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International Court of Justice

THE HAGUE

Cour internationale de Justice

LA HAYE

YEAR 2022

Public sitting

held on Friday 1 April 2022, at 3 p.m., at the Peace Palace,

President Donoghue presiding,

***in the case concerning the* Dispute over the Status and Use of the Waters of the Silala (Chile *v.* Bolivia)**

VERBATIM RECORD

ANNÉE 2022

Audience publique

tenue le vendredi 1er avril 2022, à 15 heures, au Palais de la Paix,

sous la présidence de Mme Donoghue, présidente,

***en l'affaire relative au* Différend concernant le statut et l'utilisation des eaux du Silala (Chili c. Bolivie)**

COMPTE RENDU

Present:	President	Donoghue
	Vice-President	Gevorgian
	Judges	Tomka
		Abraham
		Bennouna
		Yusuf
		Xue
		Sebutinde
		Bhandari
		Robinson
		Salam
		Iwasawa
		Nolte
		Charlesworth
	Judges *ad hoc*	Daudet
		Simma
	Registrar	Gautier

Présents : Mme Donoghue, présidente
M. Gevorgian, vice-président
MM. Tomka
Abraham
Bennouna
Yusuf
Mmes Xue
Sebutinde
MM. Bhandari
Robinson
Salam
Iwasawa
Nolte
Mme Charlesworth, juges
MM. Daudet
Simma, juges *ad hoc*

M. Gautier, greffier

The Government of Chile is represented by:

H.E. Ms Ximena Fuentes Torrijo, Vice-Minister for Foreign Affairs of the Republic of Chile, Professor of Public International Law, University of Chile,

as Agent, Counsel and Advocate;

Ms Carolina Valdivia Torres, Former Vice-Minister for Foreign Affairs of the Republic of Chile,

as Co-Agent;

H.E. Ms Antonia Urrejola Noguera, Minister for Foreign Affairs of the Republic of Chile,

H.E. Mr. Hernán Salinas Burgos, Ambassador of the Republic of Chile to the Kingdom of the Netherlands,

as National Authorities;

Mr. Alan Boyle, Emeritus Professor of Public International Law, University of Edinburgh, Barrister, Essex Court Chambers, member of the Bar of England and Wales,

Ms Laurence Boisson de Chazournes, Professor of International Law and International Organization, University of Geneva, member of the Institute of International Law,

Ms Johanna Klein Kranenberg, Legal Adviser and General Co-ordinator, Ministry of Foreign Affairs of Chile,

Mr. Stephen McCaffrey, Carol Olson Endowed Professor of International Law, University of the Pacific, McGeorge School of Law, former Chair of the International Law Commission,

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Mr. Andrés Jana Linetzky, Professor of Civil Law, University of Chile,

Ms Mara Tignino, Reader, University of Geneva, Lead Legal Specialist of the Platform for International Water Law at the Geneva Water Hub,

Mr. Claudio Troncoso Repetto, Professor and Head of Department of International Law, University of Chile,

Mr. Luis Winter Igualt, former Ambassador of the Republic of Chile, Professor of International Law, Pontificia Universidad Católica de Valparaíso and Universidad de Los Andes,

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Mme Carolina Valdivia Torres, ancienne vice-ministre des affaires étrangères de la République du Chili,

comme coagente ;

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Mr. Hassán Zeran Ruiz-Clavijo, First Secretary, Embassy of Chile in the Netherlands,

Ms María Fernanda Vila Pierart, First Secretary, Embassy of Chile in the Netherlands,

Mr. Diego García González, Second Secretary, Embassy of Chile in the Netherlands,

Ms Josephine Schiphorst, Executive Assistant to the Ambassador, Embassy of Chile in the Netherlands,

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Mme Devon Burkhalter, Farm Press Creative,

M. David Swanson, Swanson Land Surveying,

comme conseillers assistants.

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comme agent ;

S. Exc. M. Rogelio Mayta Mayta, ministre des affaires étrangères de l'Etat plurinational de Bolivie,

Mr. Freddy Mamani Laura, President of the Chamber of Deputies of Bolivia,

Ms Trinidad Rocha Robles, President of the International Policy Commission of the Chamber of Senators of Bolivia,

Mr. Antonio Colque Gabriel, President of the Commission for International Policy and Protection for Migrants of the Chamber of Deputies of Bolivia,

H.E. Mr. Freddy Mamani Machaca, Vice-Minister for Foreign Affairs of Bolivia,

Mr. Marcelo Bracamonte Dávalos, General Adviser to the Minister for Foreign Affairs of Bolivia,

as National Authorities;

Mr. Alain Pellet, Professor Emeritus of the University Paris Nanterre, former Chairman of the International Law Commission, President of the Institut de droit international,

Mr. Rodman R. Bundy, former *avocat à la Cour d'appel de Paris*, member of the Bar of the State of New York, partner, Squire Patton Boggs LLC, Singapore,

Mr. Mathias Forteau, Professor, University Paris Nanterre, member of the International Law Commission,

Mr. Gabriel Eckstein, Professor of Law, Texas A&M University, member of the Bar of the State of New York and the District of Columbia Bar,

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Mr. Emerson Calderón Guzmán, Professor of Public International Law, Universidad Mayor de San Andrés and Secretary General of the Strategic Directorate for Maritime Claims, Silala and International Water Resources (DIREMAR),

Mr. Francesco Sindico, Associate Professor of International Environmental Law, University of Strathclyde Law School, Glasgow, and Chairman of the International Union for Conservation of Nature (UICN) World Commission on Environmental Law, Climate Change Law Specialist Group,

Ms Laura Movilla Pateiro, Associate Professor of Public International Law, University of Vigo,

Mr. Edgardo Sobenes, Consultant in International Law (ESILA),

Ms Héloïse Bajer-Pellet, member of the Paris Bar,

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Mr. Ysam Soualhi, Researcher, Center Jean Bodin (CJB), University of Angers,

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Ms Alejandra Salinas Quiroga, DIREMAR,

Ms Fabiola Cruz Morena, Embassy of Bolivia in the Netherlands,

as Technical Assistants.

M. Freddy Mamani Laura, président de la chambre des députés de la Bolivie,

Mme Trinidad Rocha Robles, présidente de la commission de politique internationale de la chambre des sénateurs de la Bolivie,

M. Antonio Colque Gabriel, président de la commission de politique internationale et de protection des migrants de la chambre des députés de la Bolivie,

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M. Gabriel Eckstein, professeur de droit à l'Université A&M du Texas, membre des barreaux de l'Etat de New York et du district de Columbia,

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Mme Alejandra Salinas Quiroga, DIREMAR,

Mme Fabiola Cruz Morena, ambassade de Bolivie aux Pays-Bas,

comme assistantes techniques.

The PRESIDENT: Please be seated. The sitting is open.

The Court meets today and will meet in the coming days to hear the Parties' oral arguments, as well as the examination of their experts, in the case concerning *Dispute over the Status and Use of the Waters of the Silala (Chile* v. *Bolivia)*. This afternoon, the Court will hear the first round of oral argument by Chile on its own claims.

Owing to the ongoing concern***s*** related to the COVID-19 pandemic, the Court has decided to hold these oral proceedings in a hybrid format, under Article 59, paragraph 2, of its Rules.

The Court has taken great care to ensure the smooth conduct of this hybrid hearing. The Parties participated in technical tests prior to the opening of the hearing. These tests were comprehensive and included, for example, tests of the interpretation system and the process for displaying exhibits. However, while these tests reduce the risk of technical difficulties, they cannot eliminate them. In the event that we experience any such difficulty, such as a loss of audio input from a remote participant, I may have to interrupt the proceeding briefly to allow the technical team to solve the problem.

In a hybrid hearing such as this one, all judges are able to view the speaker and any demonstrative exhibits, regardless of whether they are in the Great Hall or joining via video link. I would like to note that the following judges are present with me in the Great Hall of Justice: Vice-President Gevorgian and Judges Tomka, Bennouna, Yusuf, Xue, Sebutinde, Iwasawa, Nolte and Charlesworth; while Judges Abraham, Bhandari, Robinson and Salam and Judges *ad hoc* Daudet and Simma are participating by video link. For reasons duly made known to me, Judge Cançado Trindade is unable to sit with us in these oral proceedings, either in person or by video link.

For this hybrid hearing, the Registrar informed both Parties that each of them could have up to eight representatives present in the Great Hall of Justice at any one time, and that, in addition, two members per delegation could sit in the gallery. The Parties were moreover informed that the Court could make available, should a Party so desire, an additional room in the Peace Palace, from which

other members of the delegation could follow the proceeding via video link, and that participation via video link would also be available to further members of each delegation who would not be present in the Peace Palace.

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Since the Court included on the Bench no judge of the nationality of either Party, each Party proceeded to exercise the right conferred upon it by Article 31, paragraph 3, of the Statute to choose a judge *ad hoc* to sit in the case. Chile chose Mr. Bruno Simma, and Bolivia, Mr. Yves Daudet.

Article 20 of the Statute provides that "[e]very Member of the Court shall, before taking up his duties, make a solemn declaration in open court that he will exercise his powers impartially and conscientiously". Pursuant to Article 31, paragraph 6, of the Statute, the same provision applies to judges *ad hoc*, who must make a new solemn declaration in each case in which they participate, as stated in Article 8, paragraph 3, of the Rules of Court.

In accordance with custom, I shall first say a few words about the career and qualifications of Professor Daudet and Judge Simma before inviting each of them to make his solemn declaration.

Professor Yves Daudet, who is of French nationality, is a Doctor of Law and Professor in Public Law and Political Science. He is currently President of the Curatorium of the Hague Academy of International Law and Emeritus Professor at the University of Paris I (Panthéon-Sorbonne), where he served as the First Vice-President. Professor Daudet is an arbitrator in the Court of Conciliation and Arbitration within the Organization for Security and Co-operation in Europe. He has held a number of academic and research posts in France, Mauritius, Morocco and Côte d'Ivoire. He was a member of the French delegation to the United Nations Conference on the International Code of Conduct on the Transfer of Technology. He has been chosen as a judge *ad hoc* on numerous occasions and is currently sitting in the case concerning *Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (Nicaragua* v. *Colombia);* in the two cases concerning *Application of the International Convention on the Elimination of All Forms of Racial Discrimination (Armenia* v. *Azerbaijan)* and *(Azerbaijan* v. *Armenia)*; and in the case concerning *Allegations of Genocide under the Convention on the Prevention and Punishment of the Crime of Genocide*

(Ukraine v. *Russian Federation)*. Professor Daudet is a member of the Editorial Board of the *Annuaire français de droit international* and is a member of the French Society of International Law and the French branch of the International Law Association. He has published numerous books and articles in different areas of international law.

Judge Bruno Simma, of German nationality, served as a Member of this Court from 2003 to 2012, and was chosen as judge *ad hoc* in the joined cases concerning *Maritime Delimitation in the Caribbean Sea and the Pacific Ocean (Costa Rica* v. *Nicaragua)* and *Land Boundary in the Northern Part of Isla Portillos (Costa Rica* v. *Nicaragua).* Judge Simma studied law at the University of Innsbruck, where he obtained a doctoral degree in 1966. In 1973, he became Professor of International Law and European Community Law at the University of Munich, where he went on to serve as the Dean of the Faculty of Law between 1995 and 1997. Judge Simma also has a long-standing academic career at the University of Michigan Law School, where he began teaching in 1986, was appointed Professor of Law in 1987 and where a Chair was created in his name in 2009. He has twice been the Director of Studies at the Hague Academy of International Law, and in 2009 he delivered its prestigious general course in public international law. His publications in international law are numerous and well known. Judge Simma was a member of the United Nations International Law Commission from 1996 to 2003. He has appeared as advocate in various cases before the Court and has sat as arbitrator in numerous important arbitration cases. Since 1 December 2012, he has been an arbitrator at the Iran-United States Claims Tribunal. Judge Simma is the recipient of numerous awards, including honorary doctorate degrees.

In accordance with the order of precedence fixed by Article 7, paragraph 3, of the Rules of Court, I shall first invite Professor Daudet to make the solemn declaration prescribed by the Statute, and I request that all those present rise. Professor Daudet, you have the floor.

M. DAUDET : «*[Inaudible]*»

The PRESIDENT: Judge Daudet, we lost the audio. So if you could try again to make your declaration**,** I would be grateful.

M. DAUDET : Excusez-moi, Madame la présidente. Je reprends totalement.

«Je déclare solennellement que je remplirai mes devoirs et exercerai mes attributions de juge en tout honneur et dévouement, en pleine et parfaite impartialité et en toute conscience.»

The PRESIDENT: I thank Professor Daudet. I now invite Judge Simma to make the solemn declaration prescribed by the Statute. Judge Simma, you have the floor.

Mr. SIMMA:

"I solemnly declare that I will perform my duties and exercise my powers as judge honourably, faithfully, impartially and conscientiously."

The PRESIDENT: I thank Judge Simma. Please be seated. I take note of the solemn declarations made by Judge *ad hoc* Daudet and Judge *ad hoc* Simma and declare them duly installed as judges *ad hoc* in the case concerning *Dispute over the Status and Use of the Waters of the Silala (Chile* v. *Bolivia)*.

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I shall now recall the ***principal*** procedural steps in the present case.

On 6 June 2016, the Republic of Chile filed in the Registry of the Court an Application instituting proceedings against the Plurinational State of Bolivia with regard to a dispute concerning the status and use of the waters of the Silala. To found the jurisdiction of the Court, Chile invokes Article XXXI of the American Treaty on Pacific Settlement signed on 30 April 1948, and officially designated, according to Article LX thereof, as the "Pact of Bogotá", to which both States are parties.

By an Order of 1 July 2016, the Court fixed 3 July 2017 and 3 July 2018 as the respective time-limits for the filing of a Memorial by Chile and a Counter-Memorial by Bolivia. Chile filed its Memorial within the time-limit thus fixed.

By an Order of 23 May 2018, the Court, at the request of the Respondent, extended until 3 September 2018 the time-limit for the filing of its Counter-Memorial. Bolivia filed its Counter-Memorial within the time-limit thus extended. In Chapter 6 of its Counter-Memorial, Bolivia, making reference to Article 80 of the Rules of Court, submitted three counter-claims.

By an Order dated 15 November 2018, in the absence of any objection by Chile to the admissibility of Bolivia's counter-claims, the Court did not consider that it was required to rule definitely at that stage on the question of whether the counter-claims fulfilled the conditions set out in Article 80, paragraph 1, of the Rules of Court. It directed the submission of a Reply by Chile and a Rejoinder by Bolivia, limited to the Respondent's counter-claims, and fixed 15 February 2019 and 15 May 2019 as the respective time-limits for the filing of those written pleadings. The Reply and the Rejoinder were filed within the time-limits thus fixed.

By an Order of 18 June 2019, the Court authorized the submission by Chile of an additional pleading relating solely to the counter-claims of Bolivia and fixed 18 September 2019 as the time-limit for the filing of that pleading. Chile filed its additional pleading within the prescribed time-limit.

By letters dated 15 October 2021, the Registrar informed the Parties that the Court had decided that hearings would be held from 1 to 14 April 2022. The Parties were also informed that, pursuant to the decision of the Court, each Party was requested to call during the hearings the experts whose reports were annexed to its written pleadings. By the same letters, the Registrar informed the Parties of the Court's decision that they should each provide, by 14 January 2022, a written statement summarizing their experts' reports. The contents of the written statements were to be limited to a summary of the experts' findings already provided in their reports, setting out the points on which the Parties consider themselves to be in agreement, but focusing primarily on the issues on which the experts remain divided.

Chile and Bolivia filed the written statements summarizing their expert reports within the time-limit as fixed by the Court. Chile's written statement was prepared by Mr. Howard Wheater and Mr. Denis Peach, and Bolivia's written statement was prepared by Mr. Roar Jensen, Mr. Torsten Jacobsen and Mr. Michael Gabora.

