Determining an International Watercourse: The Dispute of Chile v. Bolivia concerning the Silala

Determinación de un curso de agua internacional: La disputa de Chile c. Bolivia concerniente al río Silala

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Abstract: Chile and Bolivia find themselves before the International Court of Justice yet again, this time litigating about the most valuable resource in the Atacama Desert: Water. Bolivia started asserting exclusive ownership over the Silala watercourse towards the end of the last century provoking the Chilean application to the Court in mid-2016. Therein, Chile seeks the Court to establish the applicability of International Water Law to the Silala watercourse employing scientific and legal arguments. This article analyzes the States’ arguments and arrives at the conclusion that the Silala is an international watercourse as Chile explicitly and Bolivia tacitly agreed on this status.

Key words: International Water Law, Chile v Bolivia, Silala, descriptive and normative characteristics.

Resumen: Por segunda vez Chile y Bolivia se encuentran como partes litigantes en un caso frente a la Corte Internacional de Justicia en La Haya. Esta vez la disputa se concentra en el recurso más escaso del desierto de Atacama: agua dulce. Bolivia empezó a reclamar el dominio absoluto sobre el recurso hídrico del Silala a fines del siglo pasado, así provocando la demanda chilena a mediados de 2016. En ella, Chile pide a la Corte afirmar que el derecho internacional es aplicable al Silala basándose en argumentos de ciencia y derecho. El siguiente artículo analiza los argumentos de ambos estados para llegar a la conclusión que el Silala es un río internacional gracias al reconocimiento explícito de Chile e implícito de Bolivia.

Palabras claves: Derecho de Aguas Internacional, Chile c. Bolivia, características descriptivas y normativas.

2 This paper is the result of the research conducted during an exchange semester at Universidad de Chile.
1. Introduction

With its application of 6 June 2016, the Republic of Chile (hereinafter “Chile”) instituted proceedings before the International Court of Justice (hereinafter “ICJ”) against the Plurinational State of Bolivia (hereinafter “Bolivia”) concerning the status of the Silala watercourse. The Silala is located in the most arid desert of the world wherefore its resources are highly demanded, especially for mining and the provision of potable water. It rises in Bolivian territory and crosses into Chile, where it meets the San Pedro de Incaliri River. The dispute regarding the Silala arose after Bolivia revoked a concession to the Silala’s waters in 1997 and affirmed that 100% of the Silala’s waters belong to Bolivia. Chile and Bolivia currently do not maintain diplomatic relations, but have, from time to time, initiated bilateral talks to solve their various disputes. In 2009, negotiations about an agreement on the waters and status of the Silala were held, but discontinued. The 2016 Silala case is the second dispute before the ICJ between the two States after Bolivia initiated proceedings concerning the obligation to negotiate a sovereign access to the Pacific Ocean in 2012. In its 2016 application, Chile claims that the Silala watercourse is an international watercourse and that Chile is entitled to its current use. Bolivia on the other hand claims that the Silala is an assembly of springs located entirely within Bolivia. And further, that the current course of the Silala is the result of artificial deviation in the early 20th century and thus not subject to international law. Accordingly, Chile should not be entitled to its use. This article will, first, depict the international law concerning the scope of watercourses (2.), secondly, analyze the Chilean position under international law (3.1). And third, the Bolivian position (3.2), to evaluate, fourthly, both positions upon the disputed matter (3.3), and, ultimately, formulate a conclusion (3.4).

This paper draws upon all publicly accessible information. Therefore, the Chilean Memorial, submitted to the ICJ on 3 July 2017 is outside of the scope of this analysis, as it remains confidential. Nonetheless, the Chilean legal position finds thorough representation in the Application of 6 June 2016. The analysis is further limited with regard to the scientific aspects of the Silala watercourse. The Chilean representatives before the Court conducted scientific research throughout the last years on the matter, but have not disclosed the results to the public. Likewise, the publicly available sources of scientific information find consideration in this paper. However, they cannot be regarded as conclusive, as this paper is, first and foremost, an analysis of the legal positions of the opposing parties and general international law’s standing on the matter of international watercourses.

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3 General Consulate of Chile in La Paz, Bolivia, Note N° 474/71 from the General Consulate of Chile in to the Ministry of Foreign Affairs and Worship of the Republic of Bolivia, 20 May 1999, 1; Ministry of Foreign Affairs and Worship of Bolivia, Note N°GMI-815/99 from the Ministry of Foreign Affairs and Worship of the Republic of Bolivia to the General Consulate of Chile, 16 November 1999, 1.
4 Foreign Ministry of the Republic of Chile, Application instituting proceedings, concerning the Silala, (6th June 2016), para. 44.
5 Note N° GMI-815/99 from the Bolivian Ministry of Foreign Affairs to the General Consulate of Chile, 2 & 4.
2. Definition of an International Watercourse under International Law

Water is a natural resource. According to the customary principle of permanent sovereignty over natural resources it is therefore, in principle, subject to the full sovereignty of the State in which it is located. This principle assures the inalienable right of all peoples and States to freely dispose of their natural resources. The principle of permanent sovereignty over natural resources, however, recognizes obligations, such as providing information to and reducing harm from other States, if the relevant natural resource is a shared natural resource. Similarly, with regard to the applicability of International Water Law, Art. 1(1) United Nations Convention on the Non-navigational Use of International Watercourses (hereinafter “UNWC”) stipulates that its regulations only apply to international watercourses. Watercourses are, hence, only subject to the obligations and restrictions of International Water Law, if they are international watercourses.

