defined on p. 2) in the last twenty (20) years? Yes ☐ No ☒

If so, please provide the following information:

Date	Name and Address of Health Care Provider	For what illness or injury?	What diagnosis and treatment did you

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

			receive?

J. Reproductive History (To be answered by all wives and mothers; to be answered by husbands and fathers only if they are filling out this Questionnaire for their wives):

Have you (or your wife if a husband is answering this question) ever had a miscarriage? Yes ☒ No ☐
If yes, please state how many times and when each happened. one in march

Have you ever experienced any still-births or deaths of your children shortly after they were born? Yes ☐ No ☒

If yes, please state how many times and *when* each happened.

If yes, did you see a Medical Care Provider about the still-births or infant deaths? Yes ☐ No ☒

If yes, please identify who you saw, *when* you saw them, and what they told you about each such incident?

VII. SPECIFICATION OF DAMAGES BEING SOUGHT AND SUPPORTING DOCUMENTATION

A. What *amount* of damages are you seeking?

For physical injury to yourself:	$2,000 dollars
For damage to your crops:	$200 dollars
For damage to your animals:	$1,000 dollars
For lost wages or income:	$1,000 dollars
For anything else? If so, describe:	$
TOTAL	$6,000 dollars

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

B.

C. Do you seek damages to reimburse you for medical bills and expenses that you paid? Yes ☒ No ☐

If yes, how much did you pay? $1,000 dollars

If yes, did you pay in cash or with something else? (If something else, describe what it was): in products

D. Do you seek damages to reimburse you for *other* out-of-pocket expenses or fees?
Yes ☐ No ☒
If yes, how much in expenses or fees did you pay, how did you pay then, and what were the payments for?

E. Do you seek damages for lost wages or loss of time from work?
Yes ☒ No ☐

If yes, *when* did this happen? (List all instances)
Plan Colombia

If yes, how long were you unable to work? 5 months

If yes, how much in wages or income did you lose? $1,500 dollars

How do you calculate this amount? in the farm

If you claim lost wages, identify the employer(s) (by listing each name and address) who did not pay you for the relevant period of time. If self-employed, describe the basis for your alleged lost earnings.

Did you try to find new work during the period of time for which you seek lost wages or income? Yes ☒ No ☐

If yes, where did you apply or inquire and what happened following your application or inquiry? farming again

F. Do you seek damages for the loss of legal crops? Yes ☒ No ☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

If yes, please provide the following information:

Kind of Crop	Amount of crop that died / was lost	Monetary Value(s)you place on the Crops that Died	Basis for your Value(s)
Plantain, yuca, corn, rice and cacao	7 hectares		

G. Do you seek damages for farm animals or pets that died?

Yes ☐ No ☐

If yes, please provide the following information:

Kind of Animal	Number that Died	Monetary value(s) you place on the dead animals	Basis for your Value(s)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

VIII. WITNESSES TO YOUR CLAIMS

Please identify all persons whom you believe possess information concerning your alleged exposure to the "Plan Colombia" herbicide and/or the alleged injuries or other harm resulting to you from the exposure *(other than your attorneys and the Health Care Providers identified elsewhere in this Questionnaire):*

Name and address: [redacted]

(What knowledge does this person have?) same problems

Name and address:

(What knowledge does this person have?)

Name and address:

(What knowledge does this person have?)

Name and address:

(What knowledge does this person have?)

IX. DOCUMENT REQUESTS AND AUTHORIZATIONS

A. If you are claiming personal injuries to yourself:

1. Please provide a copy of any and all medical and other documents (as defined on p. 2), including records, test results and all medical bills *in your or your attorney's possession* that relate to any visit you made or any treatment you received from a Health Care Provider (as defined on p. 2) in the last twenty (20) years.

2. Please complete and sign a copy of the Exhibit A "Authorization for Release of Medical Records" for each Health Care Provider you have

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 200, Witness 12

identified in your responses to this Questionnaire. Deliver the Authorizations to each Health Care Provider identified on the form and give the documents that the Providers produce to you (along with a copy of the corresponding Authorization for Release given or sent to each Provider) to your attorney so that these medical records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit A "Authorization for Release of Medical Records" with the name of the Medical Care Provider left blank for future use if the defendants establish that you saw or were treated by additional Medical Care Providers in the last twenty (20) years.

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B. If you are claiming reimbursement for any medical expenses or other out-of-pocket expenses related to your alleged exposure:

1. Please attach a copy of the receipts, bills, invoices or any other documents in your or your attorney's possession that demonstrate the amount of the expenses for which you seek reimbursement.

C. If you are claiming lost wages or earnings:

1. Please attach copies of any and all documents in your possession about the total amount of salary or wages that was paid to you and the total amount of any other income that was generated by you for each year in the last ten (10) years. This shall include but not be limited to: pay-stubs, cancelled checks, income tax forms or other documents that disclose income received by you each year for the last ten (10) years from any source.

2. Please complete and sign the attached Exhibit B "Authorization for Release of Employment Records" for each of your employers in the last ten (10) years as identified in your answers to this Plaintiffs' Questionnaire. Deliver the Authorizations to each such employer identified on the form and give the documents that the employers produce to you (along with a copy of the corresponding Authorization) to your attorney so that these records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit B "Authorization" with the name of the employer left blank for future use if the defendants establish that you had additional employers in the last ten (10) years.

D. If you are claiming loss based on injury or damage to your legal crops:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the land and/or that you owned the crops on that land, which you claim were destroyed, (ii) the amount of crops that were destroyed, and (iii) the monetary value of the destroyed crops.

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E. If you are claiming loss based on injury to farm animals or pets:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the animals you claim were injured or killed, (ii) the number of animals that died, (iii) the monetary value of the animals that died, and (iv) any other expenses you are claiming relative to this alleged loss.

F. If you are claiming any other kind of loss or damage in this case:

1. Please attach copies of any and all documents that demonstrate or support such other claimed loss or damage and the *amount* of damages you seek for that loss or damage.

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X. VERIFICATION

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on (DATE) September 8th, 2008 (Signature)
Plaintiff's Signature
Print Plaintiff's Name: [redacted]

(Signature)
Signature of witness attesting to Plaintiff's Signature
Witness's name: [redacted]
Date: September 8th, 2008
Witness's Address: Via Colombia
Witness's Relationship to Plaintiff: [redacted]

Plaintiff's Picture

Plaintiff's Fingerprint

Annex 71

PLAINTIFF QUESTIONNAIRE, *ARIAS/QUINTEROS V. DYNCORP,* D.D.C. (EM VOL. IV, ANNEX 201, WITNESS 13)

(United States District Court for the District of Columbia, Cases No. 1:01-cv01908 (RWR-DAR) and 1:07-cv01042 (RWR-DAR). Cases consolidated for Case Management and Discovery)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Case #: [redacted]

[redacted] Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR)
Venancio Aguasanta Arias, *et al.* Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR) Consolidated for Discovery with Case No. 1:01CV01908 (RWR)

PLAINTIFFS' QUESTIONNAIRE

To Each Individual Plaintiff:

INSTRUCTIONS

1. Each individual plaintiff in the above-captioned cases must complete and sign his or her own copy of this Questionnaire.

2. If a person is responding on behalf of his or her children (or another person or persons) on whose behalf a claim has been filed before this Court, then a separate copy of this Questionnaire must be filled out for each such child or other person.

3. When you read the terms "you" and "your" throughout this Questionnaire, they refer to each person who is claiming injury due to the alleged exposure in this case. In other words, if you are claiming injury to yourself or your

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

property, you must answer the questions about yourself and your property. If you are responding on behalf of your child (or other person), then you must answer the questions about that child or other person on a separate copy of this Questionnaire, clearly marked to show to whom it refers

4. Each question must be answered in full. If you do not know the answer to a question or cannot recall the information needed to answer a question, please say this in your response to the question. If a question is "not applicable" to you, say this in your response. Do not leave any question unanswered.

5. Each individual plaintiff must realize that he or she is under oath and must provide information that is true and correct based on such person's personal knowledge and belief.

6. You may attach as many sheets of paper as necessary to fully answer the questions. This questionnaire also asks you to produce written documents that relate directly to your answers. You must give these documents to your attorney so that they may be copied for use in this lawsuit. **You must not dispose of or alter or modify any documents** or other materials that you have now or that you may later receive relating to any of the subjects addressed in this Plaintiffs' Questionnaire.

7. In filling out this form, please use the following definitions:

(A) **"Health care provider"** means any hospital, clinic, doctor's or nurse's office, infirmary, medical laboratory or other facility that provides medical care or advice. It also means any doctor, physician, surgeon, paramedic, nurse (registered or otherwise), psychologist, psychiatrist, therapist, chiropractor, healer or any other person practicing any kind of healing art (with or without traditional medications) or performing any kind of medical, physical or mental examination or treatment, and any other persons or entities involved in the evaluation, diagnosis, care and/or treatment of you.

(B) **"Document"** means any writing or record of any kind whatsoever that is in your or your family's possession or the possession of your counsel, including but not limited to written letters, papers, notes, e-mails, photographs, charts, cassettes, videotapes, computer discs or tapes, x-rays, drawings, graphs, phonorecords, nonidentical copies and other data compilations of any kind.

I. PRELIMINARY INFORMATION ABOUT YOU AND YOUR CLAIM

A. Name of plaintiff submitting this Questionnaire (NOTE: There must be one form completed for each plaintiff and for each other person claiming injuries): [redacted]

B. Name of person who this Questionnaire applies to: [redacted]

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[redacted]

C. Name of person who filled out this Questionnaire, if different from plaintiff (include the preparer's name, company, address, and relationship to plaintiff):
Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-work product. Subject to, and without waiving, said objections, responding party responds as follows: This Questionnaire and the computer responses were generated with assistance of counsel

D. Are you seeking relief for personal injury to yourself? Yes ☒ No ☐

E. Are you seeking relief for personal injury to someone else? Yes ☒ No ☐

If yes, who?FOR MY FAMILY

Please mark the reason why this person cannot act on his or her own.

Minor ☐ Impaired ☐ Death ☐ Other Reason ☐

(Note: A separate copy of this Questionnaire should be completed for each person seeking damages).

F. Are you seeking damages for injury to your property (crops or animals)? Yes ☒ No ☐

If yes, do you claim:

Damages to your crops? Yes ☒ No ☐

Damage to farm animals or pets? Yes ☒ No ☐

G. Are you seeking damages for injury to any other types of property? Yes ☐ No ☒
If yes, what kind?

II. PERSONAL INFORMATION

A. Paternal Last name:

Maternal Last name: [redacted]

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

First name: [redacted]

Middle Name: [redacted]

Any other names by which you have ever been known:

Ecuadorian identification number: [redacted]

B. Gender: Male☐ Female☒

Height: 150

Weight: 157

C. Are you Ecuadorian? Yes ☒ No ☐

If not, what is your country of citizenship? Ecuador

D. Racial/Ethnic Background: Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows: MIXED RACE

If you answered Indigenous or Indian, do you belong to an indigenous tribe or community? Yes☐ No☒

If yes, which one?

E. What language do you speak? SPANISH

F. Do you clearly understand the language used in this Questionnaire and the questions asked in this Questionnaire? Yes ☒ No☐

G. Date of Birth: [redacted]

H. Present home address: [redacted]

Village or City: LAGO AGRIO Province: PICHINCHA

If you do not live in a city or town, identify the nearest town to your home and provide the directions to get to your home from that town. (Use road names, river names and North, South, East, West directions to describe how to get to your home)

[redacted]

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How long have you lived at this address?
23 YEARS

What was the reason that caused you to move to your present home address?

Who has lived with you at this address?
MY FAMILY

I. Prior Home Addresses. Please provide the following information for the last ten (10) years:

Prior address (including closest town, province, and country)	Dates you lived at this address: Starting	Until	Persons who lived with you at this address

J. Telephone Number (if any):

K. Current Occupation: HOMEMAKER

Name of employer (If self-employed, say this):

Name of immediate supervisor (if any):

Employer's address (work):

Employer's telephone no. (work):

How long have you worked there?

L. Prior Employers. Please fill in the following information for the last ten (10) years (Include any military service, and if self-employed, say this):

Prior employers (names and addresses)	Dates you worked for this employer: Starting	Until	What did you do there?

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M. In any of your work in the last ten (10) years (including your current work or home farming), have you used or handled pesticides and/or herbicides?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☐

If yes, what kind of pesticides and/or herbicides did you use and *when* did you use them?

If you applied the pesticides and/or herbicides, how did you do it?

If you applied them, [the pesticides], describe any kind of protection you used for yourself while you were using the pesticides and/or herbicides.

If you applied pesticides, did you or anyone else in your family wash the clothes you wore when using the pesticides and/or herbicides?
Yes☐ No☐

If yes, please describe who did this, how often it was done, and the manner in which your clothes were washed or cleaned.

Do you believe you have experienced any kind of medical problems as a result of handling pesticides/herbicides in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of medical problems and *when* did you have them?

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N. Has any member of your immediate family used or handled pesticides and/or herbicides during the last ten years (as a part of your work or home farming)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what members of your family and what type of pesticides and/or herbicides did they use?

If yes, where and how did those members of your family (or any other person) wash the clothes they used while using pesticides and/or herbicides?

O. In your work or in your home farming in the last (10) years, have you been in the vicinity of or close to other people using herbicides and/or pesticides (where you could see other people)?

Yes☐ No☒

If yes, what kind of herbicides and/or pesticides did they use?

If yes, where and how did you wash your clothes that you wore after you were close to where other people used the herbicides and/or pesticides?

P. In any of your work in the last (10) years (including your current work or home farming), did/do you use or handle chemicals (other than the herbicides or pesticides identified in the previous answer.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of chemicals fertilizers, or other artificial chemical products did you use and when did you use them?

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If yes, describe any kind of protection you used for yourself while using the chemicals.

Do you believe you have experienced any kind of medical problems as a result of using chemical fertilizers or other types of artificial chemical products in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of medical problems and *when* did you experience them?

Q. Have you ever been convicted of a crime in the past ten years? Yes☐ No☒

If yes, what crime?

Did you go to jail or prison? Yes☐ No☒

If yes, how long?

R. Have you ever been rejected for a job for which you applied or for a military position because of a medical, physical, psychiatric or emotional condition?
Yes☐ No☒

If yes, what job or position?

If yes, *when* did this happen? (Include all instances when this happened).

If yes, what was your medical condition or disability (for each such instance)?

S. Have you ever filed a claim or claims with the Ecuadorian or Provincial government where you live or with an employer or with an insurance company or any other entity for compensation or the payment of medical expenses or lost earnings due to an injury or a medical disability of any kind?
Yes☐ No☒

If yes, please fill in the following information for the last ten (10 years):

Date claim filed	Filed with whom?	What	What happened with

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		injury/disability was claimed?	your claim?

T. Do you have medical insurance of any kind? Yes☐ No☒

If yes, what company or program provides your medical insurance?

U. Have you ever filed a lawsuit against anyone (aside from this suit), including any oil companies?
Yes☐ No☒

If yes, please identify: (1) what kind of lawsuit it was, (2) when you filed it, (3) the company or people you sued, (4) what Court or other tribunal it was before, and (5) what was the result of the suit. (If any of your lawsuits are still pending, say this.) (Attach additional pages if necessary to describe multiple lawsuits.)

III. FAMILY INFORMATION AND EDUCATIONAL HISTORY

A. Have you ever been married? Yes ☐ No ☒

B. If yes, *for each spouse and former spouse,* please identify the following:
1. Spouse's name: COMMON LAW MARRIAGE WITH [redacted]
2. Date of marriage: 1991
3. Spouse's date of birth: 1952
4. Spouse's occupation: A FARMER
5. Spouse's address (if different than yours):

C. Immediate Family members. Please provide the following information about each of your parents, your sisters, your brothers and your children. (**Add additional sheets if necessary.**)

Name	Relationship to you	Date of birth	Date of death (if applicable)	Cause of death (if applicable)	Main occupation
[redacted]	Daughter	1973			Homemaker
[redacted]	Daughter	1977			Homemaker

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[redacted]					
[redacted]	Daughter	1979			Homemaker
[redacted]	Daughter	1981			Homemaker
[redacted]	Daughter	September 24, 1985			Homemaker
[redacted]	Mother	1925			Homemaker
[redacted]	Son	1983			Farmer
[redacted]	Son	August 20, 1985			Farmer
[redacted]	Daughter	1998			Student
[redacted]	Son	1971			Farmer
[redacted]	Son	June 12, 1992			Student
[redacted]	Daughter				Student

D. Education.

How many years did you go to school? 2 Years

What was the highest grade you completed? SECOND GRADE

Where did you go to school? (List all schools by name and location)
IN CUENCA, I DO NOT REMEMBER THE NAME

Do you know how to read? Yes ☒ No ☐

Do you know how to write? Yes ☒ No ☐

Do you have any degrees or certifications? Yes ☐ No ☐

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If yes, what are they and what year did you get them?

IV. YOUR LIVING CONDITIONS

A. Please answer the following questions about your home, food and water:

1. What size is your house and of what materials is it made?
   WOODEN, 7 x 5 METERS

2. Where do you get your water? THROUGH THE PLUMBING

3. What is the source of your water? A RESERVOIR OF POTABLE WATER

4. Do you have running water inside your home? Yes ☒ No ☐

5. Do you filter your water? Yes ☐ No ☒

   If yes, how?

6. Where do you get the food for you and your family? FROM THE STORE AND THE FARM

7. How do you cook your food? (On a stove, grill, charcoal or firewood)
   A STOVE

   Do you eat raw crab meat? Yes ☐ No ☒

   Do you use crab juice as medicine? Yes ☐ No ☒

   Do you buy and eat food in public places (Such as open air markets or places that sell prepared foods to the public)? Yes ☐ No ☐

   If yes, have you observed the conditions in which that food was prepared and handled before you purchased and ate it? Yes ☐ No ☐

B. Please answer the following questions regarding sanitation:

1. How is sewage (waste and waste water) from your home disposed of?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and

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calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
IN THE FARM

2. Where does the sewage from your home go to (e.g., into the soil, into a body of water: sewer, river, stream, lake, etc.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
THEY RUN OFF ONTO THE FARM

3. Do you have a toilet inside your home? Yes ☒ No ☐

4. Do you use an outhouse? Yes ☒ No ☐

5. How is sewage disposed by the other homes and farms around you?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
ON THE FARM

6. How do you dispose of your trash? (e.g., do you burn it? Do you bury it? Do you send it to a landfill?)

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
WE BURN WHAT WE CAN'T USE AND THE REST IS USED ORGANICALLY

7. How far is the closest landfill to your house? THERE ISN'T ANY

8. Where you live, is the trash dumped into a public area or public water channel?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

C. Please answer the following questions regarding oil operations (oil perforation, oil

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well, oil pits, gas stations or oil facilities) close to your house or place work:

1. How far is the nearest oil operation from your home? (and describe what is it) FAR AWAY

2. Has your home, farm or work area ever experienced oil pollution as a result of oil operations?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒
   If yes, *when* did this happen?

3. Have you ever been injured in any way by oil pollution?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

   If yes, what were the injuries and *when* did they occur?

4. Do you think that anyone in your family been injured in any way by oil operations?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒
   If yes, what and *when* were the injuries they suffered?