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Pursuant to Article 53, paragraph 2, of its Rules, the Court decided, after ascertaining the views of the Parties, that copies of the written pleadings and the documents annexed thereto, as well as the written statements of the experts, would be made accessible to the public on the opening of the oral proceedings.

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I would now like to welcome the delegations of the Parties. I note the presence before the Court of the Agent of the Republic of Chile and the Agent of the Plurinational State of Bolivia, accompanied by members of their respective State's delegations. I would also like to welcome the eminent representatives of the Chilean and Bolivian Governments present at today's hearing, namely H.E. Ms Antonia Urrejola, Minister for Foreign Affairs of the Republic of Chile, who is joining us by video link, and H.E. Mr. Rogelio Mayta Mayta, Minister for Foreign Affairs of the Plurinational State of Bolivia, who is present in the Great Hall of Justice.

In accordance with the arrangements on the organization of the procedure decided by the Court, the hearings will comprise a first and second round of oral argument. The first round will begin with Chile's presentation today of its arguments on its own claims from 3 p.m. to 6 p.m. Bolivia will present its first round of argument, both on the claims of Chile and on its own counter-claims, on Monday 4 April from 3 p.m. to 6 p.m. and on Tuesday 5 April from 3 p.m. to 5 p.m. On Wednesday 6 April, Chile will present its observations on the counter-claims of Bolivia from 4 p.m. to 6 p.m. Two sittings will then be held dedicated to the questioning of the experts called by the Parties. The experts appointed by Chile will be heard on Thursday 7 April between 3 p.m. and 6 p.m. and those called by Bolivia will be heard on Friday 8 April between 3 p.m. and 6 p.m. The second round of oral argument will open on the afternoon of Monday 11 April, with Chile addressing the Court from 3 p.m. to 5 p.m. on its own claims. On Wednesday 13 April, Bolivia will present its second round of arguments on the claims of Chile and on its own counter-claims from 3 p.m. to 6 p.m. On Thursday 14 April, Chile will present its reply on the counter-claims of Bolivia from 3 p.m. to 4 p.m.

In this first sitting, Chile may, if so required, avail itself of a short extension of time beyond 6 p.m., in view of the time taken up by my introductory remarks.

I now give the floor to the Agent of Chile, H.E. Ms Ximena Fuentes Torrijo. You have the floor, Your Excellency.

Ms FUENTES TORRIJO:

I. INTRODUCTION

1. Madam President, distinguished Members of the Court, it is an honour to appear before the International Court of Justice on behalf of the Republic of Chile. I will be making some short introductory remarks in my role as Chile's Agent in this case, before looking at the case in more detail and, in particular, to explain why there is, and can be, no answer from Bolivia to the central claims that Chile makes before you.

2. I would like to take this opportunity to acknowledge the presence of Chile's Minister for Foreign Affairs, Ms Antonia Urrejola, who attends Chile's oral arguments online, in Santiago, Chile. I would also take this opportunity to respectfully greet the Bolivian delegation.

3. Chile is committed to develop a fruitful relation of co-operation with its neighbour, the Plurinational State of Bolivia, on the basis of due respect for mutual rights and obligations under international law. There are numerous areas in which Chile and Bolivia need to co-operate for the benefit of the two countries and their inhabitants living on both sides of the boundary. Chile and Bolivia share an international boundary of more than 800 km. They also share many natural resources, including rivers and aquifers in the Atacama Desert, one of the driest places on earth.

4. This dispute is concerned with one such shared resource, the Silala River system. Chile asks the Court to confirm the status of the Silala as an international watercourse and the rules that govern the relationship between Chile and Bolivia as co-riparians.

5. In 1999, Bolivia abruptly and for the first time denied that the Silala River was an international watercourse, claiming that these waters belong entirely to Bolivia and that they have been diverted into Chilean territory[1]. On 23 March 2016, former President Evo Morales announced

[1] Memorial of the Republic of Chile (hereinafter "MCh"), para. 3.8; Note No. GMI-656/99 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 3 Sept. 1999. MCh, Vol. 2, Ann. 27 (key document 9 in judges' folder).

Bolivia's intention to bring Chile before the Court, to stop what he called an illegal use of the waters of the Silala by Chile[2]. Later, Bolivia announced that it would take two years to initiate legal proceedings against Chile[3].

6. Chile decided to bring this dispute before the International Court of Justice without delay, in the belief that a speedier clarification of the rights and duties of the two States regarding the status and use of the Silala River system would provide the Parties with an opportunity to develop strategies of co-operation instead of being trapped in flawed legal and scientific premises.

7. In order to understand the dispute, which has been greatly narrowed in the course of the exchange of written pleadings, please allow me to put it in its geographical and historical context.

II. THE LOCATION OF THE SILALA RIVER

8. The Silala River is located in the Atacama Desert, as I have just noted, one of the driest places on earth. Reaching the Silala River, even today, requires some serious effort. The Silala River is located in the highlands of the Atacama Desert, at more than 4,300 m above sea level, where the climate is harsh, vegetation is scarce, and fresh water even scarcer. Despite its small size, its high-quality waters have been of great importance to the development of the Antofagasta Region in Chile: for municipal uses in cities and towns, such as Antofagasta and Calama, and for industrial uses, including the railway from Antofagasta to La Paz, operative since the last decade of the nineteenth century.

9. The Silala River is a shared watercourse. It flows for about 4 km in Bolivia, and a further 6 km in Chile, before joining the San Pedro River. It arises from springs in Bolivia that nourish two associated wetlands, Cajones and Orientales, also referred to as the northern and southern wetlands. Subsequently, we will refer to the Cajones and Orientales wetlands jointly as the Silala wetlands. In Bolivia, the discharge from the Orientales wetlands enters a ravine, where it is joined by the discharge of the Cajones wetlands. After this junction, the river continues to flow within the ravine, with walls on both sides of over 30 m high. It crosses the international boundary into Chile, with an average

[2] MCh, para. 1.8. Página Siete Digital, "Bolivia Will Sue Chile over the Silala in The Hague", La Paz, 26 Mar. 2016. MCh, Vol. 3, Ann. 72.3.

[3] MCh, para. 1.8. La Razón, "The Minister of Foreign Affairs Foresees Two Years to Prepare the Claim for the Silala", La Paz, 8 Apr. 2016. MCh, Vol. 3, Ann. 73.

flow of 170 l/s. Downstream of the border, groundwater sources contribute an additional surface flow of about 124 l/s[4].

10. Against this backdrop of the importance of the Silala River in an extremely arid region, I will first introduce in a little more detail the background to the current dispute before explaining how, in the course of these proceedings, the issues in dispute have been reduced to such an extent that Chile considered it possible, and sought to achieve, a negotiated settlement following receipt of Bolivia's Rejoinder. However, since that has turned out to be impossible, I will conclude by explaining that the dispute over the waters of the Silala River at least provides the Court with an opportunity to affirm the applicability of the basic principle of reasonable and equitable utilization in these times of increasing freshwater scarcity.

III. BOLIVIA NEVER DISPUTED THE STATUS OF THE SILALA RIVER AS AN INTERNATIONAL WATERCOURSE PRIOR TO 1999

11. Madam President, Members of the Court, prior to 1999, the status of the Silala River as an international watercourse had never been disputed by Bolivia or Chile. Bolivia's sudden about-face in 1999 was not based on any scientific foundation. It was seemingly motivated by claims of the people from the Bolivian Department of Potosí, where the headwater springs of the Silala River are located, that Chile should pay compensation for its use of the waters.

12. For almost 100 years, the Parties had agreed that the Silala River naturally flowed from Bolivia to Chile. There is ample evidence of Bolivia's recognition of the international character of the Silala River, including documents, maps and explicit declarations by Bolivia's own authorities[5].

13. Most notably, this is evidenced, first, by the map appended to the 1904 Treaty of Peace and Amity between Bolivia and Chile that depicts the Silala River crossing from Bolivia into Chile, signed by the Bolivian Ambassador in Chile, Mr. Alberto Gutiérrez, and the Chilean Minister for Foreign Affairs, Mr. Emilio Bello Codesido[6]; second, by Bolivia's participation in joint demarcation and revision activities in the Silala area, in 1906, 1924 and as recently as 1991 and 1992[7]; and third,

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[4] MCh, para. 2.5.

[5] MCh, paras. 4.11-4.66.

[6] MCh, paras. 4.24-4.25; Map Appended to the Treaty of Peace and Amity, 20 Oct. 1904. MCh, Vol. 6, Ann 82 (key document 2 tab in judges' folder).

[7] MCh, paras. 4.36-4.47.

even more recently, in 1996, by a public statement by Bolivian Ambassador Teodosio Imaña Castro, then Chair of the Bolivian Boundary Commission and President of the Mixed Boundary Commission, in which he confirmed: "The inclination of the terrain has been established by experts to be around 30%, its river bed is narrow and its crystalline waters follow the course that, due to the force of gravity, goes downhill into Chilean territory."[8]

14. Indeed, geological and geomorphological studies show conclusively that a river has flowed from what is now Bolivia, to what is now Chile, for at least 8,400 years[9]. As to its uses, the Silala River and its surroundings have supported human habitation, animal herding and possibly wildlife hunting for at least the last 1,500 years as confirmed by the archaeological evidence found on the terraces along the Silala River ravine in Chile[10].

15. In modern times, the waters of the Silala River have been used pursuant to licences granted by both Chile and Bolivia. As will be further explained later by Dr. Klein Kranenberg, in 1906 a concession was granted by the Government of Chile to the Antofagasta (Chili) and Bolivia Railway Company Limited (FCAB) for the use of the waters of the Silala to provide potable water to the Chilean port city of Antofagasta some 300 km away[11]. Two years later, in 1908, a concession was granted by the Government of Bolivia to the same company for the use of the waters of the Silala River to supply water to the steam engines operating on the Antofagasta-La Paz railway[12].

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[8] MCh, para. 4.50; Presencia, "Dialogue on Friday with Dr. Teodosio Imaña Castro", La Paz, 31 May 1996. MCh, Vol. 3, Ann. 71.

[9] MCh, para. 2.10; Peach, D. W. and Wheater, H. S., *The Evolution of the Silala River, Catchment and Ravine* (hereinafter "Peach and Wheater (2019)"), p. 31.

[10] MCh, para. 2.13; Peach and Wheater (2019), pp. 34-35.

[11] MCh, para. 2.21; Deed of Concession by the State of Chile of the Waters of the Siloli (No. 1.892) to the Antofagasta (Chili) and Bolivia Railway Company Limited, 31 July 1906, MCh, Vol. 3, Ann. 55 (key document 4 in judges' folder).

[12] MCh, para. 2.21; Deed of Concession by the State of Bolivia of the Waters of the Siloli (No. 48) to the Antofagasta (Chili) and Bolivia Railway Company Limited, 28 Oct. 1908, MCh, Vol. 3, Ann. 41 (key document 5 in judges' folder).

16. After FCAB obtained these permits, waterworks and earth channels were excavated along the Silala River, in Bolivian and Chilean territory[13]. Bolivia terminated the 1908 concession in 1997[14]. Since then, FCAB only operates the intake on Chilean territory[15].

17. The late 1990s also marks the time when Bolivia started to question the status of the Silala as an international river, and began to affirm, both in public and in diplomatic Notes, that "the spring waters of the Silala, granted by the 1908 concession, do not constitute a river, let alone a binational river or shared waters", and that the "waters that are formed in Bolivian territory . . . would be consumed in that same territory, if it were not for the intake, transport and control works, made by the concessionaire company"[16]. On these grounds, Bolivia claimed a 100-per-cent ownership of the waters of the Silala[17].

18. Between 2000 and 2010, Chile agreed to engage in negotiations and attempts to settle the dispute with Bolivia[18]. These ended abruptly, when Bolivia asked Chile to pay for the past use of the waters of the Silala in Chilean territory, the so-called "historic debt" theory[19]. The origin of this can be found in promises made by President Hugo Banzer, in 1999, to the people of Potosí, when he announced that his Government "will recover the waters of the Silala spring being usurped by Chile" and that "Potosí will see important revenues, not yet quantified, in the not too long term"[20].

19. One important aspect of the Bolivian claim that Chile has diverted the waters of the Silala is that Bolivia never attempted to put before Chile serious scientific studies on the basis of which the two Parties could have initiated a fruitful dialogue. In point of fact, the first time that scientific studies

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[13] MCh, paras. 2.22 and 2.25; Robert H. Fox, The Waterworks Department of the Antofagasta (Chili) & Bolivia Railway Company, *South African Journal of Science*, 1922, MCh, Vol. 3, Ann. 75; Letter from the General Manager of FCAB in Chile to the Chairman of the Board of Directors of FCAB in London, 3 Sept. 1942, MCh, Vol. 3, Ann. 68; Letter from the General Manager of FCAB in Chile to the Secretary of the Board of Directors of FCAB in London, 27 Jan. 1928, MCh, Vol. 3, Ann 67.1 (key document 7 in judges' folder); Letter from the General Manager of FCAB in Chile to the Secretary of the Board of Directors of FCAB in London, 29 June 1928, MCh, Vol. 3, Ann. 67.2.

[14] MCh, para. 2.24; Administrative Resolution No. 71/97 by the Prefecture of the Department of Potosí, 14 May 1997, MCh, Vol. 3, Ann. 46 (key document 8 in judges' folder).

[15] MCh, para. 2.24.

[16] Note No. GMI-815/99 from the Ministry of Foreign Affairs of Bolivia to the Ministry of Foreign Affairs of Chile, 16 November 1999, MCh, Vol. 2, Ann. 29 (key document 11 in judges' folder).

[17] MCh, para. 5.2; Note No. VRE-DGRB-UAM-020663/2012 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 25 Oct. 2012, MCh, Vol. 2, Ann. 36 (key document 14 in judges' folder).

[18] MCh, paras. 3.17-3.25.

[19] MCh, para. 3.24; Minutes of the Twenty-Second Meeting of the Bolivia-Chile Political Consultation Mechanism, 14 July 2010, MCh, Vol. 2, Ann. 24.

[20] *El Diario*, "Waters of the Silala usurped by Chile will be recovered", La Paz, 11 Apr. 1999.

commissioned by Bolivia about the functioning of the Silala River have been shared with Chile, has been during these proceedings before the International Court of Justice[21]. These studies, presented with Bolivia's Counter-Memorial, confirm what Bolivia had denied for years in the period from 1999 to September 2018: that the Silala River naturally flows along the topographic gradient from Bolivia into Chile. In light of this, Bolivia has, in the proceedings before you, returned to where it was before 1999 and no longer questions the status of the Silala as an international river.

IV. THE ISSUES IN DISPUTE BETWEEN THE PARTIES HAVE BEEN REDUCED CONSIDERABLY DURING THE WRITTEN PLEADINGS

20. Madam President, Members of the Court, as you may have noted from the written proceedings, in many aspects the Parties have reached a common understanding upon the nature and use of the Silala River, thanks to notable changes in Bolivia's position.

21. In and from 1999, Bolivia not only took the position that the Silala River is not an international watercourse; it also maintained that Bolivia has 100-per-cent sovereignty over its waters; that Chile has no right to its reasonable and equitable use; that Chile should therefore pay, retroactively, for past uses of the waters of the Silala; and that Bolivia has no obligations to Chile with respect to it.

22. Notably, following Chile's decision to submit the case before this Court, Bolivia has now abandoned the idea that the Silala is not an international watercourse and has accepted that the Silala flows naturally from Bolivia into Chile *(this is Chile's Claim* (a)*)*[22]. It has also acknowledged that, as an international watercourse, the Silala is governed by the principle of equitable and reasonable utilization, and that the duties to consult and to prevent significant harm are also applicable *(these are Chile's Claims* (b) *and* (d)*)*. Bolivia has even recognized that Chile's past and current use of the Silala, as an international watercourse, is reasonable and equitable *(this is Chile's Claim* (c)*)*[23]. This means that the "historic debt" claim has seemingly been abandoned by Bolivia, at least in its submissions before the Court, insofar as Bolivia acknowledges the international status of the Silala River, the right of the two riparians to benefit from this international watercourse in accordance with

[21] DHI (formerly Danish Hydraulic Institute), *Study of the Flows in the Silala Wetlands and Springs System*, 2018, Counter-Memorial of the Plurinational Republic of Bolivia (hereinafter "CMB"), Vol. 2, Ann. 17.