2.1. Definition and Scope of a Watercourse

Art. 2 (2) (b) UNWC defines a watercourse as a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus. This definition is in accordance with the widespread understanding that a watercourse is not merely a pipe that transports water from one point to another, but rather a complex hydrologic system with various interrelated components. The non-comprehensive list of watercourse components provided by the International Law Commission (hereinafter “ILC”) enumerates rivers, lakes, aquifers, glaciers, reservoirs and canals. In the following, the extent of a watercourse is analyzed with regard to (1.) the drainage basin concept and (2.) artificial deviations of the natural water flow.

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7 ICJ, Armed Activities on the Territory of the Congo, para. 244; Art.1 UNGA, Permanent sovereignty over natural resources (1962); Declaration on the Establishment of a New International Economic Order (General Assembly resolution 3201 (S.VI) of 1 May 1974); Art.2 (1) UNGA, Charter of Economic Rights and Duties of States (1974); Art. 2(1) ICCPR; preamble UNGA, The law of transboundary aquifers (2008).
8 Ibid.; Stockholm Declaration, Principle 21; Yogeshi, Permanent Sovereignty over Natural Resources, Cambridge J. Int’l & Comp. L. (2015), 589; See: Pereira/Goughm, Permanent Sovereignty over Natural Resources in the 21st Century, Melbourne JIL (2013), 458. In this field, international law has likewise developed and State obligations are recognized today, especially towards indigenous people within their territories and transboundary environmental concerns. However, these obligations are of no support to determine the applicability of international water law. General overview: Hofbauer, The Principle of Permanent Sovereignty over Natural Resources (2009).
9 Charter of Economic Rights and Duties of States, Article 3.
2.1.1. Relationship to the drainage basin concept

To interpret the differences and similarities of the “drainage basin” and “watercourse” concept the ordinary meaning, context, history, object and purpose are analyzed in accordance with Art. 31 of the Vienna Convention on the Law of Treaties (hereinafter “VCLT”). The International Law Association’s (hereinafter “ILA”) Helsinki Rules on the Uses of Waters of International Rivers (1966) (hereinafter “Helsinki Rules”) and Berlin Rules on Water Resources (2004) (hereinafter “Berlin Rules”) employ the term drainage basin to delimit the applicability of their rules. An international drainage basin is defined as “a geographical area extending over two or more States determined by the watershed limits of the system of waters, including surface and underground waters, flowing into a common terminus”. The ILC declined this term and agreed on the term watercourse, due to the objection of multiple States. The States feared that the employment of the drainage basin concept would result in a broader application of International Water Law regulating the use of their land territory. This historical argument implies that the term “drainage basin” is more expansive than “watercourse”. However, Art. 1 (1) UNWC stipulates that the convention likewise applies to the “measures of protection and preservation and management related to the uses of those watercourses and their waters”. In order to ensure the protection, preservation, International Water Law must also apply to land-based activity that affects an international watercourse. An interpretation of the object, purpose and context of Art.1(1) UNWC thus clarifies that the term “watercourse” is equally ample as “drainage basin”.

Generally, both “watercourse” and “drainage basin” are functionally equivalent and cover all components of a surface freshwater system, including the above cited enumeration, as well as, reservoirs, wetlands, floodplains, surface runoffs, and, in general, any source that contributes water.

A difference arises as to the inclusion of confined groundwater in aquifers. Whilst the ILA’s Berlin Rules and Seoul Rules on International Groundwaters (1986) expand the concept of drainage basin to include groundwater not connected to surface waters, the ILC excluded these waters from the scope of a watercourse. The ILC submitted different Draft Articles concerning the Law of Transboundary Aquifers to the United Nation’s General Assembly dealing with the matter.

References:
13 Art. 31 VCLT.
14 Helsinki Rules, Article 1; Berlin Rules, Articles 1 (1) & 3 (5).
15 Helsinki Rules, Article 2; Berlin Rules, Article 3 (5).
19 Mulligan and Eckstein, Dispute over the Silala/Siloli Watershed, Water Resources Development (2011), 603, maintain that international law does not apply to “surface runoff in a marginally defined or undefined channel” and support this thesis with a reference to McCaffrey, The Law of International Watercourses (2007). This contention could not be found in McCaffrey’s textbook, nor does it align to the general position upheld by McCaffrey. He is one of the most progressive authors who is in favor of a wide understanding of a watercourse. Moreover, the criterion “flowing through a channel” is neither mentioned in any UN document nor by McCaffrey himself. Mulligan and Eckstein’s contention must be rejected.
20 International Law Association, Commentaries to Helsinki Rules, Article 2, Basin Elements; ILC, Commentaries UNWC, Article 2 para.4; Centre for Water Law, Policy and Science, FAQ UNWC Answer 9; McCaffrey, The Law of International Watercourses, 37.
21 Seoul Rules, Article 1; ILA, Commentaries to Berlin Rules, Article 3, page11.
groundwater referred to in the Art. 2 (b) UNWC must be directly connected to the flow of the watercourse in order to qualify as its component.24

