INTERNATIONAL COURT OF JUSTICE

CERTAIN ACTIVITIES CARRIED OUT BY NICARAGUA IN THE BORDER AREA

(COSTA RICA V. NICARAGUA)

COUNTER-MEMORIAL OF THE REPUBLIC OF NICARAGUA

ON COMPENSATION

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CHAPTER 1: INTRODUCTION

1.1 Pursuant to the Order of the Court dated 2 February 2017, which fixed the time limits for the filing of written pleadings in relation to compensation, Nicaragua respectfully submits this Counter-Memorial in response to Costa Rica's Memorial of 3 April 2017. As provided in Article 49(2) of the Rules of Court, Nicaragua's Counter-Memorial answers the factual and legal arguments in the Memorial and, in doing so, identifies points of agreement and disagreement between the Parties.

I. Procedural History

1.2 On 16 December 2015, the Court issued its Judgment on the merits of this case. It ruled that Costa Rica had sovereignty over a disputed area of uninhabited wetland near the mouth of the San Juan River, which it defined as comprising "some 3 square kilometres between the right bank of the disputed *caño*, the right bank of the San Juan River up to its mouth at the Caribbean Sea and the Harbor Head Lagoon."[1]

1.3 In light of its ruling on sovereignty, the Court further decided that Nicaragua had breached its international obligations "by excavating three *caños*

[1] Provisional Measures Order of 8 March 2011, para. 55; Judgment of 16 December 2015, para. 69.

and establishing a military presence" in the disputed territory.[2] On this basis, the Court found that Nicaragua "has the obligation to compensate Costa Rica for material damages caused by" those acts,[3] and ordered that, "failing agreement between the Parties on this matter within 12 months from the date of t[he] Judgment, the question of compensation due to Costa Rica will, at the request of one of the Parties, be settled by the Court."[4]

1.4 Nicaragua has fully accepted the Court's Judgment, including its obligation to provide compensation in accordance with the Judgment and the relevant rules of international law.

1.5 By diplomatic note dated 7 June 2016, Costa Rica presented Nicaragua with its claim for compensation, wherein it claimed to have suffered material damages in the amount of $6,723,476.48.[5]

1.6 Nicaragua was shocked by the size of Costa Rica's claim, which it considered exorbitant. Nevertheless, acting in good faith, it promptly assembled an inter-agency team to evaluate the various elements of the claim. Nicaragua also retained experts to assist it in performing this evaluation. On the basis of their review, Nicaragua and its experts determined that many elements of Costa

[2] Judgment of 16 December 2015, para. 229(1)–(3).

[3] *Ibid.*, para. 229(5)(a).

[4] *Ibid.*, para. 229(5)(b).

[5] Letter from Costa Rica (S. Ugalde) to Nicaragua (C. Argüello Gómez), reference ECRPB-043-16, 7 June 2016, p. 2. Costa Rica Memorial on Compensation ("CRMC"), Vol. II, Annex 35 (at p. 598).

Rica's claim lacked supporting documentation. Accordingly, on 18 November 2016, Nicaragua requested that Costa Rica supply supporting documentation to substantiate its claim.[6] Costa Rica responded on 14 December 2016 by providing some additional materials.[7]

1.7 On 16 January 2017, before Nicaragua or its experts had an opportunity to fully analyze the materials that Costa Rica had presented the previous month, Costa Rica requested that the Court settle the question of compensation.[8]

II. Overview of the Counter-Memorial

1.8 This Counter-Memorial consists of five Chapters, followed by Nicaragua's Submissions.

1.9 **Chapter 2**, which follows this Introduction, sets out the facts relevant to compensation. It begins by describing the works that were undertaken by Nicaragua in the disputed area, which were confined to clearing a small channel, or *caño*, in 2010, and two even smaller *caños* in 2013, as well as associated felling of trees. As can be seen in satellite imagery taken since the works were completed, each *caño* soon re-filled with sediment, both as a result of

[6] Letter from Nicaragua (C. Argüello Gómez) to Costa Rica (S. Ugalde), reference HOL-EMB-280, 18 November 2016, p. 2. CRMC, Vol. II, Annex 37 (at p. 608).

[7] Letter from Costa Rica (S. Ugalde) to Nicaragua (C. Argüello Gómez), reference ECRPB-148-16, 14 December 2016. CRMC, Vol. II, Annex 38.

[8] *See* CRMC, para. 1.8.

natural processes and due to the installation of a small dyke in 2015. The surrounding areas also quickly re-vegetated as a result of natural processes. After the *caños* refilled with sediment, and the vegetation restored itself, the only remaining consequence of Nicaragua's works was the loss of felled trees. The imagery shows a total of a 180 trees felled.

1.10 **Chapter 3** addresses the law applicable to Costa Rica's compensation claim. It begins by reviewing the scope and nature of compensation owed to Costa Rica in light of the Court's Judgment, which limits compensation to "material damages" caused by Nicaragua's wrongful acts in the disputed territory. The Chapter then shows that Costa Rica is entitled to receive compensation for expenses or losses only insofar as it can prove they were (a) actually incurred, (b) bore a direct and certain causal relationship to Nicaragua's unlawful activities, and (c) are quantified on the basis of evidence rather than guesswork or speculation. Costa Rica bears the burden of proving each of these elements with clear and convincing evidence. The Chapter closes by showing that Costa Rica is not entitled to compensation for losses or expenses that it incurred as a result of its own voluntary acts.

1.11 **Chapters 4 and 5** respond to the specifics of Costa Rica's compensation claim.

1.12 In particular, **Chapter 4** addresses the claims that are advanced in relation to the alleged environmental impacts of Nicaragua's works, for which Costa Rica claims $3,076,416.84 in compensation. Among other things, the Chapter shows that the technical report upon which Costa Rica relies for its environmental valuation, which was authored by Fundación Neotrópica, a Costa Rican non-governmental organization, is permeated with serious flaws that result in a dramatically inflated valuation.

1.13 Those flaws are explained in two expert reports annexed to this Counter-Memorial:

- An Expert Report co-authored by *Professor Cymie Payne* of Rutgers University, who served as legal advisor to the environmental claims panel of the United Nations Compensation Commission ("UNCC"); and *Robert Unsworth* of Industrial Economics, Inc., which served as the principal technical advisor to the UNCC's environmental claims panel.
- An Expert Report by *Professor G. Mathias Kondolf* of the University of California, Berkeley, who is a fluvial geomorphologist and expert in environmental river management and restoration.

1.14 These Expert Reports demonstrate that the fundamental premise of the Fundación Neotrópica valuation is flawed since it is based upon an approach

that is inappropriate for valuing environmental damage. For that reason, Fundación Neotrópica's approach is not used by domestic environmental authorities to value environmental damage.

1.15 The Expert Reports further show that Fundación Neotrópica implements its own inapposite approach incorrectly. Among other things, Fundación Neotrópica arbitrarily assigns monetary values to alleged "ecosystem services" that were not actually impaired. It also dramatically over-estimates the commercial value of the trees that were felled by illogically assuming that the same trees could be felled every year for 50 years. Further, Fundación Neotrópica fails to properly account for the area's recovery. When these and other errors are corrected, the valuation shrinks to less than 3% of Costa Rica's claimed amount. When the damage is valued using the appropriate technique, the amount is even less.

1.16 **Chapter 5** responds to Costa Rica's claim for compensation for the alleged "monitoring" that it claims to have carried out. In particular, the Chapter shows that Costa Rica's principal claim, in excess of $3 million for wages paid to Costa Rican police, is not compensable because, *inter alia*, those forces were deployed to provide security against any future hypothetical attempts by Nicaragua to occupy Costa Rican territory, including an imagined Nicaraguan "invasion." They were not deployed to remedy any environmental harm allegedly caused by Nicaragua, or because of Nicaragua's presence in the disputed area.

Nor, contrary to Costa Rica's attempt to suggest otherwise, were they dispatched because of the Court's Provisional Measures Order of 8 March 2011, which post-dates their deployment. The Chapter further shows that, in any event, their wages are not compensable since Costa Rica simply relocated existing personnel from elsewhere in Costa Rica. Finally, Chapter 5 demonstrates that Costa Rica's various other monitoring-related claims are not compensable and/or are unsupported by evidence.

1.17 The Counter-Memorial concludes with Nicaragua's Submissions, to the effect that Costa Rica is entitled to no more than $188,504 for material damages caused by Nicaragua's wrongful acts.

CHAPTER 2: NICARAGUA'S WORKS AND THEIR IMPACTS

2.1 In this Chapter, Nicaragua sets out the facts relevant to Costa Rica's compensation claim. Section I describes the ecology of the disputed area prior to Nicaragua's works, where much of the land had been converted to pasture for livestock. Section II describes the works that Nicaragua undertook in connection with the *caño* it cleared in 2010, a project that involved the felling of a reported 180 trees. It further shows that by the middle of the following year, the channel had re-filled with sediment; and, due to the dynamic nature of the environment, the surrounding areas quickly revegetated. Finally, Section III describes the two smaller *caños* that were cleared in 2013. One was so inconsequential that the Ramsar Secretariat determined that it required no remediation; the other was remediated by a small dyke constructed in 2015. As with the 2010 *caño*, the areas surrounding the 2013 *caños* rapidly revegetated.

I. The State of the Disputed Area Prior to Nicaragua's Works

2.2 The evaluation of environmental impacts to the disputed area must begin with a description of its baseline conditions prior to Nicaragua's works. Since no description of its pre-existing state is presented in Costa Rica's Memorial or in its accompanying technical reports, it falls to Nicaragua to do so.

2.3 At the time Nicaragua commenced its works in October 2010, the disputed area was uninhabited, but it was hardly pristine. To the contrary, Costa

Rica had previously permitted agricultural activities to be conducted in the area, including the clearing of land (and trees) for the creation of pastures for cattle-raising. Costa Rica admitted this in a report it presented to the Ramsar Secretariat on 28 October 2011.[9] There, Costa Rica characterized the area as a place that had undergone "an expansion of the agricultural frontier to make way for sparsely-forested pastures,"[10] and observed the presence of "an area of livestock pasture extending to the east to an area of flooded forest."[11]

2.4 This description is consistent with Ramsar's own characterization of the Caribe Noreste Ramar site that encompasses the disputed area, where Ramsar observed that "[l]and use is principally given over to the development of agricultural and livestock rearing activities, tourism and fishing."[12] According to Costa Rica's own estimate, 37 percent of the disputed area was *not* forested, with much of the area devoted to cattle-grazing.[13] The rest consists primarily of a geomorphically dynamic area of flooded forest and swamp, where naturally-

[9] Ministry of Environment, Energy and Telecommunications of Costa Rica, Technical Report: Evaluation and assessment of the environmental situation in the North-eastern Caribbean Wetland (Humedal Caribe Noreste) pursuant to the Order of the International Court of Justice, 28 October 2011 ("Costa Rica Technical Report to Ramsar Convention Secretariat (2011)"). CRM, Vol. IV, Annex 155.

[10] *Ibid.*, p. 56.

[11] *Ibid.*, p. 13.

[12] Ramsar Advisory Mission (RAM) No. 69, Report: North-eastern Caribbean Wetland of International Importance (Humedal Caribe Noreste), Costa Rica, 17 December 2010. CRM, Vol. IV, Annex 147 (at p. 87).

[13] Costa Rica Technical Report to Ramsar Convention Secretariat (2011), p. 16. CRM, Vol. IV, Annex 155 (at p. 238).

formed *caños* come and go, and sedmient is continually being deposited and redistributed.[14]

II. The 2010 *Caño*

2.5 In October 2010, Nicaragua undertook to manually clear a small channel (the 2010 *caño*) connecting the San Juan River to Harbor Head Lagoon.[15] For approximately two-thirds of its length, the *caño* traversed unforested land that Costa Rica characterized as "livestock pasture."[16]

2.6 The works involved removing 180 trees[17] of common species in two non-contiguous patches: a 2-hectare bloc located directly adjacent to a large expanse of cattle grazing pasture; and a 0.48-hectare patch adjacent to Harbor Head Lagoon.[18] This impacted a mere 0.003 percent of the Humedal Caribe Noreste Ramsar site in which the disputed area is located.[19]

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[14] Ramsar Advisory Mission No. 77, Wetland of International Importance, 10–13 August 2014 ("2014 Ramsar Report"), p. 6. Attachment CR-5 to Letter from Costa Rica (S. Ugalde) to the International Court of Justice (P. Couvreur), reference ECRPB-090-14 with attachments, 22 August 2014. CRMC, Vol. II, Annex 22 (at p. 362). Report of G. Mathias Kondolf, PhD: Review of Costa Rica's Claims for Compensation in the Río San Juan Delta (May 2017) ("Kondolf Report (2017)"), pp. 2-3. Nicaragua Counter-Memorial on Compensation ("NCMC"), Vol. I, Annex 2.

[15] *See* NCM, paras. 5.107, 5.194–5.196.

[16] Costa Rica Technical Report to Ramsar Convention Secretariat (2011), p. 13. CRM, Vol. IV, Annex 155 (at p. 235).

[17] NCM, paras. 2.67, 5.212; *see also* Hearing on Provisional Measures, CR 2011/2, paras. 44 (at pp. 45–46), 54 (at p. 50) (Reichler, and sources cited therein).

[18] Costa Rica Technical Report to Ramsar Convention Secretariat (2011), p. 44. CRM, Vol. IV, Annex 155 (at p. 266). The 180 removed trees reported by Nicaragua is consistent with the 197 trees reported by Costa Rica. *See* SINAC, Appraisal of maximum average age of the trees felled in primary forest areas in the Punta Castilla, Colorado, Pococí and Limón sectors of Costa Rica, as

2.7 The authorization for the project specified that the work could use only hand-held tools, and that the *caño* could not exceed maximum dimensions of 1,560 metres in length and 30 metres in width.[20] The actual work, according to Costa Rica's calculations, resulted in a *caño* that was 350 metres shorter than authorized.[21] Its maximum width never exceeded 15 metres.[22]

2.8 Due to the San Juan River's heavy sediment load and the natural depositional tendencies of the area, the *caño* quickly filled with sediment.[23] The width reduced from an average of 10 metres in mid to late November 2010[24] to an average of 6 metres by late December 2010.[25] The depth also declined to only 1 metre on average by late December 2010.[26]

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a result of the Nicaraguan Army's occupation for the apparent restoration of an existing canal, December 2010. CRM, Vol. IV, Annex 145 (at p. 49).

[19] *See* The Annotated Ramsar List of Wetlands of International Importance: Costa Rica, 10 January 2000. CRM, Vol. IV, Annex 141 (at p. 18) (indicating that the Humedal Caribe Noreste covers a total area of 75,310 hectares).

[20] Ministry of the Environment and Natural Resources (MARENA), Administrative Resolution No. 038-2008-A1, 30 October 2009. NCM, Vol. III, Annex 34 (at pp. 92–93). *See also* NCM, para. 5.107.

[21] Costa Rica Technical Report to Ramsar Convention Secretariat (2011), p. 15. CRM, Vol. IV, Annex 155 (at p. 237).

[22] *See* Report of Professor Colin Thorne, October 2011 ("Thorne Report (2011)"), pp. iv, I-36. CRM, Vol. I, Appendix 1 (at pp. 311, 360).

[23] Kondolf Report (2017), pp. 2-3. NCMC, Vol. I, Annex 2.

[24] *See* Thorne Report (2011), p. I-36 (citing UNITAR/UNOSAT (2011a) report). CRM, Vol. I, Appendix 1 (at p. 360); *see also* MARENA Technical Monitoring Report from Inspection Conducted 24–26 November 2010. NCM, Vol. II, Annex 14 (at p. 291).

[25] Hearing on Provisional Measures, CR 2011/2, Doc. No. 17, Second Certification of Lester Antonio Quintero Gómez, 23 December 2010.

[26] *Ibid.*

2.9 Soon thereafter, the *caño* completely closed. Costa Rica's expert, Professor Colin Thorne, noted in his First Report that "the excavated portion of the [2010] *caño* silted up"[27] and "clos[ed] due to siltation during mid-summer 2011."[28] He further found that the rapid sedimentation "allow[ed] areas disturbed during construction to begin a process of recovery,"[29] and that there was immediate "vegetation regrowth."[30] By July 2011, eight months after Nicaragua's works, Professor Thorne reported that "the shrubs and understory appear[ed] to be recovering from the disturbance."[31]

2.10 The area's revegetation can be seen by comparing **Figure 2.1,** which is a satellite image taken in November 2010, that is, immediately after Nicaragua's works, with **Figure 2.2,** which is an image of the same area taken in April 2015.[32] In both images, the area where trees were felled is outlined in yellow. The revegetation is readily apparent.

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[27] Written Statement by Professor Colin Thorne, March 2015 ("Thorne Written Statement (2015)"), para. 5.15.

[28] Thorne Report (2011), p. I-63. CRM, Vol. I, Appendix 1 (at p. 387). In his testimony before the Court, Professor Thorne confirmed that the *caño* was closed by mid-summer 2011 "due to a drop in water level, sand deposition in the mouth and siltation along the rest of its length. … The inlet [at the end of the *caño* connected to Harbor Head Lagoon] remained open, and is still open today. [It] is a backwater from the Harbor Head Lagoon, it has not silted, it has not closed. It is still there just as it has been for 230 years." Hearing on Merits, CR 2015/3, p. 32 (Reichler & Thorne). *See also* Kondolf Report (2017), p. 3. NCMC, Vol. I, Annex 2.