[22] CMB, para. 44.

[23] CMB, paras. 16-18.

international law, and that its claim for compensation for the so-called "artificial flow", refers to a future delivery of the said "artificially-flowing" waters[24] and depends on Chile's consent[25].

23. Taking into account that Bolivia now accepts Chile's position on so many of the issues that were in dispute, one has to ask: why are we still here, before the Court? The short answer is that Bolivia still insists that it owns a portion of the waters of the Silala River and that, although it is reluctant to state this in plain terms, Chile should agree to pay for the use of that portion. Bolivia has labelled this portion of the flow as "artificial flow", allegedly an addition to the surface water flow, and allegedly generated as the result of the small channels that the FCAB company excavated on Bolivian territory in around 1928[26]. Remarkably, according to Bolivia, the alleged "artificial flow" of the Silala River is not governed by the principle of equitable and reasonable utilization but by the rule of territorial sovereignty[27].

24. Thus, the key remaining legal issue in the current case is whether international law recognizes the distinction introduced by Bolivia between natural and artificial surface water flows, on which its (partial) defence to Chile's claims and its counter-claims 2 and 3 are based. Bolivia's thesis is that the groundwater that naturally flows down the gradient into Chile, but which — due to the channelization works on Bolivian territory constructed by Bolivia's licensee, in 1928, may now flow down a channel as surface water instead of groundwater — is correctly characterized as "artificial water". It would be manifestly contrary to international law for Bolivia to assert exclusive sovereignty over the groundwater flowing to Chile. Yet somehow, according to Bolivia, once the groundwater flows on the surface due to the drainage effect of the channelization works on Bolivia's territory, this is said to become "artificial water", over which Bolivia can claim exclusive sovereignty. That position, with all due respect, is obviously untenable. Indeed, Chile wonders how Bolivia's thesis, which was never mentioned during the development of this dispute between November 1999 and September 2018, can seriously be pursued before this Court.

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[24] Rejoinder of the Plurinational Republic of Bolivia (hereinafter "RB"), para. 100.

[25] CMB, submission *(c)*, p. 106.

[26] CMB, para. 13.

[27] CMB, para. 115.

25. And there is no disagreement on any relevant factual issue before the Court, as all Parties agree that, whether as groundwater or as surface water, the waters of the Silala, after due allowance for minimal evaporation, flow down the gradient to Chile.

V. THE REMAINING DISPUTE SHOULD HAVE BEEN SETTLED BY THE PARTIES

26. Against this background, in June 2019, Chile proposed to Bolivia the terms of a settlement, but it received no reply from Bolivia.

27. In that proposed settlement the Parties would have recognized that both States are entitled to the equitable and reasonable use of the Silala River and that Bolivia can dismantle the channels as it sees fit.

28. I would like to devote some comments regarding this last issue.

29. As the Court is aware, Bolivia's case is that the channels dug on its territory generate what it calls an "artificial flow" of surface water. Its case on "artificial flow" lacks any basis in international law, but it also lacks any coherent factual basis. It was not Chile that authorized the construction of the channels on Bolivian territory. Nor does Chile ask for them to be retained. Nor is it relevant whether the channelization results, as Bolivia claims, in an increase in the surface water flow: all the waters of the Silala River, less minimal evaporation losses, flow from Bolivia into Chile, due to the natural topography of the terrain, either as surface or as groundwater flow.

30. Chile has no objection to Bolivia dismantling the channels. Chile has made clear in its written pleadings, and is happy to reiterate, that if the removal of the channels, which of course will be done with due care by Bolivia, were to lead to a reduction of the surface water flows in Chile, or to any drop in water quality, this would not per se infringe Bolivia's obligations regarding the Silala River as an international watercourse[28]. In its Rejoinder, Bolivia has manifested its concern that Chile will somehow object to the dismantling of the channels on the basis of a protection of Chile's present uses. Chile has already clarified this point in paragraph 1.19 of its Additional Pleading stating that

> "Bolivia's principal concern . . . seems to be that Chile's principled position that it is 'entitled to its current use of the waters of the Silala River' means that 'Bolivia's rights to dismantle the artificial infrastructure could be constrained if its actions resulted in a reduction in the current flow regime such that it prevents Chile from enjoying its existing uses'".

[28] Additional Pleading of Chile on Bolivia's Counter-Claims (hereinafter "APCh"), para. 1.20.

However, Chile has clearly stated in paragraph 1.20 of its Additional Pleading that

> "a reduction (if any) of the cross-boundary surface flow resulting from the dismantling of the channels in Bolivia would not be considered a violation of customary international law unless the obligations that Bolivia has accepted were somehow engaged"[29].

31. Further, during the current proceedings, Bolivia has manifested its interest in restoring the Silala wetlands in its territory, even though it had never communicated such interest to Chile before. Indeed, the first indication of this concern was received by Chile with Bolivia's Counter-Memorial. Again, Chile supports a restoration but we emphasize that any past or future degradation caused in Bolivia by the acts and omissions of Bolivia is not something that Chile could conceivably be responsible for, and we are puzzled by how degradation for which Bolivia would be responsible has come to feature in Bolivia's case.

VI. THE REMAINING DISPUTE PROVIDES A VALUABLE OPPORTUNITY FOR THE COURT TO CONFIRM THE BASIC PRINCIPLE OF EQUITABLE AND REASONABLE UTILIZATION IN TIMES OF INCREASING FRESHWATER SCARCITY

32. Even though the dispute has been significantly reduced, the issue that the Court is called upon to decide can be seen as important in the context of climate change and water scarcity.

33. The ill-conceived concept of "artificial flow" raises the following legal question before the Court: "Does an upstream State have sovereign and exclusive rights over the augmented surface flow of a shared water resource, resulting from waterworks constructed in that State's territory?" This question needs to be answered by reference to the current factual situation where the additional surface flow would be at the expense of groundwater that would anyway be flowing to the downstream State.

34. The concepts of "artificial flow" and exclusive sovereignty have no place in the law of international watercourses. In times of increasing scarcity of freshwater, countries are called upon to co-operate in the efficient management of their shared water resources. This might imply the implementation of technical improvements and sometimes the construction of waterworks, which may well lead to increases in surface water flows at the expense of groundwater flows. On analysis, Bolivia's contention is, with respect, absurd.

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[29] APCh, para. 1.19.

35. Madam President, Members of the Court, the Silala case — however small the Silala River may be and despite the fact that the issues in dispute have narrowed — provides the Court with a valuable opportunity to confirm certain basic principles of the international law of shared freshwater resources. Principally, that all riparian States have a right to the reasonable and equitable use of an international watercourse, and that the law of international watercourses does not permit an upstream State to charge its downstream neighbour for controlling the flow of such a watercourse.

VII. ROADMAP OF CHILE'S RESPONSE TO BOLIVIA'S DEFENCES AND COUNTER-CLAIMS

36. Dr. Klein Kranenberg will now look in a little more detail at the history of the utilization of the Silala River and she will show the Court how the activities on Bolivian territory, which form the basis of Bolivia's defence, were licensed by Bolivia, under the 1908 Bolivian concession granted to a private English company, and that Chile has had no involvement in those activities.

37. Professor Stephen McCaffrey will then develop the point that international law does not recognize a distinction between "natural" and "artificial" flows, and that the principles of equitable and reasonable utilization, prevention of significant harm and co-operation, apply to all waters of the Silala River's system. Regrettably, due to personal reasons, Professor McCaffrey is unable to present his oral arguments. I am grateful to Professor Alan Boyle, who has agreed to deliver Professor McCaffrey's speech, on his behalf.

38. ***And t***hen, Professor Laurence Boisson de Chazournes will demonstrate that Chile's historical uses of the Silala waters are in accordance with the principle of reasonable and equitable use. She will also explain that Chile recognizes Bolivia's right to use the waters of the Silala in accordance with the principle of equitable and reasonable utilization, in case a need for water from the Silala arises in Bolivian territory.

39. Finally, Mr. Sam Wordsworth will identify how all the expert issues that are relevant to the Court's determinations in this case have been agreed.

40. Thank you for your kind attention. Madam President, I ask you to give the floor to Dr. Johanna Klein Kranenberg.

The PRESIDENT: Thank you, Your Excellency. I now invite Ms Johanna Klein Kranenberg to take the floor. You have the floor, Madam.

Ms KLEIN KRANENBERG:

BOLIVIA'S CHANNELS ON BOLIVIA'S TERRITORY PURSUANT TO BOLIVIA'S 1908 CONCESSION

1. Madam President, Members of the Court, it is an honour to appear before you on behalf of the Republic of Chile.

2. Chile's Agent has impressed upon you the importance of the Silala River for the development of the Antofagasta Region in Chile, one of the most arid places on earth. She has also noted Bolivia's recognition of the Silala River as an international watercourse, with the exception of a portion of the waters, which Bolivia calls its "artificial flow". This "artificial flow" is said to be caused by the channels on Bolivia***'s*** territory.

3. My task today is to show you that these channels, and any other waterworks in Bolivia, were carried out by an English company, pursuant to a licence granted by Bolivia in 1908, from which it follows, inevitably, that the channels, and the alleged "artificial flow", are not in any way attributable to Chile.

4. I will also briefly refer to the uses of the Silala River in Chile for human consumption and industrial development, and show that Bolivia, by contrast, has thus far not demonstrated any use or need for the water in its territory. If it were to do so, then of course Bolivia would be entitled to a reasonable and equitable utilization of the Silala River.

I. History of the Chilean and Bolivian concessions of the Silala River

5. ***So m***y main point today is that the channels on Bolivian territory were carried out by an English company, pursuant to a Bolivian licence granted in 1908. The company in question is the Antofagasta (Chili) and Bolivia Railway Company Limited, also known as FCAB.

6. Established in London in 1888, the company's main line of business was the construction and the operation of the railway from the Chilean port city of Antofagasta to La Paz in Bolivia, as

you can see from the photos on the screen[30]. Its second line of business consisted in the supply of potable water to Antofagasta[31]. This city has no local water supplies and is entirely dependent on fresh water supply from elsewhere. Water was also necessary for the operation of the steam engines of the railway, so the two lines of business were closely related.

7. The FCAB archives in London provide a full account of: (i) FCAB's identification of the Silala River as a valuable water resource in 1905; (ii) how the company obtained the water rights, first in Chile in 1906 and, two years later, in Bolivia; (iii) the construction of the first intake and the start of operations in 1910; and (iv) the later construction of the channels in Bolivia in 1928.

A. FCAB identifies the Silala River as a valuable water resource, in 1905

8. To look at the documents in a little more detail, the General Manager of FCAB wrote to the Board of Directors in London, in December 1905, that

> "news was obtained of a large supply from a river (the Ciloli) [this is one of the ***various*** names for the Silala River] also flowing into the San Pedro Salar where its waters disappear. Samples were taken from a point in this river called 'El Cajon' . . ., and the quality, as per analysis enclosed, was found to be excellent. There is a large volume of water flowing down the river Ciloli which is probably the principal source of the San Pedro River as from the Salar."[32]

This, it should be noted, is incontrovertible evidence of the abundant flow of the Silala River on Chilean territory before any waterworks were constructed.

B. FCAB obtains the Chilean (1906) and Bolivian (1908) concessions of the waters of the Silala River

9. Six months later, in June 1906, the General Manager informed the Board in London that the application for the concession of the Silala waters had been approved by the Chilean authorities[33]. He also noted down, in handwriting: "I shall now endeavour to obtain the concession for the springs which are in Bolivian territory."[34]

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[30] Available at https://www.antofagasta.co.uk/about-us/our-history/.

[31] MCh, para. 4.56, fn. 152; Chilean Law of 21 January 1888. MCh, Vol. 3, Ann. 54.

[32] MCh, para. 4.57; letter from the General Manager of FCAB in Chile to the Secretary of the Board of Directors of FCAB in London, 15 Dec. 1905. MCh, Vol. 3, Ann. 63, p. 266. See under key document 3 in judges' folder.

[33] Letter from the General Manager of FCAB in Chile to the Secretary of the Board of Directors of FCAB in London, 28 June 1906. MCh, Vol. 3, Ann. 64.

[34] MCh, para. 4.58; MCh, Vol. 3, Ann. 64, p. 281.

10. The Bolivian concession was necessary for FCAB's railway business. The Chilean concession of the Silala River had been granted solely for the purpose of increasing the potable water supply for Antofagasta[35]. But FCAB also needed good quality water to run its steam engines, and Bolivian legislation gave preference to the railway companies to use public waters. In its application to the Bolivian authorities, which is an integral part of the public deed of the concession, FCAB explained that "[b]y building intake and channelling works, the previously mentioned springs could be used", and "the Company plans to execute such works to use the waters for its railroad services". The company also made the point that there is no population in the vicinity of the river in Bolivia that depends on it[36].

11. On 28 October 1908, FCAB's application was approved as requested, including its proposal to construct the necessary waterworks on Bolivian territory. As you can see on the screen, the Bolivian concession was granted by the Prefect of Potosí, without any conditions or qualifications, confirming in the broadest possible terms that "by virtue of this public instrument, [the ***company ~~FCAB~~***] is even more vested with the quality of true and only holder of the concession and grantee of the use of the 'Sololi' waters, without there being any person who can claim a better right"[37]. This 1908 Bolivian concession, which remained in force until 1997, provides the legal basis for all waterworks executed by the company in Bolivia, including the excavation and lining of the channels that now feature so centrally in Bolivia's case before you.

C. FCAB constructs the first intake on Bolivian territory and starts operations in 1910, pursuant to the 1908 Bolivian concession

12. Once both licences were obtained, FCAB constructed certain waterworks in Bolivia. These comprised an intake in Bolivia, at about 600 m upstream from the international boundary, just below the confluence of the two tributaries of the Silala River, flowing down from the Orientales (***or*** southern) and Cajones (***or*** northern) wetlands, and a pipeline to transport the water from the intake in Bolivia to FCAB's existing water reservoirs at San Pedro Station in Chile. From San Pedro Station,

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[35] MCh, para. 4.56; Deed of Concession by the State of Chile of the Waters of the Siloli (No. 1.892) to the Antofagasta (Chili) and Bolivia Railway Company Limited, 31 July 1906. MCh, Vol. 3, Ann. 55. See under key document 4 in judges' folder.

[36] Deed of Concession by the State of Bolivia of the Waters of the Siloli (No. 48) to the Antofagasta (Chili) and Bolivia Railway Company Limited, 28 Oct. 1908. MCh, Vol. 3, Ann. 41, p. 18. See under key document 5 in judges' folder.

[37] MCh, Vol. 3, Ann. 41, p. 26. See under key document 5 in judges' folder.

the water was transported to Antofagasta, over a total distance of approximately 300 km[38]. A second intake on Chilean territory was constructed much later, in the 1940s***, and t***his is still used by FCAB[39].

13. As to the initial intake in Bolivia, in a letter to the Bolivian Treasury, dated 3 August 1910, the company informed the Treasury that it "must send into national territory a pipe for the waters of the Siloli River, which have been granted to said company by the Prefecture of the Department of Potosí", and it requested authorization to send the pipe through Chilean territory[40]. This was, of course, pursuant to Bolivia's 1908 concession.

14. On 23 November 1910, the Silala water reached the reservoir at San Pedro Station. As noted down by the General Manager, "the pipeline is good and . . . the water is now in service", thus marking the beginning of the modern usage of the Silala River[41].