D. Please answer the following questions regarding volcanoes:

1. How close do you live to the Reventador volcano, and/or to any other volcano? 70 KILOMETERS

2. Do you think that you or your family members have ever been injured in any manner as a result of the eruptions or volcanic emissions of the Reventador volcano, or any other volcano?

   Responding party incorporates the General Objections previously set forth.

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Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

If yes, *when* did this happen and what were the personal damages that you suffered?

3. Do you think anyone in your town, vicinity, or community suffered personal damages of any kind as a result of the volcanic eruptions?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

If yes, explain what happened and *when* it happened

E. Please answer the following questions regarding floods:

1. Have you, your home or your farm been affected in any way as a result of a flood in the last 10 years?
Yes ☐ No ☒

If yes, describe *when* this occurred and what damages you or your property suffered?

If yes, did the floods cause you to leave your home? Yes ☐ No ☐

F. Please answer the following questions about people moving into your town, vicinity, or community.

1. Do you think that your village or community has experienced an influx of people from Colombia in the last ten (10) years? Yes ☐ No ☒

2. Do you believe that your village, vicinity, or community has experienced an influx of people from other places (other than Colombia) in the last ten (10) years? Yes ☐ No ☒

If yes, where did these people come from?

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V. YOUR ALLEGED EXPOSURE TO THE "PLAN COLOMBIA" HERBICIDE

A. Are you familiar with "Plan Colombia?" Yes ☐ No ☒

If yes, what do you know about "Plan Colombia" and *when* did you learn this?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows: THAT THEY WANTED TO ELIMINATE THE COCAINE AND FOR THAT REASON THEY WERE FUMIGATING ON THE BORDER WHICH AFFECTED US ALSO, OUR HEALTH, OUR CROPS AND OUR ANIMALS

If yes, identify the people with whom you have spoken about "Plan Colombia," what they told you, and when these conversations took place?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows: WE SPOKE WITH DR. ADOLFO MALDONADO SO THAT HE COULD HELP US KEEP ALIVE THE ECOLOGICAL SITUATION

B. Why do you believe that you and/or your property was exposed to a "Plan Colombia" herbicide? WE HAD A DIFFERENT LIFESTYLE BEFORE AND NOW THAT IT HAS DETERIORATED, WE HAVE LOST EVERYTHING

C. When were you and/or your property exposed to herbicide? (If more than once, list all dates of exposure by day, month and year.) SINCE 2001

D. **For each instance of alleged exposure to your body**, please answer the following questions (use additional sheets of paper as necessary):

1. Where were you when the exposure occurred? I WAS WORKING ON MY FARM

2. How close were you at that time to the border between Ecuador and Colombia? 3 KILOMETERS

3. How do you know this?

4. Please mark an "X" on the attached map of Northern Ecuador to show where you were at the time of the alleged exposure and list the date(s) of exposure beside each "X". Have you marked the map in this way? Yes ☒ No ☐

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If no, why not?

5. What time of day did the exposure occur? AT DIFFERENT HOURS OF THE DAY

6. What was the weather like that day? (Include the approximate temperature and whether there was precipitation) IT VARIED

7. Did you see an airplane at the time of the exposure?
Yes ☒ No ☐

If yes, what did it look like? (color, size, letters, flags or other markings on plane, etc.)
LIKE A GRAY COLOR, MEDIUM-SIZED

8. Did you see more than one airplane at the time of the exposure?
Yes ☒ No ☐

If yes, please state how many you saw and describe what each looked like:
THERE WERE TWO HELICOPTERS WITH AN AIRPLANE IN BETWEEN; IT LOOKED LIKE THE HELICOPTERS WERE ESCORTING THE AIRPLANE

9. Did you see a helicopter at the time of the alleged exposure?
Yes ☐ No ☒

If yes, how many? Yes

If yes, what did the helicopter(s) look like (color, size, letters, flags or other markings)? MEDIUM-SIZED GRAY COLORED

10. Did you see anything else in the air? Yes ☒ No ☐

If yes, what else did you see? A WHITE CLOUD

11. Did you see the spray or a "cloud" or "fog" of spray? Yes ☒ No ☐

If yes, what color was it? WHITE

12. Did you see residue on the ground after the spraying? Yes ☒ No ☐

If yes, what did it look like? POWDER

13. Did you hear anything? Yes ☒ No ☐

If yes, what did you hear? GUNFIRE

14. Did you smell anything unusual? Yes ☒ No ☐

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If yes, what did it smell like? LIKE POISON OR A STRONG IRRITANT

15. Do you contend that your body was exposed to the spray?
Yes ☒ No ☐

If yes, did you feel anything on your skin? Yes ☒ No ☐

If yes, what did you feel? ITCHINESS

If yes, what did you do with the clothing that you wore that day and when did you do it? (Include whether they were washed or destroyed)
IT WAS WASHED

16. After the spraying ceased, did you see any changes to the plants in your vicinity?
Yes ☒ No ☐

If yes, what changes did you see and how long after the spraying did you see the changes? 15 DAYS

17. After the spraying ceased, did you see any change in the wildlife, birds or fish in your vicinity? Yes ☐ No ☐

If yes, explain exactly what you saw and how long after the spraying you saw it? 15 DAYS

18. After the spraying ceased, did you observe any change in the appearance, odor or taste of any bodies of water (rivers, creeks, ponds, lakes, well water, etc.) in your vicinity? Yes ☒ No ☐

If yes, please describe the change(s) you observed and state how long after the spraying you observed this.
I DIDN'T NOTICE VERY MUCH THE CHANGE IN THE WATER

E. **For all plaintiffs alleging personal bodily injuries due to the alleged exposure**, please also answer the following questions for each instance of alleged exposure. (Use additional sheets of paper as necessary.)

1. What were your symptoms? (Please provide detail on both external and internal symptoms.)
ITCHINESS, SORE THROAT, LACK OF ENERGY, FAINTING, HEADACHES

If yes, how long after the alleged exposure did your symptoms occur?
WITHIN 15 DAYS

2. Did you go to a Health Care Provider (as defined on p. 2) based on your exposure to the "Plan Colombia" herbicide? Yes ☒ No ☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

If yes, when did you go, and how long after the exposure was this?
WITHIN TWO MONTHS

If yes, where did you go? (identify the name and address of the Health Care Provider) CENTRO MEDICO SAN FRANCISCO DE LAGO AGRIO

If yes, how far was this from your home? 20 KILOMETERS

If yes, which person(s) at the Health Care Provider's office did you see about the herbicide exposure? DOCTORS AT THE CLINIC

3. What did those person(s) tell you about your injury or condition? THEY DIDN'T KNOW WHAT WAS WRONG BECAUSE WE HAVE NOT BEEN ABLE TO BE CURED EVEN TODAY

Did the person(s) tell you that your injuries or condition was caused by the "Plan Colombia" herbicide? Yes ☐ No ☐
THEY WOULDN'T TELL US ANYTHING; SINCE THEY HAVE SEEN SO MANY PEOPLE THEY TOLD US WE WERE PROBABLY ILL BECAUSE OF THE FUMIGATIONS ON THE BORDER

4. Did the Health Care Provider take a sample of your blood or urine?
Yes ☒ No ☐

5. Did the Health Care Provider give you medicine (including herbal or home remedies) or a prescription for medicine? Yes ☒ No ☐

If yes, what was the medicine and what was it for? MEDICATION FOR THE INFECTION AND WE WOULD USE OUR OWN HOME REMEDIES

If yes, did you buy the medication or was it given to you?
Yes ☒ No ☐

If yes, describe when and where you bought or obtained it and how much you paid for it. I BOUGHT THEM IN THE PHARMACY IN CENTRO DE SALUD SAN FRANCISCO AND I DON'T REMEMBER HOW MUCH IT COST

How long did you use the medicine? THE TREATMENT LASTED FOR A MONTH

Did you take all the medicine you obtained? Yes ☒ No ☐

6. If you did not go to a Health Care Provider but thought that you were injured by the exposure, did you do anything to alleviate your injury, including any herbal or home remedies? Yes ☐ No ☐
If yes, what did you do?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

7. What specific type(s) of bodily illness or injury do you allege were caused by your exposure to the "Plan Colombia" herbicide?
ITCHINESS, SORE THROAT, TIRED, FAINTING, HEADACHES

8. Do you believe you have an increased risk of future injury or harm (which has not yet appeared on or in your body) as a result of your alleged exposure to the "Plan Colombia" herbicide? Yes ☒ No ☐

If yes, please explain what future health risks you believe you face, why you think this would be affiliated with "Plan Colombia", and identify any Health Care Providers or other people who have told you this and set out what each such person (except your attorneys) said to you about future injury or harm.
CANCER OF THE SKIN AND THE THROAD

F. **For all plaintiffs claiming damage to crops** from the alleged exposure, please also answer the following questions **about each instance of alleged exposure** (use additional sheets if necessary):

1. Where was your field of crops (identify by distance and direction from your home)?
IT WAS VERY CLOSE BECAUSE MY HOUSE IS LOCATED IN THE CENTER OF THE FARM

What was the date and time of day your crop(s) were exposed to the "Plan Colombia" herbicide?
FROM 2001 TO 2006

3. How close is that field to the border between Colombia and Ecuador? 3 km
or meters

4. Please mark a small circle ("0") on the attached map to show where your exposed field was and mark the date of the alleged exposure by each "O." Have you marked the map?
Yes ☒ No ☐
If no, why not?

5. Do you own the land where your crops were growing? Yes ☒ No ☐

If not, who owned the land when the spraying took place?

6. How big was your field or patch of crops exposed to the herbicide? 20 Hectares

What kinds of crops were planted there? YUCA, PLANTAINS, RICE, COFFEE, COCOA BEANS, CORN AND FRUIT TREES

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

7. How long after the exposure did you notice injury to the crops and what did you first see when the damage began? THE LEAVES WOULD DRY UP EVERYWHERE THE WHITE GLIFOCIDE POWDER WOULD FALL

How long did it take for the injury to be complete? WHEN THEY WERE PLANTED, THEY WOULD START DYING LITTLE BY LITTLE

What was the end result of the alleged exposure? (Describe what percentage of your crop was damaged or destroyed) 100%, WE LOST EVERYTHING

8. Did you sell or trade the crops that remained in your field after the alleged exposure? Yes ☐ No ☐

If yes, to whom?

If yes, did you tell the buyer that you believed the crop had been exposed to a "Plan Colombia" herbicide? Yes ☐ No ☐

9. How soon after the alleged exposure did you plant new crops in the same field? AFTER A YEAR THEY WOULD GROW BUT THEN DIE AGAIN AND NOW NOTHING GROWS

10. Why do you believe your crops were damaged by the "Plan Colombia" herbicide? WE REALIZED IT A YEAR AFTER THE FUMIGATIONS, THAT IS TO SAY, IN 2002 BECAUSE THE SITUATION WAS AT A GENERAL LEVEL

11. What kinds of pesticides and/or herbicides did you use on the same crops before their alleged exposure to the "Plan Colombia" herbicide? I DON'T USE ANY

12. Where did you buy the pesticides and/or herbicides that you used? (Include name and address of the supplier.)

G. **For all plaintiffs claiming injuries to farm animals or pets,** please also answer the following questions **about <u>each</u> instance of alleged exposure** (use additional sheets as necessary):

1. What kind of animals were exposed?

2. Where were your animals when they were allegedly exposed (identify by distance from your home)?

3. How close was this to the Colombian-Ecuadorian border?

4. Please place a "?" on the attached map to show where your animals were at the time of their alleged exposure and put the date(s) of exposure by each "?".

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

Have you marked the map in this way? Yes ☐ No ☐
If no, why not?

5. How long after the exposure did it take for your animals to get sick?

6. What happened to the exposed animals? (Identify for each kind of animal: how many died; how many got sick but survived; how many were unaffected)

7. For the animals that died, did a veterinarian, a professional or other person examine the corpses to determine the cause of death? Yes ☐ No ☐

   If yes, who was this, when did it happen, and what did he/she tell you? (Identify by name, title, and business address)

   If yes, when did this person examine the animal corpses in relation to when they died?

8. For the animals that got sick but survived, did a veterinarian, a professional or other person examine and diagnose the sick animals?
   Yes ☐ No ☐

   If yes, who came, when did they come, and what did they tell you? (Identify by name, title, and business address)

9. Did anyone collect blood samples or other tissue samples from your animals (dead or alive)? Yes ☐ No ☐
   If yes, who took the samples? (Identify name, title and business address)

   If yes, did you get copies of any results from the tests done on the animal blood or tissue samples? Yes ☐ No ☐

   If you got written results, please attach them to your answers to these questionnaires.

10. Why do you believe that your animals' illness or death was caused by the "Plan Colombia" herbicide?

H. Reports to Third Parties.

1. Other than the Health Care Providers or animal care professionals identified above, did you complain to anyone or to any organization (government or non-government) about the alleged spraying of herbicide?
Yes ☐ No ☒

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

If yes, whom did you speak with and when did you do this?

If yes, what did you say to this person or organization?

What did the person or organization say back to you?

Did that person or organization take samples of your blood or urine due to your alleged exposure to the "Plan Colombia" herbicide? Yes ☐ No ☐

If yes, who did this and when did it happen?

VI. YOUR MEDICAL BACKGROUND

A. Check the medical conditions that you have *at the present time* and the conditions that you have had *at any time in the past.*

Condition	I have now	I have had in the past
Cancer	☐	☐
If cancer, what kind?		
Heart disease or heart attack	☐	☐
Angina, chest pain	☒	☐
Brain tumor	☐	☐
Epilepsy	☐	☐
Diabetes	☐	☐
Liver disease	☐	☐
Pancreatitis	☐	☐
Polio	☐	☐
Malaria	☐	☐
Dysentery	☐	☐
Asthma or other respiratory illness, shortness of breath	☐	☐
Blood clots or abnormalities of blood vessels	☐	☐
Anemia or other blood disorders	☒	☐
High blood pressure	☐	☐

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AIDS or HIV-positive test results	☐	☐
Medical condition	☐	☐
Arthritis	☐	☐
Kidney disease or transplant	☐	☐
Dengue fever	☐	☐
Cholera	☐	☐
Changas	☐	☐
High cholesterol	☐	☐
Influenza	☐	☐
Diarrhea	☐	☐
Infections (bacterial or fungal)	☐	☐
Measles	☐	☐
Chicken pox	☐	☐
Mumps	☐	☐
Diptheria	☐	☐
Whooping cough	☐	☐
Scarlet fever	☐	☐
Leishmaniasis	☐	☐
Onchocerciasis	☐	☐
Alcoholism	☐	☐
Malnutrition	☐	☐
Migraine headaches	☒	☐
Fainting or serious dizziness	☒	☐
Medical condition	☐	☐
Osteoporosis	☐	☐
Broken bones	☐	☐
Skin rash or skin irritation	☒	☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

B. For each of the conditions that you checked above, please fill out the information below:

Condition No. 1

Date of onset: 2001
Did you see a Health Care Provider (as defined on page 2 above) about this condition?
Yes ☒ No ☐

If yes, who did you see? (include name and address) CENTRO DE SALUD SAN FRANCISCO

What did the Health Care Provider tell you about the condition?
THEY TOLD ME I HAD INFECTIONS OF THE SKIN

Did the Health Care Provider give you drugs or therapy? Yes ☒ No ☐

If yes, what kind? I DON'T REMEMBER

Did you take the drugs prescribed for you? Yes ☒ No ☐

Condition No. 2

Date of onset:
Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 3

Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐

If yes, who did you see? (include name and address)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 4
Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐
If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

[Translators: Use this field to describe further medical conditions if there are more than 4, using same format:]

NOTE: Attach additional sheets of paper if you have more than 4 conditions to describe.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

C. Have you had any surgeries in the last 20 years? Yes ☐ No ☒
If yes, *when?*
For what?

If yes, who performed the surgery? (include name and address)

D. Drug and Medicine Use:

Do you take any drugs and/or medicines on a regular basis, including plants, herbs, roots or traditional remedies (ancestral) for medicinal uses? Yes ☐ No ☐

If yes, please list all of the drugs and medicines (including plants, herbs, roots or traditional remedies) that you take at this time: YES, LEMON BALM, ROSES, MINT AND SOMETHING CALLED BERDOLANA

Have you formerly taken drugs and/or medicines (including plants, herbs, roots or traditional remedies) on a regular basis that you do not take now? Yes ☐ No ☒

If yes, please list all such drugs and/or medicines and identify *when you* took them:

F. History of the Use of Tobacco and Similar Products:

Have you ever smoked cigarettes? Yes ☐ No ☒

Do you currently smoke cigarettes? Yes ☐ No ☒

If yes, please fill in: I have smoked packs or cigarettes per day for years, of the following brands of cigarettes:

If you smoked earlier but do not now, please fill in: I stopped smoking in Before that, I smoked packs or cigarettes per day for years, of the following brands of cigarettes:

Have you ever smoked cigars or pipe tobacco? Yes ☐ No ☒

If you currently smoke cigars and/or a pipe, please fill in: I presently smoke (fill in number of) cigars and/or pipes per day.

If you smoked cigars or pipes earlier but do not now, please fill in: I stopped smoking (fill in "cigars" or "pipes" or "both") in (date)

Before that I smoked (fill in number) per day.

Have you ever smoked other substances based on ancestral custom or personal preference? Yes ☐ No ☒

If yes, identify what you smoked, *when* you started, and how long you have smoked

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

it.

Have you ever chewed tobacco or similar chewing material? Yes ☐ No ☒

If yes, what was it, *when* did you begin to chew it, and how long have you done this?

G. Drinking History:

Do you currently drink alcohol of any kind? Yes ☐ No ☒

If yes, how many drinks per week do you consume?

If you do not drink alcohol now but you did in the past, how many drinks per week did you consume in the past?
When was this?

Do you drink other fermented beverages that contain a smaller amount of alcohol?
Yes ☐ No ☒

If yes, explain how much of this you drink and when you have consumed it.

H. Have you ever missed work for more than 2 weeks straight for reasons related to your health in the last 20 years? Yes ☒ No ☐ If yes, *when?*AT THE BEGINNING OF 2001

If yes, please state the dates you missed work, your employer at the time, and the health condition that caused your absence from work:
SHE IS A HOUSEWIFE; SHE BECOMES ILL FROM INFLAMATION IN THE THROAT AND STREP THROAT

Did you see a Health Care Provider about the health problem that caused you to miss work? Yes ☒ No ☐

If yes, please identify the Health Care Provider's name, address and *when you* visited that provider. CENTRO DE SALUD SAN FRANCISCO

I. In addition to the Health Care Providers identified in the preceding answers in this Questionnaire, have you gone to any more Health Care Providers (as defined on p. 2) in the last twenty (20) years? Yes ☐ No ☐

If so, please provide the following information:

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

Date	Name and Address of Health Care Provider	For what illness or injury?	What diagnosis and treatment did you receive?

J. Reproductive History (To be answered by all wives and mothers; to be answered by husbands and fathers only if they are filling out this Questionnaire for their wives):

Have you (or your wife if a husband is answering this question) ever had a miscarriage? Yes ☒ No ☐
If yes, please state how many times and when each happened.

Have you ever experienced any still-births or deaths of your children shortly after they were born? Yes ☐ No ☒

If yes, please state how many times and *when* each happened.

If yes, did you see a Medical Care Provider about the still-births or infant deaths? Yes ☐ No ☐

If yes, please identify who you saw, *when* you saw them, and what they told you about each such incident?