[29] Thorne Written Statement (2015), para. 5.2.

[30] Thorne Report (2011), p. I-59. CRM, Vol. I, Appendix 1 (at p. 383)

[31] *Ibid.*, p. I-56.

[32] *See also* Kondolf Report (2017), p. 3 and Appendix of imagery. NCMC, Vol. I, Annex 2.

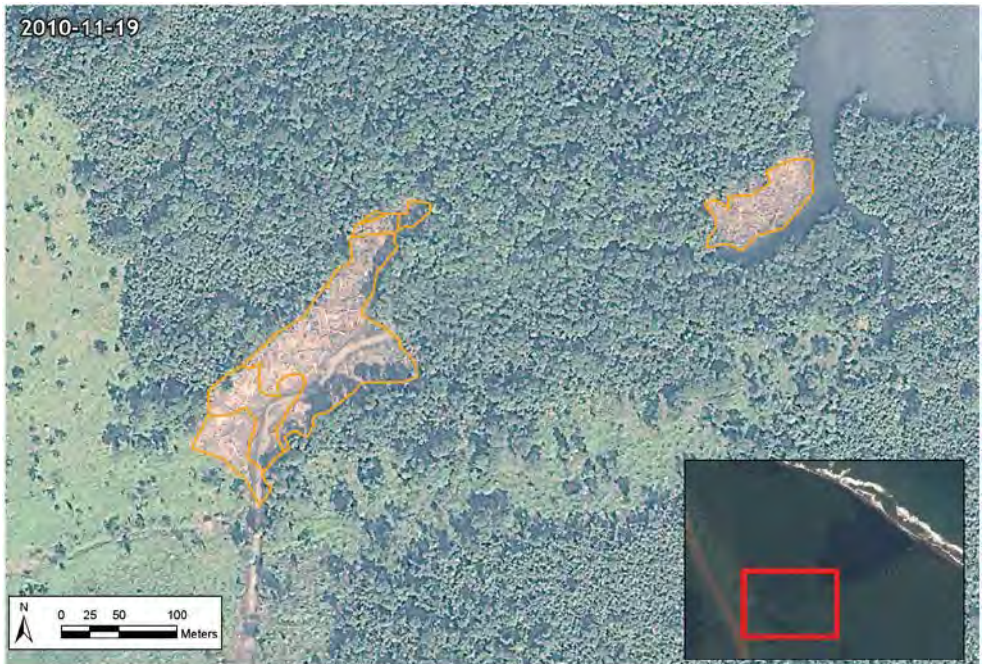

Figure 2.1: Satellite image of disputed area in the vicinity of the 2010 *caño* taken on 19 November 2010, shortly after Nicaragua's works, with felled areas outlined in yellow.

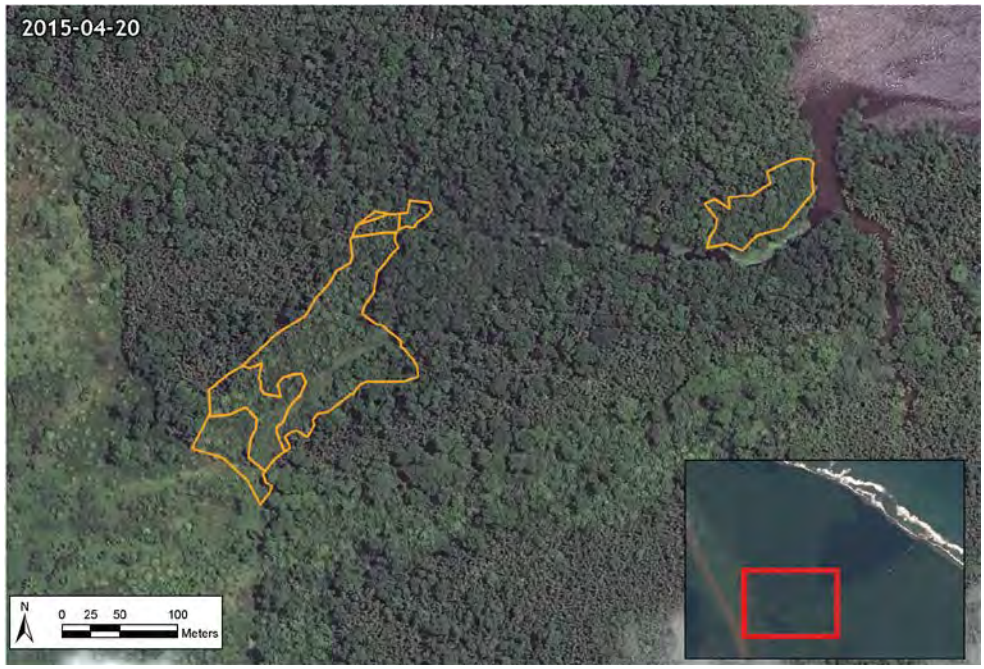

Figure 2.2: Satellite image of disputed area in the vicinity of the 2010 *caño* taken on 20 April 2015, with felled areas outlined in yellow.

2.11 **Figure 2.3** shows the same area in January 2017. By that time, the path of the 2010 *caño* had become only barely visible, and the areas where trees had been felled fully revegetated. Significantly, no remediation work on the 2010 *caño* or its environs was required or undertaken by Costa Rica.

Figure 2.3: Satellite image of disputed area in the vicinity of the 2010 *caño* taken on 17 January 2017, with felled areas outlined in yellow. Nearby areas, unaffected by Nicaragua's works, show damage from Hurricane Otto, which made landfall in late November 2016.

III. The 2013 *Caños*

2.12 In September 2013, Nicaragua excavated two small channels closer to the mouth of the San Juan River in an area that the Ramsar Secretariat characterized as "flooded grassland" and "swamp or flooded forests."[33] Professor

[33] Ramsar Advisory Mission No. 77, Wetland of International Importance, 10–13 August 2014 ("2014 Ramsar Report"), p. 6. Attachment CR-5 to Letter from Costa Rica (S. Ugalde) to the

Thorne testified that these channels were located "much further north and on land which is much younger" than the 2010 *caño*, where the "nature of the ground and the vegetation" is materially different.[34] In particular, because this land is "not as old and well established," the trees are younger than those near the 2010 *caño*.[35]

2.13 Nicaragua's works included the digging of a small trench on the sandbar at the end of the eastern *caño*. Before the end of 2013, Nicaragua filled and revegetated the trench pursuant to the Court's Order of 22 November 2013.[36]

2.14 Based on a site visit in March 2014, the Ramsar Secretariat determined that the western of the two 2013 *caños* was "not very developed" and that it merited no further attention.[37] Costa Rica concedes that it suffered no "quantifiable environmental damage" from this *caño* and does not seek any compensation in relation to it.[38]

International Court of Justice (P. Couvreur), reference ECRPB-090-14 with attachments, 22 August 2014. CRMC, Vol. II, Annex 22 (at p. 362).

[34] Hearing on Merits, CR 2015/3, p. 42 (Thorne).

[35] *Ibid.*

[36] *See* Provisional Measures Order of 22 November 2013, paras. 40, 59(2)(B); CRMC, para. 3.33(f) ("the trench dug across [the sandbar] had been filled, as had been required by the Court in its 2013 Order on Provisional Measures."); Thorne Written Statement (2015), para. 6.9 ("In November 2013, the Court instructed that the trench across the beach between the eastern *caño* and the Caribbean Sea should be back filled and revegetated. This was done and it reduced the risk of diversion of the River."). Costa Rica does not claim any compensation is owed for the trench.

[37] 2014 Ramsar Report, p. 2. CRMC, Vol. II, Annex 22 (at p. 358).

[38] *See* CRMC, para. 2.2(a) (indicating that the "material damage suffered by Costa Rica as a direct consequence" of Nicaragua's activities include only "quantifiable environmental damage caused by Nicaragua's excavation of the first *caño* in 2010-2011, and *a* further *caño* in 2013," not two *caños* in 2013) (emphasis added).

2.15 The eastern 2013 *caño* was located at "the narrowest stretch of the land between the right bank of the river and the beach at the coast."[39] Costa Rica acknowledges that it impacted no more than 0.43 hectares,[40] and that the channel was successfully remediated by constructing a small dyke in March 2015.[41] In fact, by the time work on the dyke began, the *caño* had already largely closed through natural processes.[42] As a result, the remediation project "required fewer materials than those planned in the original design."[43]

2.16 In July 2015, Costa Rican personnel monitoring the dyke "confirmed that the regeneration process ha[d] advanced in comparison to the previous overflight," which had been performed the prior month.[44] Three months later, in October 2015, Costa Rica found that "[d]ue to the growing process of natural regeneration of the site of construction of the dyke, it is no longer possible

[39] Report by the Costa Rican Ministry of Environment and Energy (MINAE), 12 August 2014, p. 1. Attachment CR-4 to Letter from Costa Rica (S. Ugalde) to the International Court of Justice (P. Couvreur), reference ECRPB-090-14 with attachments, 22 August 2014. CRMC, Vol. II, Annex 22 (at p. 323).

[40] CRMC, para. 3.11.

[41] *Ibid.*, paras. 3.41–3.42; MINAE, Report of works carried out from 26 March to 10 April 2015 within the framework of the implementation of the VI Investment Plan pursuant to Decree No. 36440-MP, 16 April 2015 ("2015 MINAE Report"), p. 26. CRMC, Vol. I, Annex 4 (at p. 228).

[42] *See* 2015 MINAE Report, p. 14 ("we observed that the sedimentation process had favoured the decrease in the depth of the [*caño*]…."). CRMC, Vol. I, Annex 4 (at p. 216). *See also ibid.*, p. 15 (reporting "visible sedimentation" along the banks of the *caño*).

[43] *Ibid.*, p. 26. *See also* Kondolf Report (2017), p. 3. NCMC, Vol. I, Annex 2.

[44] Monitoring Report, 8 July 2015, p. 151. Attachment to Costa Rica's National Commission for Risk Prevention and Emergencies Attention (CNE), Department of Reconstruction Process, Reports of expenses, 4 April 2016 ("CNE, Reports of Expenses (2016)"). CRMC, Vol. II, Annex 15 (at p. 168).

to see the dyke structure directly."[45] Costa Rica's inspection confirmed there were "no visible indications of intentional damage or erosion to the structure of the dyke, which suggests that the dyke remains whole and that it promotes the natural regeneration process."[46]

2.17 Commensurate with the minor nature of the works carried out in 2013, Professor Thorne testified that their impacts could *not* be characterized as "significant,"[47] and observed that "[v]egetation does recovery very quickly in these areas."[48] The Ramsar Secretariat likewise noted that the area in the vicinity of the *caño* has a "high capability for natural regeneration of vegetation."[49]

2.18 The closure of the 2013 *caño* and associated revegetation can be seen in **Figures 2.4–2.7**, which are satellite images taken in April 2015 (immediately after the construction of the dyke), December 2015, January 2017, and March 2017. As is readily apparent, by March 2017, the *caño* is no longer evident, and revegetation has made the previously impacted area virtually indistinguishable from other areas nearby.[50]

[45] Monitoring Report, 3 October 2015, p. 155. Attachment to CNE, Reports of Expenses (2016). CRMC, Vol. II, Annex 15 (at p. 172).

[46] *Ibid.*

[47] Hearing on Merits, CR 2015/3, p. 42 (Robinson & Thorne).

[48] *Ibid.*, p. 42 (Thorne).

[49] 2014 Ramsar Report, p. 14. CRMC, Vol. II, Annex 22 (at p. 370).

[50] *See* Kondolf Report (2017), p. 3. NCMC, Vol. I, Annex 2.

Figure 2.4: Satellite image of disputed area in the vicinity of the 2013 *caño* taken on 20 April 2015, shortly after Costa Rica completed installation of the dyke on 6 April 2015.

Figure 2.5: Satellite image of disputed area in the vicinity of the 2013 *caño* taken on 15 December 2015.

Figure 2.6: Satellite image of disputed area in the vicinity of the 2013 *caño* taken on 17 January 2017.

Figure 2.7: Satellite Satellite image of disputed area in the vicinity of the 2013 *caño* taken on 10 March 2017.

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2.19 In sum, Nicaragua's works in the disputed area caused only minor disturbances that were quickly remediated, both through natural processes and by the installation of the dyke in 2015. The only material damage caused by Nicaragua's activities was the felling of trees in the vicinity of the 2010 *caño*.

CHAPTER 3: PRINCIPLES OF DAMAGES

3.1 In this Chapter, Nicaragua sets out the principles of international law relevant to Costa Rica's claim for compensation. It begins with the terms of the Court's Judgment of 16 December 2015, which limits reparations to "material damages" caused by the activities in the disputed area that the Court determined were wrongful. The Chapter then describes the elements necessary for Costa Rica to establish an entitlement to compensation and the amount thereof.

I. The Court's Judgment of 16 December 2015

3.2 The starting point for the determination of compensation is the Court's Judgment of 16 December 2015, which held that "Nicaragua has the obligation to compensate Costa Rica for material damages caused by Nicaragua's unlawful activities on Costa Rican territory."[51]

3.3 The terms of the Judgment thus entitle Costa Rica to compensation only for "material damages." No other forms of compensation, including moral, punitive or exemplary damages, are permitted.[52] Under the applicable rules of State responsibility, the scope of material damages is limited to "damage to

[51] Judgment of 16 December 2015, para. 229(5)(a).

[52] *See* Draft Articles on Responsibility of States for Internationally Wrongful Acts, with commentaries, *Yearbook of the International Law Commission*, Vol. II, Part 2 (2001) ("ARSIWA"), Art. 36, cmt. 1 ("The qualification 'financially assessable' is intended to exclude compensation for what is sometimes referred to as 'moral damage' to a State, i.e. the affront or injury caused by a violation of rights not associated with actual damage to property or persons…").

property or other interests of the State . . . which is assessable in financial terms."[53]

3.4 The Judgment further limits the *ratione materiae* and *ratione loci* of compensation to losses or expenses caused by the activities in the disputed area that the Court determined were unlawful. No compensation is owed for any other activities.

3.5 The limitations set out in the Court's Judgment reflect the principle that the purpose of compensation is to "address the actual losses incurred as a result of the internationally wrongful act. . . . It is not concerned to punish the responsible State, nor does compensation have an expressive or exemplary character."[54] This principle was recognized long ago by the United States-Germany Claims Commission in the *Lusitania* cases, which concluded that "no exemplary, punitive, or vindictive damages can be assessed."[55] As the Eritrea-Ethiopia Claims Commission observed, "compensation has a limited … role" which is "remedial, not punitive."[56]

3.6 It follows from this principle that compensation must be proportionate to the actual injury suffered. It should not create a windfall for the

[53] *Ibid.*, Art. 31, cmt. 5.

[54] *Ibid.*, Art. 36, cmt. 4.

[55] *Opinion in the Lusitania Cases*, Mixed Claims Commission (United States and Germany), 1 November 1923 – 30 October 1929, reprinted in 5 UNRIAA 1 (2006), p. 36.

[56] *State of Eritrea and Federal Democratic Republic of Ethiopia*, Eritrea-Ethiopia Claims Commission, Final Award, Eritrea's Damages Claims, 17 August 2009, para. 26.

receiving State, because its aim is only to "offset, as far as may be, the damage suffered by the injured State as a result of the breach."[57] As explained in *Lusitania*, "[t]he remedy should be commensurate with the loss."[58]

II. Compensation May Be Awarded Only When It Is Proven That a Specific Injury Has a Direct and Certain Causal Relationship to an Internationally Wrongful Act

3.7 The Court in the *Ahmadou Sadio Diallo* case, taking "into account the practice in other international courts, tribunals and commissions," explained that determining whether compensation is required, and if so, in what amount, involves a three-step process. In particular:

> As to each head of damage, the Court will consider whether an injury is established. It will then 'ascertain whether, and to what extent, the injury asserted by the Applicant is the consequence of wrongful conduct by the Respondent', taking into account 'whether there is a sufficiently direct and certain causal nexus between the wrongful act . . . and the injury suffered by the Applicant.' … If the existence of injury and causation is established, the Court will then determine the valuation.[59]

Each of these steps, including how they have been applied to claims for environmental harm, is addressed below.

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[57] ARSIWA, Art. 36, cmt. 4.

[58] *Opinion in the Lusitania Cases*, p. 39.

[59] *Ahmadou Sadio Diallo (Republic of Guinea v. Democratic Republic of the Congo), Compensation, Judgment, I.C.J. Reports 2012*, p. 324, paras. 13–14 (quoting *Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia and Herzegovina v. Serbia and Montenegro), Judgment, I.C.J. Reports 2007*, p. 43, para. 462 (alteration in original)).

3.8 First, because a State is only obligated to provide compensation for "the injury caused by [an] internationally wrongful act,"[60] compensation may not be awarded in the absence of an injury.[61] The existence of an injury cannot merely be asserted by the claimant or assumed by the Court; it must be proven with competent evidence. For that reason, in *Diallo*, the Court rejected claims for compensation on the basis that Guinea had not presented sufficient evidence that the alleged loss had in fact been incurred.[62]

3.9 The United Nations Compensation Commission applied this rule to claims of alleged environmental harm arising out of Iraq's invasion and occupation of Kuwait. Kuwait asserted that the release of approximately eleven million barrels of oil into its territorial waters had damaged the habitats of its

[60] ARSIWA, Art. 31(1).