D. FCAB constructs the channels in Bolivia in 1928, pursuant to the 1908 Bolivian concession

15. The channels in Bolivian territory, on which Bolivia relies for its legal defences, were dug more than 17 years later, in 1928, for sanitary reasons[42].

16. In a letter of 27 January 1928, to the Board of Directors in London, the General Manager of FCAB explained that

> "certain eggs of flies have been discovered, under microscopic examination, in the water of Antofagasta . . . The cause was finally traced to the head works in the Siloli valley where there is considerable vegetable growth through which the water has to flow before reaching the intake. The schemes for overcoming this difficulty have been prepared by the Waterworks Engineer, the first, that of cleaning up the course of the water through the valley by cutting an earth channel from the upper springs to the existing intake works, and also a branch trench from the "Cajon" springs near the intake."[43]

17. This puts to rest any theories embraced by Bolivia in the past that the channels were built to divert the waters from Bolivia into Chile.

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[38] MCh, para. 2.23.

[39] MCh, para. 2.29.

[40] MCh, para. 4.60; request from FCAB to the Government of Bolivia, 3 Aug. 1910. MCh, Vol. 3, Ann. 65, p. 292. See under key document 6 in judges' folder.

[41] MCh, paras. 2.22-2.23; letter from the General Manager of FCAB in Chile to the Secretary of the Board of Directors of FCAB in London, 23 Nov. 1910. MCh, Vol. 3, Ann. 66, p. 311.

[42] MCh, para. 2.25.

[43] Letter from the General Manager of FCAB in Chile to the Secretary of the Board of Directors of FCAB in London, 27 Jan. 1928. MCh, Vol. 3, Ann. 67.1, pp. 320-321. See under key document 7 in judges' folder.

II. Since 1910, and as of today, the waters of the Silala River are used in Chile for human consumption and industrial development

18. Here, I would like to take a moment to stress the importance of the waters of the Silala River for the development of the Antofagasta Region.

19. The Silala River supplied the city of Antofagasta with potable water until alternative solutions were developed in the late 1950s[44]. Also in the late 1950s, FCAB started to replace its steam engines with diesels, a process that was completed during the 1980s. Since then, and as of today, FCAB delivers the waters of the Silala River to distributors and mining companies, where it is still used as potable water, due to its high quality, and for mining processes[45]. FCAB recently confirmed that 37 per cent of the waters of the Silala extracted by the company is still used for human consumption, either by local communities or by workers at the mining companies.

20. Since the 1950s, the Chilean national copper company, CODELCO, has also used the waters of the Silala River, following construction of an intake approximately 4 km downstream from the intake of FCAB[46]. CODELCO also has recently confirmed that 51 per cent of its portion of the Silala River is used as potable water for the workers in the Chuquicamata copper mine, near the city of Calama.

21. In short, the water of the Silala River has been used in Chile for more than 110 years, mainly for human consumption and for the operation of the railway, and later also for industrial uses. Thanks to the high natural quality of the waters of the Silala, human consumption still accounts for a significant percentage of its use.

III. Since 1997, Bolivia has not made any effort to restore the wetlands in its territory, nor demonstrated any need for the waters of the Silala River

22. Now, coming back to the history of the licences, in 1997 Bolivia terminated the 1908 Bolivian concession. The reason was that the water was no longer used for railway purposes[47]. This meant that FCAB had to abandon its intake in Bolivia and could no longer maintain the channels

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[44] MCh, para. 2.20.

[45] MCh, para. 2.19; Chilean resolution No. 5.571, Director of the Antofagasta Health Service, 28 Nov. 2002. MCh, Vol. 3, Ann. 61.

[46] MCh, para. 2.28; Chilean decree No. 1.324, 25 June 1958. MCh, Vol. 3, Ann. 56.

[47] MCh, para. 2.24; administrative resolution No. 71/97 by the Prefecture of the Department of Potosí, 14 May 1997. MCh, Vol. 3, Ann. 46. See under key 8 tab in the judges' folder.

that it had constructed (under licence) in Bolivian territory, although it has continued to extract water from its intake on Chilean territory. I should note that by this time, FCAB was owned by private interest in Chile, although it was, and still is, an English company.

23. There are *two* important points to be made about Bolivia's own actions following its termination of the 1908 concession.

24. *First*, Bolivia has not itself used the waters since 1997, although it has tried to sell the water to users in Chile. In the year 2012, Bolivia developed a fish farm and announced the construction of a bottling plant, but these were unsuccessful, and the projects were eventually abandoned[48]. As far as Chile is aware, there is no current use of the waters in Bolivia, other than for a military post which was established in 2006[49].

25. *Second*, in the 25 years following the termination of the 1908 Bolivian concession in 1997, Bolivia has not taken any material steps towards the restoration of the Silala wetlands, despite its recent declarations of intent before this Court[50]. Once the 1908 concession was terminated, if not before, there was nothing to stop Bolivia from dismantling the channels in its territory and restoring the wetlands to their natural state. However, it has chosen not to do so. We do not know why.

26. This brings me back to the main point of my presentation today, concerning the inevitable absence of any responsibility on Chile's part for any impacts of channels constructed on Bolivia's territory pursuant to the licence issued by Bolivia.

IV. Any responsibility for the channels in Bolivian territory falls to Bolivia

27. Madam President, Members of the Court, Bolivia has made the channels in its own territory the centrepiece of this case.

28. Before Chile brought this case before the Court, Bolivia claimed that the channels had diverted the water from Bolivia to Chile, and that without the channels, the water would stay put in the wetlands[51]. Bolivia has rightly abandoned this claim.

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[48] Note No. 199/39 from the General Consulate of Chile in La Paz to the Ministry of Foreign Affairs of Bolivia, 7 May 2012. MCh, Vol. 2, Ann. 34. See under key 12 tab in the judges' folder.

[49] Reply of the Republic of Chile (hereinafter "RCh"), para. 2.34, fn. 72.

[50] CMB, para. 181.

[51] Camiri.net, "Evo Shows the World that the Waters of the Silala are Bolivian", La Paz, 29 March 2016. MCh, Vol. 3, Ann. 72.4.

29. Bolivia's current claim is that the channels have increased the surface water of the Silala River, albeit to the detriment of the groundwater flow[52]. This increase it has called "artificial flow", although there is nothing artificial about it. Bolivia claims that the "artificial water" is somehow exempted from the application of accepted principles of international water law[53].

30. Shortly, Professor McCaffrey, through the voice of Professor Alan Boyle, will explain to you why this is not a tenable position under international law. Mr. Wordsworth will later explain that, as a matter of fact, the concept of "artificial flow" does not assist Bolivia in the present case because even Bolivia's own experts, DHI, recognize that all the waters of the Silala River system eventually flow from Bolivia into Chile, be it as surface or groundwater flow[54].

31. The point for now is that even if the "artificial flow" existed and had relevant legal meaning, any consequences would have to be attributed to Bolivia, not to Chile, since Chile had nothing to do with the construction of the channels. This provides a complete answer to Bolivia's defences in this case concerning the flows of the Silala River, and likewise a complete answer to its counter-claims.

32. Bolivia itself has recognized this as recently as in 1999. In an exchange of Notes between Bolivia and Chile, following the termination of the 1908 Bolivian concession and Bolivia's related public statements that the Silala was not a river, the Foreign Ministry of Bolivia reminded Chile that this was an issue between Bolivia and a private company: "It is worth emphasizing that said concession was granted by the Prefecture of . . . Potosí to a private Company and not to the Chilean State."[55] Hence, Bolivia's Foreign Ministry says, quite correctly, "all actions undertaken to date, as well as those that the cited Company carried out, were in the private sphere and with full acknowledgement of the Bolivian jurisdiction"[56]. Bolivia added that "the actions undertaken by the Bolivian State concerning the undue use of the aforementioned waters fall wholly, as appropriate, on

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[52] CMB, paras. 59-60.

[53] CMB, paras. 14, 80-108.

[54] DHI, *Study of the Flows in the Silala Wetlands and Springs Systems*, 2018, pp. 2-3. CMB, Vol. 2, Ann. 17, pp. 266-267.

[55] RCh, para. 2.70; Note No. GMI-656/99 from the Ministry of Foreign Affairs of Bolivia to the General Consulate of Chile in La Paz, 3 Sept. 1999. MCh, Vol. 2, Ann. 27, p. 344. See under key 9 tab in the judges' folder.

[56] MCh, Vol. 2, Ann. 27, p. 344. See under key 9 tab in the judges' folder.

the Company that received the concession in 1908. It would be incomprehensible for the Chilean State to want to attribute said responsibility to itself."

33. Madam President, Members of the Court, I have explained to you that all the waterworks in Bolivia, including the channels in the wetlands that were dug in the late 1920s for sanitary reasons, were carried out by FCAB under the 1908 Bolivian concession with Bolivia's knowledge and consent. Chile has no responsibility for these waterworks and, in the words of Bolivia's Foreign Minister, "[i]t would be incomprehensible for the Chilean State to want to attribute said responsibility to itself".

34. I thank you for your kind attention. Madam President, this may be a good moment for a coffee break, after which Professor Alan Boyle will deliver the oral arguments of Professor Stephen McCaffrey, on his behalf. Thank you very much.

The PRESIDENT: I thank Ms Klein Kranenberg. Before I give the floor to the next speaker, the Court will observe a coffee break of 15 minutes. The sitting is adjourned.

The Court adjourned from 4:15 p.m. to 4:30 p.m.

The PRESIDENT: Please be seated. The sitting is resumed. I now invite Professor Alan Boyle to take the floor, to deliver the pleading of Professor Stephen McCaffrey on his behalf. You have the floor, Professor.

Mr. BOYLE, on behalf of Mr. McCaffrey:

INTERNATIONAL WATER LAW AND "ARTIFICIAL FLOW"

1. Madam President, Members of the Court, it is an honour and a pleasure to appear before you on behalf of the Republic of Chile, but I do so in substitution for Professor McCaffrey, who, as you have been told, for personal reasons, is unable to appear before you. This is the speech that he would have given. It is not in any sense my speech. I am merely the medium of delivery. You will forgive me, I know, if I cannot, or do not even attempt to, emulate either his Californian charm or his Californian accent. My task this afternoon is to address Bolivia's unprecedented claim that customary international law does not apply to all of the waters of an international watercourse, and

in particular not to those that Bolivia refers to as "artificial" flows[57], and I will go on to demonstrate on the contrary that international law applies, in Chile's submission, to *all* of the waters of an international watercourse, whether they are called "artificial" or "natural".

2. I shall, like all good barristers, make three points. First, that Bolivia's thesis concerning sovereignty over the alleged "artificial" flow is contrary to fundamental principles of the law of international watercourses. Second, that the alleged distinction between natural and "artificial" flows of the Silala is unsupported by the State practice to which Bolivia refers. And third, Bolivia's theory is also incompatible with the community of interests among riparians envisaged by the Watercourses Convention[58] and by the case law of international courts and tribunals. In contrast to Bolivia's argument, Chile's most fundamental point is that the key principles of international law in this field — equitable and reasonable utilization, prevention of significant harm and co-operation among riparians — apply to *all* of the waters of an international watercourse, and hence, and in particular, to *all* of the waters of the Silala.

3. Moreover, the notion that a State can create an "artificial" flow over which it has absolute sovereignty — by enhancing the surface water flow of an international watercourse at the expense of groundwater flows — poses a serious threat to the stability provided by the current international law of international watercourses. The claim of sovereignty over "artificial" flow was, we believe, invented by Bolivia for the specific purpose of this case. It has no other foundations, as I hope I will show. The idea should, in our view, be firmly and comprehensively rejected by the Court.

4. Of course, human hands and ingenuity have been widely applied to developing the international watercourses of the world. In 1927, the permanent court in the *Donauversinkung Case* observed, "[r]ivers, including those which are non-navigable, are today no longer merely the product of natural forces"[59]. This Court observed more recently, in the *Gabčíkovo-Nagymaros* case, that "[t]hroughout the ages, mankind has, for economic and other reasons, constantly interfered with nature"[60].

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[57] CMB, paras. 79, 81.

[58] Convention on the Law of Non-Navigational Uses of International Watercourses, signed at New York on 21 May 1997, UN doc. A/RES/51/229 (1997), MCh, Vol. 2, Ann. 5, p. 41 (key document 1 of judges' folder).

[59] *Württemberg and Prussia* v. *Baden* (the *Donauversinkung Case*), German *Staatsgerichtshof*, 18 June 1927, Annual Digest of Public International Law Cases, Vol. 4 (1932), p. 132.

[60] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997*, p. 78, para. 140.

5. It is very common for States to construct works on international watercourses that affect downstream flows[61], sometimes by increasing the surface flow. Bolivia's position, if supported by the Court, would open the way to claims for compensation by upstream States where those works are located. This would be a new principle according to which a downstream State would be required, if we are to believe Bolivia, to pay its upstream neighbour for any "enhanced" flows, regardless of whether the downstream State wants to receive the water, whether as surface water or as groundwater. This, Madam President, would be a bizarre state of affairs, and more importantly, would be wholly contrary to existing international law. The threat this would pose to the stability of relations between States sharing international watercourses would be all the more serious in these times of increasing scarcity of fresh water.

I. Bolivia's novel concept of an "artificially enhanced" flow

6. Madam President, Members of the Court, as Chile's Agent has already pointed out, the novel idea of an "artificial" flow has never been a feature of discussions between the Parties concerning the *nature* of the Silala River. It was first introduced by Bolivia only *after* Chile had filed its Application in this case, in an attempt to claim exclusive sovereignty over some portion of the flow of the Silala[62]. In its Counter-Memorial of 2018, Bolivia abandoned its earlier larger claim to sovereignty over the entire flow of the Silala[63]. As presented by Bolivia, its claim to sovereignty over an artificially enhanced flow would mean, if accepted, that Chile, the downstream State, would have no right to any portion[64] of what Bolivia conceives of as the "additional" flow[65]. Instead, what Bolivia calls this "artificial" flow[66] would belong exclusively to Bolivia[67], which, if it wished, could capture it and move it outside the Silala drainage basin regardless of the otherwise applicable principles of international water law, such as equitable and reasonable utilization and prevention of significant

[61] Canalization of the Rhine and Rhone rivers are prominent examples. See Encyclopedia Britannica, Rhine River, Navigational improvements, Britannica, available at https://www.britannica.com/place/Rhine-River/Hydrology (last visited 31 Mar. 2022).

[62] RC, para. 1.4; BCM, paras. 165 *(b)*, 181 *(b)*.

[63] RC, para. 1.3.

[64] BCM, para. 181, Submission *(b)*.

[65] CMB, para. 65; Rejoinder of the Plurinational Republic of Bolivia (hereinafter "RB"), para. 83.

[66] RB, para. 100.

[67] CMB, paras. 115, 120, 181 *(b)*; BR, para. 70, p. 56.

harm. Bolivia specifically contends that it could allow this "enhanced"[68] flow, over which it claims absolute sovereignty as if it were part of its land territory, to run downstream, across the border and then it could charge Chile for its use since, according to Bolivia's theory, it owns the water[69].

7. Madam President, Members of the Court, on the face of it, Bolivia's claim that Chile must pay Bolivia for any "delivery" to Chile of these enhanced flows — would be subject to the conclusion of an agreement with Bolivia — is an extraordinary claim. It is contrary to international law and entirely novel in State practice. We believe it should be clearly and unequivocally rejected by the Court not only because it is legally untenable, but because it is also regressive. It is regressive in that it runs roughshod over the progress that has been made in the field of the law of international watercourses over more than a century and it casts doubt on the basic principles of that field of law.