VII. SPECIFICATION OF DAMAGES BEING SOUGHT AND SUPPORTING DOCUMENTATION

A. What *amount* of damages are you seeking?

For physical injury to yourself:	$Yes
For damage to your crops:	$Yes
For damage to your animals:	$Yes
For lost wages or income:	$Yes
For anything else? If so, describe:	$Yes
TOTAL	$0

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

B.

C. Do you seek damages to reimburse you for medical bills and expenses that you paid? Yes ☒ No ☐

If yes, how much did you pay? $Yes

If yes, did you pay in cash or with something else? (If something else, describe what it was): Yes

D. Do you seek damages to reimburse you for *other* out-of-pocket expenses or fees?
Yes ☒ No ☐
If yes, how much in expenses or fees did you pay, how did you pay then, and what were the payments for? I DON'T REMEMBER

E. Do you seek damages for lost wages or loss of time from work?
Yes ☒ No ☐

If yes, *when* did this happen? (List all instances)
FROM THE YEAR 2001 TO THE YEAR 2006 WE HAVE LOST ALL OF OUR PROPERTY AND THE MONIES WE WOULD BE MAKING AND PREPARING TO MAKE

If yes, how long were you unable to work? ALL THESE YEARS WE HAVEN'T BEEN ABLE TO WORK BECAUSE THE PLANTING OF THE CROPS WAS A LOSS AND WE WOULD BE LOSING TIME AND MONEY

If yes, how much in wages or income did you lose? $ I DO NOT KNOW HOW MUCH IS THE LOSS BECAUSE BEFORE WE HAD PRODUCITON AND YOU WOULD KNOW WHAT THE COST WAS GOING TO BE, BUT NOW WE HAVE NOTHING AND WE DON'T KNOW EXACTLY WHAT THE

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

LOSSES ARE

How do you calculate this amount?

If you claim lost wages, identify the employer(s) (by listing each name and address) who did not pay you for the relevant period of time. If self-employed, describe the basis for your alleged lost earnings.

Did you try to find new work during the period of time for which you seek lost wages or income? Yes ☐ No ☒

If yes, where did you apply or inquire and what happened following your application or inquiry?

F. Do you seek damages for the loss of legal crops? Yes ☒ No ☐

If yes, please provide the following information:

Kind of Crop	Amount of crop that died / was lost	Monetary Value(s)you place on the Crops that Died	Basis for your Value(s)

G. Do you seek damages for farm animals or pets that died?

Yes ☒ No ☐

If yes, please provide the following information:

Kind of Animal	Number that Died	Monetary value(s) you place on the dead animals	Basis for your Value(s)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

VIII. WITNESSES TO YOUR CLAIMS

Please identify all persons whom you believe possess information concerning your alleged exposure to the "Plan Colombia" herbicide and/or the alleged injuries or other harm resulting to you from the exposure *(other than your attorneys and the Health Care Providers identified elsewhere in this Questionnaire):*

Name and address: [redacted], EL CONDOR

(What knowledge does this person have?) 100% OF EVERYTHING

Name and address: [redacted], EL CONDOR

(What knowledge does this person have?) 100% OF EVERYTHING

Name and address:

(What knowledge does this person have?)

Name and address:

(What knowledge does this person have?)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

IX. DOCUMENT REQUESTS AND AUTHORIZATIONS

A. If you are claiming personal injuries to yourself:

1. Please provide a copy of any and all medical and other documents (as defined on p. 2), including records, test results and all medical bills *in your or your attorney's possession* that relate to any visit you made or any treatment you received from a Health Care Provider (as defined on p. 2) in the last twenty (20) years.

2. Please complete and sign a copy of the Exhibit A "Authorization for Release of Medical Records" for each Health Care Provider you have identified in your responses to this Questionnaire. Deliver the Authorizations to each Health Care Provider identified on the form and give the documents that the Providers produce to you (along with a copy of the corresponding Authorization for Release given or sent to each Provider) to your attorney so that these medical records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit A "Authorization for Release of Medical Records" with the name of the Medical Care Provider left blank for future use if the defendants establish that you saw or were treated by additional Medical Care Providers in the last twenty (20) years.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

B. If you are claiming reimbursement for any medical expenses or other out-of-pocket expenses related to your alleged exposure:

1. Please attach a copy of the receipts, bills, invoices or any other documents in your or your attorney's possession that demonstrate the amount of the expenses for which you seek reimbursement.

C. If you are claiming lost wages or earnings:

1. Please attach copies of any and all documents in your possession about the total amount of salary or wages that was paid to you and the total amount of any other income that was generated by you for each year in the last ten (10) years. This shall include but not be limited to: pay-stubs, cancelled checks, income tax forms or other documents that disclose income received by you each year for the last ten (10) years from any source.

2. Please complete and sign the attached Exhibit B "Authorization for Release of Employment Records" for each of your employers in the last ten (10) years as identified in your answers to this Plaintiffs' Questionnaire. Deliver the Authorizations to each such employer identified on the form and give the documents that the employers produce to you (along with a copy of the corresponding Authorization) to your attorney so that these records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit B "Authorization" with the name of the employer left blank for future use if the defendants establish that you had additional employers in the last ten (10) years.

D. If you are claiming loss based on injury or damage to your legal crops:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the land and/or that you owned the crops on that land, which you claim were destroyed, (ii) the amount of crops that were destroyed, and (iii) the monetary value of the destroyed crops.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

E. If you are claiming loss based on injury to farm animals or pets:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the animals you claim were injured or killed, (ii) the number of animals that died, (iii) the monetary value of the animals that died, and (iv) any other expenses you are claiming relative to this alleged loss.

F. If you are claiming any other kind of loss or damage in this case:

1. Please attach copies of any and all documents that demonstrate or support such other claimed loss or damage and the *amount* of damages you seek for that loss or damage.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

X. VERIFICATION

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on (DATE) June 11, 2008

(Signature)
Plaintiff's Signature
Print Plaintiff's Name: [redacted]

(Signature)
Signature of witness attesting to Plaintiff's Signature
Witness's name: [redacted]
Date: June 11, 2008
Witness's Address: Quito, Ecuador
Witness's Relationship to Plaintiff: None

Plaintiff's Picture

Plaintiff's Fingerprint

Annex 71

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 201, Witness 13

CERTIFICATE OF ACCURACY OF TRANSLATION

I Martha E. Noroña affirm that I am fluent in English and Spanish and that the translations of the attached documents are true and accurate to the best of my knowledge.

Martha E. Noroña

Annex 72

PLAINTIFF QUESTIONNAIRE, *ARIAS/QUINTEROS V. DYNCORP,* D.D.C. (EM VOL. IV, ANNEX 204, WITNESS 18)

(United States District Court for the District of Columbia, Cases No. 1:01-cv01908 (RWR-DAR) and 1:07-cv01042 (RWR-DAR). Cases consolidated for Case Management and Discovery)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Case #: [redacted]

[redacted] Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR)
Venancio Aguasanta Arias, *et al.* Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR) Consolidated for Discovery with Case No. 1:01CV01908 (RWR)

PLAINTIFFS' QUESTIONNAIRE

To Each Individual Plaintiff:

INSTRUCTIONS

1. Each individual plaintiff in the above-captioned cases must complete and sign his or her own copy of this Questionnaire.

2. If a person is responding on behalf of his or her children (or another person or persons) on whose behalf a claim has been filed before this Court, then a separate copy of this Questionnaire must be filled out for each such child or other person.

3. When you read the terms "you" and "your" throughout this Questionnaire, they refer to each person who is claiming injury due to the alleged exposure in this case. In other words, if you are claiming injury to yourself or your

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

then you must answer the questions about that child or other person on a separate copy of this Questionnaire, clearly marked to show to whom it refers

4. Each question must be answered in full. If you do not know the answer to a question or cannot recall the information needed to answer a question, please say this in your response to the question. If a question is "not applicable" to you, say this in your response. Do not leave any question unanswered.

5. Each individual plaintiff must realize that he or she is under oath and must provide information that is true and correct based on such person's personal knowledge and belief.

6. You may attach as many sheets of paper as necessary to fully answer the questions. This questionnaire also asks you to produce written documents that relate directly to your answers. You must give these documents to your attorney so that they may be copied for use in this lawsuit. **You must not dispose of or alter or modify any documents** or other materials that you have now or that you may later receive relating to any of the subjects addressed in this Plaintiffs' Questionnaire.

7. In filling out this form, please use the following definitions:

(A) **"Health care provider"** means any hospital, clinic, doctor's or nurse's office, infirmary, medical laboratory or other facility that provides medical care or advice. It also means any doctor, physician, surgeon, paramedic, nurse (registered or otherwise), psychologist, psychiatrist, therapist, chiropractor, healer or any other person practicing any kind of healing art (with or without traditional medications) or performing any kind of medical, physical or mental examination or treatment, and any other persons or entities involved in the evaluation, diagnosis, care and/or treatment of you.

(B) **"Document"** means any writing or record of any kind whatsoever that is in your or your family's possession or the possession of your counsel, including but not limited to written letters, papers, notes, e-mails, photographs, charts, cassettes, videotapes, computer discs or tapes, x-rays, drawings, graphs, phonorecords, nonidentical copies and other data compilations of any kind.

I. PRELIMINARY INFORMATION ABOUT YOU AND YOUR CLAIM

A. Name of plaintiff submitting this Questionnaire (NOTE: There must be one form completed for each plaintiff and for each other person claiming injuries): [redacted]

B. Name of person who this Questionnaire applies to: [redacted]

C. Name of person who filled out this Questionnaire, if different from plaintiff (include the preparer's name, company, address, and relationship to plaintiff): Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

work product. Subject to, and without waiving, said objections, responding party responds as follows: This Questionnaire and the computer responses were generated with assistance of counsel

D. Are you seeking relief for personal injury to yourself? Yes ☒ No ☐

E. Are you seeking relief for personal injury to someone else? Yes ☐ No ☐

If yes, who?

Please mark the reason why this person cannot act on his or her own.

Minor ☐ Impaired ☐ Death ☐ Other Reason ☐

(Note: A separate copy of this Questionnaire should be completed for each person seeking damages).

F. Are you seeking damages for injury to your property (crops or animals)?
Yes ☐ No ☒

If yes, do you claim:

Damages to your crops? Yes ☐ No ☒

Damage to farm animals or pets? Yes ☐ No ☒

G. Are you seeking damages for injury to any other types of property?
Yes ☐ No ☒
If yes, what kind?

II. PERSONAL INFORMATION

A. Paternal Last name: [redacted]

Maternal Last name: [redacted]

First name: [redacted]

Middle Name: [redacted]

Any other names by which you have ever been known:

Ecuadorian identification number: [redacted]

B. Gender: Male ☒ Female ☐

Height: 1.50

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

Weight: 120

C. Are you Ecuadorian? Yes ☒ No ☐

If not, what is your country of citizenship? Ecuador

D. Racial/Ethnic Background: Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows: Mixed Race

If you answered Indigenous or Indian, do you belong to an indigenous tribe or community? Yes☐ No☒

If yes, which one?

E. What language do you speak? Spanish

F. Do you clearly understand the language used in this Questionnaire and the questions asked in this Questionnaire? Yes ☒ No☐

G. Date of Birth: [redacted]

H. Present home address: [redacted],

Village or City: Comunidad San Francisco 1 Province: Sucumbios

If you do not live in a city or town, identify the nearest town to your home and provide the directions to get to your home from that town. (Use road names, river names and North, South, East, West directions to describe how to get to your home)
[redacted]

How long have you lived at this address?
8 years

What was the reason that caused you to move to your present home address?
in search of lands

Who has lived with you at this address?
my husband and children

I. Prior Home Addresses. Please provide the following information for the last ten (10) years:

Prior address (including closest town, province, and country)	Dates you lived at this address: Starting	Until	Persons who lived with you at this address
[redacted]	08/29/49	10/22/00	with my husband

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

[redacted] canton Colta, recinto Tambillo, province del Chimborazo			and children

J. Telephone Number (if any):

K. Current Occupation: housewife

Name of employer (If self-employed, say this):

Name of immediate supervisor (if any):

Employer's address (work):

Employer's telephone no. (work):

How long have you worked there?

L. Prior Employers. Please fill in the following information for the last ten (10) years (Include any military service, and if self-employed, say this):

Prior employers (names and addresses)	Dates you worked for this employer: Starting	Until	What did you do there?

M. In any of your work in the last ten (10) years (including your current work or home farming), have you used or handled pesticides and/or herbicides?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☐

If yes, what kind of pesticides and/or herbicides did you use and *when* did you use them?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

If you applied the pesticides and/or herbicides, how did you do it?

If you applied them, [the pesticides], describe any kind of protection you used for yourself while you were using the pesticides and/or herbicides.

If you applied pesticides, did you or anyone else in your family wash the clothes you wore when using the pesticides and/or herbicides?
Yes☐ No☐

If yes, please describe who did this, how often it was done, and the manner in which your clothes were washed or cleaned.

Do you believe you have experienced any kind of medical problems as a result of handling pesticides/herbicides in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☐

If yes, what kind of medical problems and *when* did you have them?

N. Has any member of your immediate family used or handled pesticides and/or herbicides during the last ten years (as a part of your work or home farming)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what members of your family and what type of pesticides and/or herbicides did they use?

If yes, where and how did those members of your family (or any other person) wash the clothes they used while using pesticides and/or herbicides?

O. In your work or in your home farming in the last (10) years, have you been in the vicinity of or close to other people using herbicides and/or pesticides (where you could see other people)?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

Yes☐ No☒

If yes, what kind of herbicides and/or pesticides did they use?

If yes, where and how did you wash your clothes that you wore after you were close to where other people used the herbicides and/or pesticides?

P. In any of your work in the last (10) years (including your current work or home farming), did/do you use or handle chemicals (other than the herbicides or pesticides identified in the previous answer.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of chemicals fertilizers, or other artificial chemical products did you use and when did you use them?

If yes, describe any kind of protection you used for yourself while using the chemicals.

Do you believe you have experienced any kind of medical problems as a result of using chemical fertilizers or other types of artificial chemical products in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☐

If yes, what kind of medical problems and *when* did you experience them?

Q. Have you ever been convicted of a crime in the past ten years? Yes☐ No☒

If yes, what crime?

Did you go to jail or prison? Yes☐ No☒

If yes, how long?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

R. Have you ever been rejected for a job for which you applied or for a military position because of a medical, physical, psychiatric or emotional condition?
Yes☐ No☒

If yes, what job or position?

If yes, *when* did this happen? (Include all instances when this happened).

If yes, what was your medical condition or disability (for each such instance)?

S. Have you ever filed a claim or claims with the Ecuadorian or Provincial government where you live or with an employer or with an insurance company or any other entity for compensation or the payment of medical expenses or lost earnings due to an injury or a medical disability of any kind?
Yes☐ No☒

If yes, please fill in the following information for the last ten (10 years):

Date claim filed	Filed with whom?	What injury/disability was claimed?	What happened with your claim?

T. Do you have medical insurance of any kind? Yes☒ No☐

If yes, what company or program provides your medical insurance? Farmer's Insurance (seguro campesino); it covers operations completely but does not cover minor diseases

U. Have you ever filed a lawsuit against anyone (aside from this suit), including any oil companies?
Yes☐ No☒

If yes, please identify: (1) what kind of lawsuit it was, (2) when you filed it, (3) the company or people you sued, (4) what Court or other tribunal it was before, and (5) what was the result of the suit. (If any of your lawsuits are still pending, say this.) (Attach additional pages if necessary to describe multiple lawsuits.)

III. FAMILY INFORMATION AND EDUCATIONAL HISTORY

A. Have you ever been married? Yes ☒ No ☐

B. If yes, *for each spouse and former spouse,* please identify the following:
1. Spouse's name: [redacted]

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

2. Date of marriage: 1971 until currently
3. Spouse's date of birth: 06/29/48
4. Spouse's occupation: farmer
5. Spouse's address (if different than yours):

C. Immediate Family members. Please provide the following information about each of your parents, your sisters, your brothers and your children. (**Add additional sheets if necessary.**)

Name	Relationship to you	Date of birth	Date of death (if applicable)	Cause of death (if applicable)	Main occupation
[redacted]	father				takes care of daughter's house
[redacted]	mother				stays in the house
[redacted]	sister				farming and housewife
[redacted]	sister				farming and housewife
[redacted]	sister		2006	cerebral hemorrhage	housewife
[redacted]	sister				housewife and farming
[redacted]	sister				housewife and farming
[redacted]	brother				farmer

D. Education.

How many years did you go to school? 6 Years

What was the highest grade you completed? 6th grade

Where did you go to school? (List all schools by name and location)
Tambillo School in the Chimborazo Province

Do you know how to read? Yes ☒ No ☐

Do you know how to write? Yes ☒ No ☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

Do you have any degrees or certifications? Yes ☒ No ☐

If yes, what are they and what year did you get them?
1964 elementary graduation diploma from Tambillo School in the Chimborazo Province

IV. YOUR LIVING CONDITIONS

A. Please answer the following questions about your home, food and water:

1. What size is your house and of what materials is it made?

2. Where do you get your water?

3. What is the source of your water?

4. Do you have running water inside your home? Yes ☐ No ☐

5. Do you filter your water? Yes ☐ No ☐

   If yes, how?

6. Where do you get the food for you and your family?

7. How do you cook your food? (On a stove, grill, charcoal or firewood)
   stove

8. Do you eat raw crab meat? Yes ☐ No ☒

9. Do you use crab juice as medicine? Yes ☐ No ☒

   Do you buy and eat food in public places (Such as open air markets or places that sell prepared foods to the public)? Yes ☐ No ☒

   If yes, have you observed the conditions in which that food was prepared and handled before you purchased and ate it? Yes ☐ No ☐

B. Please answer the following questions regarding sanitation:

1. How is sewage (waste and waste water) from your home disposed of?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

2. Where does the sewage from your home go to (e.g., into the soil, into a body of water: sewer, river, stream, lake, etc.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

3. Do you have a toilet inside your home? Yes ☐ No ☐

4. Do you use an outhouse? Yes ☒ No ☐

5. How is sewage disposed by the other homes and farms around you?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

6. How do you dispose of your trash? (e.g., do you burn it? Do you bury it? Do you send it to a landfill?)

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

7. How far is the closest landfill to your house?

8. Where you live, is the trash dumped into a public area or public water channel?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☐

C. Please answer the following questions regarding oil operations (oil perforation, oil well, oil pits, gas stations or oil facilities) close to your house or place work:

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

1. How far is the nearest oil operation from your home? (and describe what is it)

2. Has your home, farm or work area ever experienced oil pollution as a result of oil operations?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☐
   If yes, *when* did this happen?

3. Have you ever been injured in any way by oil pollution?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

   If yes, what were the injuries and *when* did they occur?

4. Do you think that anyone in your family been injured in any way by oil operations?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☐
   If yes, what and *when* were the injuries they suffered?

D. Please answer the following questions regarding volcanoes:

1. How close do you live to the Reventador volcano, and/or to any other volcano?

2. Do you think that you or your family members have ever been injured in any manner as a result of the eruptions or volcanic emissions of the Reventador volcano, or any other volcano?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

Yes ☐ No ☒

If yes, *when* did this happen and what were the personal damages that you suffered?