2.1.2. Artificial deviations as components of a watercourse

Although the ILC’s enumeration of components contains canals and mentions reservoirs,25 it is disputed whether artificial deviations are components of a watercourse.26 Some members of the ILC were of the opinion that the expression “watercourse” only referred to a natural phenomenon.27 An interpretation of the ordinary meaning of the term “flow”, which is frequently utilized in the UNWC commentaries to describe a watercourse,28 supports this strict understanding. Flow is defined as “to move steadily and continuously in a current or stream”.29 The continuity requirement is not met if an artificial intervention diverges waters and hence discontinues the flow. The diverged waters would be outside of the flow and, therefore, outside of the watercourse. The interpretation finds further support in the contextual interpretation of Art. 2 (b) UNWC’s “common terminus” requirement, whereby a watercourse must normally empty into the same water body at the same point. Diverged waters emptying into a different water body thereby could not form part of the same watercourse. However, this conclusion can be disputed as controversies arose concerning the “common terminus” requirement. Its supporters aimed at confining a watercourses’ scope30, whilst its opponents sustained that the requirement is not only artificial but also hydrologically wrong.31 The insertion of “normally” into the definition compromises the two positions thus allowing constellations where waters do not empty into the same body at the same point to be considered as components of the same watercourse.32 This conforms to the overwhelming State and jurisdictional practice on the pertaining of artificially deviated waters to watercourses, which is taken into account in accordance with Art. 31 (3) (b) and (c) VCLT. Art. 331 of the Versailles Treaty and Art. 21 of the Statute of the Danube include canals when referring to the scope of internationalized rivers. This inclusive notion was confirmed by the Permanent Court of International Justice (hereinafter “PCIJ”) in the Jurisdiction of the Oder Case.33 Furthermore, bilateral treaties include canals into their scope34 and the ICJ in the Gabcikovo-Nagymaros Project Case did not hesitate to qualify the headrace canal at Cunovo as a component of

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25 ILC, Commentaries UNWC, Article 2 para.4.
27 ILC, Commentaries UNWC, Article 2 para.5; See also: Note N° GMI-815/99 from the Bolivian Ministry of Foreign Affairs to the General Consulate of Chile, 16 November 1999, 2 & 4.
28 ILC, Commentaries UNWC, Article 2 paras. 2 & 4.
32 ILC, Commentaries UNWC, Article 2 para.6.
33 PCIJ, River Oder, p.10.
34 USSR-Hungary River Tisza Treaty; McCaffrey, 7th Report, para.50; Arcari, Mauricio, "Canals", in Wolfrum, Rüdiger, Max Planck Encyclopedia of Public International Law (OUP: 2007), para.5 (Treaty between Kyrgyz Republic and Kazakhstan); Art.14 Niger River Agreement.
the concerned watercourse. Moreover, the complex hydrology of watercourses requires a broad approach that includes artificially deviated waters because certain actions within one component of a watercourse may affect the entire watercourse. This broad approach is employed in the overwhelming treaty practice. Artificial deviations, hence, form components of a watercourse.

2.2. The definition of international for watercourses and the determining characteristics

Art. 2 (2) (a) UNWC stipulates that a watercourse is international when parts of it are situated in different States. During the ILC’s drafting process the unprecedented notion of relative internationality was included in the 1980 and 1987 drafts, whereby "parts of the waters in one State [that] are not affected by or do not affect uses of waters in another State" are excluded from the scope of an international watercourse. It was heavily criticized for its incompatibility with the hydrology of watercourses and the uncertainty this relative criterion produces. The non-relative definition employed in Art. 2 UNWC is applied by the Helsinki Rules, the Berlin Rules, the International Institute of Law, the Inter-American Bar Association, and the United Nations Economic Commission for Europe Water Convention and thus reflects Customary International Law. In the following, the different characteristics that could determine whether parts of a watercourse are situated in different States are analyzed, starting with (1.) party agreement and (2.) descriptive characteristics.