8. Chile would emphasize Bolivia is not adding new water to the Silala system. Bolivia is simply taking advantage of the small earth channels, which, as you have heard, were constructed in its territory by the railway company FCAB in 1928[70]. These earth channels, barely half a metre wide and half a metre deep, may cause an increase in surface water flow[71]. But there is some debate among the experts as to precisely how much of an increase in surface flow the channels may have caused, but that is not a point that the Court needs to get into, because it is agreed by the Parties and their experts that any increase in surface flow would, in effect, simply be offset by the corresponding decrease in groundwater flow[72], but whether it flows on the surface or underground, the water, in our contention, remains Silala water, and it would all eventually flow to Chile anyway, whether through the channels or underground[73]. So, in our view, there is no "enhancement" of the total flow of Silala waters. There is only a conversion of what would otherwise be groundwater into surface water plus a slight decrease caused by evaporation. Thus, while it might be said that the channels "enhance" the *surface* water flow, they do so to only a limited extent and only at the expense of the no less shared *groundwater* portion of the Silala River system. You can see the absurdity of the proposition. The

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[68] CMB, para. 103.

[69] RB, p. 56, Submission *(c)*.

[70] MCh, paras. 1.16 *(c)*, 2.25, 4.61; RCh, para. 2.62.

[71] Written Statement of the Experts of the Republic of Chile (H. S. Wheater and D. W. Peach, 2022 report) (hereinafter "WSCh"), p. 13.

[72] WSCh, pp. 1, 15.

[73] WSCh, pp. 1 and 15; APCh, para. 2.3; RB, para. 67.

total quantity of water making its way to Chile remains the same, however it gets there. And all of it, in our view, remains within the Silala system, whether on the surface or underground, and we therefore argue that it is fully subject to the rules of international law governing the use of international watercourses.

II. The 1997 United Nations Watercourses Convention

9. Madam President, Members of the Court, as you are well aware, those rules of international law, the ones that govern the use of the Silala in our view, are reflected in the Convention on the Law of Non-Navigational Uses of International Watercourses, adopted in 1997 by the United Nations after two sessions of negotiations. The negotiations were based on a set of draft principles prepared by the International Law Commission (hereinafter the "ILC")[74]. The authoritative value of the Convention was recognized by this Court in the *Gabčíkovo-Nagymaros* case[75], decided only four months after the Convention itself was adopted. But in that case, you quoted from Article 5 of the Convention on equitable and reasonable use[76], and referred to a State's "*basic right* to an equitable and reasonable sharing of the resources" of the watercourse[77].

10. In the light of its provenance — including twenty years' work in the ILC — the Watercourses Convention is properly seen as a codification of the basic principles of international law in this field. Since neither Bolivia nor Chile are parties to the Convention, its value is not as a treaty, but as a reflection of the relevant rules of customary international law.

III. Bolivia's "Harmon Doctrine" approach

11. Madam President, Members of the Court, given the general acceptance of the key principles of the Watercourses Convention as customary international law, Chile was surprised that Bolivia has in essence turned back the clock to something resembling a Hobbesian state of nature in the field of international watercourses. Bolivia has taken a position that aligned its case with the most famous, or more accurately, the most infamous, previous instance of a claim of absolute sovereignty

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[74] *Yearbook of the International Law Commission (YILC)*, 1994, Vol. II (Part Two), p. 89, para. 222.

[75] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997*, p. 56, para. 85.

[76] *Ibid.*, p. 80, para. 147.

[77] *Ibid.*, p. 54, para.78, emphasis added.

over the waters of an international watercourse. This, of course, was the so-called "Harmon Doctrine", articulated by the then United States Attorney General in the context of a dispute between the United States and Mexico over the Rio Grande[78]. But when it came to actually settling that dispute, the United States and Mexico did so through a treaty entitled Convention concerning the *Equitable Distribution* of the Waters of the Rio Grande[79]. Thus the Harmon Doctrine should be seen for what it was: an overly zealous advocacy by a lawyer on behalf of his client, the United States. But in the end, the two parties agreed to use equitable allocation, not absolute sovereignty over a shared resource, as their guiding principle. The Harmon Doctrine lives on in infamy as a lawless assertion of exclusive rights. But this is effectively what Bolivia is now claiming, and that is why we believe Bolivia's theory is untenable.

12. In addition to its adoption of the widely rejected Harmon Doctrine, Bolivia's theory of absolute sovereignty over an "artificial flow" is untenable for two other fundamental reasons.

13. First, the so-called "artificial flow" is nothing more than part of the waters of the Silala, and, with respect, it is manifestly nonsensical to say that an upstream State can extract groundwater that would flow anyway downstream[80] and maintain that this water, now surface water, is somehow excluded from international watercourse law.

14. Second, Bolivia's assertion of absolute sovereignty is contrary to common sense, and to the fundamental principle underlying the law in this area, namely, that of the community of interest of co-riparians. Bolivia's assertion of absolute sovereignty would eliminate key aspects of international law without which there can be, as a practical matter, no community of interest, such as the obligation to co-operate and prior notification of planned measures.

IV. The definition of the expression "international watercourse" in the United Nations Watercourses Convention

15. Madam President, Members of the Court, the most widely recognized definitions of the terms "watercourse" and "international watercourse" do not support the alleged exclusion of an "artificial flow". The generally accepted definitions are those contained in the United Nations

[78] Judson Harmon, Treaty of Guadalupe Hidalgo – International Law, 21 Op. Att'y Gen. 274 (1898).

[79] The Convention between the United States and Mexico providing for the equitable distribution of the waters of the Rio Grande for irrigation purposes, 21 May 1906, 34 Stat. 2953, 201 CTS 22.

[80] APCh, para. 2.3; RB, paras. 67 and 83.

Watercourses Convention, Article 2, and I hope that we will soon have a slide showing Article 2 on the screen.

16. I would, in particular, in this Article — I am not going to read it out to you — but I would in particular draw attention to the words "system of surface waters and ground waters . . . flowing into a common terminus".

17. This definition perfectly fits the Silala, which "flows from Bolivia to Chile and is [geologically] a system of surface waters and groundwaters constituting a unitary whole and flowing as both surface water and groundwater across the international border". In terms of the Watercourses Convention, therefore, it is "unequivocally an international watercourse"[81].

18. Yet, Bolivia has state***d*** flatly in its Counter-Memorial that "[c]ustomary international law on the use of transboundary watercourses does not apply to the artificial components of a watercourse that is wholly or partly artificial"[82]. This view would have come as a real surprise to the ILC. In explaining the meaning of the phrase, "constituting . . . a unitary whole", the ILC in its commentary to what became Article 2 of the Convention stated as follows — and I hope that is now on the screen, and indeed it is — and again, I would draw your attention to the point there that they observe, that:

> "[W]ater may move from a stream into the ground under the stream bed, spreading beyond the banks of the stream, then re-emerge in the stream, flow into a lake which empties into a river, be diverted into a canal and carried to a reservoir, and so on."[83]

19. That again fits the reality of the Silala. In other words, following the ILC, the diversion of an international watercourse into a canal, an artificial component, does not in any way destroy its character as an international watercourse. It is the same water flowing in an artificial conveyance. Therefore, contrary to Bolivia's assertion, customary international law on the use of transboundary watercourses emphatically *does* apply in our view, and in the ILC's view, to water carried in artificial infrastructure of an international watercourse, regardless of whether the water would otherwise be ground or surface water. Moreover, the Silala channelization works carried out in Bolivia, which consist of the excavation of earth channels lined with stone[84], do not come close to qualifying as a

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[81] WSCh, p. 27.

[82] CMB, para. 104.

[83] *YILC*, 1994, Vol. II (Part Two), p. 90, para. 4 of commentary to Article 2.

[84] RCh, para. 2.2; WSCh, p. 13.

"canal" as understood by the ILC or in international practice[85]. But the Commission's inclusion of canals as a possible component of a watercourse shows that, *a fortiori*, the stone lining of a stream would not in any way impact upon its character as a "watercourse" and it follows that, in the Commission's view, international law applies in totality to the waters of the Silala system.

20. In the case before the Court, the alleged "enhancement" would result only from the construction of the Silala's channels. In our view, the surface water flow would fall within the definition of the term "watercourse" since it is part of the "system of surface waters and groundwaters" and is thus subject in full to the rules of international watercourses. There can be no question of Bolivia having exclusive sovereignty over that portion of the Silala flow that Bolivia characterizes as "enhanced", since that flow is simply part of the watercourse system as a whole and, in particular, the normal rules of equitable and reasonable use and prevention of significant transboundary harm ~~***that***~~ apply. Bolivia is in essence claiming that the channels constructed in its territory by FCAB, convert shared groundwater to Bolivian surface water. But it makes no sense to contend that what starts out as groundwater, i.e. as a component part of the Silala watercourse system, can be extracted, flow on the surface, and thereby somehow exit the shared international watercourse, becoming "artificial" and subject to Bolivia's exclusive sovereignty, in which Chile would have no right. Yet this is precisely what Bolivia is arguing — a resurrection of the Harmon Doctrine, in reality.

21. Bolivia maintains that for customary international law

> "to apply [in full to the Silala] to an artificially created or enhanced watercourse, there would need to be an agreement between the Parties, including a compromise on the adjustments required to take into account the artificial nature of the water body"[86].

Such an agreement has not, of course, been reached[87]. And the authority Bolivia cites in support of this proposition is surprisingly slight and wide of the mark. Bolivia describes the authorities it refers to as relating to "a watercourse that traverses an international boundary through artificial means"[88], but as I hope you now understand, this is not at all what is involved in the present case.

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[85] RCh, para. 2.14.

[86] CMB, para. 104.

[87] CMB, para. 104.

[88] CMB, para. 105.

22. The first instance of supposedly artificial means, which Bolivia refers to as "State practice"[89], concerns "a canal crossing national boundaries"[90], not remotely what we have here. The fact that the surface water is now channelized on Bolivia's side of the boundary does not mean that the naturally flowing watercourse has somehow ceased to exist. Bolivia fails, in its Counter-Memorial, to make any reference to the most important section of the *Max Planck Encyclopedia* regarding canals and non-navigational uses. That section of the *Encyclopedia* observes that "[w]hen a canal is so constructed as to affect an international watercourse and its water resources, it may be subject to the rules of customary international law governing the non-navigational uses of international watercourses"[91]. The second supposed example of State practice that Bolivia cites concerns "[t]he construction of dams, canals, reservoirs or other works and installations and the operation of such works and installations required for regulation by a basin State in the territory of another". According to the *Max Planck Encyclopedia*, rather understandably, these sorts of works "can be carried out only by agreement between the basin States concerned"[92]. This is a situation far removed from what we are looking at here. There are no such works anywhere near the Silala. The third instance of State practice cited by Bolivia involves, supposedly, a project, for example, for the generation of electricity, where the works are situated, again

> "partly on its own territory and partly on the territory of another Contracting State . . . [In such a case, it is obvious] the States concerned shall enter into negotiations with a view to the conclusion of agreements which will allow [the] operations to be executed."[93]

That is entirely obvious. It is equally obvious that it is utterly irrelevant to the Silala, where no such works are, to the best of our knowledge, in contemplation. If they are, they certainly have not been notified to Chile. None of these supposed instances of State practice appear to us to prove Bolivia's

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[89] CMB, para. 105.

[90] CMB, pp. 68-69, fn. 152, citing M. Arcari, "Canals", *Max Planck Encyclopedia of Public International Law*, online version, para. 6. Bolivia states that according to this source "a canal crossing national boundaries effectively consists of two national sections, with each maintaining its domestic waterway character in the State where it is situated".

[91] M. Arcari & M. C. De Andrade, "Canals", *Max Planck Encyclopedia of Public International Law*, online version, para. 9.

[92] Articles on Regulation of the Flow of Water of International Watercourses, Art. 5 (1), International Law Association (ILA), *Report of the Fifty-ninth Conference, Belgrade, 1980*.

[93] Bolivia takes this example from "Article 3 of the 1923 Convention relating to the Development of Hydraulic Power Affecting More than One State [9 Dec. 1923, 36 LNTS p. 77]", CMB, pp. 68-69, fn. 152. The Convention was ratified by some States from Africa, America, Asia and Europe, but only two of those (Austria and Hungary) shared a watercourse. The 1923 Convention has had virtually no practical application.

case or to provide any authority for what it is arguing. Neither Bolivia nor Chile wishes to develop a project situated partly on the territory of one and partly on the territory of the other.

23. We say all of these examples cited by Bolivia are simply in apposite. In the fact situations dealt with in the latter two sources Bolivia cites, one can see why an agreement would be needed: the project in question is located partly in the territory of another State. That other State would need to agree to the placement of part of the project in its territory. In the case before the Court, the small channels constructed in 1928 by FCAB are situated wholly within Bolivia. In addition, the cases cited by Bolivia deal with ownership of the infrastructure while here, Bolivia is claiming ownership of the flow. No one disputes that Bolivia owns the channels.

24. Madam President, Members of the Court, I have just shown that if the Silala is an "international watercourse" as defined by the United Nations Convention, and if what Bolivia refers to as the "artificial flow" of the Silala is in fact part of that international watercourse system, then it follows that Bolivia must be bound by the key rules of the law of international watercourses, as reflected in the United Nations Convention, chiefly in Articles 5 to 7. Article 5 of course sets forth the most fundamental of these rules: equitable and reasonable utilization. Article 6 details the factors that are relevant to that concept. Article 7 sets out the due diligence obligation for prevention of harm to downstream States. Article 8 reflects the general obligation to co-operate with respect to the use and protection of the watercourse, co-operation being, of course, necessary for the proper implementation of the other obligations, notably notification and consultation enshrined in Articles 11 and 12. I will say no more about Article 5. I will leave it to Professor Boisson de Chazournes to deal with Article 5 in her speech later in these proceedings. But it may be relevant to recall at this point that Bolivia did recognize in its Counter-Memorial that the Silala River is governed by the principles of international watercourses law, to the extent that it is not an "artificial" flow, but as I hope I have shown, this so-called "artificial" flow is in fact simply part of the system as a whole. It is not something different.

So, to conclude on this point, Bolivia's claim of sovereignty over the "artificially enhanced" flow of the Silala River not only contravenes key obligations of Bolivia under the law of international watercourses, but is also contrary to the concept of a community of interest in shared water resources that has been developed by the Court.

25. Madam President, in its 1929 judgment in the *River Oder* case[94], this Court's predecessor — and I hope that is now on the screen — referred to international watercourses and said that a solution to the problem of international watercourses "has been sought . . . in the idea of . . . a community of interest of [all the] riparian States"[95]. I think that is the key phrase in that quotation, "community of interest of riparian States". We can bring slide 3 to an end. The Court went on, and this is at slide 4, to elaborate upon the implications of such a community of interest. You will note that it emphasized that:

> "This community of interest . . . becomes the basis of a common legal right, the essential features of which are ***is*** the perfect equality of all riparian States in the use of the whole course of the river and the exclusion of any preferential privilege of any one riparian"[96].

That, Madam President, Members of the Court, is surely fatal to the whole of Bolivia's case. It cannot stand against that kind of judgment. While in the *River Oder* case, the Court dealt with navigation**,** ***t***his Court in the *Gabčíkovo-Nagymaros* case reiterated what the Permanent Court had previously said, it found that the

> "[m]odern development of international law has strengthened this principle [of a community of interest in] . . . international watercourses as well, as evidenced by the adoption of the [UN Watercourses] Convention . . . by the United Nations General Assembly"[97].

26. Thus — that brings slide 5 to an end — there is a community of interest among the States riparian to the Silala, that is, Bolivia and Chile. This community of interest is the basis of a common legal right in the watercourse, not preferential rights, not exclusive sovereignty for one Party. The essential features are that perfect equality to which the Court has referred in its Judgments of both States in the use of the Silala, and the exclusion of any preferential privilege of one riparian in relation to the other. So, Bolivia does not have a privileged position in regard to any of the waters, whether they are enhanced or otherwise. The "enhanced" surface flow is impressed with the same community of interest and is enjoyed by the two States in the watercourse as a whole. And in regard to that, they stand in perfect equality.

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[94] *Territorial Jurisdiction of the International Commission of the River Oder, Judgment No. 16, 1929, P.C.I.J., Series A, No. 23* (hereinafter "*River Oder* case"), p. 27.

[95] *River Oder* case, p. 27.