[61] *Diallo*, para. 14 ("As to each head of damage, the Court will consider whether an injury is established."); *Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v. Uganda), Judgment, I.C.J. Reports 2005*, p. 168, para. 260 (holding that the DRC, in order to establish entitlement to reparation, would need to "demonstrate and prove the exact injury that was suffered as a result of specific actions of Uganda constituting internationally wrongful acts for which it is responsible").

[62] *See Diallo*, para. 31 (rejecting a claim for compensation for lost personal effects because Guinea "failed to prove the extent of the loss of Mr. Diallo's personal property"); *ibid.*, para. 34 (rejecting claims for compensation for the alleged loss of high-value items in Mr. Diallo's apartment because "Guinea has put forward no evidence whatsoever that Mr. Diallo owned these items at the time of his expulsion, that they were in his apartment if he did own them, or that they were lost as a result of his treatment by the DRC"); *ibid.*, para. 35 (rejecting a claim for compensation for the alleged loss of assets contained in bank accounts because "[t]here is no information about the total sum held in bank accounts, the amount of any particular account or the name(s) of the bank(s) in which the account(s) were held"); *ibid.*, paras. 41–42 (rejecting a claim for compensation for the alleged loss of professional remuneration in the amount of US$25,000 per month because "Guinea offers no evidence to support the claim" and "there is evidence suggesting that Mr. Diallo was not receiving US$25,000 per month in remuneration from the two companies prior to his detentions"); *see also Ahmadou Sadio Diallo (Republic of Guinea v. Democratic Republic of the Congo), Declaration to the Judgement of the Court of Judge Greenwood*, p. 391, paras 3–4.

aquatic flora and fauna, and sought compensation for the alleged loss.[63] The Commission rejected Kuwait's claim because it had not provided sufficient evidence to prove actual injury to the aquatic biota.[64] The Commission likewise denied compensation claims for lack of demonstrated injury when claimants failed to prove that the environment had been negatively impacted even where it was "reasonable to assume that some damage could have been caused."[65]

3.10 Second, even if an injury has been proven, compensation may not be awarded unless it is also demonstrated that there is a "causal nexus between the wrongful act . . . and the injury suffered by the Applicant."[66] The required causal nexus is absent when an injury would have been incurred in the absence of internationally wrongful conduct. That is why, in the *Case Concerning the*

[63] United Nations Compensation Commission, Report and Recommendations made by the Panel of Commissioners concerning the Fifth Instalment of "F4" Claims, U.N. Doc. S/AC.26/2005/10 ("UNCC, Report and Recommendations on the Fifth Instalment of "F4" Claims"), 30 June 2005, paras. 430, 433.

[64] *Ibid.*, para. 440.

[65] United Nations Compensation Commission, Report and Recommendations Made by the Panel of Commissioners Concerning Part One of the Fourth Instalment of "F4" Claims, U.N. Doc. S/AC.26/2004/16, 9 December 2004, paras. 153–154 ("The Panel considers that, although it is reasonable to assume that some damage could have been caused to the coral reefs by the presence of refugees, Jordan has provided no evidence to establish that any damage attributable to Iraq's invasion and occupation of Kuwait was caused to the coral reefs or that any such damage still persists that would require remediation. … Accordingly, the Panel recommends no compensation…"); *see also, e.g., ibid.*, para. 87 (finding insufficient evidence that contamination from oil well fires had caused long-term damage to vegetation or soil); *ibid.*, para. 93 (finding insufficient evidence that contaminants from oil well fires had caused damage to groundwater); *ibid.*, para. 296 (rejecting a claim for compensation for remediation expenses where "although soot deposition may have caused damage to plants at the time of the oil well fires, Saudi Arabia has not demonstrated the presence of any residual, ongoing damage to soils that would require remediation"); *ibid.*, para. 340 (finding insufficient evidence that contamination from oil well fires had harmed surface water resources in Syria to support an award of compensation).

[66] *Diallo*, para. 14.

Application of the Genocide Convention,[67] the Court, after concluding that Serbia and Montenegro had breached its obligation to prevent genocide, evaluated whether a causal nexus existed between that breach and the damages caused by the acts of genocide.[68] The Court held that "[s]uch a nexus could be considered established only if the Court were able to conclude from the case as a whole and with a sufficient degree of certainty that the genocide at Srebrenica would in fact have been averted if the Respondent had acted in compliance with its legal obligations."[69] Because the evidence did not support such a conclusion, the Court held that compensation was not warranted.[70]

3.11 Proving a causal nexus between the wrongful act and the alleged injury is not, by itself, sufficient to establish a claim for compensation.[71] That is because compensation is not owed for "any and all consequences flowing from an internationally wrongful act."[72] Rather, as the Court has repeatedly stressed, the casual nexus between the wrongful act and injury must be "*direct and certain*."[73] Other international courts and tribunals have used terms such as "proximate

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[67] *Application of the Convention on the Prevention and Punishment of the Crime of Genocide*, p. 43.

[68] *Ibid.*, paras. 450, 459.

[69] *Ibid.*, paras. 462.

[70] *Ibid.*

[71] ARSIWA, Art. 31, cmt. 10 ("causality in fact is a necessary but not a sufficient condition" for compensation).

[72] *Ibid.*, Art. 31, cmt. 9.

[73] *Diallo*, para. 14 (emphasis added); *Application of the Convention on the Prevention and Punishment of the Crime of Genocide*, para. 462.

cause" or "foreseeability."[74] Whatever term is used, the import is the same: losses, damages or injuries that are "too indirect, remote, and uncertain" are not subject to compensation.[75]

3.12 The application of these principles is illustrated by the UNCC's rejection of a claim by Jordan regarding expenditures on infrastructure projects.[76] Jordan argued it was "obliged to undertake" the projects to prevent damage to water supplies in four basins due to an influx of refugees.[77] There was no question that Jordan had undertaken the projects and increased water sector investments. The Panel, however, declined to award compensation because the data made it "difficult to determine what part, if any, of the increase in investments is attributable to the presence of the refugees" and moreover showed that the projects were not implemented solely in the four basins that Jordan asserted were altered by refugees, but were carried out in "all regions of Jordan."[78]

[74] *See, e.g.*, Eritrea-Ethiopia Claims Commission, Decision Number 7: Guidance Regarding *Jus ad Bellum* Liability, 27 July 2007, paras. 7, 13–14; ARSIWA, Art. 31, cmt. 10.

[75] *Trail Smelter Arbitration* (United States, Canada), Award, 16 April 1938 and 11 March 1941, reprinted in 3 UNRIAA 1905 (2006), p. 1931; *see also* Protocol V (Record of the proceedings of the tribunal of arbitration at the fifth conference held at Geneva, in Switzerland, on the 19th of June, 1872), in "Report of J. C. Bancroft Davis, Agent of the United States, *Alabama Arbitration*", 21 September 1892, reprinted in REPORT OF THE AGENT OF THE UNITED STATES BEFORE THE TRIBUNAL OF ARBITRATION AT GENEVA (1873), pp. 21–22.

[76] UNCC, Report and Recommendations on the Fifth Instalment of "F4" Claims, 30 June 2005, paras. 330–336.

[77] *Ibid.*, para. 330

[78] *Ibid.*, paras. 333–334.

3.13 Third, assuming that the State seeking compensation establishes both injury and a direct and certain causal relationship with the wrongful act, it must also prove the quantum, *i.e.*, the monetary value, of the loss.[79] This flows from the fact that compensation is meant to remedy the "actual losses" of the injured State—no more and no less.[80]

3.14 That is why in *Diallo* the Court rejected a claim for lost income; not only was there insufficient evidence of Mr. Diallo having received income from certain companies before his detention, but Guinea had failed to present evidence, such as bank account or tax records, that would allow the Court to determine the amount of any such income.[81] For the same reason, the UNCC rejected claims for compensation when the claimant failed to "demonstrate the … amount of the claimed expenditures…."[82]

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[79] *Diallo*, para. 14 ("If the existence of injury and causation is established, the Court will then determine the valuation").

[80] ARSIWA, Art. 36, cmt. 4. As stated by the PCIJ in *Factory at Chorzów*, "reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed." *Factory at Chorzów (Claim for Indemnity) (Merits), Judgment No. 13, 1928, P.C.I.J., Series A. No. 9*, p. 21, p. 47. The full reparation standard sets both a floor and a ceiling on compensation.

[81] *Diallo*, para. 44 ("The Court therefore concludes that Guinea has failed to establish that Mr. Diallo was receiving remuneration from Africom-Zaire and Africontainers-Zaire on a monthly basis in the period immediately prior to his detentions in 1995-1996 or that such remuneration was at the rate of US$25,000 per month."); *see also Factory at Chorzów*, p. 56 (rejecting a claim for compensation because the Court did not have before it sufficient data to determine not only the existence but also the extent of damage); Eritrea-Ethiopia Claims Commission, Final Award, Eritrea's Damages Claims, 17 August 2009, para. 1 ("compensation can only be awarded where there is evidence sufficient in the circumstances to establish the extent of damage…").

[82] United Nations Compensation Commission, Report and Recommendations made by the Panel of Commissioners concerning the First Instalment of "F4" Claims, U.N. Doc. S/AC.26/2001/16

3.15 This principle applies equally to compensation for harm to natural resources, including those not traded in a market. It was recognized as early as the *Trail Smelter Arbitration* and as recently as the UNCC that a monetary value cannot be assigned to such harm on the basis of "mere speculation or guess."[83] Moreover, any inferences made as part of the valuation must be "just and reasonable."[84] The F4 Panel of the UNCC considered that particular caution is warranted before assigning a monetary value to goods and services that are not traded in the market, concluding that it would only accept such valuations once it had "satisfied itself that the extent of damage and the quantification of compensation claimed are appropriate and reasonable in the circumstances of each claim."[85]

III. Costa Rica Must Prove Each of the Elements Required for Compensation with Clear and Convincing Evidence

3.16 At each of the three stages described above – injury, causation, and valuation – the party seeking compensation bears the burden of proving each of

("UNCC, Report and Recommendations on the First Instalment of "F4" Claims"), 22 June 2001, para. 189; *see also, e.g.*, *ibid.*, paras. 232, 382, 408 (same).

[83] *Ibid.*, para. 80 (quoting *Trail Smelter Arbitration*, p. 1920).

[84] *Ibid.* (quoting *Trail Smelter Arbitration*, p. 1920).

[85] UNCC, Report and Recommendations on the Fifth Instalment of "F4" Claims, 30 June 2005, para. 81.

these elements with clear and convincing evidence. This is because compensation is only due for "financially assessable damage … *insofar as it is established*."[86]

3.17 The burden of proving entitlement to compensation rests with the party seeking such compensation. As the Court has held, "it is for the party which alleges a particular fact in support of its claims to prove the existence of that fact."[87] This general rule applies with equal force to claims for compensation, as illustrated by the *Armed Activities* case, where the Court held that it was for the Democratic Republic of Congo to "demonstrate and prove the exact injury that was suffered as a result" of Uganda's internationally wrongful acts.[88] The same approach is followed by other international courts and tribunals, including the UNCC and the Eritrea-Ethiopia Claims Commission.[89]

3.18 To discharge its burden of proof, the party seeking compensation must present clear, credible and convincing evidence in support of its claims.[90]

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[86] ARSIWA, Art. 36(2) (emphasis added).

[87] *Diallo*, para. 15; *see also Application of the Interim Accord of 13 September 1995 (the former Yugoslav Republic of Macedonia v. Greece), Judgment, I.C.J. Reports 2011*, p. 644, para. 72; *Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment, I.C.J. Reports 2010*, p. 14, para. 162.

[88] *Armed Activities on the Territory of the Congo*, para. 260.

[89] *See* United Nations Compensation Commission, Provisional Rules for Claims Procedure, U.N. Doc. S/AC.26/1992/10, 26 June 1992, Art. 35(1) ("Each claimant is responsible for submitting documents and other evidence which demonstrate satisfactorily that a particular claim or group of claims is eligible for compensation pursuant to Security Council resolution 687 (1991)."); Eritrea-Ethiopia Claims Commission, Final Award, Eritrea's Damages Claims, 17 August 2009, para. 87 (holding that the Commission could award compensation to Eritrea "only where Eritrea submitted reasonable and credible proof…").

[90] For general discussion of the Court's evidentiary practice, *see* Jean-Flavien Lalive, "Quelques remarques sur la preuve devant la Cour permanente et la Cour internationale de Justice",

With respect to a claim for expenses allegedly incurred, this requires that the claim be substantiated by documentation—such as receipts, invoices, or other primary documents—showing that payment was made and in what amount.[91] Thus, in *Diallo*, an inventory of personal belongings that Mr. Diallo allegedly lost when he was expelled was held to be insufficient evidence to support the claimed quantum of compensation.[92]

3.19 Other international tribunals have rejected compensation claims for similar reasons. For example, the UNCC rejected:

- a claim for the costs of a completed study to assess environmental impact, which was substantiated only by a "report and a one-page budget";[93]

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7 *Annuaire suisse de droit international* 77 (1950); Keith Highet, "Evidence, the Court, and the Nicaragua Case", 81 *American Journal of International Law* 1 (1987); Eduardo Valencia-Ospina, "Evidence before the International Court of Justice", 1 *International Law Forum* 202 (1999); Maurice Kamto, "Les moyens de preuve devant la Cour internationale de Justice à la lumière de quelques affaires récentes portées devant elle", 49 *German Yearbook of International Law* 259 (2006); Ruth Teitelbaum, "Recent Fact-finding Developments at the International Court of Justice", 6 *Law and Practice of International Courts and Tribunals* 119 (2007); H.E. Peter Tomka & Vincent-Joël Proulx, "The Evidentiary Practice of the World Court" in LIBER AMICORUM GUDMUNDUR EIRIKSSON (Juan Carlos Sainz-Borgo (ed.), forthcoming 2016). For the evidentiary practice of other international courts and tribunals, *see*, generally, J.C. Witenberg, "La théorie des preuves devant les juridictions internationales", 56 *Recueil des Cours* 1, Vol. II (1936), Annex 19; Durward Sandifer, EVIDENCE BEFORE INTERNATIONAL TRIBUNALS (1975); Chittharanjan Amerasinghe, EVIDENCE IN INTERNATIONAL LITIGATION (2005).

[91] *See* UNCC, Report and Recommendations on the First Instalment of "F4" Claims, 22 June 2001, para. 52 ("For claims concerning monitoring and assessment activities already completed, no compensation has been recommended if the evidence presented to the Panel was not sufficient to demonstrate that the amount claimed were in fact expended.").

[92] *Diallo*, paras. 27, 31–33.

[93] UNCC, Report and Recommendations on the First Instalment of "F4" Claims, 22 June 2001, paras. 187–190.

- a claim for the costs of a project to investigate pollution from oil fires, for which the claimant failed to present "appropriate evidence, such as contracts, invoices, receipts, salary vouchers and/or accounting records";[94]

- claims for the costs of completed monitoring studies, where the claimant "provided only summary information on the costs of [the] studies" and "[n]o invoices or receipts";[95] and

- a claim for the costs of a monitoring study that was substantiated only by "a one-and-a-half-page document explaining in general terms the basis for the expenses claimed."[96]

3.20 The Eritrea-Ethiopia Claims Commission likewise rejected as inadequate evidence "inventory lists" of looted items that were not accompanied by the underlying documentary support.[97] It also found to be insufficient a "skeletal property list with a dollar amount of estimated losses,"[98] and the

[94] *Ibid.*, paras. 243–247.

[95] *Ibid.*, paras. 381, 407.

[96] *Ibid.*, para. 716; *see also ibid.*, paras. 232, 724, 727–728 (rejecting claims for lack of sufficient evidentiary support).

[97] Eritrea-Ethiopia Claims Commission, Final Award, Eritrea's Damages Claims, 17 August 2009, para. 108.

[98] *Ibid.*, para. 161.

"witness statement of [a] hotel owner, who offered neither detail nor supporting documents."[99]

3.21 With respect to claims for compensation for alleged environmental harm, carrying the burden of proof requires more than identifying an impact and assigning it monetary value. As noted above, the inferences supporting the valuation must be "just and reasonable."[100] This requires, at a minimum, showing that the assumptions on which the valuation is based are appropriate and accurate.[101] On this basis, the F4 Panel of the UNCC rejected valuations based on "assumptions regarding … lost services and expected recovery periods [that] are either inappropriate or unreasonable."[102]

IV. Compensation Is Not Permitted for Damages the Injured State Could Have Avoided or to Which It Contributed

3.22 International law recognizes additional limitations on compensation, including that a State's failure to mitigate will preclude recovery to

[99] *Ibid.*, para. 174.

[100] UNCC, Report and Recommendations on the Fifth Instalment of "F4" Claims, 30 June 2005, para. 80 (quoting *Trail Smelter Arbitration*, p. 1920).

[101] *See Ibid.*, paras. 177–179 (significantly reducing the amount of compensation awarded to Iran because Iran's valuation was based on unsupported or erroneous assumptions regarding the size of the area affected, the baseline condition of the area prior to Iraq's occupation and invasion, and the causes of any impact); *ibid.*, para. 439 (rejecting Kuwait's claim that relied on computer models of biomass loss due to oil contamination because of "substantial and unquantifiable uncertainties" in the models).