2.2.1. Party agreement

States can determine by agreement whether a watercourse is international. States are free to agree upon any matter governed by international law in accordance with Art. 2(1)(a) VCLT. The possibility to delimit the applicability of International Water Law to certain areas by watercourse agreement is expressly recognized and endorsed in Art. 3 UNWC. An interpretation of the ordinary meaning of “watercourse agreement which apply and adjust the provisions […] to […] a particular international watercourse or part thereof” as stipulated in Art.3 (1) UNWC could suggest that watercourse agreements are only applicable to watercourses that are already determined international. This contention is contradicted by a contextual interpretation of Art. 3 (2) UNWC, which identifies as one of the most important components of a watercourse agreement the “definition of the waters” to which it shall apply. The ILC commentaries affirm the “unquestioned freedom of watercourse States to define the scope of agreements they conclude”. This affirms

35 ICJ, Gabcikovo- Nagymaros, para.78; McCaffrey, The Law of International Watercourses, 191-192; Arcari, Canals, para.9.
36 McCaffrey, The Law of International Watercourses, 25 & 40; McCaffrey, Seventh Report, p.50, para.8; Arcari, Canals, para.2.
37 See McCaffrey, Seventh Report, p.59, paras.57-58.
38 McCaffrey, Seventh report, p. 62, para. 72,74.
40 Helsinki Rules, Article 2.
41 Berlin Rules, Article 3 (13)
42 Salzburg Resolution (1961), Article 1
43 Inter-American Bar Association, Buenos Aires meeting protocol (1957), Introductory paragraph.
45 Crawford, Brownlie’s Principles of Public International Law, 8th Ed. (OUP, 2012), 511 & 609.
46 ILC, Commentaries UNWC, Article 3 paras.2 & 5; see also Crawford, Brownlie Principles, 260.
47 ILC, Commentaries UNWC, Article 3 para.5.
that States have the authority to define a watercourse as international. States cannot change the geography of a watercourse by agreement. However, as demonstrated, they can determine the applicability of international law and the limitation of their own sovereign rights on a watercourse by agreement.

2.2.1.1. Form of the agreement

These agreements can take the form of a treaty that explicitly affirms the international status of a watercourse, but can also take other forms. A useful instrument could likewise be a map depicting the territories of the States concerned. The ICJ relied inter alia on maps to determine the pertinence of an island to Singapore in the Pedra Branca case and to determine the location of a river mouth in the Cameroon v. Nigeria case. Moreover, the boundary commission between Ethiopia and Eritrea affirmed that a map can resemble a statement of geographical fact. Especially maps that are annexed to treaties have authoritative and legal value. Maps can, hence, serve to determine the positions of a State with regard to geographical facts; however they do not create title. If a map thus includes a river that crosses from one territory into another, it will serve as an indication that the States agreed on the international status of the watercourse.

2.2.1.2. Tacit agreement

In the absence of an explicit treaty agreement regulating the status of a watercourse, tacit consent through the States’ conduct could become relevant, for example, by acquiescence. Acquiescence is silence, inaction or failure to protest that may in appropriate circumstances give rise to a rebuttable presumption of acceptance or recognition of a legal right or position claimed by another State. It requires knowledge of the notorious claim, a sufficient period of silence, and circumstances rendering the silence or inaction legally significant. The ICJ recognized that State’s

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48 For example: Treaty for Amazonian Cooperation, Article II; Treaty of the River Plate Basin, Articles 1 – 3.
49 Cf. International Court of Justice, Case Concerning Sovereignty over Pedra Branca/Pulau Batu Putih, Middle Rocks and South Ledge (Malaysia v Singapore), 2008 ICJ Reports 12, para.120.
50 Foreign Ministry of the Republic of Chile, Application instituting proceedings, concerning the Silala (6th June 2016), para. 44.
51 See, Case Concerning Sovereignty over Pedra Branca/Pulau Batu Putih, Middle Rocks and South Ledge (Malaysia v Singapore), paras. 260-272.
52 International Court of Justice, Case Concerning the Law and Maritime Boundary between Cameroon and Nigeria, 2002 ICJ Rep 303, paras. 59-61.
54 Eritrea-Ethiopia Boundary Commission, Decision regarding Delimitation, para. 3.18; International Court of Justice, Case concerning the Frontier Dispute (Burkina Faso v. Mali), 1986 ICJ Reports 554, para. 55.
55 Case Concerning Sovereignty over Pedra Branca/Pulau Batu Putih, Middle Rocks and South Ledge (Malaysia v Singapore), paras. 271-272.
56 Cf. Case Concerning Sovereignty over Pedra Branca/Pulau Batu Putih, Middle Rocks and South Ledge (Malaysia v Singapore), para. 120; Cf. International Court of Justice, Case Concerning Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada v United States of America), 1984 ICJ Rep 246, para. 126.
57 Cf. Note No GMI 815/99 from the Bolivian Ministry of Foreign Affairs to the General Consulate of Chile, 16 November 1999, 2 & 4.
58 Case Concerning Sovereignty over Pedra Branca/Pulau Batu Putih, Middle Rocks and South Ledge (Malaysia v Singapore), para. 121; MacGibbon, "The Scope of Acquiescence in International Law", 31 British Yearbook of International Law 143 (1954), 45-46.
60 Gulf of Maine Case, para. 144; International Court of Justice, Certain Phosphate Lands in Nauru, Preliminary Objections, 1992 ICJ Rep 240, para. 32.
boundaries could be defined through the acquiescence of one State regarding the claims of another.\textsuperscript{62} As an example of State practice, the US Supreme Court in an interstate claim likewise applied this reasoning to define the pertinence of an island to a particular federal State.\textsuperscript{63} Considering that State’s borders and sphere of territorial sovereignty can be delimited through acquiescence\textsuperscript{64} this \textit{argumentum a maiore ad minus} applies to determining the sovereign rights over a watercourse. Through the determination of a watercourse as international, States recognize that the extent of their sovereign rights thereto are limited by international law. It, thus, produces the same effects as determining sovereign rights over territorial claims, as both delimit the sphere and scope of States’ sovereignty. Hence follows, that this determination may occur through acquiescence.