[96] *River Oder* case, p. 27.

[97] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997*, p. 56, para. 85.

V. Conclusion

27. That brings me, happily, Madam President, to my conclusions. The standard of equitable and reasonable use and other principles of international watercourse law apply, we say, to all of the waters of the Silala watercourse system. There is simply no legal basis for Bolivia to claim any exclusive rights, any sovereignty, in any alleged "artificial" proportion of the flow of the Silala.

28. Let me emphasize again, no water is brought from elsewhere by Bolivia into the Silala watercourse system. It all exists there naturally, geologically. At most, the railroad company, with Bolivian authorization[98], may to some limited and undetermined degree have increased the natural surface flow through the construction of the Silala channels. But again, I am sure you have got the point by now, any increased surface water flow due to the channels is the same water that, without the channels, would ultimately have entered Chile as groundwater flow[99]. It is a bit like what goes up must come down. In the Andes, what comes down carries on down. It does not matter whether it goes down on the surface or underground.

29. So, Madam President, Members of the Court, for the reasons I have outlined, Chile would respectfully request the Court to declare and confirm that international law does not recognize the concept of "artificial flow" as invented by Bolivia, that the relevant rules of customary international law as reflected in the United Nations Watercourses Convention apply in full to the entire flow of the Silala watercourse system, wherever located, and that there is simply no basis in international law for Bolivia's assertion that any "delivery" of what Bolivia calls the "artificially-flowing waters of the Silala, . . . including the compensation to be paid for said delivery, are subject to the conclusion of an agreement with Bolivia"[100]. That is what Bolivia is demanding.

30. Madam President, Members of the Court, thank you for your kind attention. I would be grateful if you would now give the floor to my colleague, Professor Boisson de Chazournes. I thank you.

The PRESIDENT: Thank you, Professor Boyle. I shall now give the floor to Professor Laurence Boisson de Chazournes. You have the floor, Professor.

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[98] APCh, para. 2.1.

[99] APCh, para. 2.3; BR, para. 67.

[100] RB, p. 56, Submission *(c)*.

Mme BOISSON DE CHAZOURNES :

LES UTILISATIONS DES EAUX DU SILALA PAR LE CHILI SONT CONFORMES AU PRINCIPE DE L'UTILISATION ÉQUITABLE ET RAISONNABLE

1. Madame la présidente, Mesdames et Messieurs les juges, c'est pour moi un privilège d'apparaître devant votre haute juridiction au nom de la République du Chili.

2. La Bolivie et le Chili sont tous deux d'accord pour considérer que le principe de l'utilisation équitable et raisonnable est une norme de droit international général et que ce principe trouve application dans le présent différend[101]. La Bolivie et le Chili considèrent tous deux qu'ils ont le droit d'utiliser ces eaux dans la mesure où ces usages sont compatibles avec le principe d'utilisation équitable et raisonnable[102].

3. En outre, la Bolivie et le Chili conviennent tous deux que le principe de l'utilisation équitable et raisonnable est codifié dans les articles 5 et 6 de la convention des Nations Unies sur le droit relatif aux cours d'eau internationaux à des fins autres que la navigation (que nous dénommerons ci-après «convention des Nations Unies de 1997»). Selon les deux Etats, ce principe «constitue «la pierre angulaire» du droit relatif aux cours d'eau internationaux»[103].

4. Toutefois, la Bolivie cherche à brouiller les pistes en alléguant que le Chili voudrait s'assurer que les utilisations actuelles soient garanties «à perpétuité»[104]. En outre, la Bolivie va jusqu'à alléguer que le Chili souhaiterait exercer un contrôle sur les utilisations futures par la Bolivie des eaux du Silala et viserait «[à] faire prévaloir ses droits à une utilisation équitable et raisonnable sur les droits équivalents de la Bolivie»[105].

5. Mesdames et Messieurs les juges, le Chili a déjà souligné dans ses écritures que ses utilisations actuelles des eaux du Silala sont conformes au droit international[106]. En aucun cas le Chili peut être tenu responsable du fait que la Bolivie n'utilise pas, à l'heure actuelle, les eaux du Silala,

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[101] Contre-mémoire de la Bolivie (ci-après «CMB»), par. 119 ; duplique de la Bolivie (ci-après «DB»), par. 23.

[102] DB, par. 23.

[103] CMB, par. 119 (notes de bas de page omises).

[104] CMB, par. 123.

[105] DB, par. 28.

[106] Pièce additionnelle du Chili (ci-après «PACh»), par. 1.19.

hormis pour le poste militaire du Silala. En outre, la présentation de la position du Chili selon laquelle «le débit et le volume actuels des eaux qui s'écoulent de la Bolivie vers le Chili ne devraient pas être modifiés à l'avenir»[107] est erronée. Au contraire de ce que la Bolivie affirme, le Chili ne souhaite pas reléguer le droit de la Bolivie d'utiliser les eaux du Silala «en position secondaire ou subordonnée»[108]. Le Chili n'a aucune intention de préjuger des utilisations futures des eaux du fleuve Silala par la Bolivie, dans la mesure où celles-ci sont conformes au droit international[109].

6. Madame la présidente, après avoir brièvement analysé le contenu du principe de l'utilisation équitable et raisonnable tel que codifié dans la convention des Nations Unies de 1997 (I), le Chili soulignera que les utilisations passées et présentes des eaux du Silala par le Chili sont conformes au droit international général (II). Le Chili soulignera ensuite que le principe de l'utilisation équitable et raisonnable est l'un des principes clés pour évaluer les utilisations futures des eaux du Silala, mais il n'est pas le seul. Pour être conforme au droit international coutumier, l'application de ce principe va de pair avec l'obligation de ne pas causer de dommage significatif, l'obligation de notification et consultation préalable et le devoir de conduire une étude d'impact environnemental (III).

I. Le contenu du principe de l'utilisation équitable et raisonnable en droit international coutumier

7. Afin de dissiper tout doute relatif à la teneur du principe de l'utilisation équitable et raisonnable, permettez-moi de rappeler brièvement son contenu dans le cadre de la convention des Nations Unies de 1997. Ce court rappel a pour objectif de souligner — s'il y en avait encore besoin de le faire — que le principe de l'utilisation équitable et raisonnable s'applique au cours d'eau du Silala dans sa totalité. Ce cours d'eau est composé d'eaux de surface et d'eaux souterraines qui s'écoulent du territoire de la Bolivie vers le Chili en traversant une frontière internationale. Ainsi que M. McCaffrey l'a expliqué, ces eaux de surface et souterraines constituent un cours d'eau international au sens de la convention des Nations Unies de 1997.

8. Le paragraphe 1 de l'article 5 de la convention de 1997 — convention que vous trouverez à l'onglet n° 1 des documents principaux du dossier des juges — affirme le droit de chaque Etat d'un

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[107] CMB, par. 123.

[108] DB, par. 26.

[109] Réplique du Chili (ci-après «RCh»), par. 1.15.

cours d'eau international d'utiliser, sur son territoire, les eaux du cours d'eau de manière équitable et raisonnable. Cette disposition ajoute qu'un cours d'eau international doit être utilisé et mis en valeur par les Etats du cours d'eau en vue de parvenir à une utilisation et à des avantages optimaux et durables. Ces utilisations et mise en valeur doivent tenir compte des intérêts du cours d'eau concerné et être compatibles avec les exigences d'une protection adéquate du cours d'eau.

9. Le deuxième paragraphe de l'article 5, auquel votre Cour a fait référence en l'affaire relative au *Projet Gabčíkovo-Nagymaros*[110], prévoit que les Etats d'un cours d'eau international participent à l'utilisation, à la mise en valeur et à la protection d'un cours d'eau international de manière équitable et raisonnable. Cette participation inclut deux éléments. Le premier concerne le droit d'utiliser le cours d'eau, le deuxième est relatif au devoir de coopérer à sa protection et sa mise en valeur.

10. L'article 6 de la convention des Nations Unies de 1997 reflète également le droit coutumier. Cette disposition contient une liste indicative de facteurs et circonstances pertinents à prendre en compte pour déterminer le caractère équitable et raisonnable d'une utilisation d'un cours d'eau international. La Bolivie et le Chili conviennent tous deux que les facteurs énumérés à l'article 6 de la convention des Nations Unies de 1997 doivent être pris en compte pour déterminer ce qu'est une utilisation équitable et raisonnable[111].

11. Parmi les facteurs à prendre en compte, l'article 6 indique les facteurs géographiques, hydrologiques, climatiques et écologiques. La convention prévoit également que les besoins économiques et sociaux des Etats d'un cours d'eau international ainsi que la population tributaire du cours d'eau soient pris en compte. La conservation et la protection d'un cours d'eau et les effets d'une utilisation dans un Etat du cours d'eau sur d'autres Etats riverains comptent aussi parmi les facteurs de l'article 6.

12. L'article 6 souligne donc la manière dont les Etats doivent appliquer le principe de l'utilisation équitable et raisonnable. La bonne application de ce principe exige que les Etats du cours

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[110] *Projet Gabčíkovo-Nagymaros (Hongrie/Slovaquie), arrêt, C.I.J. Recueil 1997*, p. 80, par. 147.

[111] CMB, par. 119.

d'eau tiennent compte de facteurs concrets propres à chaque cours d'eau[112]. On le saisit, l'utilisation équitable et raisonnable doit être appréciée à la lumière de tous les facteurs et circonstances pertinents ayant trait à un cours d'eau.

13. Madame la présidente, comme le Chili l'a montré dans ses écritures[113], le contenu du principe de l'utilisation équitable et raisonnable est clair et les manœuvres de la Bolivie pour le présenter en tant qu'un «concept en constante évolution» ont pour seul objectif de masquer son contenu[114]. Les articles 5 et 6 de la convention des Nations Unies de 1997 expliquent de manière détaillée le contenu de ce principe. Ainsi que le Chili le démontrera, ses utilisations passées et présentes sont conformes à ce principe.

II. Les utilisations passées et présentes des eaux du Silala par le Chili sont conformes au principe de l'utilisation équitable et raisonnable

14. La Bolivie veut détourner l'attention de votre juridiction en prétendant que la reconnaissance du droit du Chili à ses utilisations actuelles des eaux du Silala empêcherait la Bolivie d'exercer son droit à une utilisation équitable et raisonnable dans le futur[115]. La Bolivie n'en est pas à une contradiction près. En effet, dans sa duplique, l'Etat bolivien a pourtant reconnu, en se référant aux écritures du Chili[116], que ce dernier ne cherche pas à empêcher le développement et l'utilisation future des eaux du Silala par la Bolivie[117]. La Bolivie admet également que : «[l]es Parties conviennent que les eaux du Silala, dans leur état actuel, ont été utilisées jusqu'à présent seulement ou exclusivement par le Chili».[118]

15. Le Chili a utilisé ces eaux depuis plus d'un siècle en application du droit international général. Ainsi que Mme Klein Kranenberg l'a expliqué, les premières utilisations des eaux du fleuve Silala remontent au début du XX^{e} siècle. Une prise d'eau a été construite en territoire bolivien par la compagnie ferroviaire britannique Antofagasta (Chili) and Bolivia Railway Company Limited

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[112] Projet d'articles sur le droit relatif aux utilisations des cours d'eau internationaux à des fins autres que la navigation, *Annuaire de la Commission du droit international*, 1994 (vol. II (2)), p. 106.

[113] PACh, par. 2.9-2.10.

[114] DB, par. 27.

[115] CMB, par. 117.

[116] RCh, par. 1.15 ; mémoire du Chili (ci-après «MCh»), par. 6.5.

[117] DB, par. 23.

[118] *Ibid.*

(ci-après la «FCAB»)[119]. La Bolivie a en effet octroyé en 1908 une concession à la FCAB pour prélever les eaux du Silala afin d'assurer le fonctionnement des locomotives à vapeur utilisées sur le chemin de fer reliant La Paz à Antofagasta[120]. Le Chili n'a joué aucun rôle dans la décision de la Bolivie d'octroyer une telle concession. La Bolivie a ensuite résilié ce contrat de concession en 1997 du fait que cette concession n'avait plus de raison d'exister puisque les eaux du Silala n'étaient plus utilisées pour alimenter les locomotives à vapeur qui avaient été remplacées par des locomotives à diesel sur le chemin de fer entre La Paz et Antofagasta[121].

16. De son côté, le Chili a octroyé une concession en 1906 à la société FCAB pour l'utilisation des eaux du Silala[122]. Cependant, à la différence de la Bolivie, les eaux n'ont pas été utilisées pour le fonctionnement du chemin de fer entre La Paz et Antofagasta, mais pour l'alimentation en eau potable de la ville d'Antofagasta[123]. Pour le Chili, les eaux du Silala ont toujours constitué une importante source d'eau potable, notamment pour favoriser le développement social et économique de la région d'Antofagasta, qui est située dans l'une des zones les plus arides au monde.

17. A la suite de la construction des chenaux exécutés sur les territoires de la Bolivie et du Chili, sur la base des concessions octroyées en 1908 par la Bolivie et en 1906 par le Chili, une prise d'eau et une conduite d'eau ont été construites par la FCAB en 1942 sur le territoire chilien[124].

18. Dans les années 1950, un autre point de prélèvement, à quelques kilomètres de distance en aval des prises d'eau de la FCAB, a été mis en place par la société minière publique chilienne CODELCO, pour l'approvisionnement en eau potable de ses mines de cuivre[125].

19. Le Chili est à ce jour le seul Etat riverain à utiliser les eaux du Silala, mis à part le poste militaire du Silala en Bolivie. Le Chili ne peut pas être tenu responsable de l'absence de l'utilisation

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[119] MCh, par. 2.21-2.22.

[120] Acte de concession (nº 48), par la Bolivie, des eaux du Siloli en faveur de l'Antofagasta (Chili) and Bolivia Railway Company Limited, en date du 28 octobre 1908. MCh, vol. 3, annexe 41. Voir l'onglet nº 5 des documents principaux du dossier des juges.

[121] Arrêté nº 71/97 de la préfecture du département de Potosí (Bolivie), 14 mai 1997. MCh, vol. 3, annexe 46. Voir l'onglet nº 8 des documents principaux du dossier des juges.

[122] Acte de concession (nº 1892), par le Chili, des eaux du Siloli en faveur de l'Antofagasta (Chili) and Bolivia Railway Company Limited, en date du 31 juillet 1906. MCh, vol. 3, annexe 55. Voir l'onglet nº 4 des documents principaux du dossier des juges.

[123] MCh, par. 2.21.

[124] MCh, par. 2.22.

[125] MCh, par. 2.30-2.31.

des eaux du Silala par la Bolivie. Lorsque, dans le passé, la Bolivie a utilisé les eaux du Silala pour alimenter les locomotives à vapeur sur le chemin de fer entre La Paz et Antofagasta, le Chili n'a jamais contesté un tel droit. La Bolivie précise d'ailleurs que le Chili «reconnaît qu'en droit international coutumier [la Bolivie] a le droit d'utiliser les eaux du Silala» et que le Chili «ne demand[e] pas … de figer l'exploitation et l'utilisation futures des eaux du Silala par l'un ou l'autre Etat»[126]. Ainsi que les faits qui viennent d'être présentés le montrent et comme la Bolivie ne l'a jamais contesté, le Chili utilise les eaux du Silala en conformité avec le principe de l'utilisation équitable et raisonnable. Ses utilisations passées et présentes se réalisent en application des normes codifiées aux articles 5 et 6 de la convention de 1997.

III. Les utilisations futures des eaux du Silala doivent être conformes au droit international

20. Malgré cette conformité, la Bolivie voudrait convaincre votre juridiction que la reconnaissance des utilisations actuelles des eaux du Silala par le Chili empêcherait la Bolivie d'exercer son droit à une utilisation équitable et raisonnable dans le futur. Non seulement la Bolivie veut faire croire que le Chili «attend de la Cour qu'elle déclare que l'utilisation qu'il fait actuellement du Silala doit lui être garantie à perpétuité» mais la Bolivie argue également que le Chili voudrait empêcher ses utilisations futures des eaux du Silala[127].