[102] *See Ibid.*, para. 424; *see also ibid.*, para 606 (rejecting compensation based on a habitat equivalency analysis put forward by Saudi Arabia where "some of Saudi Arabia's assumptions and inputs regarding intensity of damage and recovery periods are inappropriate.").

the extent of such failure.[103] As the Court explained in the *Gabcikovo-Nagymaros* case:

> It is a general principle of international law that a party injured by the non-performance of another contract party must seek to mitigate the damage he has sustained. It would follow from such a principle that an injured State which has failed to take the necessary measures to limit the damage sustained would not be entitled to claim compensation for that damage which could have been avoided.[104]

3.23 Similarly, a State should not be awarded compensation for losses or injury insofar as it contributed to them through willful or negligent acts or omissions.[105] Thus, in the *LaGrand* case, the Court observed that Germany's delay in asserting the existence of a breach and in instituting proceedings could have been taken into account had Germany sought indemnification.[106]

3.24 These limitations reflect the overarching principle that "[e]ven the wholly innocent victim of wrongful conduct is expected to act reasonably when confronted by the injury."[107] Accordingly, when a State, in responding to an

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[103] *See* ARSIWA, Art. 31, cmt. 11.

[104] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997*, p. 7, para. 80.

[105] ARSIWA, Art. 39.

[106] *LaGrand (Germany v. United States of America), Judgment, I.C.J. Reports 2001*, p. 466, paras. 57, 116.

[107] ARSIWA, Art. 31, cmt. 11. In the *S.S. Wimbledon* case, the PCIJ's award of compensation based on the delay experienced by the *Wimbledon* after Germany refused it passage through the Kiel Canal was paired with a finding that the vessel "was justified in awaiting for a *reasonable time* … before continuing its voyage" by another route. *Case of the S.S. "Wimbledon", Judgment, 1923, P.C.I.J., Series A. No. 1*, p. 31 (emphasis added).

internationally wrongful act, elects to take steps that are not reasonably necessary or proportionate with respect to the injury, the causal nexus is broken, and compensation should not be awarded for the expenses or losses thereby incurred.[108]

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3.25 In the two Chapters that follow, Nicaragua applies the principles described above to Costa Rica's claim to compensation for environmental impacts and monitoring, respectively, and demonstrates that Costa Rica has failed to meet its burden of proof in regard to well over 90% of its compensation claim.

[108] The ILC has noted the conceptual relationship between the doctrines of contribution and mitigation, and the requirement of a sufficiently close causal nexus, stating with respect to contribution: "It is possible to envisage situations where the injury in question is entirely attributable to the conduct of the victim and not at all to that of the 'responsible' State. Such situations are covered by the general requirement of proximate cause referred to in article 31…." ARSIWA, Art. 39, note 627 (at p. 110). Insofar as the doctrines of contribution and mitigation require a State to act reasonably in the face of an injury, the requirement of proximate cause (analogous to the Court's requirement of a direct and certain causal nexus) cuts off compensation for losses and expenses not reasonably foreseeable to the responsible State. *See* Decision Number 7: Guidance Regarding *Jus ad Bellum* Liability, 27 July 2007, para. 13 ("[T]he Commission concludes that the necessary connection is best characterized through the commonly used nomenclature of 'proximate cause.' In assessing whether this test is met, and whether the chain of causation is sufficiently close in a particular situation, the Commission will give weight to whether particular damage reasonably should have been foreseeable to an actor committing the international delict in question.").

CHAPTER 4: COSTA RICA'S CLAIMS FOR COMPENSATION FOR ALLEGED ENVIRONMENTAL IMPACTS

4.1 In this Chapter, Nicaragua responds to Costa Rica's claims for compensation in regard to the environmental impacts that are alleged to have been caused by the works undertaken by Nicaragua in the disputed area, namely the clearance of the 2010 and 2013 *caños*, and associated felling of trees and removal of underbrush.[109]

4.2 The compensation that Costa Rica seeks for these alleged impacts falls into three categories:

- The value of the "social cost," *i.e.*, the "loss of ecosystem goods and services," that was allegedly caused by Nicaragua's activities, which Costa Rica values at $2,823,111.74;[110]
- The cost of "restoration measures," principally "soil restoration costs," which Costa Rica values at $57,634.08;[111] and

[109] Costa Rica accepts that there are no compensable impacts caused by the western 2013 *caño*, only the eastern one.

[110] Fundación Neotrópica, Monetary Valuation of the environmental damages arising from the construction of *caños* and clearing of trees and vegetation performed by the Government of Nicaragua in the Costa Rican territory on Isla Portillos, as required by the Judgment of the International Court of Justice of 16 December 2015 ("Fundación Neotrópica, Monetary Valuation Report"), 3 June 2016, pp. 61, 63. CRMC, Vol. I, Annex 1 (at pp. 147, 149).

[111] *Ibid.*

- The expenses Costa Rica allegedly incurred in constructing the dyke across the eastern 2013 *caño*, for which Costa Rica seeks $195,671.02.[112]

4.3 The first two categories of alleged environmental damage are based on a technical report prepared for Costa Rica by Fundación Neotrópica, a Costa Rican non-governmental organization, which is found at Annex 1 of the Memorial.[113] Costa Rica relies entirely on the report of this Costa Rican environmental advocacy organization. It submits nothing from any non-Costa Rican source.

I. The Alleged "Social Cost" of Nicaragua's Works

4.4 The primary focus of the Fundación Neotrópica report is to try to assign a "monetary value" to what it refers to as the "social cost" that allegedly resulted from Nicaragua's works in the disputed area.[114] It does this by attempting to value the "ecosystem goods and services" that it alleges were

[112] CRMC, pp. 69–70, Table 3.4.

[113] Fundación Neotrópica, Monetary Valuation Report, 3 June 2016. CRMC, Vol. I, Annex 1. In addition, Fundación Neotrópica presented certain clarifications to its prior report, which are found at the explanatory addenda to the Monetary Valuation Report. Explanatory addenda to the Report Monetary Valuation of the environmental damages arising from the construction of *caños* and clearing of trees and vegetation performed by the Government of Nicaragua in the Costa Rican territory on Isla Portillos, as required by the Judgment of the International Court of Justice of 16 December 20158, 8 December 2016 ("Fundación Neotrópica, Explanatory Addenda to the Monetary Valuation Report"). CRMC, Vol. I, Annex 2.

[114] Fundación Neotrópica, Monetary Valuation Report, 3 June 2016, p. 60, Table 14. CRMC, Vol. I, Annex 1 (at p. 146).

impacted by those activities.[115] Fundación Neotrópica identifies six such goods and services:

- Standing timber;
- Other raw materials (fibre and energy);
- Gas regulation/air quality;
- Natural hazards mitigation;
- Soil formation/erosion control; and
- Habitat and nursery (biodiversity).[116]

4.5 Fundación Neotrópica assigns a monetary value to each of these services, which it applies each year for a 50-year period (discounted by 4% each succeeding year), on the ground that this represents the "time for recovery of the ecosystem to the state prior to the damage caused."[117] Based on this approach, Fundación Neotrópica claims that Nicaragua's clearance of 2.48 hectares of trees and 3.71 hectares of underbrush caused an astronomical $2,823,111.74 in environmental damage.[118]

4.6 This valuation—in excess of $456,000 per hectare—bears no relationship to reality. To put it in perspective, Costa Rica's construction of

[115] *Ibid.*

[116] *Ibid.*

[117] *Ibid.*, p. 51.

[118] Costa Rica claims that the report presents a "very conservative" valuation. CRMC, para. 3.17. That characterization is premised on its decision not to include valuations for certain alleged environmental services. *Ibid*. However, those services are plainly inapplicable here, *e.g.*, "cultural and recreational services, including historic, spiritual, recreational, aesthetic, artistic services and science and recreation." *Ibid.*, paras. 3.14, 3.17.

Route 1856 involved the felling of 83.2 hectares of forest[119] and 2.3 hectares of "natural wetland systems."[120] Were Fundación Neotrópica's valuation to be applied to that area, it would value the environmental damage at nearly $39 million. Yet, an ecological evaluation for the Government of Costa Rica concluded that the Road-related clearance had, at worst, only "moderate" environmental impacts.[121]

4.7 In light of this massive discrepancy, it is not surprising that Fundación Neotrópica's report contains significant errors that dramatically overvalue impacts to the disputed area. Those errors are described in detail in the two Expert Reports that Nicaragua presents herewith. They are authored, respectively, by Professor Cymie Payne of Rutgers University and Mr. Robert Unsworth of Industrial Economics, Inc., who were legal and technical advisors to the UNCC's environmental claims panel;[122] and by Professor G. Mathias Kondolf, an expert geomorphologist who specializes in environmental river

[119] "14.9 hectares of secondary forest and 68.3 hectares of altered primary forest," according to Costa Rica's 2015 "Follow-up and Monitoring Study." Centro Cientifico Tropical (CCT), Follow-up and Monitoring Study Route 1856 Project-EDA Ecological Component, January 2015, p. 21. CRR (*Construction of a Road* case), Vol. III, Annex 14 (at p. 461).

[120] *Ibid.*

[121] *Ibid.*, pp. 64–65, Table 6-1.

[122] Cymie R. Payne & Robert E. Unsworth, Report on Environmental Damage Valuation, 26 May 2017 ("Payne & Unsworth Report"). NCMC, Vol. I, Annex 1.

management and restoration.[123] Their explanations of Fundación Neotrópica's errors are summarized below.

A. Fundación Neotrópica's Approach to Valuation Is Not an Appropriate Method for Valuing Environmental Damages

4.8 The premise of Fundación Neotrópica's report is that it is appropriate to apply what it refers to as a "social cost" or "ecosystem services" approach to valuing the environmental impacts that were allegedly caused to the disputed area.[124] However, that approach is not designed to determine the quantum of environmental damages, and is manifestly unsuited for that purpose. As the Payne & Unsworth Report explains, "the monetary valuation approach used by Neotropica is not consistent with accepted practice in the field of natural resource damage assessment," and the "damage estimate they generate using this method is not reliable or appropriate for assigning damages."[125]

4.9 In that regard, Fundación Neotrópica's approach is intended only to serve a tool for helping policymakers appreciate the value of natural resources so as to aid their decision-making. As the Payne & Unsworth Report explains, it was designed to "draw attention to the contributions of ecosystems to people's

[123] G. Mathias Kondolf, PhD, Review of Costa Rica's Claims for Compensation in the Río San Juan Delta, May 2017 ("Kondolf Report (2017)"). NCMC, Vol. I, Annex 2.

[124] Fundación Neotrópica, Monetary Valuation Report, 3 June 2016. CRMC, Vol. I, Annex 1 (at pp. 87–158).

[125] Payne & Unsworth Report, Executive Summary. NCMC, Vol I, Annex 1.

well-being and motivate measurement of these contributions."[126] Thus, although potentially useful for that limited purpose, "the economics literature has highlighted that it is an impractical framework where the focus is on *valuation* of ecosystem services."[127]

4.10 Valuation practice makes clear that the environmental services approach that is proposed by Fundación Neotrópica is *not* used to value environmental damages. For instance, the Payne & Unsworth Report explains that the European Union has developed a "toolkit" that is "intended to highlight best practices in environmental valuation"; notably, the EU toolkit "does not include the 'ecosystem services' approach used by Neotropica as an accepted methodology."[128]

4.11 Similarly, the recent *Federal Resources Management and Ecosystem Services Guidebook*, which was published by the National Ecosystem Services Partnership (an initiative developed with the support of the U.S. Environmental Protection Agency that includes "participation by more than 150 experts from U.S. federal agencies, universities, NGOs, and think tanks") summarizes the theoretical and practical issues associated with Fundación Neotrópica's approach.[129] Those deficiencies include the fact that the approach is

[126] *Ibid.*, p. 17.

[127] *Ibid.*

[128] *Ibid.*, p. 18.

[129] *Ibid.*, p. 20 & n. 78.

"expected to generate large errors or invalid estimates, particularly due to incorrect aggregation of marginal values, failure to account for spatial connections between ecosystems and their human beneficiaries and their change over time, and other generalization errors."[130]

4.12 Fundación Neotrópica attempts to justify the application of its proposed approach by citing to documents published by Ramsar. However, rather than supporting the use of Fundación Neotrópica's method for valuing environmental damage, they confirm that it is only intended to be used for policymaking. One such study is entitled *Economic Valuation of Wetlands: A Guide for Policy Makers and Planners*; it describes the approach as a "tool to aid and improve wise use and management of global wetland resources" that assists policymakers in "weighing the advantages to be obtained by development with the damage which that development may do to wetlands."[131] The other Ramsar-published source cited by Fundación Neotrópica describes the approach as a method for "assessing the trade-offs between maintenance of wetlands and their

[130] *Ibid.*, p. 20 (quoting National Ecosystem Services Partnership (NESP), Federal Resource Management and Ecosystem Services Guidebook (2nd Rd., 2016), available at https://nespguidebook.com (*last visited* 26 May 2017)).

[131] Edward B. Barbier et al., "Economic Valuation of Wetlands: A Guide for Policy Makers and Planners" (1997), pp. ix, vi. The document, which is cited by Fundación Neotrópica, is available at http://www.ramsar.org/sites/default/files/documents/pdf/lib/lib_valuation_e.pdf (*last visited* 25 May 2017).

conversion in decision-making."[132] Neither endorses its use for valuing environmental damage.

4.13 Indeed, apart from its own report on behalf of the Costa Rican Ministry of the Environment for use in a domestic mining case in Costa Rica, the Fundación Neotrópica report does not discuss any other instances in which the proposed approach has been used to value environmental damages. To the contrary, it acknowledges that, as of a 2006 survey published by the United Nations Environment Programme's Regional Office for Latin America and the Caribbean, it "is not documented as having be[en] widely used."[133] In fact, the UNEP report cites no instances in which the approach has been used to value environmental damage, as opposed to aid policymaking.[134]

4.14 Nor is Fundación Neotrópica helped by citing a 1997 paper by Costanza *et al*. The Payne & Unsworth Report explains that a subsequent update,

[132] Rudolf de Groot et al., "Valuing wetlands: Guidance for valuing the benefits derived from wetland ecosystem services" (November 2006), Ramsar Technical Report No. 3, CBD Technical Series No. 27, p. v. This document, which is cited by Fundación Neotrópica, is available at http://www.ramsar.org/sites/default/files/documents/pdf/lib/lib_rtr03.pdf (*last visited* 25 May 2017). Fundación Neotrópica also cites a 2010 report by The Economics of Ecosystems and Biodiversity ("TEEB") of the United Nations Environment Programme, but that report is likewise focused on policymaking, not the valuation of damages. *See* Pushpam Kumar (ed.), "The Economics of Ecosystems and Biodiversity, Ecological and Economic Foundations" (2010), available on line at http://www.teebweb.org/our-publications/teeb-study-reports/ecological-and-economic-foundations/ (*last visited* 25 May 2017).

[133] Fundación Neotrópica, Monetary Valuation Report, 3 June 2016, p. 37. CRMC, Vol. I, Annex 1 (at p. 123).

[134] *See* Castañón del Valle, M., "Valoración del Daño Ambiental" (2006), UNEP Regional Office for Latin America and the Caribbean, available on line at http://www.pnuma.org/gobernanza/documentos/Valoracion_Dano_Ambiental.pdf (*last visited* 27 May 2017).

published in 2014, "does not include damage valuation as one of the applications they claim this approach addresses."[135] Rather, the update highlights the role that the approach can play in "heightening awareness and estimating the overall level of importance of ecosystem services."[136]

4.15 In short, the methodological approach used by Fundación Neotrópica is not a proper means for valuing environmental harm. It thus does not provide a reliable basis to value the environmental impacts of Nicaragua's works.

B. Fundación Neotrópica's Report Contains Serious Errors That Result in a Massive Over-Estimation of Damages

4.16 Even if, *quod non*, the environmental services approach proposed by Fundación Neotrópica was an appropriate method for valuing environmental damages, Fundación Neotrópica has implemented it incorrectly in ways that cause a dramatic overvaluation of impacts to the disputed area. The Payne & Unsworth Report details the serious flaws that pervade Fundación Neotrópica's analysis. Nicaragua summarizes below three of the most significant errors, namely that the report: (i) wrongly assumes the presence of environmental services that are not actually present in the disputed area; (ii) improperly values the impacted area's

[135] Payne & Unsworth Report, pp. 18–19. NCMC, Vol I, Annex 1.