2.2.2. Descriptive characteristics

In the absence of an agreement between watercourse States, descriptive characteristics can determine the status of a watercourse.

2.2.2.1. Geography

The first characteristic that could determine the internationality of a watercourse is its geographic situation within a State’s territory. An interpretation of the ordinary meaning of “situated” utilized in Art. 2 (2) (a) UNWC supports this interpretation as it implies a physical location of the watercourse.\textsuperscript{65} A similar wording is employed in all conventions mentioned before.\textsuperscript{66} Some even refer explicitly to territory.\textsuperscript{67} A contextual interpretation of Art.2 (2) (c) UNWC confirms this approach as a watercourse State is defined as a “State in whose territory part of an international watercourse is situated”. According to the ILC, this geographic factor “can be established by simple observation in the vast majority of cases”.\textsuperscript{68} Thereby, a watercourse is international if its geographic components are situated in the territory of two or more States, which is determined by observing a watercourse’s crossing or delimitation of a political border.

2.2.2.2. Jurisdiction

A different criterion could be jurisdiction. Thereby, a watercourse would be international if it is subject to the jurisdiction of two or more States.\textsuperscript{69} Considering that States generally exercise jurisdiction within their territories\textsuperscript{70}, the jurisdiction criterion will only lead to different conclusions

\textsuperscript{62} Cf. ICJ, \textit{Gulf of Maine Case}, para. 148; see Marques, Acquiescence, paras.11 f.
\textsuperscript{64} Marques, Acquiescence, para.13.
\textsuperscript{65} Cf. Oxford Online Dictionary, Definition Situation.
\textsuperscript{66} Berlin Rules, Article 3 (13); Helsinki Rules, Article 2; ECE Convention on Transboundary Watercourses and International Lakes, Article 1.1.
\textsuperscript{68} ILC, Commentaries UNWC, Article 2 para.2.
\textsuperscript{69} Cf. Note Nº GMI-815/99 from the Bolivian Ministry of Foreign Affairs to the General Consulate of Chile, 16 November 1999, 2 & 4.
\textsuperscript{70} Crawford, \textit{Brownlie’s Principles}, 289 & 299.
than the territory criterion, if one State exercises the exclusive jurisdiction over a watercourse, parts of which are located in different territories.

A State’s right to exercise jurisdiction within its territory derives from its territorial sovereignty. However, prescriptive and adjudicative extraterritorial jurisdiction over certain subject matters is recognized within international law. Therefore, in principle, jurisdiction could also be exercised with regard to all subject matters pertaining to a watercourse that is situated in the territory of another State. Nonetheless, extraterritorial jurisdiction does not eliminate the territorial State’s jurisdiction. Hence, the required situation that a State exclusively exercises jurisdiction over a watercourse in a foreign State can never arise unless agreed upon.

2.2.3. Conclusion

Under Customary International Law, a watercourse is international if parts of it are situated in different States. A watercourses’ international character is determined by States’ agreements as to the status or jurisdiction over a watercourse or by observation if parts of the watercourse are located in two or more State’s territories.

3. Applicability of customary International Water Law to the case

Neither Chile nor Bolivia have ratified the UNWC. Nonetheless, as identified above, the scope of an international watercourse as defined in the UNWC reflects Customary International Law, as shown by States’ opinio juris and practice. The applicability of rules of Customary International Law is presumed. The applicability is impeded if one of the States persistently objects the rule of Customary International Law by always opposing any attempt to apply it. Neither Chile nor Bolivia have persistently objected to this rule of Customary International Law as evidenced by positions adopted and treaties concluded that accept the shared nature of transboundary watercourses. This paper will therefore now turn to and scrutinize

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72 Colangelo, What is extra territorial jurisdiction?, 1312.
75 UN Treaty Collection. Information on UNWC.
76 Mulligan and Eckstein, *Disputes over the Silala/Siloli Watershed*, 602.
79 For “Chile: the position in the Lauca dispute” see McCaffrey, *The Law of International Watercourses*, 139-140; for “Bolivia: the regime governing the Titicaca Lake”, see McCaffrey, ibid., 154.
both Chile’s (I) and Bolivia’s (II) position on the Silala’s status to arrive at a conclusion based on Customary International Law (III).