3. Do you think anyone in your town, vicinity, or community suffered personal damages of any kind as a result of the volcanic eruptions?

Yes ☐ No ☐

If yes, explain what happened and *when* it happened

E. Please answer the following questions regarding floods:

1. Have you, your home or your farm been affected in any way as a result of a flood in the last 10 years?
Yes ☐ No ☒

If yes, describe *when* this occurred and what damages you or your property suffered?

If yes, did the floods cause you to leave your home? Yes ☐ No ☐

F. Please answer the following questions about people moving into your town, vicinity, or community.

1. Do you think that your village or community has experienced an influx of people from Colombia in the last ten (10) years? Yes ☐ No ☐

2. Do you believe that your village, vicinity, or community has experienced an influx of people from other places (other than Colombia) in the last ten (10) years? Yes ☐ No ☐

If yes, where did these people come from?

V. YOUR ALLEGED EXPOSURE TO THE "PLAN COLOMBIA" HERBICIDE

A. Are you familiar with "Plan Colombia?" Yes ☒ No ☐

If yes, what do you know about "Plan Colombia" and *when* did you learn this?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows: That we are sick because of the Plan Colombia fumigations, 2002

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

If yes, identify the people with whom you have spoken about "Plan Colombia," what they told you, and when these conversations took place?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows: with neighbors, on TV, USA's government supports the elimination of coca plants. 2002

B. Why do you believe that you and/or your property was exposed to a "Plan Colombia" herbicide? Because it smelled bad and it dried the throats

C. When were you and/or your property exposed to herbicide? (If more than once, list all dates of exposure by day, month and year.) 2002

D. **For each instance of alleged exposure to your body**, please answer the following questions (use additional sheets of paper as necessary):

1. Where were you when the exposure occurred? outside the house

2. How close were you at that time to the border between Ecuador and Colombia? 2 kms

3. How do you know this? because you can count the farms

4. Please mark an "X" on the attached map of Northern Ecuador to show where you were at the time of the alleged exposure and list the date(s) of exposure beside each "X". Have you marked the map in this way?
Yes ☒ No ☐

If no, why not?

5. What time of day did the exposure occur? from 8:30 am until 1 pm

6. What was the weather like that day? (Include the approximate temperature and whether there was precipitation) 25 degrees centigrades, there was no rain

7. Did you see an airplane at the time of the exposure?
Yes ☒ No ☐

If yes, what did it look like? (color, size, letters, flags or other markings on plane, etc.)
white, small

8. Did you see more than one airplane at the time of the exposure?
Yes ☒ No ☐

If yes, please state how many you saw and describe what each looked like:
3 white light aircrafts

9. Did you see a helicopter at the time of the alleged exposure?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

Yes ☐ No ☐

If yes, how many?

If yes, what did the helicopter(s) look like (color, size, letters, flags or other markings)?

10. Did you see anything else in the air? Yes ☐ No ☐

If yes, what else did you see?

11. Did you see the spray or a "cloud" or "fog" of spray? Yes ☒ No ☐

If yes, what color was it? white

12. Did you see residue on the ground after the spraying? Yes ☐ No ☒

If yes, what did it look like?

13. Did you hear anything? Yes ☒ No ☐

If yes, what did you hear? the noise from the light aircrafts and the helicopters

14. Did you smell anything unusual? Yes ☒ No ☐

If yes, what did it smell like? strong smell

15. Do you contend that your body was exposed to the spray?
Yes ☒ No ☐

If yes, did you feel anything on your skin? Yes ☒ No ☐

If yes, what did you feel? itchiness

If yes, what did you do with the clothing that you wore that day and when did you do it? (Include whether they were washed or destroyed)
we washed the clothes in the afternoon

16. After the spraying ceased, did you see any changes to the plants in your vicinity?
Yes ☒ No ☐

If yes, what changes did you see and how long after the spraying did you see the changes? the plants were dying after three weeks

17. After the spraying ceased, did you see any change in the wildlife, birds or fish in your vicinity? Yes ☒ No ☐

If yes, explain exactly what you saw and how long after the spraying you saw it?
very weak birds, dead fishes, after 8 days

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

18. After the spraying ceased, did you observe any change in the appearance, odor or taste of any bodies of water (rivers, creeks, ponds, lakes, well water, etc.) in your vicinity?
Yes ☒ No ☐

If yes, please describe the change(s) you observed and state how long after the spraying you observed this.
tasted like gas after 8 days

E. **For all plaintiffs alleging personal bodily injuries due to the alleged exposure**, please also answer the following questions for each instance of alleged exposure. (Use additional sheets of paper as necessary.)

1. What were your symptoms? (Please provide detail on both external and internal symptoms.)
skin rashes, headache, dizziness, diarrhea, nausea, body ache

If yes, how long after the alleged exposure did your symptoms occur?
1 month later

2. Did you go to a Health Care Provider (as defined on p. 2) based on your exposure to the "Plan Colombia" herbicide? Yes ☒ No ☐

If yes, when did you go, and how long after the exposure was this?
2002, still being treated

If yes, where did you go? (identify the name and address of the Health Care Provider)
Gonzales Clinic, San Jose Clinic, Gonzabay Pharmacy, Ruiz Pharmacy in Lago Agrio

If yes, how far was this from your home? 1 hour away in a car

If yes, which person(s) at the Health Care Provider's office did you see about the herbicide exposure? Gonzales clinic, San Jose, Gonzabay and Ruiz pharmacies

3. What did those person(s) tell you about your injury or condition? that I needed a cleaning and to bathe with lots of soap and water
Did the person(s) tell you that your injuries or condition was caused by the "Plan Colombia" herbicide? Yes ☒ No ☐

4. Did the Health Care Provider take a sample of your blood or urine?
Yes ☒ No ☐

5. Did the Health Care Provider give you medicine (including herbal or home remedies) or a prescription for medicine? Yes ☒ No ☐

If yes, what was the medicine and what was it for? saline solutions

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

If yes, did you buy the medication or was it given to you?
bought

If yes, describe when and where you bought or obtained it and how much you paid for it.
since 2002 until now in Lago Agrio, 90 USD

How long did you use the medicine? since 2002 until now

Did you take all the medicine you obtained? Yes ☐ No ☒

6. If you did not go to a Health Care Provider but thought that you were injured by the exposure, did you do anything to alleviate your injury, including any herbal or home remedies? Yes ☐ No ☐
If yes, what did you do?

7. What specific type(s) of bodily illness or injury do you allege were caused by your exposure to the "Plan Colombia" herbicide?
lung and liver infection, headache, nausea, diarrhea, stomach ache

8. Do you believe you have an increased risk of future injury or harm (which has not yet appeared on or in your body) as a result of your alleged exposure to the "Plan Colombia" herbicide? Yes ☒ No ☐

If yes, please explain what future health risks you believe you face, why you think this would be affiliated with "Plan Colombia", and identify any Health Care Providers or other people who have told you this and set out what each such person (except your attorneys) said to you about future injury or harm.
the doctos says that I continue to have respiratory, liver and lung problems

F. **For all plaintiffs claiming damage to crops** from the alleged exposure, please also answer the following questions **about each instance of alleged exposure** (use additional sheets if necessary):

1. Where was your field of crops (identify by distance and direction from your home)?

What was the date and time of day your crop(s) were exposed to the "Plan Colombia" herbicide?

3. How close is that field to the border between Colombia and Ecuador? km or meters

4. Please mark a small circle ("0") on the attached map to show where your exposed field was and mark the date of the alleged exposure by each "O." Have you marked the map?
Yes ☐ No ☐
If no, why not?

5. Do you own the land where your crops were growing? Yes ☐ No ☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

If not, who owned the land when the spraying took place?

6. How big was your field or patch of crops exposed to the herbicide?
What kinds of crops were planted there?

7. How long after the exposure did you notice injury to the crops and what did you first see when the damage began?

How long did it take for the injury to be complete?

What was the end result of the alleged exposure? (Describe what percentage of your crop was damaged or destroyed)

8. Did you sell or trade the crops that remained in your field after the alleged exposure? Yes ☐ No ☐

If yes, to whom?

If yes, did you tell the buyer that you believed the crop had been exposed to a "Plan Colombia" herbicide? Yes ☐ No ☐

9. How soon after the alleged exposure did you plant new crops in the same field?

10. Why do you believe your crops were damaged by the "Plan Colombia" herbicide?

11. What kinds of pesticides and/or herbicides did you use on the same crops before their alleged exposure to the "Plan Colombia" herbicide?

12. Where did you buy the pesticides and/or herbicides that you used?
(Include name and address of the supplier.)

G. **For all plaintiffs claiming injuries to farm animals or pets**, please also answer the following questions **about <u>each</u> instance of alleged exposure** (use additional sheets as necessary):

1. What kind of animals were exposed?

2. Where were your animals when they were allegedly exposed (identify by distance from your home)?

3. How close was this to the Colombian-Ecuadorian border?

4. Please place a "?" on the attached map to show where your animals were at the time of their alleged exposure and put the date(s) of exposure by each "?".

   Have you marked the map in this way? Yes ☐ No ☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

If no, why not?

5. How long after the exposure did it take for your animals to get sick?

6. What happened to the exposed animals? (Identify for each kind of animal: how many died; how many got sick but survived; how many were unaffected)

7. For the animals that died, did a veterinarian, a professional or other person examine the corpses to determine the cause of death? Yes ☐ No ☐

   If yes, who was this, when did it happen, and what did he/she tell you? (Identify by name, title, and business address)

   If yes, when did this person examine the animal corpses in relation to when they died?

8. For the animals that got sick but survived, did a veterinarian, a professional or other person examine and diagnose the sick animals?
   Yes ☐ No ☐

   If yes, who came, when did they come, and what did they tell you? (Identify by name, title, and business address)

9. Did anyone collect blood samples or other tissue samples from your animals (dead or alive)? Yes ☐ No ☐
   If yes, who took the samples? (Identify name, title and business address)

   If yes, did you get copies of any results from the tests done on the animal blood or tissue samples? Yes ☐ No ☐

   If you got written results, please attach them to your answers to these questionnaires.

10. Why do you believe that your animals' illness or death was caused by the "Plan Colombia" herbicide?

H. Reports to Third Parties.

1. Other than the Health Care Providers or animal care professionals identified above, did you complain to anyone or to any organization (government or non-government) about the alleged spraying of herbicide?
Yes ☐ No ☐

If yes, whom did you speak with and when did you do this?

If yes, what did you say to this person or organization?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

What did the person or organization say back to you?

Did that person or organization take samples of your blood or urine due to your alleged exposure to the "Plan Colombia" herbicide? Yes ☐ No ☐

If yes, who did this and when did it happen?

VI. YOUR MEDICAL BACKGROUND

A. Check the medical conditions that you have *at the present time* and the conditions that you have had *at any time in the past.*

Condition	I have now	I have had in the past
Cancer	☐	☐
If cancer, what kind?		
Heart disease or heart attack	☐	☐
Angina, chest pain	☐	☐
Brain tumor	☐	☐
Epilepsy	☐	☐
Diabetes	☐	☐
Liver disease	☒	☐
Pancreatitis	☐	☐
Polio	☐	☐
Malaria	☐	☐
Dysentery	☐	☐
Asthma or other respiratory illness, shortness of breath	☒	☐
Blood clots or abnormalities of blood vessels	☐	☐
Anemia or other blood disorders	☐	☐
High blood pressure	☐	☐
AIDS or HIV-positive test results	☐	☐
Medical condition	☒	☐
Arthritis	☐	☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

Kidney disease or transplant	☐	☐
Dengue fever	☐	☐
Cholera	☐	☐
Changas	☒	☐
High cholesterol	☐	☐
Influenza	☐	☐
Diarrhea	☒	☐
Infections (bacterial or fungal)	☐	☐
Measles	☐	☒
Chicken pox	☐	☒
Mumps	☐	☐
Diptheria	☐	☐
Whooping cough	☐	☐
Scarlet fever	☐	☐
Leishmaniasis	☐	☐
Onchocerciasis	☐	☐
Alcoholism	☐	☐
Malnutrition	☐	☐
Migraine headaches	☒	☐
Fainting or serious dizziness	☒	☐
Medical condition	☒	☐
Osteoporosis	☐	☐
Broken bones	☐	☐
Skin rash or skin irritation	☒	☐

B. For each of the conditions that you checked above, please fill out the information below:

Condition No. 1

Date of onset:

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

Did you see a Health Care Provider (as defined on page 2 above) about this condition? Yes ☐ No ☐

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 2

Date of onset:
Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 3

Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐

If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

Condition No. 4
Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐
If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

[Translators: Use this field to describe further medical conditions if there are more than 4, using same format:]

NOTE: Attach additional sheets of paper if you have more than 4 conditions to describe.

C. Have you had any surgeries in the last 20 years? Yes ☒ No ☐

If yes, *when?* October 2007
For what? gall bladder

If yes, who performed the surgery? (include name and address)
Corazon Inmaculado de Maria Hospital located in Chaco

D. Drug and Medicine Use:

Do you take any drugs and/or medicines on a regular basis, including plants, herbs, roots or traditional remedies (ancestral) for medicinal uses? Yes ☒ No ☐

If yes, please list all of the drugs and medicines (including plants, herbs, roots or traditional remedies) that you take at this time: plantago tea

Have you formerly taken drugs and/or medicines (including plants, herbs, roots or traditional remedies) on a regular basis that you do not take now? Yes ☒ No ☐

If yes, please list all such drugs and/or medicines and identify *when you* took them: herb louise

F. History of the Use of Tobacco and Similar Products:

Have you ever smoked cigarettes? Yes ☐ No ☒

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Do you currently smoke cigarettes? Yes ☐ No ☒

If yes, please fill in: I have smoked packs or cigarettes per day for years, of the following brands of cigarettes:

If you smoked earlier but do not now, please fill in: I stopped smoking in Before that, I smoked packs or cigarettes per day for years, of the following brands of cigarettes:

Have you ever smoked cigars or pipe tobacco? Yes ☐ No ☒

If you currently smoke cigars and/or a pipe, please fill in: I presently smoke (fill in number of) cigars and/or pipes per day.

If you smoked cigars or pipes earlier but do not now, please fill in: I stopped smoking (fill in "cigars" or "pipes" or "both") in (date)

Before that I smoked (fill in number) per day.

Have you ever smoked other substances based on ancestral custom or personal preference? Yes ☐ No ☒

If yes, identify what you smoked, *when* you started, and how long you have smoked it.

Have you ever chewed tobacco or similar chewing material? Yes ☐ No ☒

If yes, what was it, *when* did you begin to chew it, and how long have you done this?

G. Drinking History:

Do you currently drink alcohol of any kind? Yes ☐ No ☒

If yes, how many drinks per week do you consume?

If you do not drink alcohol now but you did in the past, how many drinks per week did you consume in the past?
When was this?

Do you drink other fermented beverages that contain a smaller amount of alcohol?
Yes ☐ No ☒

If yes, explain how much of this you drink and when you have consumed it.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

H. Have you ever missed work for more than 2 weeks straight for reasons related to your health in the last 20 years? Yes ☒ No ☐ If yes, *when?* from midyear in 2002 until currently I haven't been able to work

If yes, please state the dates you missed work, your employer at the time, and the health condition that caused your absence from work:
since 2002 until currently because of respiratory problems

Did you see a Health Care Provider about the health problem that caused you to miss work? Yes ☐ No ☒

If yes, please identify the Health Care Provider's name, address and *when you* visited that provider.

I. In addition to the Health Care Providers identified in the preceding answers in this Questionnaire, have you gone to any more Health Care Providers (as defined on p. 2) in the last twenty (20) years? Yes ☒ No ☐

If so, please provide the following information:

Date	Name and Address of Health Care Provider	For what illness or injury?	What diagnosis and treatment did you receive?
end of February 2008	naturist in lago Agrio	because of respiratory problems	gave me a syrup but I did not take it because it upset me

J. Reproductive History (To be answered by all wives and mothers; to be answered by husbands and fathers only if they are filling out this Questionnaire for their wives):

Have you ever had a miscarriage?
Yes ☐ No ☒

If yes, please state how many times and when each happened.

Have you ever experienced any still-births or deaths of your children shortly after they were born?
Yes ☐ No ☒

If yes, please state how many times and *when* each happened.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

If yes, did you see a Medical Care Provider about the still-births or infant deaths?
Yes ☐ No ☐

If yes, please identify who you saw, *when* you saw them, and what they told you about each such incident?

VII. SPECIFICATION OF DAMAGES BEING SOUGHT AND SUPPORTING DOCUMENTATION

A. What *amount* of damages are you seeking?

For physical injury to yourself:	$yes
For damage to your crops:	$no
For damage to your animals:	$no
For lost wages or income:	$
For anything else? If so, describe:	$
TOTAL	$0

B.

C. Do you seek damages to reimburse you for medical bills and expenses that you paid? Yes ☒ No ☐

If yes, how much did you pay? $

If yes, did you pay in cash or with something else? (If something else, describe what it was):

D. Do you seek damages to reimburse you for *other* out-of-pocket expenses or fees?
Yes ☐ No ☐
If yes, how much in expenses or fees did you pay, how did you pay then, and what were the payments for?

E. Do you seek damages for lost wages or loss of time from work?
Yes ☒ No ☐

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If yes, *when* did this happen? (List all instances)
since 2002 until now

If yes, how long were you unable to work? 6 years

If yes, how much in wages or income did you lose? $

How do you calculate this amount?

If you claim lost wages, identify the employer(s) (by listing each name and address) who did not pay you for the relevant period of time. If self-employed, describe the basis for your alleged lost earnings.

Did you try to find new work during the period of time for which you seek lost wages or income? Yes ☐ No ☐

If yes, where did you apply or inquire and what happened following your application or inquiry?

F. Do you seek damages for the loss of legal crops? Yes ☐ No ☒

If yes, please provide the following information:

Kind of Crop	Amount of crop that died / was lost	Monetary Value(s)you place on the Crops that Died	Basis for your Value(s)

G. Do you seek damages for farm animals or pets that died?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

Yes ☐ No ☒

If yes, please provide the following information:

Kind of Animal	Number that Died	Monetary value(s) you place on the dead animals	Basis for your Value(s)

VIII. WITNESSES TO YOUR CLAIMS

Please identify all persons whom you believe possess information concerning your alleged exposure to the "Plan Colombia" herbicide and/or the alleged injuries or other harm resulting to you from the exposure *(other than your attorneys and the Health Care Providers identified elsewhere in this Questionnaire):*

Name and address: [redacted]. Precooperativa Isidro Ayora

(What knowledge does this person have?) knows about my illness

Name and address: [redacted] Comunidad San Francisco I

(What knowledge does this person have?) knows about my illness

Name and address:

(What knowledge does this person have?)

Name and address:

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

(What knowledge does this person have?)

IX. DOCUMENT REQUESTS AND AUTHORIZATIONS

A. If you are claiming personal injuries to yourself:

1. Please provide a copy of any and all medical and other documents (as defined on p. 2), including records, test results and all medical bills *in your or your attorney's possession* that relate to any visit you made or any treatment you received from a Health Care Provider (as defined on p. 2) in the last twenty (20) years.