[136] *Ibid.*, p. 19.

gas regulation/air quality services; and (iii) erroneously assumes that all impacts will last for 50 years.[137]

i. Fundación Neotrópica's Erroneous Assumptions in Regard to "Environmental Services"

4.17 Fundación Neotrópica erroneously assumes that Nicaragua's works impacted environmental services that were not actually impacted, specifically (a) soil formation/erosion control, and (b) natural hazard mitigation. Fundación Neotrópica assumes that these services were harmed without analyzing whether they are actually provided in this environment. Notably, Costa Rica did not provide an expert report by Professor Thorne, even though, as a fluvial geomorphologist who has advised Costa Rica in regard to the environmental impacts of Nicaragua's activities in the disputed area, he is competent to provide testimony on whether soil formation/erosion control or natural hazard mitigation services have been adversely impacted. By assuming, contrary to the evidence, that these services were harmed, Fundación Neotrópica wrongly assigns over $1.3 million in damages to Nicaragua.

a) The Alleged Impact on "Soil Formation/Erosion Control"

[137] The Payne & Unsworth Report observes that although "Neotropica provides several tables that present inputs to the analysis they perform, as well as summary tables of results," it is "not possible to replicate the results they get given the information provided." *Ibid.*, p. 24. They also identify "several instances in which there appear to be errors in the calculations." *Ibid.*

4.18 Fundación Neotrópica suggests that Nicaragua's works impacted what it describes as "soil formation/erosion control."[138] The alleged loss of these services comprises no less than $1,179,924 of the compensation claim.[139]

4.19 Costa Rica, however, is not entitled to *any* compensation for lost soil formation/erosion control because it has not suffered any such loss. It is undisputed that the *caños* cleared by Nicaragua in 2010 and 2013 rapidly re-filled with sediment, and are now covered with vegetation.[140] Moreover, as the Kondolf Report explains, since the area where the *caños* were cleared is a zone of deposition, it is not subject to erosion that needs to be controlled.[141] Rather, the area is the constant recipient of huge amounts of sediment carried by the San Juan River.[142] Given this reality, the Payne & Unsworth Report concludes that there is no basis for any valuation of lost erosion control or soil formation.[143]

b) The Alleged Impact on Natural Hazards Mitigation

4.20 Equally baseless is Fundación Neotrópica's assumption that Nicaragua's works impacted the disputed area's ability to mitigate natural

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[138] Fundación Neotrópica, Monetary Valuation Report, 3 June 2016, p. 60, Table 14. CRMC, Vol. I, Annex 1 (at p. 146).

[139] *See* Payne & Unsworth Report, p. 32 Exhibit 1. NCMC, Vol I, Annex 1.

[140] *See* paras. 2.8–2.11, 2.15–2.18, *supra*.

[141] Kondolf Report (2017), pp. 2-4. NCMC, Vol. I, Annex 2.

[142] *Ibid.*

[143] Payne & Unsworth Report, p. 29. NCMC, Vol I, Annex 1.

hazards, a service that it defines as "preventing and mitigating risk and natural hazards, such as storms and other adverse weather conditions."[144] Fundación Neotrópica claims that the lost value of this service is $184,581.[145]

4.21 Costa Rica, however, is not entitled to any compensation for lost natural hazard mitigation because no such service has been lost. Indeed, Fundación Neotrópica identifies no natural hazards that the affected area was mitigating; instead, it only claims that, in general, natural resources can provide "flood and storm protection."[146]

4.22 In fact, the disputed area plays no role in mitigating natural hazards,[147] and Fundación Neotrópica never explains how this wetland, which Costa Rica and Ramsar have described as "flooded grassland" and "swamp or flooded forests,[148] could provide flood protection. Nor does Fundación Neotrópica explain how Nicaragua's works could have impacted any natural hazard mitigation services.[149] Indeed, as can be seen in **Figures 2.3**, **2.6**, and **2.7**

[144] Fundación Neotrópica, Monetary Valuation Report, 3 June 2016, Table 3. CRMC, Vol. I, Annex 1 (at p. 103).

[145] *Ibid.*, Table 14.

[146] *Ibid.*, p. 18.

[147] Even if it did, the nearby towns and infrastructure that would benefit from such services are located in Nicaragua, not Costa Rica, a fact that Fundación Neotrópica accepts. *See ibid.*, p. 53; Fundación Neotrópica, Explanatory Addenda to the Monetary Valuation Report, 8 December 2016, pp. 5–6. CRMC, Vol. I, Annex 2 (at pp. 165–166). *See also* Kondolf Report (2017), pp. 4-5. NCMC, Vol. I, Annex 2.

[148] *E.g.*, 2014 Ramsar Report, p. 6. CRMC, Vol. II, Annex 22 (at p. 362).

[149] Kondolf Report (2017), p. 4. NCMC, Vol. I, Annex 2.

above, when the disputed area was struck by Hurricane Otto in November 2016, Nicaragua's works did not affect the harm caused by the storm.[150] The Payne & Unsworth Report thus concludes that "this category of loss should not be included in the damage claim being made by Costa Rica."[151]

ii. Fundación Neotrópica Improperly Values "Gas Regulation/Air Quality Services"

4.23 Fundación Neotrópica claims that Nicaragua's works impacted the area's ability to regulate gas and air quality, a service that it defines as the contribution of "forest cover and marine ecosystems" to "air purification" and "the balancing of greenhouse gases."[152] According to Fundación Neotrópica, this caused nearly $1 million ($937,509) in damage.[153] Like its other calculations, this claim is so exorbitant as to verge on pure fantasy.

4.24 In particular, Fundación Neotrópica dramatically overestimates the value of any gas regulation services that were allegedly impacted by Nicaragua's works. Fundación Neotrópica selects the highest value from the literature it surveyed—$14,955 per hectare—without demonstrating that the habitat it describes is similar to the disputed area and ignoring studies that assign lower

[150] *Ibid.*, p. 5.

[151] Payne & Unsworth Report, p. 30. NCMC, Vol. I, Annex 1.

[152] Fundación Neotrópica, Monetary Valuation Report, 3 June 2016, p. 18. CRMC, Vol. I, Annex 1 (at p. 104).

[153] Payne & Unsworth Report, p. 32 Exhibit 1. NCMC, Vol. I, Annex 1.

values.[154] Fundación Neotrópica provides no cogent justification for this choice, which is particularly inexplicable given that it relies on an unpublished, non-peer reviewed master's thesis by a Costa Rican student, "[i]n spite of finding several reference studies"[155] where the value per hectare was much lower: between $105.11 and $3,367.07.[156]

4.25 Even if Fundación Neotrópica's selection of the highest value from the literature were justified, Fundación Neotrópica misinterprets the nature of that value. As the Payne & Unsworth Report explains, the $14,955 per hectare figure represents the total value of all carbon sequestered in a hectare, including "in vegetation, in soil, in leaf litter, and in woody debris."[157] It thus reflects the *maximum* value of carbon-related impacts per hectare that could, in theory, have been caused by Nicaragua's works, assuming those works had released into the atmosphere all carbon that was sequestered. Even if that had occurred for the 2.91 hectares where Fundación Neotrópica considers gas regulation and air quality services to have been impacted, the damages would only be $47,778, or

[154] Fundación Neotrópica, Monetary Valuation Report, 3 June 2016, p. 53 & Appendix 3. CRMC, Vol. I, Annex 1 (at p. 139, 158).

[155] Fundación Neotrópica, Explanatory Addenda to the Monetary Valuation Report, 8 December 2016, p. 5. CRMC, Vol. I, Annex 2 (at p. 165).

[156] Fundación Neotrópica, Monetary Valuation Report, 3 June 2016, Appendix 3. CRMC, Vol. I, Annex 1 (at p. 158).

[157] Payne & Unsworth Report, p. 27 (quoting the International Union for the Conservation of Nature). NCMC, Vol 1, Annex 1.

approximately five percent of the $937,509 that Costa Rica claims in compensation for these services.[158]

4.26 Further, Fundación Neotrópica erroneously assumes that the benefits of gas regulation accrue to Costa Rica alone; in fact, the benefits of forests, wherever they are located, that reduce the impacts of greenhouse gas emissions are distributed worldwide. As the Payne & Unsworth Report explains, "the social cost of carbon . . . reflects the value of avoided impacts *to the world's population*, not simply the avoided costs to citizens of Costa Rica."[159] Thus, to the extent Costa Rica could claim any compensation for losses of such benefits, it would only be entitled to its share of the global total, which is miniscule.

iii. Fundación Neotrópica Erroneously Assumes That All Impacts Last for 50 Years

4.27 Another fundamental flaw in Fundación Neotrópica's analysis is that, as noted above, for each environmental service that it claims has been impacted, it assigns an initial value which it applies over a period of 50 years, discounted by 4% each year. The ostensible basis for doing so is the assumption that, in the disputed area, 50 years is the "documented term for minimum recovery

[158] *Ibid.* p. 32 Exhibit 1.

[159] *Ibid.* p. 28 (emphasis in original).

of the ecosystem's ability to provide the ecosystem services lost."[160] That assumption, however, is not based on reality.

4.28 *First*, as shown above, Costa Rica cannot claim *any* compensation for alleged impacts to soil formation/erosion control, or to natural hazard mitigation, because those services are inapplicable in this environment and thus have not been lost.[161] Cost Rica is therefore certainly not entitled to compensation for impacts to those services for 50 years. Correcting this error reduces the overall valuation significantly: the 50-year valuation of impacts to these services accounts for more than 40 percent of Costa Rica's total claim for "social costs."[162]

4.29 *Second*, with respect to the value of the trees that were felled, Fundación Neotrópica claims that Costa Rica is owed the astronomical amount of $462,490, even though, as the Payne & Unsworth Report explains, the highest possible market value of that standing timber (using Fundación Neotrópica's assumptions about the number and species of trees) is only $30,175.[163] Fundación Neotrópica comes to this conclusion by assuming that the timber is harvested every year for 50 years. As the Payne & Unsworth Report explains, this is a

[160] Fundación Neotrópica, Monetary Valuation Report, 3 June 2016, p. 59. CRMC, Vol. I, Annex 1 (at p. 145). *See also* Kondolf Report (2017), pp. 5-6. NCMC, Vol. I, Annex 2.

[161] *See supra* paras. 4.17–4.22.

[162] *See* Payne & Unsworth Report, p. 32 Exhibit 1. NCMC, Vol 1, Annex 1.

[163] *Ibid.*

serious error because trees can only be harvested once.[164] Thus, even assuming, *arguendo*, that the other elements of Costa Rica's calculation are accurate (which they are not), correcting this error reduces the valuation by approximately 95%.[165]

4.30 In reality, even that may overestimate the value of the timber because, as the Payne & Unsworth Report explains, there is no evidence that Fundación Neotrópica has accounted for the cost that would be required to harvest the timber and transport it to market, which contravenes accepted valuation methodology.[166] Moreover, no actual market for the timber has been established, rendering the valuation entirely speculative.[167]

4.31 *Third*, it is incorrect for Costa Rica to apply its already-inflated air quality and gas regulation valuation every year for fifty years. As the Payne &

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[164] *Ibid.*, pp. 24–25.

[165] *See ibid.*, p. 32 Exhibit 1.

[166] *Ibid.* p. 25.

[167] *Ibid.* Fundación Neotrópica introduces further error by assuming that the tree data collected during the "census" of the 2010 *caño* (whose accuracy Nicaragua has repeatedly disputed) can be applied to the 2013 *caño* as well: "the tree estimate for [the eastern 2013 *caño*] … was based on the inventory for *Caño* Pastora [*i.e.*, the 2010 *caño*]." Fundación Neotrópica, Explanatory Addenda to the Monetary Valuation Report, 8 December 2016, p. 9. CRMC, Vol. I, Annex 2 (at p. 169). This is also apparent from Table 16 of the Fundación Neotrópica report, which (according to the correction made at p. 3 of Annex 2) assumes that the same species were felled during the construction of both *caños*. The record contains no basis for assuming that the location of the 2013 *caño* contained either the same types of trees or the same distribution of trees as the location of the 2010 *caño*. To the contrary, Professor Thorne explained to the Court during the oral hearings that "the vegetation through which the first *caño* was cut, in my opinion, differed from that of the second and third *caños*, which are much further north and on land which is much younger …" Hearing on Merits, CR 2015/3, p. 42 (Thorne). And Costa Rica reported to Ramsar in March 2014 only that "several *Pterocarpus officinalis* trees and *Raphia taedigera* plants had been cut down" during the construction of the 2013 *caño*. Costa Rican Ministry of the Environment and Energy, Final Report for the Secretariat of the Ramsar Convention, March 2014, p. 8. Compliance Report, Attachment CR-1.

Unsworth Report explains, the $14,955 per hectare value that Fundación Neotrópica uses is the value of all the sequestered carbon, which could be released into the atmosphere only once.[168] Moreover, as noted above, it is unreasonable for Fundación Neotrópica to assume that the impacted area will provide *no* gas regulating or air quality services for a full 50 years, given the significant regrowth of vegetation that has occurred.[169]

4.32 *Fourth*, it is wrong to assume, as Fundación Neotrópica does, that it will take 50 years for impacts to the disputed area's "habitat and nursery (biodiversity)" and "raw materials (fibre and energy)" to be resolved. Given the rapid recovery that the disputed area has undergone, as discussed in paragraphs 2.8–2.11 and 2.15–2.18, it is evident that its ability to provide "habitat and nursery (biodiversity)" and "other raw materials (fibre and energy)," has recovered.[170] Thus, even if Fundación Neotrópica had accurately assigned an initial value to those goods and services of $1,896 and $832, respectively,[171] it vastly inflated the

[168] *See* Payne & Unsworth Report, p. 28. NCMC, Vol 1, Annex 1.

[169] *Ibid.*

[170] *See* Kondolf Report (2017), pp. 1, 3, 6. NCMC, Vol. I, Annex 2.

[171] Even these one-year values are unsupported and likely overstated. With regard to alleged "habitat and nursery (biodiversity)" services, Fundación Neotrópica's year-one valuation is based on the transfer of values from "a study performed for policy purposes in Thailand – with differing ecological, economic, and cultural attributes." Payne & Unsworth Report, p. 31. NCMC, Vol 1, Annex 1. With regard to the "other raw materials (fibre and energy)," Fundación Neotrópica failed to establish either that the values transferred (which they simply average from a range of sources) come from analogous habitats or that a market for these raw materials actually exists in the context of the disputed area. *Ibid.* pp. 25–26.

valuation by claiming $40,730 and $17,877, respectively, when it assumed that losses will extend for 50 years.[172]

II. Future "Restoration Measures"

4.33 Fundación Neotrópica further assumes that Costa Rica is entitled to a one-time "restoration cost" of $57,634.08.[173] Nearly the entire amount ($54,925.69) consists of the "value of the replacement of the dredged soil" that was removed when the *caños* were cleared.[174]

4.34 However, as described above in paragraphs 2.8–2.11 and 2.15–2.18, there is no need to replace this soil because both *caños* are already filled in – the 2010 *caño* as a result of natural processes that were completed in mid-2011, and the 2013 *caño* as a result of the dyke that was constructed in 2015. Fundación Neotrópica fails to acknowledge either of these facts.[175]

4.35 Indeed, there is no indication in the Memorial that Costa Rica has any intention to carry out further restoration work, and none of the four reports that are cited by Fundación Neotrópica as providing "the recommendation of

[172] *See ibid.* p. 32 Exhibit 1.

[173] Fundación Neotrópica, Monetary Valuation Report, 3 June 2016, pp. 61, 63. CRMC, Vol. I, Annex 1 (at p. 147, 149).

[174] *Ibid.*, p. 61. $33,610.69 pertains to the 2010 *caño*; $21,315.00 pertains to the 2013 *caño*.

[175] The remaining $2,708.39 of the total consists of a "$929.79 per ha for restoration cost of a wetland in the Costa Rica-Nicaragua cross-border wetland area." *Ibid.* It claims this cost is associated with "the repopulation of species, control, monitoring and infrastructure." *Ibid.*, p. 52 (at p. 138). However, Fundación Neotrópica does not identify any restoration that is occurring or planned to occur.

restoration measures" suggest that restoration should include measures beyond constructing the dyke that was installed in 2015.[176]

III. Remediation of the 2013 Eastern Caño

4.36 Separate from its claim for lost environmental services, Costa Rica seeks $195,671.02 in compensation for costs it allegedly incurred in connection with construction of the dyke across the 2013 eastern *caño* in 2015. Nicaragua accepts that compensation may be appropriate for costs that were reasonably incurred. However, Costa Rica's claim is inflated.

4.37 Specifically, Costa Rica seeks $156,446.27 in compensation for "construction materials and hiring of a private civilian helicopter to transport personnel and materials."[177] This includes more materials than were actually used to build the dyke. Annex 4 to the Memorial accepts that "[t]he construction required fewer materials than those planned in the original design," and that "[l]eftover material included sandbags and sacks filled with sand at the delta of the Agua Dulce lagoon, with a total of 2451 synthetic sandbags mostly contained in 79 sacks, and 564 burlap sandbags contained in 25 sacks."[178] It further indicates that the surplus may be "used to contain erosion at the edge of Agua

[176] *See ibid.*, p. 51 (citing sources number 4, 10, 12, and 13 in Table 2). CRMC, Vol. I, Annex 1 (at p. 137).

[177] CRMC, Table 3.4 (at p. 69).

[178] 2015 MINAE Report, p. 26. CRMC, Vol. I, Annex 4 (at p. 228).

Dulce lagoon near its mouth."[179] The cost for these materials cannot reasonably be assigned to Nicaragua. Removing them from the claim reduces it by at least $9,000.[180]

4.38 Costa Rica also seeks $33,041.75 in compensation for three post-dyke construction overflights (on 9 June, 8 July, and 3 October 2015).[181] Costa Rica claims that the purpose of these flights was "to assess the effectiveness of the works that had been completed to construct the dyke on the eastern caño."[182] However, the overflights, at least in part, were for purposes unrelated to the activities that the Court determined were wrongful. Each overflew "other points of interest in the *Humedal Caribe Noroeste*," [183] including at least one "[o]verflight of the border road." [184] These expenses are therefore not compensable.