3.1. The Chilean position and its legal and scientific background

Chile sustains that both Chile and Bolivia have recognized the Silala as an international watercourse.\(^{80}\) This party agreement is ascertained by the official and signed map to the 1904 Peace Treaty between Chile and Bolivia. The parties concluded this treaty to *inter alia* delimit their borders.\(^{81}\) The annexed map illustrating the agreements of Art. 3 of the Treaty depicts the “Río [river] Silala” crossing the political boundary between points 15 (Cerro Silala) and 16 (Cerro Incaliri).\(^{82}\) Chile affirms that Bolivia thereby accepted both that the Silala is a natural river and its international status. This understanding finds support in a Press Release in the newspaper *El Diario* issued by the Bolivian Ministry of Foreign Affairs, which declared that the Silala watercourse is a river owned by both Bolivia and Chile.\(^{83}\)

Moreover, Chile affirms that the Silala watercourse is international by its geographic characteristics.\(^{84}\) According to the Chilean application, “the Silala river basin shows an uninterrupted and steady gradient of approximately 4,3% on average, from its origins in Bolivia until” it crosses into Chilean territory at 4,278 meters above sea level (coordinates 22°00’34’’S-68°01’37’’W) and “reaches the Chilean Incaliri River”.\(^{85}\) Chile sustains that the watercourse has been naturally existent in its current course for thousands of years, as shown by the ravines through which it runs.\(^{86}\) The forces of gravity, which pulled the water down into the direction of the Pacific Ocean, are responsible for the creation of these natural ravines.

The Chilean argument is hence twofold. Firstly, that Bolivia recognized and agreed on the international status of the Silala and, secondly, that the Silala’s geographic components ascertain its international status as it naturally crosses from Bolivian to Chilean territory.

3.2. The Bolivian position and its legal and scientific background

Bolivia rejects this position.\(^{87}\) She sustains that the Silala’s current course is product of artificial works performed by a private company in the early 20\(^{th}\) century. These works were executed in accordance with a concession granted by the Bolivian Prefecture of Potosí in 1908 to the Antofagasta (Chili) and Bolivian Railway Company Limited (hereinafter “FCAB”), which allowed

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\(^{80}\) Chile Application, para. 14.

\(^{81}\) Treaty of Peace and Friendship (1904), Article II.

\(^{82}\) Chile Application, para. 15; Map appended to the Treaty of Peace and Friendship (1904).


\(^{84}\) Chile, Application, para. 42-44.

\(^{85}\) Chile, Application, para. 40, 44.

\(^{86}\) Chile, Application, para. 44.

\(^{87}\) Note No GMI-656/99 from the Bolivian Ministry of Foreign Affairs to the General Consulate of Chile, 3 September 1999, 2.
the use of the Silala’s waters for the steam engines of trains. The concession included the permission to construct canals on Bolivian territory. Bolivia sustains that the Silala “springs” would be self-contained in the surrounding wetlands and thus not possess the characteristics of a river had these artificial canals not been constructed. Most importantly, only through these canals the current stream into Chile came into existence. Therefore, an international legal regime should not be applicable. First, the alleged Chilean consent to this position is analyzed (1.) and, second, the Bolivian legal position on internationalizing artificial canals is scrutinized (2.).

3.2.1. Chile’s consent to the Bolivian position

Bolivia argues that Chile has agreed to this position. This position is based, firstly, on Article 6 of the Bolivian-Chilean Pre-agreement of 2009 on the Silala. During negotiations on the Silala, which failed later on, both states did not ultimately agree upon any official statements. However, an unofficial version was circulated among the negotiating parties. Bolivia makes reference to this unofficial version with its argument. Therein the parties agreed on the hypothesis of allocating 50% of the Silala’s waters to each country, which, however, could be increased in favor of Bolivia based on the results of joint studies to be carried out under the agreement. By recognizing the possibility of increasing Bolivia’s share, the Chilean part had recognized the disputed international status of the Silala, which is favorable to the Bolivian position.

This argument does not convince for two reasons. Firstly, the wording of Article 6 is too vague to arrive at this conclusion.

Article 6

1. The Parties establish, in accordance with Article 2, that the total volume of water of the Silala or Siloli system, which flows across the border (100%), 50% corresponds, initially, to the Plurinational State of Bolivia, is freely available to it and can be used within its territory or authorized to be captured for use by third parties, including its deliverance to Chile. This percentage may be increased in Bolivia’s favour, based on the results of joint studies to be carried out under this Agreement.

By employing the terms “may be increased” and “based on the results of joint studies” the wording indicates that Chile did not agree to this increase at the moment of the agreement nor to the Bolivian position of absolute ownership. Secondly, the object and purpose of the entire agreement
is contrary to this perception, as it aims to share the benefits of the Silala between both riparian states.\textsuperscript{96} If at all, the object and purpose of the agreement would rather support the Chilean position.