2. Please complete and sign a copy of the Exhibit A "Authorization for Release of Medical Records" for each Health Care Provider you have identified in your responses to this Questionnaire. Deliver the Authorizations to each Health Care Provider identified on the form and give the documents that the Providers produce to you (along with a copy of the corresponding Authorization for Release given or sent to each Provider) to your attorney so that these medical records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit A "Authorization for Release of Medical Records" with the name of the Medical Care Provider left blank for future use if the defendants establish that you saw or were treated by additional Medical Care Providers in the last twenty (20) years.

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B. If you are claiming reimbursement for any medical expenses or other out-of-pocket expenses related to your alleged exposure:

1. Please attach a copy of the receipts, bills, invoices or any other documents in your or your attorney's possession that demonstrate the amount of the expenses for which you seek reimbursement.

C. If you are claiming lost wages or earnings:

1. Please attach copies of any and all documents in your possession about the total amount of salary or wages that was paid to you and the total amount of any other income that was generated by you for each year in the last ten (10) years. This shall include but not be limited to: pay-stubs, cancelled checks, income tax forms or other documents that disclose income received by you each year for the last ten (10) years from any source.

2. Please complete and sign the attached Exhibit B "Authorization for Release of Employment Records" for each of your employers in the last ten (10) years as identified in your answers to this Plaintiffs' Questionnaire. Deliver the Authorizations to each such employer identified on the form and give the documents that the employers produce to you (along with a copy of the corresponding Authorization) to your attorney so that these records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit B "Authorization" with the name of the employer left blank for future use if the defendants establish that you had additional employers in the last ten (10) years.

D. If you are claiming loss based on injury or damage to your legal crops:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the land and/or that you owned the crops on that land, which you claim were destroyed, (ii) the amount of crops that were destroyed, and (iii) the monetary value of the destroyed crops.

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E. If you are claiming loss based on injury to farm animals or pets:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the animals you claim were injured or killed, (ii) the number of animals that died, (iii) the monetary value of the animals that died, and (iv) any other expenses you are claiming relative to this alleged loss.

F. If you are claiming any other kind of loss or damage in this case:

1. Please attach copies of any and all documents that demonstrate or support such other claimed loss or damage and the *amount* of damages you seek for that loss or damage.

Annex 72

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 204, Witness 18

X. VERIFICATION

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on (DATE) 06/09/08

(Signature)
Plaintiff's Signature
Print Plaintiff's Name: [redacted]
Irene

(Signature)
Signature of witness attesting to Plaintiff's Signature
Witness's name: [redacted]
Date: 06/09/08
Witness's Address: Quito, Ecuador
Witness's Relationship to Plaintiff: None

Plaintiff's Picture

Plaintiff's Fingerprint

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CERTIFICATE OF ACCURACY

I, Olga Stella Martinez de Tellez, swear under penalty of perjury that I am fluent in both English and Spanish and that the translation of the attached document is true and correct.

Olga Stella Martinez de Tellez.
Signature

December 14, 2008

Annex 73

PLAINTIFF QUESTIONNAIRE, *ARIAS/QUINTEROS V. DYNCORP,* D.D.C. (EM VOL. IV, ANNEX 217, WITNESS 33)

(United States District Court for the District of Columbia, Cases No. 1:01-cv01908 (RWR-DAR) and 1:07-cv01042 (RWR-DAR). Cases consolidated for Case Management and Discovery)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 217, Witness 33

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Case #: [redacted]

[redacted] Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR)
Venancio Aguasanta Arias, *et al.* Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR) Consolidated for Discovery with Case No. 1:01CV01908 (RWR)

PLAINTIFFS' QUESTIONNAIRE

To Each Individual Plaintiff:

INSTRUCTIONS

1. Each individual plaintiff in the above-captioned cases must complete and sign his or her own copy of this Questionnaire.

2. If a person is responding on behalf of his or her children (or another person or persons) on whose behalf a claim has been filed before this Court, then a separate copy of this Questionnaire must be filled out for each such child or other person.

3. When you read the terms "you" and "your" throughout this Questionnaire, they refer to each person who is claiming injury due to the alleged exposure in this case. In other words, if you are claiming injury to yourself or your

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 217, Witness 33

property, you must answer the questions about yourself and your property. If you are responding on behalf of your child (or other person), then you must answer the questions about that child or other person on a separate copy of this Questionnaire, clearly marked to show to whom it refers

4. Each question must be answered in full. If you do not know the answer to a question or cannot recall the information needed to answer a question, please say this in your response to the question. If a question is "not applicable" to you, say this in your response. Do not leave any question unanswered.

5. Each individual plaintiff must realize that he or she is under oath and must provide information that is true and correct based on such person's personal knowledge and belief.

6. You may attach as many sheets of paper as necessary to fully answer the questions. This questionnaire also asks you to produce written documents that relate directly to your answers. You must give these documents to your attorney so that they may be copied for use in this lawsuit. **You must not dispose of or alter or modify any documents** or other materials that you have now or that you may later receive relating to any of the subjects addressed in this Plaintiffs' Questionnaire.

7. In filling out this form, please use the following definitions:

(A) **"Health care provider"** means any hospital, clinic, doctor's or nurse's office, infirmary, medical laboratory or other facility that provides medical care or advice. It also means any doctor, physician, surgeon, paramedic, nurse (registered or otherwise), psychologist, psychiatrist, therapist, chiropractor, healer or any other person practicing any kind of healing art (with or without traditional medications) or performing any kind of medical, physical or mental examination or treatment, and any other persons or entities involved in the evaluation, diagnosis, care and/or treatment of you.

(B) **"Document"** means any writing or record of any kind whatsoever that is in your or your family's possession or the possession of your counsel, including but not limited to written letters, papers, notes, e-mails, photographs, charts, cassettes, videotapes, computer discs or tapes, x-rays, drawings, graphs, phonorecords, nonidentical copies and other data compilations of any kind.

I. PRELIMINARY INFORMATION ABOUT YOU AND YOUR CLAIM

A. Name of plaintiff submitting this Questionnaire (NOTE: There must be one form completed for each plaintiff and for each other person claiming injuries): [redacted]

B. Name of person who this Questionnaire applies to: [redacted]

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 217, Witness 33

[redacted]

C. Name of person who filled out this Questionnaire, if different from plaintiff (include the preparer's name, company, address, and relationship to plaintiff):
Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-work product. Subject to, and without waiving, said objections, responding party responds as follows: This Questionnaire and the computer responses were generated with assistance of counsel

D. Are you seeking relief for personal injury to yourself? Yes ☒ No ☐

E. Are you seeking relief for personal injury to someone else? Yes ☐ No ☒

If yes, who?N/A

Please mark the reason why this person cannot act on his or her own.

Minor ☐ Impaired ☐ Death ☐ Other Reason ☐ N/A

(Note: A separate copy of this Questionnaire should be completed for each person seeking damages).

F. Are you seeking damages for injury to your property (crops or animals)? Yes ☐ No ☒

If yes, do you claim:

Damages to your crops? Yes ☐ No ☒

Damage to farm animals or pets? Yes ☐ No ☒

G. Are you seeking damages for injury to any other types of property? Yes ☐ No ☒
If yes, what kind? N/A

II. PERSONAL INFORMATION

A. Paternal Last name: [redacted]

Maternal Last name: [redacted]

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 217, Witness 33

First name: [redacted]

Middle Name: [redacted]

Any other names by which you have ever been known: N/A

Ecuadorian identification number: [redacted]

B. Gender: Male ☒ Female ☐

Height: 1.50 meters

Weight: 123 pounds

C. Are you Ecuadorian? Yes ☒ No ☐

If not, what is your country of citizenship? Ecuador

D. Racial/Ethnic Background: Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows: Afro-Ecuadorian

If you answered Indigenous or Indian, do you belong to an indigenous tribe or community? Yes ☐ No ☒

If yes, which one?

E. What language do you speak? Spanish

F. Do you clearly understand the language used in this Questionnaire and the questions asked in this Questionnaire? Yes ☒ No ☐

G. Date of Birth: [redacted]

H. Present home address: [redacted]

Village or City: Mataje Province: Esmeraldas

If you do not live in a city or town, identify the nearest town to your home and provide the directions to get to your home from that town. (Use road names. river names and North, South, East, West directions to describe how to get to your home)

[redacted]

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How long have you lived at this address?
24 years

What was the reason that caused you to move to your present home address?
Born here

Who has lived with you at this address?
Dad, mom, siblings

I. Prior Home Addresses. Please provide the following information for the last ten (10) years:

Prior address (including closest town, province, and country)	Dates you lived at this address: Starting	Until	Persons who lived with you at this address

J. Telephone Number (if any): No

K. Current Occupation: Farmer

Name of employer (If self-employed, say this): N/A

Name of immediate supervisor (if any): N/A

Employer's address (work): N/A

Employer's telephone no. (work): N/A

How long have you worked there? N/A

L. Prior Employers. Please fill in the following information for the last ten (10) years (Include any military service, and if self-employed, say this):

Prior employers (names and addresses)	Dates you worked for this employer: Starting	Until	What did you do there?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 217, Witness 33

M. In any of your work in the last ten (10) years (including your current work or home farming), have you used or handled pesticides and/or herbicides?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of pesticides and/or herbicides did you use and *when* did you use them?
N/A

If you applied the pesticides and/or herbicides, how did you do it?
N/A

If you applied them, [the pesticides], describe any kind of protection you used for yourself while you were using the pesticides and/or herbicides.
N/A

If you applied pesticides, did you or anyone else in your family wash the clothes you wore when using the pesticides and/or herbicides?
Yes☐ No☒

If yes, please describe who did this, how often it was done, and the manner in which your clothes were washed or cleaned.
N/A

Do you believe you have experienced any kind of medical problems as a result of handling pesticides/herbicides in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of medical problems and *when* did you have them?
N/A

N. Has any member of your immediate family used or handled pesticides and/or herbicides during the last ten years (as a part of your work or home farming)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 217, Witness 33

and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what members of your family and what type of pesticides and/or herbicides did they use?
N/A

If yes, where and how did those members of your family (or any other person) wash the clothes they used while using pesticides and/or herbicides?
N/A

O. In your work or in your home farming in the last (10) years, have you been in the vicinity of or close to other people using herbicides and/or pesticides (where you could see other people)?

Yes☐ No☒

If yes, what kind of herbicides and/or pesticides did they use?
N/A

If yes, where and how did you wash your clothes that you wore after you were close to where other people used the herbicides and/or pesticides?
N/A

P. In any of your work in the last (10) years (including your current work or home farming), did/do you use or handle chemicals (other than the herbicides or pesticides identified in the previous answer.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of chemicals fertilizers, or other artificial chemical products did you use and when did you use them?
N/A

If yes, describe any kind of protection you used for yourself while using the chemicals.
N/A

Do you believe you have experienced any kind of medical problems as a result of using chemical fertilizers or other types of artificial chemical products in your work or

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 217, Witness 33

at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of medical problems and *when* did you experience them?
N/A

Q. Have you ever been convicted of a crime in the past ten years? Yes☐ No☒

If yes, what crime? N/A

Did you go to jail or prison? Yes☐ No☒

If yes, how long? N/A

R. Have you ever been rejected for a job for which you applied or for a military position because of a medical, physical, psychiatric or emotional condition?
Yes☐ No☒

If yes, what job or position? N/A

If yes, *when* did this happen? (Include all instances when this happened).
N/A

If yes, what was your medical condition or disability (for each such instance)?
N/A

S. Have you ever filed a claim or claims with the Ecuadorian or Provincial government where you live or with an employer or with an insurance company or any other entity for compensation or the payment of medical expenses or lost earnings due to an injury or a medical disability of any kind?
Yes☐ No☒

If yes, please fill in the following information for the last ten (10 years):

Date claim filed	Filed with whom?	What injury/disability was claimed?	What happened with your claim?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 217, Witness 33

T. Do you have medical insurance of any kind? Yes☒ No☐

If yes, what company or program provides your medical insurance? Seguro Campesino (Peasant Insurance)

U. Have you ever filed a lawsuit against anyone (aside from this suit), including any oil companies?
Yes☐ No☒

If yes, please identify: (1) what kind of lawsuit it was, (2) when you filed it, (3) the company or people you sued, (4) what Court or other tribunal it was before, and (5) what was the result of the suit. (If any of your lawsuits are still pending, say this.) (Attach additional pages if necessary to describe multiple lawsuits.)
N/A

III. FAMILY INFORMATION AND EDUCATIONAL HISTORY

A. Have you ever been married? Yes☐ No☒

B. If yes, *for each spouse and former spouse,* please identify the following:
1. Spouse's name: N/A
2. Date of marriage: N/A
3. Spouse's date of birth: N/A
4. Spouse's occupation: N/A
5. Spouse's address (if different than yours): N/A

C. Immediate Family members. Please provide the following information about each of your parents, your sisters, your brothers and your children. **(Add additional sheets if necessary.)**

Name	Relationship to you	Date of birth	Date of death (if applicable)	Cause of death (if applicable)	Main occupation
[redacted]	Father	[redacted]			Farmer
[redacted]	Mother	I do not remember			Housewife
[redacted]	Brother	I do not remember			Farmer
[redacted]	Brother	I do not remember			Farmer
[redacted]	Sister.	I do not remember			Domestic servant
[redacted]	Brother	I do not remember			Farmer
[redacted]	Brother	I do not			Farmer

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[redacted]		remember			
[redacted]	Sister	I do not remember			Housewife
[redacted]	Brother	I do not remember			Student
[redacted]	Brother	I do not remember			Student
[redacted]	Brother	I do not remember			Student

D. Education.

How many years did you go to school? 11 Years

What was the highest grade you completed? Fourth course

Where did you go to school? (List all schools by name and location)
Mi Patria School, Mataje

Do you know how to read? Yes ☒ No ☐

Do you know how to write? Yes ☒ No ☐

Do you have any degrees or certifications? Yes ☒ No ☐

If yes, what are they and what year did you get them?
I do not remember

IV. YOUR LIVING CONDITIONS

A. Please answer the following questions about your home, food and water:

1. What size is your house and of what materials is it made?
   8 x 10, wood

2. Where do you get your water? Plumbing

3. What is the source of your water? Running water business

4. Do you have running water inside your home? Yes ☒ No ☐

5. Do you filter your water? Yes ☐ No ☒

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 217, Witness 33

If yes, how? N/A

6. Where do you get the food for you and your family? From the farm and purchased at the market

7. How do you cook your food? (On a stove, grill, charcoal or firewood) Stove

Do you eat raw crab meat? Yes ☐ No ☒

Do you use crab juice as medicine? Yes ☐ No ☒

Do you buy and eat food in public places (Such as open air markets or places that sell prepared foods to the public)? Yes ☒ No ☐

If yes, have you observed the conditions in which that food was prepared and handled before you purchased and ate it? Yes ☐ No ☒

B. Please answer the following questions regarding sanitation:

1. How is sewage (waste and waste water) from your home disposed of?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
Dead well

2. Where does the sewage from your home go to (e.g., into the soil, into a body of water: sewer, river, stream, lake, etc.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
In the earth

3. Do you have a toilet inside your home? Yes ☐ No ☒

4. Do you use an outhouse? Yes ☒ No ☐

5. How is sewage disposed by the other homes and farms around you?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
Dead well

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 217, Witness 33

6. How do you dispose of your trash? (e.g., do you burn it? Do you bury it? Do you send it to a landfill?)

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
   Burn it

7. How far is the closest landfill to your house? Do not know

8. Where you live, is the trash dumped into a public area or public water channel?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

C. Please answer the following questions regarding oil operations (oil perforation, oil well, oil pits, gas stations or oil facilities) close to your house or place work:

1. How far is the nearest oil operation from your home? (and describe what is it)
   N/A

2. Has your home, farm or work area ever experienced oil pollution as a result of oil operations?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒
   If yes, *when* did this happen? N/A

3. Have you ever been injured in any way by oil pollution?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

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If yes, what were the injuries and *when* did they occur? N/A

4. Do you think that anyone in your family been injured in any way by oil operations?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

If yes, what and *when* were the injuries they suffered? N/A

D. Please answer the following questions regarding volcanoes:

1. How close do you live to the Reventador volcano, and/or to any other volcano? N/A

2. Do you think that you or your family members have ever been injured in any manner as a result of the eruptions or volcanic emissions of the Reventador volcano, or any other volcano?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

   If yes, *when* did this happen and what were the personal damages that you suffered?
   N/A

3. Do you think anyone in your town, vicinity, or community suffered personal damages of any kind as a result of the volcanic eruptions?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

   If yes, explain what happened and *when* it happened
   N/A

E. Please answer the following questions regarding floods:

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1. Have you, your home or your farm been affected in any way as a result of a flood in the last 10 years?
Yes ☐ No ☒

If yes, describe *when* this occurred and what damages you or your property suffered?
N/A

If yes, did the floods cause you to leave your home? Yes ☐ No ☒

F. Please answer the following questions about people moving into your town, vicinity, or community.

1. Do you think that your village or community has experienced an influx of people from Colombia in the last ten (10) years? Yes ☐ No ☒

2. Do you believe that your village, vicinity, or community has experienced an influx of people from other places (other than Colombia) in the last ten (10) years? Yes ☐ No ☒

If yes, where did these people come from? N/A

V. YOUR ALLEGED EXPOSURE TO THE "PLAN COLOMBIA" HERBICIDE

A. Are you familiar with "Plan Colombia?" Yes ☐ No ☒

If yes, what do you know about "Plan Colombia" and *when* did you learn this?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows:N/A

If yes, identify the people with whom you have spoken about "Plan Colombia," what they told you, and when these conversations took place?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows:N/A

B. Why do you believe that you and/or your property was exposed to a "Plan Colombia" herbicide? I witnessed the spraying.

C. When were you and/or your property exposed to herbicide? (If more than once, list

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all dates of exposure by day, month and year.) 2006

D. **For each instance of alleged exposure to your body**, please answer the following questions (use additional sheets of paper as necessary):

1. Where were you when the exposure occurred? In the fields

2. How close were you at that time to the border between Ecuador and Colombia? 4 kilometers

3. How do you know this? It is there.

4. Please mark an "X" on the attached map of Northern Ecuador to show where you were at the time of the alleged exposure and list the date(s) of exposure beside each "X". Have you marked the map in this way?
Yes ☐ No ☒

   If no, why not? N/A

   On the map in Caso No. 3230, there is text typed on the top of map that reads: "No sabe ubicar su recinto en el mapa," which means in English: "He does not know how to locate his community on the map."

5. What time of day did the exposure occur? Midday

6. What was the weather like that day? (Include the approximate temperature and whether there was precipitation) Sunny and breezy

7. Did you see an airplane at the time of the exposure?
Yes ☒ No ☐

   If yes, what did it look like? (color, size, letters, flags or other markings on plane, etc.)
White light aircraft

8. Did you see more than one airplane at the time of the exposure?
Yes ☒ No ☐

   If yes, please state how many you saw and describe what each looked like:
3

9. Did you see a helicopter at the time of the alleged exposure?
Yes ☒ No ☐

   If yes, how many? Yes

   If yes, what did the helicopter(s) look like (color, size, letters, flags or other markings)? Lead

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10. Did you see anything else in the air? Yes ☒ No ☐

If yes, what else did you see? Cloudy

11. Did you see the spray or a "cloud" or "fog" of spray? Yes ☒ No ☐

If yes, what color was it? Whitish

12. Did you see residue on the ground after the spraying? Yes ☒ No ☐

If yes, what did it look like? Oily liquid

13. Did you hear anything? Yes ☒ No ☐

If yes, what did you hear? Airplane noise

14. Did you smell anything unusual? Yes ☒ No ☐

If yes, what did it smell like? A strong smell

15. Do you contend that your body was exposed to the spray?
Yes ☒ No ☐

If yes, did you feel anything on your skin? Yes ☒ No ☐

If yes, what did you feel? Allergies, itching

If yes, what did you do with the clothing that you wore that day and when did you do it? (Include whether they were washed or destroyed)
I washed it.