[179] *Ibid.*

[180] Costa Rica has presented a list of the supplies purchased for the dyke construction works, including the quantity purchased and their unit price. CRMC, Vol. II, Annex 15 (at p. 157). That list can be compared with the list of "Materials used for the construction of the dyke at the artificial caño" that is included in Table 3 of the 2015 MINAE Report (CRMC, Vol. I, Annex 4, at p. 224). Such a comparison indicates at least $9,112.50 worth of the materials went unused.

[181] CRMC, Table 3.4 (at p. 70).

[182] *Ibid.*, para. 3.42.

[183] *See* Costa Rica's National Commission for Risk Prevention and Emergencies Attention (CNE), Department of Reconstruction Processes, Report of Expenses incurred by the CNE, 4 April 2016, pp. 145, 147–148, 152. CRMC, Vol. II Annex 15 (at pp. 162, 164–165, 169).

[184] *See* CNE, Reports of Expenses (2016), p. 154. CRMC, Vol. II, Annex 15 (at p. 171).

IV. The Proper Valuation of Material Damages Caused by Nicaragua's Works

4.39 The Payne & Unsworth Report explains that the "standard approach in natural resource damage assessment is to value damage claims using restoration or replacement costs."[185] For instance, this was the approach that the UNCC's environmental claims panel followed for the "largest environmental damage claims" that it was called upon to adjudicate, which concerned "[d]amage to Saudi Arabia's coastal environment" caused by oil spills.[186] The panel's award had two components: (a) "replacement costs," which were "valued by the cost of shoreline reserves that would provide additional ecological services to replace those that were lost"; and (b) "restoration costs," which were "valued by the cost of a remediation plan tailored to the injured sites."[187]

4.40 The Payne & Unsworth Report explains that "such an approach is appropriate for valuing Costa Rica's claims for environmental damage" since it would "provide an accurate measure of loss" while avoiding "the weaknesses inherent in Neotropica's approach."[188]

4.41 With respect to *replacement costs*, the Payne & Unsworth Report observes that "[i]t is common in the context of natural resource damage

[185] Payne & Unsworth Report, p. 33. NCMC, Vol 1, Annex 1.

[186] *Ibid.*

[187] *Ibid.*

[188] *Ibid.*

assessment for parties to use payments to land conservation banks, such as wetland banks, or to pay landowners to conserve or protect habitat as a means to offset environmental harms."[189] This is a "favoured approach because these actions assure that the same level of environmental services are available as would have been but for the harm in question."[190] As noted, this was acheived by the UNCC in regard to damage to Saudi Arabia's coastline by the award of compensation in an amount sufficient to establish reserves in comparable areas.

4.42 Use of a similar approach would be appropriate and straightforward to implement in regard to damage caused to the disputed area because, as the Payne & Unsworth Report explains, "Costa Rica has an active market that pays landowners and communities for the management of habitat to provide ecosystem services."[191]

4.43 In that regard, under Costa Rica's protection scheme, the highest price paid in 2012 was $294/hectare/year, which corresponds to $309/hectare/year in 2017 dollars.[192] Payne & Unsworth explain that if this amount were applied to the 6.19 hectares that Costa Rica alleges were injured by Nicaragua's works, and applied over the course of 20 to 30 years (a reasonable length of time given the

[189] *Ibid.*

[190] *Ibid.*

[191] *Ibid.*

[192] *Ibid.*

recovery of the impacted areas[193]), "this would imply an ecosystem service replacement cost of $1,913/year, or a present value for 20 to 30 years of USD 27,034 to USD 34,987."[194]

4.44 On this basis, the Payne & Unsworth Report concludes that Costa Rica is entitled to no more than $34,987 in compensation for replacement costs.[195]

4.45 With respect to *restoration costs*, the amount claimed by Costa Rica consists of expenses incurred in connection with the construction of the dyke in 2015 to remediate the 2013 eastern *caño*. Nicaragua accepts that it should compensate Costa Rica for such costs, except for materials not used in the construction of the dyke and overflights that involved monitoring unrelated locations. When those uncompensable expenses are subtracted from Costa Rica's claim, the result is a compensable restoration cost of no more than $153,517.[196]

4.46 Accordingly, consistent with standard environmental claims valuation practices, including that of the UNCC, Nicaragua is responsible for compensating Costa Rica for its claims with respect to environmental impacts in an amount no greater than $188,504. This represents the cost of purchasing the protection of an area equivalent to the area that was impacted by Nicaragua's

[193] Kondolf Report (2017), pp. 3–4. NCMC, Vol. I, Annex 2.

[194] Payne & Unsworth Report, p. 34. NCMC, Vol. I, Annex 1.

[195] *Ibid*., pp. 33–34.

[196] *Supra* paras. 4.36–4.38.

works ($34,987),[197] plus the reasonable costs of remediation work carried out by Costa Rica in the 2013 eastern *caño* ($153,517).[198]

[197] *Supra* para. 4.44.

[198] *Supra* para. 4.45. Costa Rica claims pre- and post-judgment interest on the asserted ground that it is "well-established in international practice." CRMC, para. 2.29. However, "an injured State has no automatic entitlement to the payment of interest"; rather, the "awarding of interest depends on the circumstances of each case [and] in particular, on whether an award of interest is necessary in order to ensure full reparation." ARSIWA, Art. 38, cmt. 7. Costa Rica nowhere explains why the circumstances of this case warrant the award of interest. Nor has it attempted to justify the 6% interest rate it requests.

CHAPTER 5: COSTA RICA'S CLAIMS FOR ALLEGED MONITORING

5.1 In this Chapter, Nicaragua responds to Costa Rica's claims for reimbursement for its purported "monitoring" expenses, almost all of which are actually the salaries of Costa Rican security forces deployed to protect against the imagined threat of Nicaragua reoccupying the disputed area and, especially, occupying other parts of Costa Rica. As such, they are unrelated to the material damage caused by Nicaragua's works in the disputed area and entirely inappropriate claims for compensation.

I. Claims for the Wages of Security Personnel

5.2 Nearly the entirety of Costa Rica's claim for monitoring ($3,092,834.17) consists of wages that it claims to have paid to security personnel who were deployed between March 2011 and December 2015 to police posts that Costa Rica constructed at Laguna Los Portillos and Laguna Agua Dulce.[199] None of these costs are compensable.

[199] CRMC, para. 3.29(c); Costa Rica's Ministry of Security, Department of Salaries and Wages, Report of Salaries paid to Police personnel from March 2011 to December 2015 ("Ministry of Security, Department of Salaries and Wages, Salaries Report"). CRCM, Vol. II, Annex 13.

A. Costa Rica's Deployment of Security Personnel Was Not Proximately Caused by Nicaragua's Works in the Disputed Area

5.3 The police deployment for which Costa Rica claims compensation had nothing to do with any environmental harm caused by Nicaragua, or even Nicaragua's presence in the disputed area; rather, it was to provide security against future attempts by Nicaragua to occupy the disputed area or, especially, *other* parts of Costa Rica, including to defend Costa Rica against a fantasized Nicaraguan invasion. To confirm that this is the case, the Court need only look to the documents that Costa Rica itself has presented in support of its compensation claim.

5.4 In particular, the materials that Costa Rica provided to Nicaragua in June 2016, which set out the details of its compensation claim, explain the $3,092,834.17 claimed for "Wages of Law Enforcement [Fuerza Pública] and Border Police [Policía de Fronteras] forces" by stating that the police were deployed "to avoid Nicaragua claiming sovereignty over additional territories in the region"[200] It further states that "[t]hese police forces were to surveil the actions of the Nicaraguan army . . . ."[201] These statements by themselves defeat

[200] Summary Table of the Information Provided by the Institutions Responsible for Attending to Harm Caused by Nicaragua in the Zone of Isla Portillos (undated, provided to Nicaragua on 7 June 2016), p. 2, Rows 8, 9. NCMC, Vol. I, Annex 3. Costa Rica also cited the Court's Provisional Measures Order of 8 March 2011 as a justification. However, as explained *infra*, that claim is untrue.

[201] *Ibid.*, Row 8.

Costa Rica's claim. It is an admission that the "Fuerza Publica" and the "Policia de Frontera" were *not* deployed in response to, or to remediate, the material damage that Nicaragua's works caused to the disputed area.

5.5 Annex 13 of Costa Rica's Memorial, which is a chart listing the police officers for whose salaries Costa Rica seeks compensation, is also revealing. It bears the title "Ministry of Security, Personnel Posted in Delta Costa Rica and Agua Dulce *Because of the Nicaraguan Invasion*" (emphasis added), which further demonstrates that Costa Rica is seeking compensation for officers it deployed because of a threatened "Nicaraguan invasion."[202] Consistent with that purpose, Annex 13 also establishes that the personnel were stationed at locations far removed from the disputed area. Agua Dulce is approximately 8 kilometres away from the disputed area; Delta Costa Rica is approximately 19 kilometres away. Notably, no police presence at Isla Portillos is mentioned.

5.6 The Memorial itself confirms that Costa Rica's deployment of forces to or near Isla Portillos was not a response to Nicaragua's works in the disputed area. Paragraph 3.29(c) states that Costa Rica had to "staff these posts [at Laguna de Agua Dulce and Isla Portillos] with sufficient personnel to monitor the actions of Nicaragua *in the vicinity of* (and in) *the disputed territory* and to

[202] Ministry of Security, Department of Salaries and Wages, Salaries Report. CRCM, Vol. II, Annex 13 (at p. 124).

provide security to the area, as ordered by the Court."[203] The actions these forces were deployed to monitor, as Costa Rica's own documents reveal, were any preparations or other movements by Nicaraguan military personnel that might signal an intention to enter and occupy Costa Rican territory.[204] As Costa Rica explained in an July 2013 report to the Ramsar Secretariat, the police were deployed because of "hostile acts" that, it claimed, "evidenced Nicaragua's intention to entirely ignore the border regime."[205] These included, *inter alia*, that Nicaragua had "threatened to reclaim the Costa Rican province of Guanacaste."[206] Costa Rica's report described its construction of surveillance towers at the posts for which it is now seeking compensation, each equipped with "long range cameras (15 km)" that were intended "to serve as a support for the *national security strategy* in the border area."[207]

5.7 These deployments thus had nothing to do with remedying or even responding to the environmental damage Nicaragua's works are said to have caused in the disputed area, or with Nicaragua's presence in the disputed area.

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[203] CRMC, para. 3.29(c) (emphasis added).

[204] *See* Summary Table of the Information Provided by the Institutions Responsible for Attending to Harm Caused by Nicaragua in the Zone of Isla Portillos (undated, provided to Nicaragua on 7 June 2016), Rows 8, 9. NCMC, Vol. I, Annex 3.

[205] Costa Rican Ministry of Foreign Affairs, New Works in the Northeast Caribbean Wetland, Report for the Executive Secretariat of the Ramsar Convention on Wetlands, July 2013 ("Costa Rica's Report to Ramsar Convention Secretariat, July 2013"), p. 3. CRMC, Vol. I, Annex 3 (at p. 180).

[206] *Ibid.*

[207] CRMC, para. 3.26; Costa Rica's Report to Ramsar Convention Secretariat, July 2013, p. 6 (emphasis added). CRMC, Vol. I, Annex 3 (at p. 183).

B. Costa Rica's Security Forces Were Not Deployed Because of the Court's 8 March 2011 Provisional Measures Order

5.8 Costa Rica cannot justify seeking compensation from Nicaragua for its police deployment by invoking the Court's Provisional Measures Order of 8 March 2011.[208] That Order directed the parties to monitor the disputed area so as to "prevent the development of criminal activity in the disputed territory in the absence of any police or security forces of either Party."[209] In the first place, the Costa Rican deployment could not have been motivated by the Provisional Measures Order because it *preceded* the Order: deployments to Laguna de Agua Dulce began in December 2010; the Court did not indicate provisional measures until 8 March 2011.

5.9 Second, the Order directed monitoring in order to "*prevent the development of criminal activity in the disputed territory* in the absence of any police or security forces of either Party."[210] Thus, if Costa Rica had deployed security personnel to the disputed area in response to (as distinct from prior to) the Court's Order, it would have been appropriate only for the purpose of preventing criminal activity – not for the purpose of monitoring Nicaragua's works or any related environmental damage caused by such works. In fact, at the time the Order was issued in March 2011, Nicaragua's works had already been completed

[208] CRMC, para. 3.26

[209] Provisional Measures Order of 8 March 2011, para. 78.

[210] *Ibid.* (emphasis added).

and its personnel had been removed from the disputed area. The Order plainly reflects this. The removal of Nicaraguan personnel from the area left it completely devoid of any security presence, and ripe for criminal activity. That explains why the Court, which otherwise prohibited most entry into the area, directed the Parties to monitor it to "prevent the development of criminal activity."[211]

5.10 The Witness Statement of Costa Rica's former Minister of Public Security, Mr. Mario Zamora Cordero, confirms that the deployment of Costa Rica's security forces was not part of a plan to prevent criminal activity in the disputed area in response to the Court's Order. To the contrary, it was intended to provide security against Nicaragua occupying other parts of Costa Rica.[212] He states that "Costa Rica placed police personnel in the vicinity of Isla Portillos in order to provide security and assistance to communities in that area, and, where possible, to protect Costa Rican territory from further advances of Nicaragua military forces."[213]

5.11 To be sure, the former Minister's Witness Statement (which was prepared for use in this litigation six years after the events it recounts) asserts that the long-term deployment of security personnel to the disputed area was a

[211] *Ibid.*

[212] *See* Witness Statement of Mr. Mario Zamora Cordero, Former Minister of Public Security of Costa Rica, 22 March 2017 ("Zamora Cordero Witness Statement (2017)"). CRMC, Vol. I, Annex 5 (at p. 238).

[213] *Ibid.*

response to the Court's indication of provisional measures.[214] But, even if that were so, any proper response to the Court's Order would have been directed at preventing criminal activities in the disputed area, not at Nicaragua's works in the area or at the damage they are alleged to have caused.

5.12 In any event, the former Minister's Statement in this regard is contradicted by contemporaneous official Costa Rican government records. In April 2011, Mr. Zamora's predecessor as Minister of Public Security, Mr. José María Tijerino Pacheco, prepared a report that detailed what had been accomplished during his tenure as Minister. He explained that "[a]s a result of events on the northern border in recent months, the urgent goal was established of reactivating Border Police in order to ensure the security of citizens and respect for national sovereignty."[215] That motivation, he made clear, applied to "the entire land border line" and to the "infrastructure needed for the operation," which included the 45 "police outposts" that had been or would be constructed.[216] Significantly, Minister Tijerino's report did *not* refer to the Court's Provisional Measures Order as a reason for the police deployment. Nor did the Minister refer to any need to monitor or otherwise address Nicaragua's works in the disputed area or any alleged damage they might have caused.

[214] *Ibid.* ("After the Court indicated Provisional Measures on [8 March 2011], I gave instructions for the planning of a long term police presence, in order to provide security to what was then termed the 'disputed territory.'").

[215] José María Tijerino Pacheco, Outgoing Report, Period 8 May 2010 to 30 April 2011, Ministries of State and Police and Public Security, April 2011, pp. 26–27. NCMC, Vol. I, Annex 4.

[216] *Ibid.*

5.13 Moreover, any such monitoring, even if done in response to the Order of 8 March 2011, *quod non*, was disproportionate to any need to prevent criminal activity in the disputed area. Indeed, prior to its deployment, Costa Rica had never stationed police in, or anywhere near, the disputed area.[217] There was certainly no cause to station a large number of personnel there at two separate posts, twenty-four hours a day, seven days a week. And there is no cause whatsoever to ask Nicaragua to pay for these activities.

C. The Wages Allegedly Paid to Security Personnel Would Have Been Paid Even in the Absence of Nicaragua's Works

5.14 Even if the salaries of the Costa Rican police were, in principle, compensable, a State is only entitled to compensation for extraordinary expenses, such as the costs of hiring new personnel or the payment of overtime. For

[217] *See* Affidavit of Suban Antonio Yuri Valle Olivares (Police), 15 December 2010, p. 1 ("The only Costa Rican presence has been the rural guard or public force post located in the Delta, from the San Juan River Delta throughout the river's mouth we never saw any presence of Costa Rican civil authorities or public force."). NCM, Vol. III, Annex 84 (at p. 360); *see also* Affidavit of José Magdiel Pérez Solis (Police), 15 December 2010, p. 1 ("Since two thousand and eight (2008), up to this day, I have never seen Costa Rican presence in the zone."). NCM, Vol. III, Annex 80 (at p. 336); Affidavit of Gregorio de Jesús Aburto Ortiz (Police), 15 December 2010, p. 2 ("I have to say that during 2004 and 2005 there was no presence of Costa Rican civil authorities or public forces in the Harbor Head zone."). NCM, Vol. III, Annex 81 (at p. 343); Affidavit of Luis Fernando Barrantes Jiménez (Police), 15 December 2010, p. 1 ("[W]e never found the presence of any Costa Rican civil authority or public force…"). NCM, Vol. III, Annex 82 (at p. 348); Affidavit of Douglas Rafael Pichardo Ramírez (Police) p. 2 ("During our constant patrol activities throughout all the Harbor Head zone and its streams, Indio River, the lagoon and the San Juan River we never found any Costa Rican authorities neither civil servants."). NCM, Vol. III, Annex 83 (at p. 355).

example, the UNCC's F2 Panel held that only incremental salary and overtime payments were compensable.[218] It defined these incremental payments as:

> payments made over and above normal salary and overtime payments made to regular staff as a direct result of Iraq's invasion and occupation of Kuwait, as well as salary and overtime payments to staff specifically recruited as a result of Iraq's invasion and occupation of Kuwait. In all cases, the salary and overtime payments must also be reasonable in order to be compensable.[219]

Other UNCC panels likewise held that only personnel costs over and above what the claimant would have incurred but for the internationally wrongful act are compensable.[220] This flows inexorably from the requirement that an internationally wrongful act be the cause-in-fact of a loss for compensation to be

[218] United Nations Compensation Commission, Report and Recommendations made by the Panel of Commissioners concerning the Second Instalment of "F2" Claims, U.N. Doc. S/AC.26/2000/26 ("UNCC, Report and Recommendations on the Second Instalment of "F2" Claims"), 7 December 2000, paras. 52–58.