The second line of argument presented by Bolivia is based on Chile’s consent over the exclusive Bolivian jurisdiction. Following the rule that artificial watercourses are subject to the agreements that created them\textsuperscript{97}, Bolivia affirms that the Silala is and has always been subject to the terms of the 1908 concession deed granted to FCAB.\textsuperscript{98} Thereby, Bolivia affirms its exclusive jurisdiction over the Silala. As indicated above,\textsuperscript{99} such exclusive jurisdiction cannot occur unless consented to by the territorial State concerned. Bolivia submits that two facts demonstrate Chile’s consent thereto. Firstly, the recourse of annulment presented by FCAB after the reversion of the concession in 1997, being an “eloquent and unequivocal demonstration of the fact that the company recognized that any matter related to the use and exploitation of the waters of the Silala was subject to the domestic law and to the jurisdiction and competence of the Bolivian authorities”.\textsuperscript{100} Secondly, the consent is located in acquiescence, as Chile did not protest the assertion of exclusive jurisdiction formulated by Bolivia for 91 years.\textsuperscript{101}

Under international law, both of the portrayed facts do not evidence Chile’s consent to Bolivia’s assertion of exclusive jurisdiction. First, FCAB did not act on behalf of the Chilean State.\textsuperscript{102} In two memoranda (2 December 1999 and 12 May 2000) the Chilean Foreign Ministry differentiated between the internal effect of Bolivia’s concession reversion and the non-existent consequences for Chile.\textsuperscript{103} In Chile’s opinion, it pertains to Bolivia’s riparian rights to grant and annul concessions to the Silala, but these actions will not affect Chile’s riparian rights.\textsuperscript{104} Secondly, Chile granted a concession to FCAB in 1906 with regard to the Silala watercourse.\textsuperscript{105} By exercising this right, Chile asserted its riparian right to utilization and it can hence not be assumed that Chile afterwards acquiesced to the Bolivian position. In conclusion, Chile neither consented to Bolivia’s position denying the Silala’s international status nor to her position of exclusive jurisdiction over the watercourse.

3.2.2. The discussion on internationalizing artificial deviations

Bolivia sustains that International Water Law is not applicable to an artificial deviation that “internationalizes” a watercourse. This position is supported by the international law governing artificial canals. Different to watercourses, canals that cross political boundaries consist of two national sections, with each section remaining an internal waterway.\textsuperscript{106} Commentators have likewise ascertained that “A manufactured river, in the form of canals or other man-made systems, would

\textsuperscript{96} Infante, The Altiplano Silala (Siloli), 916; Cortes, “Crónica de una Demanda anunciada”, 82.
\textsuperscript{97} Mulligan and Eckstein, The Silala/Siloli Watershed, 602.
\textsuperscript{98} Note N° GMI-815/99 from the Bolivian Ministry of Foreign Affairs to the General Consulate of Chile, 16 November 1999, 2 & 3.
\textsuperscript{99} See 2.2.2.2
\textsuperscript{100} Note N° GMI-815/99 from the Bolivian Ministry of Foreign Affairs to the General Consulate of Chile, 16 November 1999, 3.
\textsuperscript{101} Note N° GMI-815/99 from the Bolivian Ministry of Foreign Affairs to the General Consulate of Chile, 16 November 1999, 2.
\textsuperscript{103} Infante, The Altiplano Silala (Siloli), 907.
\textsuperscript{104} Fuentes, Ximena. “Una Nueva Controversia con Bolivia”, 12.
\textsuperscript{105} Chile Application, para. 17; Fuentes, Fuentes, Ximena. “Una Nueva Controversia con Bolivia”, 12.
\textsuperscript{106} Arcari, “Canals”, para.6.
not fall within the rubric of international water law, since, by definition, such water bodies are proprietary and subject to the agreements that created them.”

This is based on the understanding that a watercourse is a natural phenomenon. For the Silala dispute, the decisive question has been identified as whether the waters have flown naturally across the border or whether their course is entirely manufactured.

Other commentators, however, ascertain that “there is no getting around” the internationalization through canals. According to the broad definition of “watercourse” under international law, the connection of water bodies suffices for them to be considered as a unitary whole. Such broad approach is necessary, even with regard to internationalizing canals, because alterations in one part can cause damage in the other parts. Support for this thesis is drawn from the law applicable to the navigational uses of international watercourses, as canals that internationalize national watercourses will be subject to the freedom of navigation. Furthermore, an interpretation of the object and purpose of International Water Law underpins the argument. International Water Law aims at the protection and equitable distribution of watercourse resources. This purpose is defeated if the circumstances of creation of an international watercourse render International Water Law inapplicable. In summary, the approach applying International Water Law to artificially internationalized watercourses reminds of the maxime that law arises from facts (ex facto jus oritur).

Nonetheless, this progressive position most likely does not form part of international custom. Firstly, the ex facto jus oritur maxime is not recognized as a principle of international law. Secondly, the majority of commentators and the law of international canals sustain a contrary position. Thirdly, this approach would cause severe discontent among States that lose their exclusive sovereignty over a watercourse, to an extent that these States would impede the existence of such rule under international law.

A clear differentiation must be made between artificial deviations to an international watercourse and an artificial deviation internationalizing a watercourse. As established above, the prior is considered as a part of the watercourse, whilst the latter does not constitute the creation of an international watercourse. In conclusion, should the Silala qualify as a manufactured river it would not qualify as an international watercourse and, thus, not be subject to International Water Law.