21. Dans sa réplique, le Chili a pourtant bien souligné qu'il n'a aucune intention de préempter les utilisations futures des eaux du Silala par la Bolivie. Il a précisé :

> «[L]e Chili tient à rassurer la Bolivie sur le fait qu'il ne prétend pas l'empêcher d'utiliser le Silala à l'avenir, pour autant qu'elle le fasse conformément au principe de l'utilisation équitable et raisonnable, et à condition qu'elle respecte l'obligation qui lui est faite en vertu du droit international coutumier de ne pas causer de dommage important ainsi que les obligations connexes en ce qui concerne la coopération, la notification, l'échange d'informations et, s'il y a lieu, la conduite d'une évaluation de l'impact sur l'environnement, conformément au droit international coutumier.»[128]

22. Ces utilisations devront respecter le principe de l'utilisation équitable et raisonnable et être évaluées à la lumière des facteurs énumérés à l'article 6 de la convention des Nations Unies de 1997,

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[126] DB, par. 23 (notes de bas de page omises).

[127] CMB, par. 123.

[128] RCh, par. 1.15.

parmi lesquels «[l]es effets de l'utilisation ou des utilisations du cours d'eau dans un Etat du cours d'eau sur d'autres Etats du cours d'eau» et «[l]es utilisations actuelles et potentielles du cours d'eau»[129].

23. Le Chili ne dispose pas à l'heure actuelle d'informations sur les utilisations futures des eaux du Silala par la Bolivie. Le Chili tient à rappeler que, dans le passé, la Bolivie n'a pas respecté les obligations auxquelles elle est tenue en droit international général en matière d'échange d'informations et de notification.

24. Madame la présidente, Mesdames et Messieurs les juges, permettez-moi de vous donner quelques exemples d'utilisation des eaux du Silala par la Bolivie pour lesquels l'Etat bolivien n'a pas respecté les obligations relatives à l'échange d'informations et la notification préalable prévues aux articles 11 et 12 de la convention des Nations Unies de 1997, lesquels, contrairement à ce que la Bolivie affirme, ***codifient et*** reflètent le droit coutumier[130].

25. Un premier exemple de non respect du droit coutumier par la Bolivie remonte à la fin des années 1990. En 1999, la Bolivie a en effet octroyé une concession à une société privée bolivienne, dénommée DUCTEC. Selon les termes de la concession, l'objectif était de commercialiser l'eau prélevée du Silala[131]. Le Chili n'a pas reçu d'informations sur ce projet d'utilisation des eaux du Silala quand bien même il concernait l'utilisation d'un cours d'eau international. Dans une note diplomatique du 27 avril 2000, le Chili a rappelé la nécessité de respecter le principe de l'utilisation équitable et raisonnable et l'exigence de coopération[132]. Cette note diplomatique est restée sans réponse.

26. En outre, en 2012, le Chili a demandé des renseignements sur plusieurs projets annoncés par le gouverneur du département de Potosí, dans la région du Silala, notamment la construction d'une «ferme piscicole», d'«un barrage» et d'«une usine d'embouteillage d'eau minérale»[133]. Dans

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[129] Article 6 *d)* et *e)* de la convention des Nations Unies de 1997.

[130] RCh, par. 1.15 et 2.34.

[131] Contrat de concession de l'utilisation et de l'exploitation des sources du Silala, conclu le 25 avril 2000 entre le surintendant bolivien des installations sanitaires de base et DUCTEC S.R.L. MCh, vol. 3, annexe 48.

[132] Note n° 006738 en date du 27 avril 2000 adressée au ministère des affaires étrangères et des cultes de la République de Bolivie par le ministère des affaires étrangères de la République du Chili. MCh, vol. 2, annexe 31.

[133] MCh, par. 5.19.

une note diplomatique du 7 mai 2012[134], le Chili a demandé à recevoir des informations sur ces projets «avant la mise en œuvre des projets, afin de pouvoir en évaluer la portée et les éventuels effets néfastes en aval de la frontière et de s'assurer qu'il est dûment tenu compte de ses droits, en tant que pays riverain»[135].

27. Le 9 octobre 2012, du fait de l'absence de réponse de la Bolivie, le Chili a de nouveau demandé des informations sur ces projets[136]. Le Chili a réitéré la nécessité «de recevoir les informations pertinentes sans retard» avant la mise en œuvre de ces projets. Il a précisé que l'obligation de fournir les informations en temps utile est nécessaire «afin de pouvoir … examiner comme il se doit et analyser les effets, néfastes ou non, que le projet est susceptible d'avoir sur cette ressource hydrique partagée, en particulier ses effets environnementaux éventuels sur les eaux du Silala et les risques de pollution»[137]. A la suite de cette demande, la Bolivie a répondu par une note diplomatique en date du 25 octobre 2012. Et au prétexte que les eaux du Silala ne constitueraient pas un cours d'eau international, la Bolivie a argué que l'Etat bolivien n'avait pas à transmettre les renseignements demandés par le Chili[138]. Comme nous le savons, la Bolivie a depuis changé de position et reconnaît aujourd'hui le caractère international des eaux du Silala, qu'elles soient de surface ou souterraines. Le respect des obligations évoquées par le Chili dans ses notes diplomatiques découle du statut de cours d'eau international.

28. Plus récemment, au cours de la présente instance, en 2017, le Chili a de nouveau demandé des informations à la Bolivie sur la construction d'une base militaire dénommée «Poste militaire du Silala» ainsi que sur la construction de dix maisons situées près du cours d'eau[139]. En particulier,

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[134] Note nº 199/39 en date du 7 mai 2012 adressée au ministère des affaires étrangères de l'Etat plurinational de Bolivie par le consulat général du Chili à La Paz. MCh, vol. 2, annexe 34. Voir l'onglet nº 12 des documents principaux du dossier des juges.

[135] MCh, vol. 2, annexe 34, p. 89. Voir l'onglet nº 12 des documents principaux du dossier des juges.

[136] Note nº 389/149 en date du 9 octobre 2012 adressée au ministère des affaires étrangères de l'Etat plurinational de Bolivie par le consulat général du Chili à La Paz. MCh, vol. 2, annexe 35. Voir l'onglet nº 13 des documents principaux du dossier des juges.

[137] MCh, vol. 2, annexe 35, p. 90. Voir l'onglet nº 13 des documents principaux du dossier des juges.

[138] Note VRE-DGRB-UAM-020663/2012 en date du 25 octobre 2012 adressée au consulat général du Chili par le ministère des affaires étrangères de l'Etat plurinational de Bolivie. MCh, vol. 2, annexe 36. Voir l'onglet nº 14 des documents principaux du dossier des juges.

[139] MCh, vol. 1, par. 5.21 ; note nº 29/17 en date du 7 février 2017 adressée au ministère bolivien des affaires étrangères par le consulat général du Chili à La Paz. MCh, vol. 2, annexe 39.1. Voir l'onglet nº 15 des documents principaux du dossier des juges.

dans sa note diplomatique en date du 7 février 2017, le Chili a fait valoir que «les utilisations potentielles des eaux du système hydrographique du Silala et le rejet des eaux usées dans celui-ci peuvent avoir des conséquences importantes pour les droits et les intérêts légitimes du Chili». Le Chili a également souligné que cette demande est faite compte tenu des «principes de bonne foi et de bon voisinage, ainsi que du principe de l'utilisation équitable et raisonnable énoncé à l'article 5 de la convention sur le droit relatif aux utilisations des cours d'eau internationaux à des fins autres que la navigation»[140].

29. Dans sa réponse datée du 24 mars 2017, la Bolivie indique qu'***e***, «en application des principes de bonne foi et de bon voisinage, le ministère fait savoir que dès que les informations demandées seront disponibles» le Chili en sera informé[141]. Toutefois, le 25 mai 2017, la Bolivie a précisé qu'«il n'y a aucun danger que les modestes infrastructures qui existent sur le site provoquent une pollution ou affectent la qualité de l'eau des sources de Silala, car les habitations qui y sont construites ne sont pas habitées»[142]. S'agissant du poste militaire, la Bolivie indique que «des équipements appropriés garantissant la préservation et la conservation des eaux susmentionnées ont été mis en place». Et la Bolivie de conclure que «[l']utilisation qui est faite de ces eaux est par conséquent minimale et leur évacuation est contrôlée par un système élémentaire d'assainissement qui empêche toute pollution de la zone»[143].

30. Comme on peut le constater, malgré l'obligation de notifier en temps utile les mesures projetées susceptibles d'avoir des effets négatifs significatifs, à laquelle la Bolivie est tenue en droit international général, l'Etat bolivien a constamment refusé de fournir au Chili les informations requises sur les mesures projetées sur les eaux du Silala.

31. Le Chili ne dispose pas d'informations sur les projets d'utilisation des eaux du Silala par la Bolivie. Le Chili tient néanmoins à réaffirmer que toute utilisation future des eaux du Silala par la

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[140] MCh, vol. 2, annexe 39.1, p. 109. Voir l'onglet n° 15 des documents principaux du dossier des juges.

[141] Note VRE-Cs-47/2017 en date du 24 mars 2017 adressée au consulat général du Chili à La Paz par le ministère bolivien des affaires étrangères. MCh, vol. 2, annexe 39.2, p. 110. Voir l'onglet n° 16 des documents principaux du dossier des juges.

[142] Note VRE-Cs-117/2017 en date du 25 mai 2017 adressée au consulat général du Chili à La Paz par le ministère bolivien des affaires étrangères. MCh, vol. 2, annexe 39.3, p. 111. Voir l'onglet n° 17 des documents principaux du dossier des juges.

[143] MCh, vol. 2, annexe 39.3, p. 111. Voir l'onglet n° 17 des documents principaux du dossier des juges.

Bolivie doit se conformer à l'obligation de notification des mesures projetées pouvant avoir des effets négatifs significatifs. Le respect de cette obligation est indispensable pour prévenir les risques de dommage et assurer une gestion commune d'un cours d'eau international tel le Silala.

32. La notification préalable d'un projet est en effet nécessaire pour la mise en œuvre du principe de l'utilisation équitable et raisonnable. La Bolivie a, à plusieurs reprises, manqué au respect de ce principe[144]. Votre juridiction a pourtant souligné que :

> «L'obligation de notifier est … essentielle dans le processus qui doit mener les parties à se concerter pour évaluer les risques du projet et négocier les modifications éventuelles susceptibles de les éliminer ou d'en limiter au minimum les effets.»[145]

33. Cette obligation, codifiée à l'article 12 de la convention des Nations Unies de 1997, prévoit que la notification doit être accompagnée des données techniques et informations disponibles, ainsi que d'une étude d'impact environnemental ainsi que cela est requis en droit international général.

34. En l'affaire des *Usines de pâte à papier sur le fleuve Uruguay*, votre haute juridiction avait noté que la notification préalable d'un projet doit être accompagnée «d'une information aussi complète que possible» afin d'évaluer l'impact d'un projet sur un cours d'eau international[146]. Dans cette même affaire, votre Cour avait également affirmé que la notification «doit intervenir avant que l'Etat intéressé ne décide de la viabilité environnementale du projet, compte dûment tenu de l'évaluation de l'impact sur l'environnement qui lui a été présentée»[147]. Le Chili doit pouvoir disposer d'une telle évaluation pour apprécier le préjudice qui pourrait être causé par un projet sur les eaux du Silala. La notification préalable accompagnée d'une évaluation d'impact sur l'environnement permettrait au Chili d'évaluer les conséquences d'une nouvelle utilisation sur les utilisations existantes.

35. Un autre dessein de la Bolivie consiste à réduire la portée normative de l'obligation générale de notification préalable. Dans sa duplique, la Bolivie mentionne très brièvement cette obligation dans la partie relative à l'obligation de ne pas causer de dommage significatif et limite son

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[144] MCh, par. 5.32 ; RCh, par. 2.38.

[145] *Usines de pâte à papier sur le fleuve Uruguay (Argentine c. Uruguay), arrêt, C.I.J. Recueil 2010 (I)*, p. 59, par. 115.

[146] *Ibid*., p. 58, par. 113.

[147] *Ibid*., p. 60, par. 120.

champ d'application aux prétendues eaux du Silala qui «s'écoulent naturellement»[148]. Qui plus est, comme cela vient d'être mentionné, la Bolivie s'arroge la prérogative de décider ce qui devrait ou ne devrait pas être soumis à l'obligation de notification préalable. Il ne revient pourtant pas à la Bolivie de décider unilatéralement s'il existe un risque d'effets négatifs significatifs pour le Chili.

La sentence relative à l'*Affaire du lac Lanoux* rappelle avec acuité que :

> «L'Etat exposé à subir les répercussions des travaux entrepris par un Etat limitrophe est seul juge de ses intérêts, et si ce dernier n'en a pas pris l'initiative, on ne saurait méconnaître à l'autre le droit d'exiger notification des travaux ou concessions qui sont l'objet d'un projet.»[149]

36. En outre, l'article 18, paragraphe 1, de la convention des Nations Unies de 1997 doit être évoqué[150]. Cette disposition renvoie à l'article 12 lorsqu'«un Etat du cours d'eau a des motifs raisonnables de penser qu'un autre Etat du cours d'eau projette des mesures qui peuvent avoir des effets négatifs significatifs pour lui». On le saisit, le Chili est en droit de demander de recevoir des informations de la Bolivie sur des projets susceptibles d'avoir des impacts négatifs significatifs.

37. Le Chili réfute l'argument de la Bolivie selon lequel le Chili n'accepterait aucune modification de la quantité d'eau qui s'écoule de la Bolivie vers le Chili[151]. Au contraire de ce que la Bolivie affirme dans ses écritures, le Chili ne prend pas unilatéralement le contrôle des eaux du Silala[152]. Toute utilisation future des eaux du Silala doit être évaluée en tenant compte du principe de l'utilisation équitable et raisonnable et se conformer à d'autres obligations internationales, telle l'obligation de ne pas causer de dommage significatif, l'obligation de notification préalable et le devoir de conduire une étude d'impact environnemental. N'en déplaise à la Bolivie, ces principes sont applicables à toutes les eaux du Silala, qu'elles soient de surface ou souterraines.

38. Mesdames et Messieurs les juges, je vous remercie de votre attention et vous prie, Madame la présidente, de donner la parole à M. Samuel Wordsworth.

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[148] DB, par. 20.

[149] *Affaire du lac Lanoux (Espagne, France)*, sentence du 16 novembre 1957, *Recueil des sentences arbitrales*, vol. XII, p. 314, par. 21.

[150] RCh, par. 2.36.

[151] CMB, par. 123.

[152] *Ibid*.

The PRESIDENT: Thank you for your statement, Professor Boisson de Chazournes. I now invite Mr. Sam Wordsworth to take the floor. You have the floor.

Mr. WORDSWORTH:

THE FACTS AND EXPERT EVIDENCE RELEVANT TO THE SURFACE AND GROUNDWATER FLOWS OF THE SILALA RIVER

1. Madam President, Members of the Court, it is a privilege to appear before you and to have been asked by Chile to introduce the facts and expert evidence relevant to the surface and groundwaters of the Silala River, that is, the evidence that is key to the disposition of the central issues in dispute. The curiosity here is that, as the Court will already have seen from the written pleadings, the relevant facts are either plain from the face of the documents or are not in dispute at all. Indeed, there are only two factual issues relevant to the Court's determinations, and even that is putting the number rather high.

2. Fact one: the construction of the channels on Bolivian territory — that are said by Bolivia to generate the so-called "artificial" surface water flows and to have led to a deterioration in the Bolivian wetlands — were constructed by an English company pursuant to the 1908 licence granted by Bolivia[153]. You have seen the 1908 licence, its existence cannot be disputed and, likewise, Chile's point that this 1908 licence is fatal to all the issues that Bolivia raises with respect to the channels.