16. After the spraying ceased, did you see any changes to the plants in your vicinity?
Yes ☒ No ☐

If yes, what changes did you see and how long after the spraying did you see the changes? They withered

17. After the spraying ceased, did you see any change in the wildlife, birds or fish in your vicinity? Yes ☒ No ☐

If yes, explain exactly what you saw and how long after the spraying you saw it? Dead fish, sick animals.

18. After the spraying ceased, did you observe any change in the appearance, odor or taste of any bodies of water (rivers, creeks, ponds, lakes, well water, etc.) in your vicinity? Yes ☒ No ☐

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If yes, please describe the change(s) you observed and state how long after the spraying you observed this.
Murky water

E. **For all plaintiffs alleging personal bodily injuries due to the alleged exposure**, please also answer the following questions for each instance of alleged exposure. (Use additional sheets of paper as necessary.)

1. What were your symptoms? (Please provide detail on both external and internal symptoms.)
Itching, allergies, headache, skin irritation

If yes, how long after the alleged exposure did your symptoms occur?
Two days later

2. Did you go to a Health Care Provider (as defined on p. 2) based on your exposure to the "Plan Colombia" herbicide? Yes ☒ No ☐

If yes, when did you go, and how long after the exposure was this?
Two days after the spraying

If yes, where did you go? (identify the name and address of the Health Care Provider) Nurse Maria Cevallos, Virgen de las Lajas Medical Center.

If yes, how far was this from your home? 6 kilometers

If yes, which person(s) at the Health Care Provider's office did you see about the herbicide exposure? Nurse Maria Cevallos

3. What did those person(s) tell you about your injury or condition? Symptoms resulting from the spraying

Did the person(s) tell you that your injuries or condition was caused by the "Plan Colombia" herbicide? Yes ☒ No ☐

4. Did the Health Care Provider take a sample of your blood or urine?
Yes ☒ No ☐

5. Did the Health Care Provider give you medicine (including herbal or home remedies) or a prescription for medicine? Yes ☒ No ☐

If yes, what was the medicine and what was it for? Skin creams

If yes, did you buy the medication or was it given to you?
Purchased and samples were given.

If yes, describe when and where you bought or obtained it and how much you paid

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for it. In San Lorenzo

How long did you use the medicine? One month

Did you take all the medicine you obtained? Yes ☒ No ☐

6. If you did not go to a Health Care Provider but thought that you were injured by the exposure, did you do anything to alleviate your injury, including any herbal or home remedies? Yes ☒ No ☐
If yes, what did you do? Medicinal teas

7. What specific type(s) of bodily illness or injury do you allege were caused by your exposure to the "Plan Colombia" herbicide?
Skin irritation

8. Do you believe you have an increased risk of future injury or harm (which has not yet appeared on or in your body) as a result of your alleged exposure to the "Plan Colombia" herbicide? Yes ☐ No ☒

If yes, please explain what future health risks you believe you face, why you think this would be affiliated with "Plan Colombia", and identify any Health Care Providers or other people who have told you this and set out what each such person (except your attorneys) said to you about future injury or harm.
Nurse Maria Cevallos

F. **For all plaintiffs claiming damage to crops** from the alleged exposure, please also answer the following questions **about each instance of alleged exposure** (use additional sheets if necessary):

1. Where was your field of crops (identify by distance and direction from your home)?

What was the date and time of day your crop(s) were exposed to the "Plan Colombia" herbicide?

3. How close is that field to the border between Colombia and Ecuador? km or meters

4. Please mark a small circle ("0") on the attached map to show where your exposed field was and mark the date of the alleged exposure by each "O." Have you marked the map? Yes ☐ No ☐
If no, why not?

On the map in Caso No. 3230, there is text typed on the top of map that reads: "No sabe

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ubicar su recinto en el mapa," which means in English: "He does not know how to locate his community on the map."

5. Do you own the land where your crops were growing? Yes ☐ No ☐

If not, who owned the land when the spraying took place?

6. How big was your field or patch of crops exposed to the herbicide?
What kinds of crops were planted there?

7. How long after the exposure did you notice injury to the crops and what did you first see when the damage began?

How long did it take for the injury to be complete?

What was the end result of the alleged exposure? (Describe what percentage of your crop was damaged or destroyed)

8. Did you sell or trade the crops that remained in your field after the alleged exposure? Yes ☐ No ☐

If yes, to whom?

If yes, did you tell the buyer that you believed the crop had been exposed to a "Plan Colombia" herbicide? Yes ☐ No ☐

9. How soon after the alleged exposure did you plant new crops in the same field?

10. Why do you believe your crops were damaged by the "Plan Colombia" herbicide?

11. What kinds of pesticides and/or herbicides did you use on the same crops before their alleged exposure to the "Plan Colombia" herbicide?

12. Where did you buy the pesticides and/or herbicides that you used?
(Include name and address of the supplier.)

G. **For all plaintiffs claiming injuries to farm animals or pets**, please also answer the following questions **about <u>each</u> instance of alleged exposure** (use additional sheets as necessary):

1. What kind of animals were exposed?

2. Where were your animals when they were allegedly exposed (identify by distance from your home)?

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3. How close was this to the Colombian-Ecuadorian border?

4. Please place a "?" on the attached map to show where your animals were at the time of their alleged exposure and put the date(s) of exposure by each "?".

   Have you marked the map in this way? Yes ☐ No ☐
   If no, why not?

   On the map in Caso No. 3230, there is text typed on the top of map that reads: "No sabe ubicar su recinto en el mapa," which means in English: "He does not know how to locate his community on the map."

5. How long after the exposure did it take for your animals to get sick?

6. What happened to the exposed animals? (Identify for each kind of animal: how many died; how many got sick but survived; how many were unaffected)

7. For the animals that died, did a veterinarian, a professional or other person examine the corpses to determine the cause of death? Yes ☐ No ☐

   If yes, who was this, when did it happen, and what did he/she tell you? (Identify by name, title, and business address)

   If yes, when did this person examine the animal corpses in relation to when they died?

8. For the animals that got sick but survived, did a veterinarian, a professional or other person examine and diagnose the sick animals?
   Yes ☐ No ☐

   If yes, who came, when did they come, and what did they tell you? (Identify by name, title, and business address)

9. Did anyone collect blood samples or other tissue samples from your animals (dead or alive)? Yes ☐ No ☐
   If yes, who took the samples? (Identify name, title and business address)

   If yes, did you get copies of any results from the tests done on the animal blood or tissue samples? Yes ☐ No ☐

   If you got written results, please attach them to your answers to these questionnaires.

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10. Why do you believe that your animals' illness or death was caused by the "Plan Colombia" herbicide?

H. Reports to Third Parties.

1. Other than the Health Care Providers or animal care professionals identified above, did you complain to anyone or to any organization (government or non-government) about the alleged spraying of herbicide?
Yes ☐ No ☐

If yes, whom did you speak with and when did you do this?

If yes, what did you say to this person or organization?

What did the person or organization say back to you?

Did that person or organization take samples of your blood or urine due to your alleged exposure to the "Plan Colombia" herbicide? Yes ☐ No ☐

If yes, who did this and when did it happen?

VI. YOUR MEDICAL BACKGROUND

A. Check the medical conditions that you have *at the present time* and the conditions that you have had *at any time in the past.*

Condition	I have now	I have had in the past
Cancer	☐	☐
If cancer, what kind?		
Heart disease or heart attack	☐	☐
Angina, chest pain	☐	☐
Brain tumor	☐	☐
Epilepsy	☐	☐
Diabetes	☐	☐
Liver disease	☐	☐
Pancreatitis	☐	☐
Polio	☐	☐
Malaria	☐	☐

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Dysentery	☐	☐
Asthma or other respiratory illness, shortness of breath	☐	☐
Blood clots or abnormalities of blood vessels	☐	☐
Anemia or other blood disorders	☐	☐
High blood pressure	☐	☒
AIDS or HIV-positive test results	☐	☐
Medical condition	☐	☐
Arthritis	☐	☐
Kidney disease or transplant	☐	☐
Dengue fever	☐	☐
Cholera	☐	☐
Changas	☐	☐
High cholesterol	☐	☐
Influenza	☐	☐
Diarrhea	☐	☐
Infections (bacterial or fungal)	☐	☐
Measles	☐	☐
Chicken pox	☐	☐
Mumps	☐	☐
Diptheria	☐	☐
Whooping cough	☐	☐
Scarlet fever	☐	☐
Leishmaniasis	☐	☐
Onchocerciasis	☐	☐
Alcoholism	☐	☐
Malnutrition	☐	☐
Migraine headaches	☐	☐

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Fainting or serious dizziness	☐	☒
Medical condition	☐	☐
Osteoporosis	☐	☐
Broken bones	☐	☐
Skin rash or skin irritation	☐	☒

B. For each of the conditions that you checked above, please fill out the information below:

Condition No. 1

Date of onset: I do not remember
Did you see a Health Care Provider (as defined on page 2 above) about this condition?
Yes ☐ No ☒

If yes, who did you see? (include name and address) N/A

What did the Health Care Provider tell you about the condition?
N/A

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☒

If yes, what kind? N/A

Did you take the drugs prescribed for you? Yes ☐ No ☒

Condition No. 2

Date of onset: I do not remember
Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☒ No ☐

If yes, who did you see? (include name and address) Nurse Maria Cevallos, Virgen de las Lajas Medical Center

What did the Health Care Provider tell you about the condition?
Symptoms resulting from the spraying.

Did the Health Care Provider give you drugs or therapy? Yes ☒ No ☐

If yes, what kind? Pills

Did you take the drugs prescribed for you? Yes ☒ No ☐

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Condition No. 3

Date of onset: I do not remember

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☒ No ☐

If yes, who did you see? (include name and address) Nurse Maria Cevallos, Virgen de las Lajas Medical Center

What did the Health Care Provider tell you about the condition? Symptoms resulting from the spraying.

Did the Health Care Provider give you drugs or therapy? Yes ☒ No ☐

If yes, what kind? Skin creams

Did you take the drugs prescribed for you? Yes ☒ No ☐

Condition No. 4
Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐
If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

[Translators: Use this field to describe further medical conditions if there are more than 4, using same format:]

NOTE: Attach additional sheets of paper if you have more than 4 conditions to describe.

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C. Have you had any surgeries in the last 20 years? Yes ☐ No ☒

If yes, *when? N/A*
For what? N/A

If yes, who performed the surgery? (include name and address)
N/A

D. Drug and Medicine Use:

Do you take any drugs and/or medicines on a regular basis, including plants, herbs, roots or traditional remedies (ancestral) for medicinal uses? Yes ☐ No ☒

If yes, please list all of the drugs and medicines (including plants, herbs, roots or traditional remedies) that you take at this time: N/A

Have you formerly taken drugs and/or medicines (including plants, herbs, roots or traditional remedies) on a regular basis that you do not take now? Yes ☐ No ☒

If yes, please list all such drugs and/or medicines and identify *when you* took them:
N/A

F. History of the Use of Tobacco and Similar Products:

Have you ever smoked cigarettes? Yes ☐ No ☒

Do you currently smoke cigarettes? Yes ☐ No ☒

If yes, please fill in: I have smoked N/A packs or N/A cigarettes per day for N/A years, of the following brands of cigarettes: N/A

If you smoked earlier but do not now, please fill in: I stopped smoking in N/A
Before that, I smoked N/A packs or N/A cigarettes per day for N/A years, of the following brands of cigarettes: N/A

Have you ever smoked cigars or pipe tobacco? Yes ☐ No ☒

If you currently smoke cigars and/or a pipe, please fill in: I presently smoke (fill in number of) N/A cigars and/or N/A pipes per day.

If you smoked cigars or pipes earlier but do not now, please fill in: I stopped smoking (fill in "cigars" or "pipes" or "both") in (date) N/A

Before that I smoked (fill in number) N/A per day.

Have you ever smoked other substances based on ancestral custom or personal preference? Yes ☐ No ☒

If yes, identify what you smoked, *when* you started, and how long you have smoked it. N/A

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Have you ever chewed tobacco or similar chewing material? Yes ☐ No ☒

If yes, what was it, *when* did you begin to chew it, and how long have you done this?
N/A

G. Drinking History:

Do you currently drink alcohol of any kind? Yes ☒ No ☐

If yes, how many drinks per week do you consume? A mug of beer

If you do not drink alcohol now but you did in the past, how many drinks per week did you consume in the past? N/A
When was this? N/A

Do you drink other fermented beverages that contain a smaller amount of alcohol?
Yes ☐ No ☒

If yes, explain how much of this you drink and when you have consumed it. N/A

H. Have you ever missed work for more than 2 weeks straight for reasons related to your health in the last 20 years? Yes ☐ No ☒ If yes, *when?* N/A

If yes, please state the dates you missed work, your employer at the time, and the health condition that caused your absence from work:
N/A

Did you see a Health Care Provider about the health problem that caused you to miss work? Yes ☐ No ☒

If yes, please identify the Health Care Provider's name, address and *when you* visited that provider. N/A

I. In addition to the Health Care Providers identified in the preceding answers in this Questionnaire, have you gone to any more Health Care Providers (as defined on p. 2) in the last twenty (20) years? Yes ☐ No ☒

If so, please provide the following information:

Date	Name and Address of Health Care Provider	For what illness or injury?	What diagnosis and treatment did you

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			receive?

J. Reproductive History (To be answered by all wives and mothers; to be answered by husbands and fathers only if they are filling out this Questionnaire for their wives):

Have you (or your wife if a husband is answering this question) ever had a miscarriage? Yes ☐ No ☒
If yes, please state how many times and when each happened.

Have you ever experienced any still-births or deaths of your children shortly after they were born? Yes ☐ No ☒

If yes, please state how many times and *when* each happened.

If yes, did you see a Medical Care Provider about the still-births or infant deaths? Yes ☐ No ☒

If yes, please identify who you saw, *when* you saw them, and what they told you about each such incident?

VII. SPECIFICATION OF DAMAGES BEING SOUGHT AND SUPPORTING DOCUMENTATION

A. What *amount* of damages are you seeking?

For physical injury to yourself:	$Yes $20 in medicine
For damage to your crops:	$N/A
For damage to your animals:	$N/A
For lost wages or income:	$N/A
For anything else? If so, describe:	$N/A
TOTAL	$ 0

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B.

C. Do you seek damages to reimburse you for medical bills and expenses that you paid? Yes ☒ No ☐

If yes, how much did you pay? $ 20

If yes, did you pay in cash or with something else? (If something else, describe what it was): Cash

D. Do you seek damages to reimburse you for *other* out-of-pocket expenses or fees?
Yes ☐ No ☒
If yes, how much in expenses or fees did you pay, how did you pay then, and what were the payments for?

E. Do you seek damages for lost wages or loss of time from work?
Yes ☐ No ☒

If yes, *when* did this happen? (List all instances)

If yes, how long were you unable to work?

If yes, how much in wages or income did you lose? $

How do you calculate this amount?

If you claim lost wages, identify the employer(s) (by listing each name and address) who did not pay you for the relevant period of time. If self-employed, describe the basis for your alleged lost earnings.

Did you try to find new work during the period of time for which you seek lost wages or income? Yes ☐ No ☒

If yes, where did you apply or inquire and what happened following your application or inquiry?

F. Do you seek damages for the loss of legal crops? Yes ☐ No ☒

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If yes, please provide the following information:

Kind of Crop	Amount of crop that died / was lost	Monetary Value(s)you place on the Crops that Died	Basis for your Value(s)

G. Do you seek damages for farm animals or pets that died?

Yes ☐ No ☒

If yes, please provide the following information:

Kind of Animal	Number that Died	Monetary value(s) you place on the dead animals	Basis for your Value(s)

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VIII. WITNESSES TO YOUR CLAIMS

Please identify all persons whom you believe possess information concerning your alleged exposure to the "Plan Colombia" herbicide and/or the alleged injuries or other harm resulting to you from the exposure *(other than your attorneys and the Health Care Providers identified elsewhere in this Questionnaire):*

Name and address: [redacted]. Mataje Community

(What knowledge does this person have?) Witness of spraying

Name and address: [redacted]. Mataje Community

(What knowledge does this person have?) Witness of spraying

Name and address:

(What knowledge does this person have?)

Name and address:

(What knowledge does this person have?)

IX. DOCUMENT REQUESTS AND AUTHORIZATIONS

A. If you are claiming personal injuries to yourself:

1. Please provide a copy of any and all medical and other documents (as defined on p. 2), including records, test results and all medical bills *in your or your attorney's possession* that relate to any visit you made or any treatment you received from a Health Care Provider (as defined on p. 2) in the last twenty (20) years.

2. Please complete and sign a copy of the Exhibit A "Authorization for Release of Medical Records" for each Health Care Provider you have

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identified in your responses to this Questionnaire. Deliver the Authorizations to each Health Care Provider identified on the form and give the documents that the Providers produce to you (along with a copy of the corresponding Authorization for Release given or sent to each Provider) to your attorney so that these medical records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit A "Authorization for Release of Medical Records" with the name of the Medical Care Provider left blank for future use if the defendants establish that you saw or were treated by additional Medical Care Providers in the last twenty (20) years.

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B. If you are claiming reimbursement for any medical expenses or other out-of-pocket expenses related to your alleged exposure:

1. Please attach a copy of the receipts, bills, invoices or any other documents in your or your attorney's possession that demonstrate the amount of the expenses for which you seek reimbursement.

C. If you are claiming lost wages or earnings:

1. Please attach copies of any and all documents in your possession about the total amount of salary or wages that was paid to you and the total amount of any other income that was generated by you for each year in the last ten (10) years. This shall include but not be limited to: pay-stubs, cancelled checks, income tax forms or other documents that disclose income received by you each year for the last ten (10) years from any source.

2. Please complete and sign the attached Exhibit B "Authorization for Release of Employment Records" for each of your employers in the last ten (10) years as identified in your answers to this Plaintiffs' Questionnaire. Deliver the Authorizations to each such employer identified on the form and give the documents that the employers produce to you (along with a copy of the corresponding Authorization) to your attorney so that these records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit B "Authorization" with the name of the employer left blank for future use if the defendants establish that you had additional employers in the last ten (10) years.

D. If you are claiming loss based on injury or damage to your legal crops:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the land and/or that you owned the crops on that land, which you claim were destroyed, (ii) the amount of crops that were destroyed, and (iii) the monetary value of the destroyed crops.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 217, Witness 33

E. If you are claiming loss based on injury to farm animals or pets:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the animals you claim were injured or killed, (ii) the number of animals that died, (iii) the monetary value of the animals that died, and (iv) any other expenses you are claiming relative to this alleged loss.