[219] *Ibid.*, para. 53.

[220] *E.g.*, United Nations Compensation Commission, Report and Recommendations made by the Panel of Commissioners concerning the Second Instalment of "F4" Claims, U.N. Doc. S/AC.26/2002/26 ("UNCC, Report and Recommendations on the Second Instalment of "F4" Claims"), 3 October 2002, para. 30 (adopting the approach of "other panels that have held that salaries and other expenses incurred by a claimant in respect of its personnel are compensable if the expenses were incurred as a direct result of Iraq's invasion and occupation of Kuwait and were extraordinary in nature (i.e. if they were over and above what would have been incurred by the claimant in the normal course of events)."); *see also* United Nations Compensation Commission, Report and Recommendations made by the Panel of Commissioners concerning the Third Instalment of "E2" Claims, U.N. Doc. S/AC.26/1999/22, 9 December 1999, para. 100 ("Many claimants, particularly in the shipping industry, allege that they incurred *additional* staff costs, in the form of *overtime payments* and *bonus payments* made as incentives to employees so as to enable claimants to continue their operations in the Middle East area during the hostilities. … The Panel finds that *additional* payments, where related to the compensable areas and periods … are compensable to the extent that they were reasonable in amount.") (emphasis added).

merited.[221]

5.15 Ordinary wages and other compensation that would have been paid in the absence of a wrongful act are therefore not compensable.[222] Accordingly, the UNCC F4 Panel rejected claims as to which there was insufficient evidence that personnel costs were extraordinary,[223] on the basis that "salaries and related expenses paid to regular employees of a claimant are not compensable if such expenses would have been incurred regardless of Iraq's invasion and occupation of Kuwait."[224]

[221] *See Application of the Convention on the Prevention and Punishment of the Crime of Genocide*, para. 462 (rejecting a claim for monetary compensation when the evidence did not establish that the injury would not have occurred in the absence of the breach).

[222] *See* UNCC, Report and Recommendations on the Second Instalment of "F4" Claims, 3 October 2002, para. 30.

[223] *E.g.*, *Ibid.*, paras. 213–219, 240–248, 249–257; *see also* United Nations Compensation Commission, Report and Recommendations made by the Panel of Commissioners concerning the First Instalment of "F2" Claims, U.N. Doc. S/AC.26/1999/23 ("UNCC, Report and Recommendations on the First Instalment of "F2" Claims"), 9 December 1999, para. 101 (rejecting a claim on the same ground). The International Tribunal for the Law of the Sea reached the same result in the *M/V "Saiga"* case, when faced with a claim for compensation for "the expenses resulting from the time lost by [Saint Vincent and the Grenadines'] officials in dealing with the arrest and detention of the ship and its crew." *M/V "Saiga" (No. 2) Case (Saint Vincent and the Grenadines v. Guinea)*, Judgment of 1 July 1999, ITLOS Reports 1999, para. 177. The Tribunal reject the claim, holding that any expenses incurred with respect to the officials were "incurred in the normal functions of a flag State" and for this reason were not compensable. *Ibid.*

[224] UNCC, Report and Recommendations on the Second Instalment of "F4" Claims, 3 October 2002, para. 30; *see also* UNCC, Report and Recommendations on the Second Instalment of "F2" Claims, 7 December 2000, paras. 54, 57 ("The Panel finds that salary and overtime payments made to staff members who performed their regular tasks in assisting refugees are not, in principle, compensable where those payments would have been made regardless of Iraq's invasion and occupation of Kuwait. … [P]ayments made to staff members who performed their regular tasks in implementing emergency plans and other preventive and protective measures are not in principle compensable where those payments would have been made regardless of Iraq's invasion and occupation of Kuwait.").

5.16 This rule applies even when personnel are diverted from their other tasks to address the effects of a wrongful act. UNCC panels have thus routinely rejected claims for compensation for the ordinary wages of personnel, such as:

- the salaries and equipment of 1,700 regular staff police officers re-assigned to provide protection to evacuees and additional services throughout the country;[225]
- the costs allegedly incurred by Kuwait University in creating a new research department to study the impacts of Iraq's invasion and occupation, where Kuwait failed to establish that the University hired new personnel to carry out the studies rather than simply reallocating resources from other departments;[226]
- the salaries of the crew of an oil pollution control vessel dispatched to assist with the response to oil spills in the Persian Gulf;[227] and
- the salaries of regular government personnel dispatched to Bahrain and Qatar to provide technical assistance and training regarding the protection of drinking water from the effects of oil spills.[228]

[225] UNCC, Report and Recommendations on the First Instalment of "F2" Claims, 9 December 1999, paras. 100(i), 101.

[226] UNCC, Report and Recommendations on the Fifth Instalment of "F4" Claims, 30 June 2005, paras. 533–543.

[227] UNCC, Report and Recommendations on the Second Instalment of "F4" Claims, 3 October 2002, para. 245.

[228] *Ibid.*, para. 254. Accordingly, Costa Rica's unsupported assertion that "claims were, in principle, permitted where staff or officials had been diverted from other functions which they

5.17 These rulings are corroborated by the sources cited in Costa Rica's Memorial. In one, the panel awarded compensation only for *extraordinary* personnel costs, such as bonus and overtime payments, which the personnel would not otherwise have received.[229] In the other, the panel limited compensation to "incremental salary and overtime payments … over and above normal salary and overtime payments…."[230] Costa Rica cites no support for the proposition that regular personnel costs—even for reassigned personnel—are compensable.[231]

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would have performed" is incorrect. *See* CRMC, para. 2.17. On the contrary, the mere fact that personnel were reassigned from other work they would have done was *not* sufficient to make their salaries compensable, as demonstrated above. Only *additional* costs incurred with respect to re-assigned personnel—such as overtime payments, deployment bonuses, or per diems which would not have been paid in the absence of the wrongful act—are compensable.

[229] *See* CRMC, paras. 2.15, 2.21; *see also* UNCC, Report and Recommendations on the Fifth Instalment of "F4" Claims, 30 June 2005, paras. 258–259; UNCC, Report and Recommendations on the Second Instalment of "F2" Claims, 7 December 2000, paras. 55–57.

[230] *See* CRMC, para. 2.16 (quoting UNCC, Report and Recommendations on the Second Instalment of "F2" Claims, 7 December 2000, para. 53).

[231] Costa Rica is not aided by its reliance on two investment arbitration awards. *See* CRMC, para. 2.18. As Costa Rica admits in footnote 36 of its Memorial, the *Pope & Talbot* tribunal held that the value of management time was *not* compensable because even though management was "involved in matters covered by the … claim," the claimant incurred no additional cost because the managers' "salaries would have been paid no matter what work related activities those managers undertook." *Pope & Talbot Inc. v. The Government of Canada*, UNCITRAL, Award in Respect of Damages, 31 May 2002, para. 82. The "professional costs" cited by Costa Rica (*see* CRMC, para. 2.18), for which the tribunal did award compensation were legal and accounting fees, not salaries. *Pope & Talbot v. Canada*, paras. 85–87. In the *Lemire* case, the tribunal did not award damages for management time. Instead, the tribunal merely considered management time (which it did not quantify) to be relevant in estimating the amount invested by the claimant. *Josepth Charles Lemire v. Ukraine*, ICSID Case No. ARB/06/18, Award, March 28, 2011, para. 302. The tribunal did not use the amount invested as a measure of damages; to the contrary, it observed that "[i]nvestment and damages are of course separate concepts…." *Ibid.*, para. 300. Instead, it used the amount invested as a "test of reasonability" of the amount of damages determined through a discounted cash flow (DCF) valuation. *Ibid.*, paras. 298–299.

5.18 Here, Costa Rica did not incur any extraordinary expenses because it simply redeployed existing personnel from elsewhere in Costa Rica. This is made clear by the Witness Statement of Costa Rica's former Minister of Public Security, who states:

> [W]e were forced to *relocate* staff from many of its urban units in order to provide the necessary personnel to establish a presence in the area of Isla Portillos. Many of the *relocated* police were moved from units in the Central Valley, more specifically San José, Cartago, Heredia and Alajuela, but more generally resources were *relocated* almost from all police units across the country.[232]

5.19 Similarly, the former Minister's Witness Statement refers to the "*relocation* of police personnel" and the need to "*reassign* police personnel from units in town and cities serving communities and individuals, and *relocate* them to Isla Portillos."[233] Further, in regard to the creation of a "special border police unit," he states: "*For sake of clarity, this border police unit was formed by taking human and financial resources from other operational structures of the police.*"[234] In other words, Costa Rica hired no new personnel and made no additional appropriations to fund the police who manned the posts for which Costa Rica claims compensation.

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[232] Zamora Cordero Witness Statement (2017) (emphasis added). CRMC, Vol. I, Annex 5 (at p. 237).

[233] *Ibid.*, p. 238 (emphasis added).

[234] *Ibid.*, p. 239 (emphasis added).

5.20 Put simply, Costa Rica incurred no extraordinary expenses. Instead, it impermissibly seeks reimbursement for wages that it would have paid to its security personnel anyway.[235]

D. The Wages Allegedly Paid to Security Personnel Are Not Supported by Evidence

5.21 Costa Rica's compensation claim for the wages it paid to its security personnel is further defeated by its failure to present evidence to substantiate its alleged expenditures. The only evidence it has presented for the more than $3 million it claims for wages are the charts found at Annex 13, which come nowhere close to satisfying Costa Rica's burden of proof.[236]

5.22 For wages allegedly paid during the period March 2011-September 2013, Costa Rica's chart simply presents what it calls an "Estimation."[237] None of the underlying documentary evidence is produced. Moreover, the "Estimation"

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[235] Indeed, its compensation claim includes such ordinary expenses as "social security [contributions]," "Christmas bonus[es]," and "school allowance." Costa Rica's Ministry of Security, Department of Salaries and Wages, Report of Salaries paid to Police personnel from March 2011 to December 2015. CRMC, Vol. II, Annex 13 (at pp. 121–122). There is no support the Memorial's claim that new personnel were hired. CRMC, para. 3.29(c). The only source that is cited, CRMC Annex 39, simply describes fluctuations in the total number of police employed by Costa Rica, which is unsurprisingly higher some years than others. No evidence is presented that would suggest that any increase in the number of police is attributable to the need to deploy forces to the two police posts for which Costa Rica claims compensation.

[236] *See Diallo*, paras. 27, 31–33; UNCC, Report and Recommendations on the First Instalment of "F4" Claims, 22 June 2001, paras. 187–190, 232, 243–247, 381–382, 407–408, 716–717, 724, 727–728 (rejecting claims on similar grounds); Eritrea-Ethiopia Claims Commission, Final Award, Eritrea's Damages Claims, 17 August 2009, paras. 108, 161, 174 (same).

[237] Ministry of Security, Department of Salaries and Wages, Salaries Report (table titled "Estimation of Compensations Paid to Police Officers of the Public Force in Service"). CRCM, Vol. II, Annex 13 (at p. 122).

includes both police who were deployed to Agua Dulce and to Delta Costa Rica, even though the Memorial accepts that wages of personnel stationed at the latter post are not compensable, and there is no way to disaggregate the two.[238]

5.23 For the subsequent period, beginning in what is referred to as "II Sem 2013," no fewer than 45 individuals are listed as being stationed at Delta Costa Rica.[239] Further, the chart covers purported expenses through "I Sem 2016," despite the fact that Costa Rica only claims reimbursement for wages incurred through the date of the Court's Judgment of 16 December 2015.[240] The limited information that Costa Rica has provided, and the opaque manner in which it has calculated its claim for wages, makes it impossible to disentangle the wages that Costa Rica accepts are not compensable from those for which reimbursement is sought.

II. Claims for Other Expenses Allegedly Incurred in Connection with Costa Rica's Security Deployment

5.24 Costa Rica claims compensation for a variety of other expenses it allegedly incurred in relation to its police deployment. This includes $29,459.40 for wages it allegedly paid to Coast Guard personnel who are said to have

[238] *Ibid.*

[239] *Ibid.*, pp. 124–126.

[240] *Ibid.*

provided fluvial transport in connection with the police deployment.[241] It also includes the purchase of equipment allegedly used at its police posts, ranging from four ATVs (for which it seeks $81,208.40)[242] to a plethora of miscellaneous items, including a blender, coffee-maker, washing machines, and office equipment (for which it seeks $24,065.87).[243]

5.25 None of these claims is compensable because, as shown above (at paragraphs 5.3–5.13), they all relate to Costa Rica's deployment of security forces to protect against an imagined threat of a Nicaraguan invasion of other parts of Costa Rica, not to prevent or remedy any of the material damage (that is, the felling of trees or the removal of underbrush in connection with the clearing of *caños*) caused by Nicaragua between October 2010 and January 2011, or, briefly, in September 2013.

5.26 None of these assorted claims is compensable in any event. The claim for wages of Coast Guard personnel is impermissible because Costa Rica hired no new personnel to transport its security forces, nor did it pay its existing personnel anything extra for their activities. It merely assigned existing personnel to perform the transport services at their normal wages. This, as shown above (at

[241] Specifically, Costa Rica seeks $6,780.60 for October 2010–March 2011, and $22,678.80 for March 2011–December 2015. CRMC, paras. 3.24(e), 3.29(d), and Tables 3.3 & 3.4.

[242] CRMC, p. 56, Table 3.3.

[243] CRMC, para 3.29(b).

paragraphs 5.14–5.20), does not constitute an extraordinary expense and is not compensable.

5.27 Nor may Costa Rica seek compensation for the equipment that it says it provided to the security forces who were transported to Isla Portillos and Laguna Agua Dulce (the latter at some distance from the disputed area), for reasons other than remediation of the material damage caused by Nicaragua's works. How can Nicaragua's felling of trees and removal of underbrush be the proximate cause of Costa Rica's alleged purchases a washing machine, a blender, or office equipment, let alone four ATVs? The question itself reveals the absurdity of Costa Rica's claims.

5.28 In any event, nothing in the materials that Costa Rica has presented establishes an evidentiary basis for these claims. In particular, there is no evidence to substantiate the assertion that the Coast Guard personnel actually provided transport in connection with the police deployment.[244] The evidence for the alleged purchase of equipment is equally deficient. Annex 14, which contains the putative documentation, does not provide dollar figures for each item listed, and Costa Rica does not disclose the exchange rate it used for its calculations. In

[244] *See* National Coast Guard Service of Costa Rica, Department of Salaries and Wages, Report on working hours by personnel of the Coast Guard (21 October 2010 to 19 January 2015). CRMC, Vol. II, Annex 7; National Coast Guard Service of Costa Rica, Department of Salaries and Wages, Table of average Coast Guard Salaries (2010 to 2015). CRMC, Vol. II, Annex 8.

any event, the numbers do not add up, and it is impossible to determine which specific items of equipment are being claimed as compensable.[245]

A. Claims for Flights

5.29 Costa Rica claims compensation for various flights it allegedly carried out over the disputed area in October-November of 2010, and in April 2011, for which it collectively seeks $56,696.4 in fuel and maintenance costs and $2,062.37 for aircrew wages.[246]

5.30 Although Costa Rica claims that "[t]hese flights were necessary to verify reports of Nicaragua's presence and unlawful activities on Costa Rican territory, [247] and to "assess the environmental condition of the disputed territory," [248] the flight logs tell a different story. No fewer than 14 flights transported journalists, including from the *Tico Times*, *La Nación*, *Associated Press*, *Canal 44*, *Xinhua*, *Prensa Libre*, *Radio Nacional*, *Canal 13*, *Canal 7*,

[245] *See* Costa Rica's Ministry of Security, Border Police Directorate, Report of Expenses of Maintenance and Equipment of the Police Post in Agua Dulce Including Invoices, March 2016. CRMC, Vol. II, Annex 14. In addition, many of the items for which Costa Rica claims compensation were purchased between May and December 2015, that is, shortly before the Court's Judgment, and more than two years after Nicaragua's last wrongful acts. *Ibid.*

[246] In particular, Costa Rica claims $37,585.60 for fuel and maintenance and $1,044.66 for aircraft crew for the October–November 2010 flights, and $20,110.84 for aircraft fuel and maintenance and $1,017.71 for aircraft crew for the April 2011 fights. CRMC, para. 3.24(a), Table 3.2 (at pp. 42–42); CRMC, para. 3.29(a), Table 3.3 (at pp. 55–57).

[247] CRMC, para. 3.24(a).

[248] *Ibid.*, para. 3.29(a).