(a) The Court has already heard this from my colleagues, but I emphasize the point at this stage of our argument because, as the Court will have seen from the January 2022 summary report of Bolivia's experts, DHI, a significant part of Bolivia's evidence consists of alleged harm caused to its wetlands. Yet the alleged harm is irrelevant so far as concerns this case. Chile is not responsible for any impacts from activities that Bolivia permits on Bolivian territory, and there can likewise be no defence to Chile's claims in this case by reference to what Bolivia elects to do, or omits to do, upstream on its own territory.

(b) Of course, if there is any harm to wetlands, that is not irrelevant in more general terms, and Chile has in its written pleadings expressly encouraged Bolivia to take any steps it considers necessary

[153] Deed of Concession by the State of Bolivia of the Waters of the Siloli (No. 48) to the Antofagasta (Chili) and Bolivia Railway Company Limited, 28 Oct. 1908 (original in Spanish, English translation), MCh, Vol. 3, Annex 41 (key document 5 in judges' folder).

to restore its wetlands, including through dismantling the channels[154]; but the extent of alleged ecological degradation in the upstream State, Bolivia, caused by works that Bolivia has permitted is a matter for Bolivia alone.

3. Fact two: whether as surface water or as groundwater, and with or without the channels dug long ago on Bolivia's territory, the waters of the Silala flow and will continue to flow down the hill into Chile, as they have done for thousands of years.

I. Areas of agreement between the Parties' experts

4. Here it is useful to refer to the areas of agreement that have, in compliance with the Court's directions, been identified by the Parties' experts; and I start with Bolivia's experts, DHI, and section 1.1 of their summary report of January 2022:

(a) Main finding 1: "The main source of surface water of the Silala springs is groundwater discharge, and the surface waters interact with the underlying groundwater along their course." Further detail on the basic features of the Silala can then be seen in DHI's main finding 3: "Silala is of a complex nature and comprised of a coupled groundwater-surface water system originating in Bolivian territory (upstream) and extending into Chile (downstream)."

(b) These conclusions, which are shared by Chile's experts, are important because, as noted earlier by Chile's Agent, it was Bolivia's position at the outset of these proceedings that the Silala was not an international watercourse, but, given these basic hydrological features, and given that the Silala crosses the boundary into Chile, Bolivia could not maintain that position. The agreed facts establish that, unquestionably, the Silala is an international watercourse. And I recall Article 2 *(a)* of the 1997 Convention that you were referred to earlier: the Silala is a system of surface and groundwaters constituting a unitary whole and flowing into a common terminus — flowing from Bolivia into Chile. So, leaving to one side Bolivia's curious position on so-called "artificial flows", the expert agreement here determines pretty much the entirety of the case.

(c) Looking back to DHI's main finding 2, this is that "[t]he canals have not changed the overall direction of flow in surface water or groundwater". This is consistent with main finding 6, which is the one that really matters so far as concerns Bolivia's case on "artificial flows":

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[154] See e.g. RCh, para. 1.8, and APCh, para. 2.68.

"The collected field data and the established models suggest that the water discharged from the Silala catchment (accounting for the evapotranspiration losses from the soils, wetlands and canals) eventually flows to Chile either as groundwater or as surface water, with or without the canals."

(i) None of the rest matters, including the various points of disagreement between the experts. So what if Bolivia's authorization of the construction of the various shallow channels on its territory has led to an increase in surface water flows to Chile? That water would anyway have flowed into Chile as groundwater.

(ii) And so what, if, according to Bolivia, Chile takes some benefit from having this water as surface water, not groundwater[155]? That alleged benefit was not sought or requested by Chile, and Chile does not ask for the channels on Bolivia's territory to be retained. Far from it: Chile expressly agrees with Bolivia's statement that Bolivia is entitled to dismantle the works on its territory "in conformity with its [— that is Bolivia's —] own interests and customary international legal norms governing transboundary watercourses"[156].

(iii) Unless the Court is going to accept the extraordinary proposition that an upstream State can act as a self-policing drainage company, unilaterally extracting water that would otherwise flow as groundwater into the downstream State, and able then to assert exclusive sovereign rights over that water when it reaches the boundary as surface water, then Bolivia's case on "artificial flows" must fall away.

(d) In passing, I note DHI's main finding 4: "The evaporation from the wetlands will increase if the canals are removed." This is not of relevance because the amount of extra water that would be evaporated is *de minimis*, around 1-2 per cent[157], and more to the point, Chile does not and *cannot* object to removal of the channels, assuming of course Bolivia complies with its obligations under international law[158].

(e) As to DHI's main finding 5, this is only important to the extent that it is a stepping-stone to main finding 6. The experts agree that "[s]urface water flows will decrease, and groundwater flow increase at the border if the canals are dismantled, and the wetlands restored to their natural

[155] RB, paras. 70 and 81-85.

[156] APCh, para. 1.18, referring to RB, para. 84.

[157] See e.g. RCh, para. 3.9.

[158] See e.g. APCh, para. 1.18.

conditions". The amount of the respective decrease and increase is disputed between the experts but, again, it does not matter because the key point on which the experts do agree is that, subject to the very small effects of channelization on evaporation, all surface and groundwaters eventually flow downhill to Chile.

5. I turn to the areas of agreement as recorded by Chile's experts, Drs. Wheater and Peach.

(a) If you can cast your eyes over points 1 to 5, you can see that these are the same basic points as reflected in DHI's main findings 1 to 3. In essence, it is being said that the Silala River is a coupled groundwater-surface water system, and that construction of the channels in the 1920s on Bolivian territory has not influenced the river flow direction, which follows the natural topographic gradients — you can see that at points 4 and 5. And you can see that last point graphically from the longitudinal profile at Figure 2 to the Wheater and Peach summary report[159]. Looking to the right side of the figure, there is a drop in elevation of around 130 m from the far end of the Cajones and Orientales wetlands to the boundary line, that is, a drop of more than one and a half times the height of the Peace Palace tower over the distance of a few kilometres. So, of course, the river flows, and will always continue to flow, naturally down into Chile, regardless of the 1928 channel works.

(b) The next two areas of agreement cover the same ground as DHI's main findings 4 and 5 and, for the same reasons, do not give rise to further issues of fact that this Court need resolve. Thus Drs. Wheater and Peach record the experts' agreement that:

(i) Point 6: "This channelization will have had some effect on the surface water flow of the Silala River. An increase in river flow due to these works would be expected . . . (As discussed in section 4 below, we consider that this impact will be very small)." The DHI experts say, by contrast, that the increase will be in the range of 11 to 33 per cent, but, again, the quantum of the increase could only matter if Bolivia were able to persuade the Court that it can act as this self-policing upstream drainage company, able to assert exclusive sovereign rights over surface water that would anyway flow into Chile as groundwater. It is

[159] WSCh, p. 15.

difficult not to look forward with some interest to seeing how that notably inventive argument is articulated orally on Monday.

(ii) Then, point 7: "Some impact of the drainage channels on evaporation from the wetlands would be expected but is small . . . (As discussed further in section 4 below, we consider that this impact will be very small)." And the same points I made earlier apply — the evaporation is *de minimis* and the existence of the channels is a matter for Bolivia, with Chile stating in terms that Chile can have no complaint if surface water flows are reduced due to Bolivia removing the channels on its territory[160].

(c) Finally, point 8, which is the area of agreement that really matters: "Apart from the effects of channelization on evaporation, any increase in surface flow in the river will be accompanied by a decrease in groundwater flows across the border, and vice-versa."

6. Now, over the coming days, Bolivia will be seeking to focus your attention on the areas of disagreement between the experts. But the legal reality is that these simply do not matter. Just as in the *Construction of a Road* case, between Costa Rica and Nicaragua, where there were contested facts as to the quantity of sediment deposition into the San Juan River, there is no reason for the Court to enter into the areas of expert disagreement — because what is agreed is sufficient. In that case, the Court aptly noted:

> "The Court sees no need to go into a detailed examination of the scientific and technical validity of the different estimates put forward by the Parties' experts. Suffice it to note here that the amount of sediment in the river due to the construction of the road represents at most 2 per cent of the river's total load, according to Costa Rica's calculations based on the figures provided by Nicaragua's experts and uncontested by the latter"[161].

7. By reference to that uncontested figure on the additional amount of sediment in the river, the Court was able to decide the key point at issue, i.e. that the construction of the road was not causing significant harm[162].

8. The same basic approach can safely be followed in the current case. By its directions of 15 October 2021, the Court adroitly stipulated that each expert summary should contain a list of those

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[160] APCh, para. 1.20.

[161] *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica* v. *Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua* v. *Costa Rica), Judgment, I.C.J. Reports 2015 (II)*, p. 729, para. 186.

[162] *Ibid*., p. 731, para. 194.

matters on which the experts agreed and those on which they disagreed and, in order to dispose of this case, it is only the notably longer list of points of agreement that the Court will need to refer to.

II. The areas of disagreement between the Parties' experts

9. It is only because there is some cross-examination of the experts that I say any more on the four areas of disagreement identified in the DHI summary; and, in fact, these four disagreements are all just iterations of the same basic point, which is at DHI's main finding 7. ***And a***s recorded there, the experts disagree as to

> "[t]he magnitude of the decrease in cross-border surface water flow in the natural condition (i.e., without the canals and drainage network). DHI's estimated range of decrease, based on on-site field data and modelling, is 11% – 33% while Chile states (without detailed calculations) that it is negligible".

10. Thus, according to the DHI team, if Bolivia removes the channels on its territory, the surface water flows will decrease significantly, while Chile's experts, Drs. Wheater and Peach, strongly disagree with that. And the views of Drs. Wheater and Peach are not, as DHI's point 7 may imply, without a solid scientific and technical basis. Those views are explained in five lengthy reports, which are backed up by some 16 supporting reports. In brief, as recorded in the Wheater and Peach summary,

> "DHI's surprising conclusion was that the overall effects of channelization on surface flows would be large. DHI stated in Bolivia's Counter-Memorial . . ., 'Without canals . . . [a] reduction of surface flows of 30-40% is estimated compared to current conditions'. Following our critique of their modelling in Wheater and Peach (2019a), DHI revised their estimates in Bolivia's Rejoinder, but nevertheless continued to assert very large effects: ' . . . the simulated range of decrease in transborder surface flow when removing the canals is 11%-33%' . . . We have consistently stated that these estimates are wholly implausible and that, given the relatively small reductions in groundwater table depths associated with the channelization of the wetlands and of the main river, any effects will be very small."

11. The point is ultimately a simple one.

(a) Groundwater flows from high elevation to low elevation, as one might expect, and the elevation gradient is the key to the rate at which the groundwater flows.

(b) Now, the channels on which Bolivia places so much focus, and which it will no doubt tell you are more than 6 km in total length, are very shallow — the channels in the southern wetlands are only from 19 to 50 cm deep, and from 22 to 55 cm deep in the northern wetlands[163] (so that is

[163] RB, paras. 51-52.

basically from a sixth to a third of the height of this podium). By contrast, the groundwater flows down an elevation difference of at least 150 m from the catchment boundary to the wetland springs[164].

(c) That 150 m-figure comes from DHI, and still using DHI's figures, the effect of the channels is to lower the depth of the wetland water table by between 10 and 45 cm. So, at most, the potential change in the groundwater elevation, caused by removal of the channels, is 45 cm as a fraction of 150 m; that is a 0.3-per-cent change. As you can see, the change is almost negligible, including in terms of groundwater gradient. It basically makes no difference to the functioning of the system if the water table in the wetlands is a few tens of centimetres higher or lower. ***And y***et the DHI model is predicting a major drop in surface water flow, of 11-33 per cent, if and when the channels are removed. As Drs. Wheater and Peach point out, that simply makes no sense.

12. So, something is going wrong with the DHI modelling exercise, and the issues that Drs. Wheater and Peach point to include the ground level being modelled as if it were some 6 m higher than it actually is[165]. Bearing in mind that the aim of the modelling is to evaluate the effects of channels that are at most 60 cm deep, this is a serious anomaly. If the ground levels in the modelling are way out, then it is to be expected that the surface water flow modelling will be unreliable also.

13. There are various other points that can be explored in cross-examination, including the unreported and unexplained addition of water in the DHI models as between the different scenarios[166]. Despite the identification of this anomaly, in Chile's Additional Pleading of September 2019, this was one of the points Bolivia's experts chose not to address in their summary report of January 2022, so we still do not know whether or how the anomaly is to be explained.

14. As the Court can see from DHI's main point 8, the DHI modelling exercise is said to be consistent with "[h]istorical surface flow measurements from before channelization".

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[164] CMB, Vol. 3, p. 488, Fig. 11.

[165] WSCh, p. 21.

[166] WSCh, p. 21.

(a) But all that is being referred to here is a single sentence in the 1922 paper on the Waterworks Department of the FCAB, prepared by its chief engineer, Mr. Fox[167] — and you can see the single sentence, he said: "At Siloli a small dam has been built across the stream which has a daily flow (with very slight variations) of 11,300 cubic metres, or, say, 2,500,000 gallons."

(b) There is nothing to accompany this — no underlying records, no reference material. And, so far as concerns Chile's experts, it is anomalous that great weight should be placed on this one standalone sentence in order to identify what the river flows were in the period prior to construction of the channels.

15. As to DHI's main findings 9 and 10, these merely recite the experts' disagreement as to the accuracy of the modelling exercise that DHI has carried out, and there is a criticism of Chile's experts for a failure to carry out any detailed alternative analyses. The only further point that is useful to identify at this stage, that is prior to cross-examination, is that Chile's experts do not criticize the modelling software that the DHI experts have used, but the reliability of any modelling exercise is dependent on the inputs and the boundary conditions that are set by the user of the model. In layperson's terms, no matter how good the underlying modelling software, it can still be a case of rubbish in, rubbish out.

16. That can all be explored when the Court hears from the experts next week. However, the key point remains that the important work of the experts, that is the work that matters so far as concerns the outcome of the case, is already complete and is to be found in their agreement that, whether as surface water or groundwater, all the water upstream in Bolivia will eventually flow to Chile.

17. Thus, even if the DHI experts were correct, and removal of the channels would lead to a significant decrease in surface water flowing to Chile, then there would be an increase in groundwater to Chile. And Bolivia cannot, by some unprecedented legal magic, somehow have exclusive sovereign rights over that alleged additional surface water and, likewise, it cannot somehow be inequitable or unreasonable for Chile to receive, at the surface, water that it would anyway have received as groundwater.

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[167] Robert H. Fox, The Waterworks Department of the Antofagasta (Chili) & Bolivia Railway Company, *South African Journal of Science*, 1922. MCh, Vol. 3, Ann. 75, p. 411.

18. And, if I can conclude by recalling the only other fact which is material to the outcome of the case on water flow, the alleged increase in surface water is caused solely by acts authorized by Bolivia on Bolivian territory — that is, the construction of shallow channels almost 100 years ago which, for some unknown reason, Bolivia has not removed despite the ecological harm it now says they cause. Such acts and omissions by Bolivia cannot somehow be factored in as a defence to Chile's claim that its current use of all the waters of the Silala is equitable and reasonable, or somehow stand as a basis for asserting some State responsibility on Chile's part. Moreover, Bolivia cannot benefit from its own conduct, including its own historical licensing activity, to create new categories of sovereign rights over a portion of a shared water resource, whose use is governed by the principle of equitable and reasonable utilization and the other equally well-established principles of international law.

19. Madam President, Members of the Court, the case is a very straightforward one, factually as well as legally, and we are happy to conclude our opening in good time. I thank you for your kind attention, and that concludes Chile's presentation of today.

The PRESIDENT: I thank Mr. Wordsworth, whose statement brings this sitting to a close. The oral proceedings in the case will resume at 3 p.m. on Monday 4 April, when Bolivia will present its first round of argument, both on the claims of Chile and on its own counter-claims.

The sitting is adjourned.

The Court rose at 6 p.m..