F. If you are claiming any other kind of loss or damage in this case:

1. Please attach copies of any and all documents that demonstrate or support such other claimed loss or damage and the *amount* of damages you seek for that loss or damage.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 217, Witness 33

X. VERIFICATION

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on (DATE) September 18, 2008 (Signature)
Plaintiff's Signature
Print Plaintiff's Name: [redacted]

(Signature)
Signature of witness attesting to Plaintiff's Signature
Witness's name: [redacted]
Date: September 18, 2008
Witness's Address: Quito, Ecuador
Witness's Relationship to Plaintiff: None

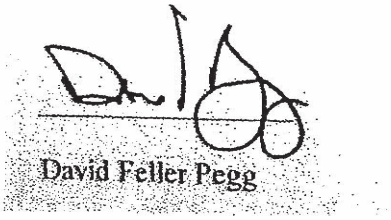
Plaintiff's Picture

Plaintiff's Fingerprint

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 217, Witness 33

CERTIFICATE OF ACCURACY OF TRANSLATION

I David Feller Pegg affirm that I am fluent in English and Spanish and that the translation of the attached documents are true and accurate.



Annex 74

PLAINTIFF QUESTIONNAIRE, *ARIAS/QUINTEROS V. DYNCORP,* D.D.C. (EM VOL. IV, ANNEX 220, WITNESS 37)

(United States District Court for the District of Columbia, Cases No. 1:01-cv01908 (RWR-DAR) and 1:07-cv01042 (RWR-DAR). Cases consolidated for Case Management and Discovery)

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

Case #: [redacted]

[redacted] Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR)
Venancio Aguasanta Arias, *et al.* Plaintiffs, v. DYNCORP, *et al.* Defendants.	Case No. 1:07CV01042 (RWR) Consolidated for Discovery with Case No. 1:01CV01908 (RWR)

PLAINTIFFS' QUESTIONNAIRE

To Each Individual Plaintiff:

INSTRUCTIONS

1. Each individual plaintiff in the above-captioned cases must complete and sign his or her own copy of this Questionnaire.

2. If a person is responding on behalf of his or her children (or another person or persons) on whose behalf a claim has been filed before this Court, then a separate copy of this Questionnaire must be filled out for each such child or other person.

3. When you read the terms "you" and "your" throughout this Questionnaire, they refer to each person who is claiming injury due to the alleged exposure in this case. In other words, if you are claiming injury to yourself or your

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

property, you must answer the questions about yourself and your property. If you are responding on behalf of your child (or other person), then you must answer the questions about that child or other person on a separate copy of this Questionnaire, clearly marked to show to whom it refers

4. Each question must be answered in full. If you do not know the answer to a question or cannot recall the information needed to answer a question, please say this in your response to the question. If a question is "not applicable" to you, say this in your response. Do not leave any question unanswered.

5. Each individual plaintiff must realize that he or she is under oath and must provide information that is true and correct based on such person's personal knowledge and belief.

6. You may attach as many sheets of paper as necessary to fully answer the questions. This questionnaire also asks you to produce written documents that relate directly to your answers. You must give these documents to your attorney so that they may be copied for use in this lawsuit. **You must not dispose of or alter or modify any documents** or other materials that you have now or that you may later receive relating to any of the subjects addressed in this Plaintiffs' Questionnaire.

7. In filling out this form, please use the following definitions:

(A) **"Health care provider"** means any hospital, clinic, doctor's or nurse's office, infirmary, medical laboratory or other facility that provides medical care or advice. It also means any doctor, physician, surgeon, paramedic, nurse (registered or otherwise), psychologist, psychiatrist, therapist, chiropractor, healer or any other person practicing any kind of healing art (with or without traditional medications) or performing any kind of medical, physical or mental examination or treatment, and any other persons or entities involved in the evaluation, diagnosis, care and/or treatment of you.

(B) **"Document"** means any writing or record of any kind whatsoever that is in your or your family's possession or the possession of your counsel, including but not limited to written letters, papers, notes, e-mails, photographs, charts, cassettes, videotapes, computer discs or tapes, x-rays, drawings, graphs, phonorecords, nonidentical copies and other data compilations of any kind.

I. PRELIMINARY INFORMATION ABOUT YOU AND YOUR CLAIM

A. Name of plaintiff submitting this Questionnaire (NOTE: There must be one form completed for each plaintiff and for each other person claiming injuries): [redacted]

B. Name of person who this Questionnaire applies to: [redacted]

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

[redacted]

C. Name of person who filled out this Questionnaire, if different from plaintiff (include the preparer's name, company, address, and relationship to plaintiff):
Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-work product. Subject to, and without waiving, said objections, responding party responds as follows: This Questionnaire and the computer responses were generated with assistance of counsel

D. Are you seeking relief for personal injury to yourself? Yes ☒ No ☐

E. Are you seeking relief for personal injury to someone else? Yes ☐ No ☒

If yes, who?N/A

Please mark the reason why this person cannot act on his or her own.

Minor ☐ Impaired ☐ Death ☐ Other Reason ☐ N/A

(Note: A separate copy of this Questionnaire should be completed for each person seeking damages).

F. Are you seeking damages for injury to your property (crops or animals)? Yes ☒ No ☐

If yes, do you claim:

Damages to your crops? Yes ☒ No ☐

Damage to farm animals or pets? Yes ☒ No ☐

G. Are you seeking damages for injury to any other types of property? Yes ☐ No ☒
If yes, what kind?

II. PERSONAL INFORMATION

A. Paternal Last name: [redacted]

Maternal Last name: [redacted]

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

First name: [redacted]

Middle Name: N/A

Any other names by which you have ever been known: N/A

Ecuadorian identification number: [redacted]

B. Gender: Male☒ Female☐

Height: 1.67 meters

Weight: 142 pounds

C. Are you Ecuadorian? Yes ☒ No ☐

If not, what is your country of citizenship? Ecuador

D. Racial/Ethnic Background: Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:Afro Ecuadorian

If you answered Indigenous or Indian, do you belong to an indigenous tribe or community? Yes☐ No☒

If yes, which one?

E. What language do you speak? Spanish

F. Do you clearly understand the language used in this Questionnaire and the questions asked in this Questionnaire? Yes ☒ No☐

G. Date of Birth: Novemeber [redacted]

H. Present home address: MATAJE, [redacted]

Village or City: Mataje Province: Esmeraldas

If you do not live in a city or town, identify the nearest town to your home and provide the directions to get to your home from that town. (Use road names, river names and North, South, East, West directions to describe how to get to your home) [redacted]

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

[redacted]

How long have you lived at this address?
60 years

What was the reason that caused you to move to your present home address?
Born here

Who has lived with you at this address?
Wife and children

I. Prior Home Addresses. Please provide the following information for the last ten (10) years:

Prior address (including closest town, province, and country)	Dates you lived at this address: Starting	Until	Persons who lived with you at this address

J. Telephone Number (if any): No

K. Current Occupation: Farmer

Name of employer (If self-employed, say this): [redacted]

Name of immediate supervisor (if any): [redacted]

Employer's address (work): Mataje

Employer's telephone no. (work): N/A

How long have you worked there? Three years

L. Prior Employers. Please fill in the following information for the last ten (10) years (Include any military service, and if self-employed, say this):

Prior employers (names and addresses)	Dates you worked for this employer: Starting	Until	What did you do there?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

M. In any of your work in the last ten (10) years (including your current work or home farming), have you used or handled pesticides and/or herbicides?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of pesticides and/or herbicides did you use and *when* did you use them?
N/A

If you applied the pesticides and/or herbicides, how did you do it?
N/A

If you applied them, [the pesticides], describe any kind of protection you used for yourself while you were using the pesticides and/or herbicides.
N/A

If you applied pesticides, did you or anyone else in your family wash the clothes you wore when using the pesticides and/or herbicides?
Yes☐ No☒

If yes, please describe who did this, how often it was done, and the manner in which your clothes were washed or cleaned.
N/A

Do you believe you have experienced any kind of medical problems as a result of handling pesticides/herbicides in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of medical problems and *when* did you have them?
N/A

N. Has any member of your immediate family used or handled pesticides and/or herbicides during the last ten years (as a part of your work or home farming)?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what members of your family and what type of pesticides and/or herbicides did they use?
N/A

If yes, where and how did those members of your family (or any other person) wash the clothes they used while using pesticides and/or herbicides?
N/A

O. In your work or in your home farming in the last (10) years, have you been in the vicinity of or close to other people using herbicides and/or pesticides (where you could see other people)?

Yes☐ No☒

If yes, what kind of herbicides and/or pesticides did they use?
N/A

If yes, where and how did you wash your clothes that you wore after you were close to where other people used the herbicides and/or pesticides?
N/A

P. In any of your work in the last (10) years (including your current work or home farming), did/do you use or handle chemicals (other than the herbicides or pesticides identified in the previous answer.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of chemicals fertilizers, or other artificial chemical products did you use and when did you use them?
N/A

If yes, describe any kind of protection you used for yourself while using the chemicals.
N/A

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

Do you believe you have experienced any kind of medical problems as a result of using chemical fertilizers or other types of artificial chemical products in your work or at home?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes☐ No☒

If yes, what kind of medical problems and *when* did you experience them?
N/A

Q. Have you ever been convicted of a crime in the past ten years? Yes☒ No☐

If yes, what crime? Witness to a death

Did you go to jail or prison? Yes☒ No☐

If yes, how long? Only a few days for investigation

R. Have you ever been rejected for a job for which you applied or for a military position because of a medical, physical, psychiatric or emotional condition?
Yes☐ No☒

If yes, what job or position? N/A

If yes, *when* did this happen? (Include all instances when this happened).
N/A

If yes, what was your medical condition or disability (for each such instance)?
N/A

S. Have you ever filed a claim or claims with the Ecuadorian or Provincial government where you live or with an employer or with an insurance company or any other entity for compensation or the payment of medical expenses or lost earnings due to an injury or a medical disability of any kind?
Yes☐ No☒

If yes, please fill in the following information for the last ten (10 years):

Date claim filed	Filed with whom?	What injury/disability was claimed?	What happened with your claim?

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

T. Do you have medical insurance of any kind? Yes☒ No☐

If yes, what company or program provides your medical insurance? Farmers Insurance

U. Have you ever filed a lawsuit against anyone (aside from this suit), including any oil companies?
Yes☐ No☒

If yes, please identify: (1) what kind of lawsuit it was, (2) when you filed it, (3) the company or people you sued, (4) what Court or other tribunal it was before, and (5) what was the result of the suit. (If any of your lawsuits are still pending, say this.) (Attach additional pages if necessary to describe multiple lawsuits.)
N/A

III. FAMILY INFORMATION AND EDUCATIONAL HISTORY

A. Have you ever been married? Yes ☐ No ☒

B. If yes, *for each spouse and former spouse,* please identify the following:
1. Spouse's name: [redacted]
2. Date of marriage: 1973
3. Spouse's date of birth: Doesn't know
4. Spouse's occupation: Housewife
5. Spouse's address (if different than yours): N/A

C. Immediate Family members. Please provide the following information about each of your parents, your sisters, your brothers and your children. **(Add additional sheets if necessary.)**

Name	Relationship to you	Date of birth	Date of death (if applicable)	Cause of death (if applicable)	Main occupation
[redacted]	Wife	Doesn't know			Housewife
[redacted]	Son	Doesn't remember			Farmer
[redacted]	Son	1976			Farmer
[redacted]	Son	1978			Farmer
[redacted]	Daughter	1980			Domestic help
[redacted]	Son	1982			Farmer

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

[redacted]	Son	[redacted]			Farmer
[redacted]	Son	1982			Farmer
[redacted]	Daugher	1986			Housewife
[redacted]	Son	1992			Student
[redacted]		1993			Student
		1996			Student

D. Education.

How many years did you go to school? Seven Years

What was the highest grade you completed? Seventh grade

Where did you go to school? (List all schools by name and location)
Mi Patria Grade School, Mataje

Do you know how to read? Yes ☒ No ☐

Do you know how to write? Yes ☒ No ☐

Do you have any degrees or certifications? Yes ☒ No ☐

If yes, what are they and what year did you get them?
Doesn't remember

IV. YOUR LIVING CONDITIONS

A. Please answer the following questions about your home, food and water:

1. What size is your house and of what materials is it made?
   8x10 wood
2. Where do you get your water? Water pipes
3. What is the source of your water? water company
4. Do you have running water inside your home? Yes ☒ No ☐
5. Do you filter your water? Yes ☐ No ☒

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

If yes, how? Doesn't remember

6. Where do you get the food for you and your family? Farm and the san Lorenzo Market

7. How do you cook your food? (On a stove, grill, charcoal or firewood)
Stove

Do you eat raw crab meat? Yes ☐ No ☒

Do you use crab juice as medicine? Yes ☐ No ☒

Do you buy and eat food in public places (Such as open air markets or places that sell prepared foods to the public)? Yes ☐ No ☒

If yes, have you observed the conditions in which that food was prepared and handled before you purchased and ate it? Yes ☐ No ☒

B. Please answer the following questions regarding sanitation:

1. How is sewage (waste and waste water) from your home disposed of?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
Septic tank

2. Where does the sewage from your home go to (e.g., into the soil, into a body of water: sewer, river, stream, lake, etc.)?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
Into the soil

3. Do you have a toilet inside your home? Yes ☐ No ☒

4. Do you use an outhouse? Yes ☒ No ☐

5. How is sewage disposed by the other homes and farms around you?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections. responding party responds as follows:
Septic tank

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

6. How do you dispose of your trash? (e.g., do you burn it? Do you bury it? Do you send it to a landfill?)

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:
   Burned

7. How far is the closest landfill to your house? Doesn't know

8. Where you live, is the trash dumped into a public area or public water channel?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague and ambiguous and calls for speculation. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

C. Please answer the following questions regarding oil operations (oil perforation, oil well, oil pits, gas stations or oil facilities) close to your house or place work:

1. How far is the nearest oil operation from your home? (and describe what is it)
   N/A

2. Has your home, farm or work area ever experienced oil pollution as a result of oil operations?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒
   If yes, *when* did this happen? N/A

3. Have you ever been injured in any way by oil pollution?

   Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

   Yes ☐ No ☒

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

If yes, what were the injuries and *when* did they occur? N/A

4. Do you think that anyone in your family been injured in any way by oil operations?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

If yes, what and *when* were the injuries they suffered? N/A

D. Please answer the following questions regarding volcanoes:

1. How close do you live to the Reventador volcano, and/or to any other volcano? N/A

2. Do you think that you or your family members have ever been injured in any manner as a result of the eruptions or volcanic emissions of the Reventador volcano, or any other volcano?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

If yes, *when* did this happen and what were the personal damages that you suffered?
N/A

3. Do you think anyone in your town, vicinity, or community suffered personal damages of any kind as a result of the volcanic eruptions?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question is vague, ambiguous, calls for speculation and calls for expert opinion testimony. Subject to, and without waiving, said objections, responding party responds as follows:

Yes ☐ No ☒

If yes, explain what happened and *when* it happened
N/A

E. Please answer the following questions regarding floods:

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

1. Have you, your home or your farm been affected in any way as a result of a flood in the last 10 years?
Yes ☐ No ☒

If yes, describe *when* this occurred and what damages you or your property suffered?
N/A

If yes, did the floods cause you to leave your home? Yes ☐ No ☒

F. Please answer the following questions about people moving into your town, vicinity, or community.

1. Do you think that your village or community has experienced an influx of people from Colombia in the last ten (10) years? Yes ☐ No ☒

2. Do you believe that your village, vicinity, or community has experienced an influx of people from other places (other than Colombia) in the last ten (10) years? Yes ☐ No ☒

If yes, where did these people come from? N/A

V. YOUR ALLEGED EXPOSURE TO THE "PLAN COLOMBIA" HERBICIDE

A. Are you familiar with "Plan Colombia?" Yes ☐ No ☒

If yes, what do you know about "Plan Colombia" and *when* did you learn this?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows:N/A

If yes, identify the people with whom you have spoken about "Plan Colombia," what they told you, and when these conversations took place?

Responding party incorporates the General Objections previously set forth. Responding party further objects that this question calls for privileged attorney-client communications. Subject to, and without waiving, said objections, responding party responds as follows:N/A

B. Why do you believe that you and/or your property was exposed to a "Plan Colombia" herbicide? N/A

C. When were you and/or your property exposed to herbicide? (If more than once, list

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

all dates of exposure by day, month and year.) End of 2003

D. **For each instance of alleged exposure to your body**, please answer the following questions (use additional sheets of paper as necessary):

1. Where were you when the exposure occurred? I was at my farm

2. How close were you at that time to the border between Ecuador and Colombia? Ten meters

3. How do you know this? Calculating the distance from the river

4. Please mark an "X" on the attached map of Northern Ecuador to show where you were at the time of the alleged exposure and list the date(s) of exposure beside each "X". Have you marked the map in this way?
Yes ☐ No ☒

If no, why not? Not able to locate position on the map

5. What time of day did the exposure occur? 11 am

6. What was the weather like that day? (Include the approximate temperature and whether there was precipitation) Sunny

7. Did you see an airplane at the time of the exposure?
Yes ☒ No ☐

If yes, what did it look like? (color, size, letters, flags or other markings on plane, etc.)
White

8. Did you see more than one airplane at the time of the exposure?
Yes ☒ No ☐

If yes, please state how many you saw and describe what each looked like:
Five planes

9. Did you see a helicopter at the time of the alleged exposure?
Yes ☒ No ☐

If yes, how many? yes

If yes, what did the helicopter(s) look like (color, size, letters, flags or other markings)? grey with military green

10. Did you see anything else in the air? Yes ☒ No ☐

If yes, what else did you see? A cloud

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

11. Did you see the spray or a "cloud" or "fog" of spray? Yes ☒ No ☐

If yes, what color was it? Whitish

12. Did you see residue on the ground after the spraying? Yes ☒ No ☐

If yes, what did it look like? A yellow oily liquid

13. Did you hear anything? Yes ☒ No ☐

If yes, what did you hear? The sound of airplanes

14. Did you smell anything unusual? Yes ☒ No ☐

If yes, what did it smell like? A strong and foul smell

15. Do you contend that your body was exposed to the spray?
Yes ☒ No ☐

If yes, did you feel anything on your skin? Yes ☒ No ☐

If yes, what did you feel? Itchiness, allergic

If yes, what did you do with the clothing that you wore that day and when did you do it? (Include whether they were washed or destroyed)
Washed the clothes

16. After the spraying ceased, did you see any changes to the plants in your vicinity?

Yes ☒ No ☐

If yes, what changes did you see and how long after the spraying did you see the changes? The withered immediately

17. After the spraying ceased, did you see any change in the wildlife, birds or fish in your vicinity? Yes ☒ No ☐

If yes, explain exactly what you saw and how long after the spraying you saw it? They died

18. After the spraying ceased, did you observe any change in the appearance, odor or taste of any bodies of water (rivers, creeks, ponds, lakes, well water, etc.) in your vicinity? Yes ☒ No ☐

If yes, please describe the change(s) you observed and state how long after the spraying you observed this.
Cloudy water that could not be used

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

E. **For all plaintiffs alleging personal bodily injuries due to the alleged exposure,** please also answer the following questions for each instance of alleged exposure. (Use additional sheets of paper as necessary.)