Canal 42, *Extra*, *Costa Rica Hoy*, *Reuters*, and *Radio América*.[249] Others ferried cargo, including "vegetable boxes" and "stretchers."[250] The logs for other flights leave blank the space for describing the "reason for the flight" and list no passengers, making it impossible to determine the flight's relationship to Nicaragua's acts.[251]

5.31 Further, notwithstanding Costa Rica's characterization of its claim as being for "fuel and maintenance," its supporting materials reveal it actually includes insurance and unspecified "miscellaneous" costs.[252] Regardless, Costa Rica has not presented invoices or other documentation that substantiate its claims. Finally, Costa Rica is not entitled to compensation for the regular salaries of flight crews, which consisted of existing government personnel.[253]

B. Claims Relating to Alleged Environmental Monitoring

5.32 Costa Rica claims compensation for expenses allegedly incurred while monitoring environmental impacts in the disputed area. In particular, it

[249] National Air Surveillance Service of Costa Rica, Department of Aeronautic Operations, Flight Logs, 14 April 2016. CRMC, Vol. II, Annex 12 (at pp. 71, 86, 87, 92, 93, 95, 96, 97, 99, 101, 105, 106, 107, 108).

[250] *E.g.*, *ibid.*, pp. 66, 70, 82, 83, 91.

[251] *Ibid.*, pp. 67, 72, 74, 77, 79, 84, 88).

[252] National Air Surveillance Service of Costa Rica, Department of Aeronautic Operations, Operative Expenses Report, 2 March 2016. CRMC, Vol. II, Annex 9 (at p. 45).

[253] CRMC, para. 3.24(b). Further, the alleged salary costs are simply "estimated." *See* National Air Surveillance Service of Costa Rica, Department of Salaries and Wages, Salaries Report (October 2010 to April 2011), (columns headed "Monthly average"). CRMC, Vol. II, Annex 10 (at pp. 53–56).

claims compensation for wages of personnel working for the Tortuguero Conservation Area (ACTo); food, water, and transportation costs; and expenses incurred in constructing a biological station near Laguna Los Portillos.[254]

5.33 To be compensable, environmental monitoring costs must, like any other expense, bear a direct and certain causal link to the activities the Court has held to be wrongful. As the UNCC has held, "compensation should not be awarded for monitoring and assessment activities that are purely theoretical or speculative, or which have only a tenuous link with damage resulting from" the wrongful acts.[255]

5.34 This requires proof that the monitoring is "reasonable" *vis-à-vis* the potential environmental impacts being studied.[256] Costa Rica does not contest this, accepting that only "[c]osts *reasonably* incurred in monitoring" environmental impacts are compensable.[257] A party seeking compensation must therefore prove that the monitoring project as a whole, as well as the particular expenses claimed for reimbursement, has the required causal nexus. At a minimum, this requires

[254] *See* CRMC, paras. 3.24, 3.29.

[255] UNCC, Report and Recommendations on the First Instalment of "F4" Claims, 22 June 2001, para. 31.

[256] *Ibid.*, para. 29.

[257] CRMC, para. 2.19 (emphasis added); *see also ibid.*, para. 2.13 (citing as "guidance as to the kinds of costs and expenses that would be recoverable" a decision by the UNCC Governing Council limited to "[r]easonable monitoring and assessment").

evidence concerning the work's parameters and methodology; failure to present such evidence requires rejecting the claim.[258]

5.35 Costa Rica, however, has not presented any evidence of what was monitored, such as the monitors' terms-of-reference or instructions. Indeed, Costa Rica has not even presented reports that the monitors produced, even though they evidently exist. In that regard, the cover letter provided in Annex 6 indicates that ACTo furnished to Costa Rica's Ministry of Foreign Ministry two binders of documents that included "copies of logs, reports, [and] other documents, which provide evidence of the participation of government officials and ACTo teams in addressing the problems arising from the Nicaraguan invasion of Isla Calero."[259] None of this material has been presented to the Court. It thus cannot be determined whether Costa Rica's monitoring was reasonably related to the activities that were found to be wrongful, or whether the monitoring (if it was carried out at all) was concerned with other issues, such as Nicaragua's dredging

[258] *See* UNCC, Report and Recommendations on the First Instalment of "F4" Claims, 22 June 2001, para. 752 (rejecting a claim for monitoring and assessment costs where "Syria has failed to provide details regarding the proposed methodology and it has not indicated how the study would link sheep mortality to air pollution resulting from Iraq's invasion and occupation of Kuwait."); *ibid.*, para. 759 (rejecting a claim for monitoring and assessment costs where "Syria has not provided any details of the proposed methodology; nor has it indicated how the study would differentiate vegetation contaminated as a result of Iraq's invasion and occupation of Kuwait from that contaminated by other sources").

[259] Tortuguero Conservation Area, National System of Conservation Areas, Report of expenses incurred in attending the situation arised by Nicaragua's occupation of Isla Calero ("Tortuguero Conservation Area, National System of Conservation Areas, Expenses Report"), 8 January 2016. CRMC, Vol. II, Annex 6 (at p. 5).

in the San Juan River, general ecological research, or issues related to the parties' land or maritime boundary disputes.[260]

5.36 Regardless, for the reasons explained above, the wages of the ACTo personnel ($26,471.31) are not compensable because Costa Rica simply reassigned existing staff.[261] And Costa Rica has not provided sufficient evidence to substantiate the various other alleged "monitoring" expenses for which it claims reimbursement.[262]

[260] In fact, the record shows that the monitoring related in large part to other issues. In a report to Ramsar, Costa Rica described the biological station as having objectives that are broader than monitoring linked to Nicaragua's activities. *See* Costa Rican Ministry of Foreign Affairs, New Works in the Northeast Caribbean Wetland, Report for the Executive Secretariat of the Ramsar Convention on Wetlands, July 2013, p. 7. CRMC, Vol. II, Annex 3 (at p. 184).

[261] CRMC, para. 3.29(g); UNCC, Report and Recommendations on the Second Instalment of "F4" Claims, 3 October 2002, pp. 31, 33, 36 (rejecting various claims for compensation for the wages of personnel involved in environmental clean-up and monitoring work because the claimant had not shown any extraordinary expenses).

[262] Tortuguero Conservation Area, National System of Conservation Areas, Expenses Report, 8 January 2016 (presenting only a summary table for its "Estimate of administrative costs" allegedly incurred for personnel, food, water transport, and ground transport). CRMC, Vol. II, Annex 6 (at p. 7); *ibid.* (providing only an "estimate of the cost of meals" made "indirectly using the rates authorized for the meal expense report approved by the Office of the National Comptroller General"); CRMC, para. 3.29(f) (failing to adequately justify expenditure of $35,500 for a tractor it claims was needed "to carry out works in the area of the Biological Station for its maintenance and ensure access to it"); *ibid.*, 3.29(j) (failing to adequately justify expenditure of $42,752.76 for purchasing two ATVs and three cargo trailers for the station, on the asserted ground that they were "dedicated initially to [the station's] construction, and later on to access and supply it, transporting materials, personnel and supplies from the post in Laguna de Agua Dulce to the Station").

C. Claims Relating to Satellite Imagery

5.37 Finally, Costa Rica seeks compensation for satellite images taken between December 2010-September 2015 ($178,304.00),[263] and for reports prepared by UNITAR and UNOSAT ($43,143.00).[264]

5.38 Although Costa Rica claims these as monitoring costs, they are properly characterized as non-compensable litigation expenses since Costa Rica commissioned a substantial portion of them in connection with the presentation of its case on the merits, including especially its claim of sovereignty over the disputed area, and its unsuccessful claim of environmental harm resulting from Nicaragua's dredging of the San Juan River, and it relied upon them for those purposes.[265]

5.39 For example, Costa Rica's case on the merits relied heavily on the UNITAR and UNOSAT reports, which it annexed to the Memorial[266] and cited as

[263] Ministry of Foreign Affairs and Worship, Report and Invoices for expenses incurred by the Ministry of Foreign Affairs for the purchase of Satellite Images and geospatial data processing corresponding to the area of Isla Portillos and the Mouth of the San Juan River ("Ministry of Foreign Affairs, Report and Invoices") (1 December 2010 to 2 October 2015). CRMC, Vol. II, Annex 16 (at p. 183).

[264] CRMC, p. 57; *see also ibid*., p. 42.

[265] *See, e.g.*, UNITAR/UNOSAT, Morphological and Environmental Change Assessment: San Juan River Area (including Isla Portilllos and Calero), Costa Rica (Geneva, 2011), 4 January 2011 ("January 2011 UNITAR/UNOSAT Report"). CRM, Vol. IV, Annex 148; UNITAR/UNOSAT, Morphological and Environmental Change Assessment: San Juan River Area (including Isla Portilllos and Calero), Costa Rica (Geneva, 2011), 8 November 2011 ("November 2011 UNITAR/UNOSAT Report"). CRM, Vol. IV, Annex 150.

[266] *See* January 2011 UNITAR/UNOSAT Report. CRM, Vol. IV, Annex 148; November 2011 UNITAR/UNOSAT Report. CRM, Vol. IV, Annex 150.

support for its arguments concerning whether the 2010 *caño* existed prior to its clearance, [267] the alleged environmental impacts of those works, [268] and Nicaragua's dredging of the San Juan River.[269] Professor Thorne, Costa Rica's expert, similarly relied upon one such report for his own report that Costa Rica included with its Memorial.[270]

5.40 Costa Rica's arguments on the merits also used satellite images for which it now seeks reimbursement. Its compensation claim includes the image dated 7 June 2011 that was used in Sketch Map 5.1 of its Memorial.[271] One of the invoices it has presented includes an image taken on 28 August 2011 that appears to correspond to Figure I.42 in Professor Thorne's report.[272] And the invoice for the image taken on 22 December 2013 appears to match the one found in Figure 5.3 of Professor Thorne's report in the *Construction of a Road* case, which Costa Rica also used to cross-examine Nicaragua's experts.[273] It is thus clear that the

[267] *E.g.*, CRM, para. 3.108, Figure 3.9 (at p. 125); *ibid.*, para 4.55.

[268] *E.g.*, *ibid.*, para. 3.111; *ibid*. para. 3.113.

[269] *E.g.*, *ibid.*, para. 5.108; *ibid*. para 5.115.

[270] *See, e.g.*, Thorne Report (2011), pp. I-34–I-36 (citing and reproducing an image from the January 2011 UNITAR/UNOSAT Report). CRM, Vol. I, Appendix 1 (at pp. 358–360); *see also ibid.*, Table II.1.

[271] *Compare* CRM, Sketch Map 5.1 (at p. 229) (including a satellite image dated 7 June 2011) *with* Ministry of Foreign Affairs, Report and Invoices (1 December 2010 to 2 October 2015). CRMC, Vol. II, Annex 16 (at p. 255) (invoice for a satellite image dated 7 June 2011).

[272] *Compare* Ministry of Foreign Affairs, Report and Invoices (1 December 2010 to 2 October 2015). CRMC, Vol. II, Annex 16 (at p. 254) (invoice for radar satellite imagery with a date range beginning on 28 August 2011) *with* Thorne Report (2011), Figure, I.42 (at p. I-72) (radar satellite image dated 28 August 2011). CRM, Vol. I, Appendix 1 (at p. 396).

[273] *Compare* Report of Professor Colin Thorne, February 2015 ("Thorne Report (2015)"), Figure 5.3 (at p. 240) (image from Pleiades satellite dated December 2013, also used by Costa Rica in 20

primary purpose for Costa Rica's commissioning of these materials was not for "monitoring," but rather to further its claims and defenses on the merits. As such, they are non-compensable litigation expenses.

5.41 In any event, only a small fraction of the satellite images purchased by Costa Rica actually depict the three-square-kilometer disputed area; the vast majority covers *other* areas. Of the 26 sets of images for which Costa Rica seeks compensation, the smallest covers 15 sq. km.[274] Only three cover less than 100 sq. km,[275] and one covers more than 1100 sq. km.[276]

5.42 This defeats nearly all of Costa Rica's compensation claim for satellite imagery because Costa Rica was charged by the square kilometer. For

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April 2015 cross-examination of Nicaragua's experts). CRR (*Construction of a Road* case), Appendix A *with* Ministry of Foreign Affairs, Report and Invoices (1 December 2010 to 2 October 2015). CRMC, Vol. II, Annex 16 (at p. 216) (invoice for image from Pleiades satellite covering area of Finca La Chorrera dated 22 December 2013). Costa Rica appears to be seeking reimbursement for additional satellite images that it used for its case on the merits. For example, one of Costa Rica's invoices is for "December 2010" satellite imagery. *Ibid.*, p. 258. That description corresponds to several images, dated December 2010, which Costa Rica and Professor Thorne relied upon. *E.g.*, Thorne Report (2011), Figure I.18 (at p. I-27) (image dated 14 December 2010). CRM, Vol. I, Appendix 1 (at p. 351); *ibid.*, Figure I.42 (at p. I-72) (image dated 29 December 2010). Many of Costa Rica's other invoices and images similarly overlap. *Compare* Ministry of Foreign Affairs, Report and Invoices (1 December 2010 to 2 October 2015). CRMC, Vol. II, Annex 16 (at p. 259) (invoice for "November 2010" satellite imagery) *with* Thorne Report (2011), Figure I.17 (at p. I-26) (satellite image dated 19 November 2010) CRM, Vol. I, Appendix 1 (at p. 350); *compare* Ministry of Foreign Affairs, Report and Invoices (1 December 2010 to 2 October 2015). CRMC, Vol. II, Annex 16 (at p. 225) (invoice for image from WorldView-2 satellite dated 27 July 2012) *with* Thorne Report (2015), Figure 5.3 (at p. 240) (satellite image dated July 2012 with reference code "WV02") CRR (*Construction of a Road* case) Appendix A.

[274] *See* Ministry of Foreign Affairs, Report and Invoices (1 December 2010 to 2 October 2015). CRMC, Vol. II, Annex 16 (at p. 183) (table provided by Costa Rica that summarizes the satellite imagery for which it is seeking compensation).

[275] *See ibid.*, p. 183. Costa Rica has presented a total of 28 invoices; the area of the imagery purchased is not listed for two of them. *Ibid.*

[276] *Ibid.*, pp. 227–228.

example, the invoice dated 5 May 2014 is for a set of images that "cover the area of the mouth of San Juan River and the delta of the San Juan River, along the northern border with Nicaragua," that is, the entire stretch of the Lower Río San Juan.[277] Costa Rica was charged $28.00 per square kilometer for this 180 sq. km area,[278] and claims compensation for the entire $5,040 invoice.[279] Costa Rica, however, has no right to obtain reimbursement for these images, or for its purchase of other imagery that depicts places other than the disputed area. None of these images bears any causal relationship to Nicaragua's wrongful acts, which were confined to the disputed area.[280]

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5.43 In sum, Costa Rica has failed to prove that it is entitled to compensation for any of its putative "monitoring" costs.

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[277] *Ibid.*, pp. 206–207.

[278] *Ibid.*

[279] *Ibid.*

[280] *See, e.g.*, *ibid.*, pp. 185–186 (invoice for images covering 227 sq. km. that "cover the Mouth of Río Colorado, Laguna Aguadulce Sector, Río Taura and Laguna Portillos"); *ibid.*, pp. 191–192 (invoice for images covering 318 sq. km, of which 230 sq. km. were billed, that "cover the area of Trinidad and the Mouth of San Juan River"); *ibid.*, pp. 203–204 (invoice for images covering 177 sq. km. that "cover the area from Delta Costa Rica up to the Mouth of San Juan River along the border with Nicaragua"); *ibid.*, p. 195 (separate images of "Delta of the San Juan River" and "Mouth of the San Juan River"); *ibid.*, p. 210 (separate images of "Delta Costa Rica" and "Mouth of San Juan River – Isla Portillos"); *ibid.*, p. 213 (separate images of "Delta Costa Rica" and "Mouth of San Juan River"); *ibid.*, p. 216 (separate images of "Mouth of San Juan River" and "Finca Las Mercedes, Finca La Chorrera, Linea Fonteriza (border)"); *ibid.*, pp. 219–220 (separate images of "Mouth of the San Juan River," and "Delta Costa Rica," and "Trinidad – Delta Costa Rica"). Some invoices contain no description of the area covered. *E.g.*, *ibid.*, pp. 246–247, 249–50, 252, 254–55, 257. Others simply state that the images depict the "northern border with Nicaragua", but based on their size clearly cover far more than the disputed territory. *E.g.*, *ibid.*, pp. 225, 228, 232, 235, 237, 240.

SUBMISSIONS

For the reasons given herein, the Republic of Nicaragua requests the Court to adjudge and declare that the Republic of Costa Rica is not entitled to more than $188,504 for material damages caused by Nicaragua's wrongful acts.

The Hague, 02 June 2017

Carlos J. Argüello-Gómez

Agent of the Republic of Nicaragua

CERTIFICATION

I have the honour to certify that this Counter-Memorial and the documents annexed are true copies and conform to the original documents and that the translations into English made by the Republic of Nicaragua are accurate translations.

The Hague, 02 June 2017

Carlos J. Argüello-Gómez

Agent of the Republic of Nicaragua

CERTAIN ACTIVITIES CARRIED OUT BY NICARAGUA IN THE BORDER AREA

(COSTA RICA V. NICARAGUA)

COUNTER-MEMORIALOF THE REPUBLIC OF NICARAGUA

ON COMPENSATION

Annexes

LIST OF ANNEXES