1. What were your symptoms? (Please provide detail on both external and internal symptoms.)
Itchiness, allergic, vomiting, dizziness, headache

If yes, how long after the alleged exposure did your symptoms occur?
Immediately

2. Did you go to a Health Care Provider (as defined on p. 2) based on your exposure to the "Plan Colombia" herbicide? Yes ☒ No ☐

If yes, when did you go, and how long after the exposure was this?
15 days after the fumigations

If yes, where did you go? (identify the name and address of the Health Care Provider) Virgen Las Lajas Medical Center

If yes, how far was this from your home? About one kilometer

If yes, which person(s) at the Health Care Provider's office did you see about the herbicide exposure? Nurse Maria Cevallos

3. What did those person(s) tell you about your injury or condition? Symptoms produced by the fumigation
Did the person(s) tell you that your injuries or condition was caused by the "Plan Colombia" herbicide? Yes ☒ No ☐

4. Did the Health Care Provider take a sample of your blood or urine?
Yes ☐ No ☒

5. Did the Health Care Provider give you medicine (including herbal or home remedies) or a prescription for medicine? Yes ☒ No ☐

If yes, what was the medicine and what was it for? Pills, syrups, creams

If yes, did you buy the medication or was it given to you?
Yes ☐ No ☒

If yes, describe when and where you bought or obtained it and how much you paid for it. I didn't buy it

How long did you use the medicine? One week

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

Did you take all the medicine you obtained? Yes ☒ No ☐

6. If you did not go to a Health Care Provider but thought that you were injured by the exposure, did you do anything to alleviate your injury, including any herbal or home remedies? Yes ☒ No ☐
If yes, what did you do? Medicinal teas

7. What specific type(s) of bodily illness or injury do you allege were caused by your exposure to the "Plan Colombia" herbicide?
Allergy, fever, headache

8. Do you believe you have an increased risk of future injury or harm (which has not yet appeared on or in your body) as a result of your alleged exposure to the "Plan Colombia" herbicide? Yes ☐ No ☒

If yes, please explain what future health risks you believe you face, why you think this would be affiliated with "Plan Colombia", and identify any Health Care Providers or other people who have told you this and set out what each such person (except your attorneys) said to you about future injury or harm.
N/A

F. **For all plaintiffs claiming damage to crops** from the alleged exposure, please also answer the following questions **about each instance of alleged exposure** (use additional sheets if necessary):

1. Where was your field of crops (identify by distance and direction from your home)?
10 meters behind my house

What was the date and time of day your crop(s) were exposed to the "Plan Colombia" herbicide?
Four years ago, about 11am

3. How close is that field to the border between Colombia and Ecuador? km or10 meters

4. Please mark a small circle ("0") on the attached map to show where your exposed field was and mark the date of the alleged exposure by each "O." Have you marked the map?
Yes ☐ No ☒
If no, why not? Not able to locate land on the map

5. Do you own the land where your crops were growing? Yes ☒ No ☐

If not, who owned the land when the spraying took place? N/A

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

6. How big was your field or patch of crops exposed to the herbicide? 1 hectare
What kinds of crops were planted there? Cocoa beans, plantain, yucca, sugar cane

7. How long after the exposure did you notice injury to the crops and what did you first see when the damage began? right away

How long did it take for the injury to be complete? two days

What was the end result of the alleged exposure? (Describe what percentage of your crop was damaged or destroyed) All of the crops were lost

8. Did you sell or trade the crops that remained in your field after the alleged exposure? Yes ☒ No ☐

If yes, to whom? N/A

If yes, did you tell the buyer that you believed the crop had been exposed to a "Plan Colombia" herbicide? Yes ☐ No ☐
N/A

9. How soon after the alleged exposure did you plant new crops in the same field? The land is no good for agriculture now

10. Why do you believe your crops were damaged by the "Plan Colombia" herbicide? The fumigations destroy everything

11. What kinds of pesticides and/or herbicides did you use on the same crops before their alleged exposure to the "Plan Colombia" herbicide? No

12. Where did you buy the pesticides and/or herbicides that you used?
(Include name and address of the supplier.)
N/A

G. **For all plaintiffs claiming injuries to farm animals or pets**, please also answer the following questions **about <u>each</u> instance of alleged exposure** (use additional sheets as necessary):

1. What kind of animals were exposed? Pigs, hens, turkeys, ducks

2. Where were your animals when they were allegedly exposed (identify by distance from your home)? On the farm

3. How close was this to the Colombian-Ecuadorian border? 10 meters

4. Please place a "?" on the attached map to show where your animals were at the time of their alleged exposure and put the date(s) of exposure by each "?".

   Have you marked the map in this way? Yes ☐ No ☒

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If no, why not? Not able to locate land on the map

5. How long after the exposure did it take for your animals to get sick? Severl days after they began to die

6. What happened to the exposed animals? (Identify for each kind of animal: how many died; how many got sick but survived; how many were unaffected)
Seven pigs, 20 hens, 10 turkeys and eight ducks died

7. For the animals that died, did a veterinarian, a professional or other person examine the corpses to determine the cause of death? Yes ☐ No ☒

If yes, who was this, when did it happen, and what did he/she tell you? (Identify by name, title, and business address) N/A

If yes, when did this person examine the animal corpses in relation to when they died?
N/A

8. For the animals that got sick but survived, did a veterinarian, a professional or other person examine and diagnose the sick animals?
Yes ☐ No ☒

If yes, who came, when did they come, and what did they tell you? (Identify by name, title, and business address)
N/A

9. Did anyone collect blood samples or other tissue samples from your animals (dead or alive)? Yes ☐ No ☒
If yes, who took the samples? (Identify name, title and business address)
N/A

If yes, did you get copies of any results from the tests done on the animal blood or tissue samples? Yes ☐ No ☒

If you got written results, please attach them to your answers to these questionnaires.

10. Why do you believe that your animals' illness or death was caused by the "Plan Colombia" herbicide?
The animals began to die after the fumgiations

H. Reports to Third Parties.

1. Other than the Health Care Providers or animal care professionals identified above, did you complain to anyone or to any organization (government or non-government) about the alleged spraying of herbicide?
Yes ☐ No ☐

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If yes, whom did you speak with and when did you do this? No

If yes, what did you say to this person or organization? N/A

What did the person or organization say back to you? N/A

Did that person or organization take samples of your blood or urine due to your alleged exposure to the "Plan Colombia" herbicide? Yes ☐ No ☒

If yes, who did this and when did it happen? N/A

VI. YOUR MEDICAL BACKGROUND

A. Check the medical conditions that you have *at the present time* and the conditions that you have had *at any time in the past.*

Condition	I have now	I have had in the past
Cancer	☐	☐
If cancer, what kind?		
Heart disease or heart attack	☐	☐
Angina, chest pain	☐	☐
Brain tumor	☐	☐
Epilepsy	☐	☐
Diabetes	☐	☐
Liver disease	☐	☐
Pancreatitis	☐	☐
Polio	☐	☐
Malaria	☐	☐
Dysentery	☐	☐
Asthma or other respiratory illness, shortness of breath	☐	☐
Blood clots or abnormalities of blood vessels	☐	☐
Anemia or other blood disorders	☐	☐
High blood pressure	☐	☐

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AIDS or HIV-positive test results	☐	☐
Medical condition	☐	☐
Arthritis	☐	☐
Kidney disease or transplant	☐	☐
Dengue fever	☐	☐
Cholera	☐	☐
Changas	☐	☐
High cholesterol	☐	☐
Influenza	☐	☐
Diarrhea	☐	☒
Infections (bacterial or fungal)	☐	☐
Measles	☐	☐
Chicken pox	☐	☐
Mumps	☐	☐
Diptheria	☐	☐
Whooping cough	☐	☐
Scarlet fever	☐	☐
Leishmaniasis	☐	☐
Onchocerciasis	☐	☐
Alcoholism	☐	☐
Malnutrition	☐	☐
Migraine headaches	☐	☐
Fainting or serious dizziness	☐	☐
Medical condition	☐	☐
Osteoporosis	☐	☐
Broken bones	☐	☐
Skin rash or skin irritation	☐	☒

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B. For each of the conditions that you checked above, please fill out the information below:

Condition No. 1

Date of onset: I don't remember
Did you see a Health Care Provider (as defined on page 2 above) about this condition?
Yes ☒ No ☐

If yes, who did you see? (include name and address) Nurse Maria Cevallos, Virgen de las Lajas Medical Center

What did the Health Care Provider tell you about the condition?
Caused by the herbicide

Did the Health Care Provider give you drugs or therapy? Yes ☒ No ☐

If yes, what kind? Pills, rehydration fluids

Did you take the drugs prescribed for you? Yes ☒ No ☐

Condition No. 2

Date of onset: I don't remember
Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☒ No ☐

If yes, who did you see? (include name and address) Nurse Maria Cevallos, Virgen de las Lajas Medical Center

What did the Health Care Provider tell you about the condition?
Caused by the herbicide

Did the Health Care Provider give you drugs or therapy? Yes ☒ No ☐

If yes, what kind? Creams and pills

Did you take the drugs prescribed for you? Yes ☒ No ☐

Condition No. 3

Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐

If yes, who did you see? (include name and address)

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What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

Condition No. 4
Date of onset:

Did you see a Health Care Provider as defined on page 2 above) about this condition? Yes ☐ No ☐
If yes, who did you see? (include name and address)

What did the Health Care Provider tell you about the condition?

Did the Health Care Provider give you drugs or therapy? Yes ☐ No ☐

If yes, what kind?

Did you take the drugs prescribed for you? Yes ☐ No ☐

[Translators: Use this field to describe further medical conditions if there are more than 4, using same format:]

NOTE: Attach additional sheets of paper if you have more than 4 conditions to describe.

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C. Have you had any surgeries in the last 20 years? Yes ☐ No ☒
If yes, *when? N/A*
For what? N/A

If yes, who performed the surgery? (include name and address)
N/A

D. Drug and Medicine Use:

Do you take any drugs and/or medicines on a regular basis, including plants, herbs, roots or traditional remedies (ancestral) for medicinal uses? Yes ☐ No ☒

If yes, please list all of the drugs and medicines (including plants, herbs, roots or traditional remedies) that you take at this time: N/A

Have you formerly taken drugs and/or medicines (including plants, herbs, roots or traditional remedies) on a regular basis that you do not take now? Yes ☐ No ☒

If yes, please list all such drugs and/or medicines and identify *when you* took them:
N/A

F. History of the Use of Tobacco and Similar Products:

Have you ever smoked cigarettes? Yes ☒ No ☐

Do you currently smoke cigarettes? Yes ☒ No ☐

If yes, please fill in: I have smoked a cigarette from time to time packs or cigarettes per day for
30 years, of the following brands of cigarettes: Lider

If you smoked earlier but do not now, please fill in: I stopped smoking in
Before that, I smoked N/A packs or N/A cigarettes per day for N/A years, of the following brands of cigarettes: N/A

Have you ever smoked cigars or pipe tobacco? Yes ☐ No ☒

If you currently smoke cigars and/or a pipe, please fill in: I presently smoke (fill in number of) N/A cigars and/or N/A pipes per day.

If you smoked cigars or pipes earlier but do not now, please fill in: I stopped smokingN/A (fill in "cigars" or "pipes" or "both") in (date) N/A

Before that I smoked (fill in number) N/A per day.

Have you ever smoked other substances based on ancestral custom or personal preference? Yes ☐ No ☒

If yes, identify what you smoked, *when* you started, and how long you have smoked

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

it. N/A

Have you ever chewed tobacco or similar chewing material? Yes ☐ No ☒

If yes, what was it, *when* did you begin to chew it, and how long have you done this?
N/A

G. Drinking History:

Do you currently drink alcohol of any kind? Yes ☐ No ☒

If yes, how many drinks per week do you consume? From time to time, a glass per week

If you do not drink alcohol now but you did in the past, how many drinks per week did you consume in the past? N/A
When was this? N/A

Do you drink other fermented beverages that contain a smaller amount of alcohol?
Yes ☐ No ☒

If yes, explain how much of this you drink and when you have consumed it. N/A

H. Have you ever missed work for more than 2 weeks straight for reasons related to your health in the last 20 years? Yes ☐ No ☒ If yes, *when?* N/A

If yes, please state the dates you missed work, your employer at the time, and the health condition that caused your absence from work:
N/A

Did you see a Health Care Provider about the health problem that caused you to miss work? Yes ☐ No ☒

If yes, please identify the Health Care Provider's name, address and *when you* visited that provider. N/A

I. In addition to the Health Care Providers identified in the preceding answers in this Questionnaire, have you gone to any more Health Care Providers (as defined on p. 2) in the last twenty (20) years? Yes ☐ No ☒

If so, please provide the following information:

Date	Name and Address of	For what illness or	What diagnosis and treatment did you

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

	Health Care Provider	injury?	receive?

J. Reproductive History (To be answered by all wives and mothers; to be answered by husbands and fathers only if they are filling out this Questionnaire for their wives):

Have you (or your wife if a husband is answering this question) ever had a miscarriage? Yes ☐ No ☒
If yes, please state how many times and when each happened.

Have you ever experienced any still-births or deaths of your children shortly after they were born? Yes ☐ No ☒

If yes, please state how many times and *when* each happened.

If yes, did you see a Medical Care Provider about the still-births or infant deaths? Yes ☐ No ☒

If yes, please identify who you saw, *when* you saw them, and what they told you about each such incident?

VII. SPECIFICATION OF DAMAGES BEING SOUGHT AND SUPPORTING DOCUMENTATION

A. What *amount* of damages are you seeking?

For physical injury to yourself:	$yes
For damage to your crops:	$yes, not sure of the specific amount
For damage to your animals:	$yes 2480
For lost wages or income:	$no
For anything else? If so, describe:	$no
N/A	
TOTAL	$

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

B.

C. Do you seek damages to reimburse you for medical bills and expenses that you paid? Yes ☐ No ☒

If yes, how much did you pay? $N/A

If yes, did you pay in cash or with something else? (If something else, describe what it was): N/A

D. Do you seek damages to reimburse you for *other* out-of-pocket expenses or fees? Yes ☐ No ☒
If yes, how much in expenses or fees did you pay, how did you pay then, and what were the payments for? N/A

E. Do you seek damages for lost wages or loss of time from work? Yes ☒ No ☐

If yes, *when* did this happen? (List all instances)
Not sure of the exact amount

If yes, how long were you unable to work? N/A

If yes, how much in wages or income did you lose? $N/A

How do you calculate this amount? N/A

If you claim lost wages, identify the employer(s) (by listing each name and address) who did not pay you for the relevant period of time. If self-employed, describe the basis for your alleged lost earnings.

Did you try to find new work during the period of time for which you seek lost wages or income? Yes ☐ No ☒

If yes, where did you apply or inquire and what happened following your application or inquiry? N/A

F. Do you seek damages for the loss of legal crops? Yes ☒ No ☐

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If yes, please provide the following information:

Kind of Crop	Amount of crop that died / was lost	Monetary Value(s)you place on the Crops that Died	Basis for your Value(s)
Cocoa beans	300 trees	Doesn´t know	Market price
Yucca	Two meters	Doesn´t know	
Plantain	1500 meters	Doesn´t know	
Sugar cane	40 plants	Doesn´t know	

G. Do you seek damages for farm animals or pets that died?

Yes ☒ No ☐

If yes, please provide the following information:

Kind of Animal	Number that Died	Monetary value(s) you place on the dead animals	Basis for your Value(s)
Pigs	7	1400	Market price
20 hens	20	200	Market price
10 turkeys	10	800	Market price
8 ducks	8	80	Market price

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

VIII. WITNESSES TO YOUR CLAIMS

Please identify all persons whom you believe possess information concerning your alleged exposure to the "Plan Colombia" herbicide and/or the alleged injuries or other harm resulting to you from the exposure *(other than your attorneys and the Health Care Providers identified elsewhere in this Questionnaire):*

Name and address: [redacted], Mataje Community

(What knowledge does this person have?) Witness to the fumigations

Name and address: [redacted], Mataje Community

(What knowledge does this person have?) Witness to the fumigations

Name and address:

(What knowledge does this person have?)

Name and address:

(What knowledge does this person have?)

IX. DOCUMENT REQUESTS AND AUTHORIZATIONS

A. **If you are claiming personal injuries to yourself:**

1. Please provide a copy of any and all medical and other documents (as defined on p. 2), including records, test results and all medical bills *in your or your attorney's possession* that relate to any visit you made or any treatment you received from a Health Care Provider (as defined on p. 2) in the last twenty (20) years.

2. Please complete and sign a copy of the Exhibit A "Authorization for Release of Medical Records" for each Health Care Provider you have

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

identified in your responses to this Questionnaire. Deliver the Authorizations to each Health Care Provider identified on the form and give the documents that the Providers produce to you (along with a copy of the corresponding Authorization for Release given or sent to each Provider) to your attorney so that these medical records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit A "Authorization for Release of Medical Records" with the name of the Medical Care Provider left blank for future use if the defendants establish that you saw or were treated by additional Medical Care Providers in the last twenty (20) years.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

B. If you are claiming reimbursement for any medical expenses or other out-of-pocket expenses related to your alleged exposure:

1. Please attach a copy of the receipts, bills, invoices or any other documents in your or your attorney's possession that demonstrate the amount of the expenses for which you seek reimbursement.

C. If you are claiming lost wages or earnings:

1. Please attach copies of any and all documents in your possession about the total amount of salary or wages that was paid to you and the total amount of any other income that was generated by you for each year in the last ten (10) years. This shall include but not be limited to: pay-stubs, cancelled checks, income tax forms or other documents that disclose income received by you each year for the last ten (10) years from any source.

2. Please complete and sign the attached Exhibit B "Authorization for Release of Employment Records" for each of your employers in the last ten (10) years as identified in your answers to this Plaintiffs' Questionnaire. Deliver the Authorizations to each such employer identified on the form and give the documents that the employers produce to you (along with a copy of the corresponding Authorization) to your attorney so that these records may be delivered to the defendants' counsel along with your responses to this Questionnaire.

3. Please sign and produce an additional copy of the Exhibit B "Authorization" with the name of the employer left blank for future use if the defendants establish that you had additional employers in the last ten (10) years.

D. If you are claiming loss based on injury or damage to your legal crops:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the land and/or that you owned the crops on that land, which you claim were destroyed, (ii) the amount of crops that were destroyed, and (iii) the monetary value of the destroyed crops.

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

E. If you are claiming loss based on injury to farm animals or pets:

1. Please attach copies of any and all documents that demonstrate or support: (i) that you owned the animals you claim were injured or killed, (ii) the number of animals that died, (iii) the monetary value of the animals that died, and (iv) any other expenses you are claiming relative to this alleged loss.

F. If you are claiming any other kind of loss or damage in this case:

1. Please attach copies of any and all documents that demonstrate or support such other claimed loss or damage and the *amount* of damages you seek for that loss or damage.

Annex 74

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

X. VERIFICATION

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on (DATE) September 18th, 2008 (Signature)
Plaintiff's Signature
Print Plaintiff's Name: [redacted]

(Signature)
Signature of witness attesting to Plaintiff's Signature
Witness's name: [redacted]
Date: September 18th, 2008
Witness's Address: Quito, Ecuador
Witness's Relationship to Plaintiff: None

Plaintiff's Picture

Plaintiff's Fingerprint

Questionnaire respondent is the same person as: EM, Vol. IV, Annex 220, Witness 37

CERTIFICATE OF ACCURACY OF TRANSLATION

I _Kathleen Sue Nygard_ affirm that I am fluent in English and Spanish and that the translation of the attached documents are true and accurate.

(Kathleen Sue Nygard)