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108 McCaffrey, The law of international watercourses, 41; Mulligan and Eckstein, Dispute over the Silala/Siloli Watershed, 602.
110 McCaffrey, The law of international watercourses, 41.
111 McCaffrey, The law of international watercourses, 41 & 194.
112 UNWC, Article 1 (1).
115 McCaffrey, The law of international watercourses, 41.
3.3. Evaluation

As shown by the discussion, the “simple observation method” established by the ILC does not suffice. Therefore, this section, firstly, analyzes the available scientific reports (1.) and, secondly, scrutinizes the alleged Bolivian consent to the Silala’s international status (2.).

3.3.1. Analysis of scientific arguments

This analysis will commence with an objective description of the current de facto course of the Silala and then assess the particular scientific arguments. The Silala is formed by groundwater springs in Sud Lipez, Potosí, Bolivia at an altitude of approximately 4500 m over sea-level. Over 70 small-volume groundwater springs have been identified in this area that discharge their water to the surface from fractured volcanic deposits from the Miocene age (approx. 23-5.3 million years ago), which are overlain by relatively impermeable lavas from the Pliocene age (approx. 2.5 million to 11,700 years ago). These waters assemble in two channels that have clear influences of human intervention such as fortifications through assembled rocks. The Northern channel unites with the Southern channel approximately 700 meters North-East of the Chilean-Bolivian border from where it flows into Chile as a single course. The total discharge of water is between 140-160 liters per second. In Chile, the Silala continues to flow for 7.22 km until it meets the Helado River to form the San Pedro de Incalirí River, a tributary of the exoreic Loa River.

Chile argues that the principal channel runs through ravines that were carved out over the course of thousands of years. This is plausible given the average 4,3% gradient from the Silala springs towards the San Pedro de Incalirí river, which allows the forces of gravity to pull down the waters in direction of sea-level. Pictures taken during over flights and subsequent topographic maps confirm the natural existence of the fluvial ravines.

The Bolivian engineer Bazoberry rebuts the Chilean position that the ravines are of fluvial origin with reference to the volcanic activity, glacier movement and erosion in the region that likewise create ravines. Furthermore, Bolivian scientists bring forward two arguments against the Chilean

116 Mulligan and Eckstein, The Silala/Siloli Watershed, 595; Bazoberry Q., Antonio. El Mito del Silala (La Paz, 2002), 9; Meza, “Chile/Bolivia: ¿Es el Río Silala un Factor de Tensión Secundario?”, 153, maintains that the waters rise at 4350 m above sea-level, the Chilean application at about 4400 m above sea-level.
117 Encyclopaedia Britannica, Miocene Epoch [2009].
118 Encyclopaedia Britannica, Pleistocene Epoch [2014].
119 Mulligan and Eckstein, The Silala/Siloli Watershed, 596.
120 Mulligan and Eckstein, ibid., 596; Fuenzalida, El conflicto chileno-boliviano del Silala (Coleccion Tesis Universidad de Chile, 2013), 55.
121 Mulligan and Eckstein, The Silala/Siloli Watershed, 596.
122 Chile Application, para. 10; Von Chrismar Escuti, Julio. “El Silala es un río y como tal debe ser considerado”, Revista Política y Estrategia 93 (2014), 77-78 mentions that the discharge is of 230 liters per second.
123 The Chilean application (para. 10) maintains that the total flow in Chilean territory is of 4.7 kilometers.
124 Meza, “Chile/Bolivia: ¿Es el Río Silala un Factor de Tensión Secundario?”, 153; Mulligan and Eckstein, The Silala/Siloli Watershed, 596.
125 Application Chile, para. 44; Von Chrismar, “El Silala es un río y como tal debe ser tratado”, 77-78.
126 Application Chile, para. 44; Fuenzalida, El conflicto chileno-boliviano del Silala, 54, mentions 6%.
128 Bazoberry, El Mito del Silala, 14.
thesis. Firstly, that there exists no gradient in the Silala plain. Therefore, the direction taken by the water cannot be of a natural course, as the powers of gravity cannot pull the waters down accordingly. Bazoberry affirms that FCAB workers used explosives to create an artificial gradient for this purpose. Secondly, natural rivers are allegedly inexistent in the area due to the arid climatic conditions. The scarcity of precipitation produces sandy grounds. These are highly absorbent of water. Therefore, a watercourse with a proper riverbed could not be formed naturally as the water would be absorbed by the ground or evaporate immediately. To solve this problem the FCAB workers used rocks on the floor and on the sides of the riverbed.

In general, the scientific reports arrive at very different results. Whilst Chilean authors and scientists affirm the Chilean position, Bolivian authors and scientists affirm the Bolivian position. But even within the broader Chilean scientific position there are diverging sets of data utilized. Some sustain that the Silala is formed at 4350 m, others at 4500 m; one account puts the discharge at 140-160 liters per second, another at 230 liters per second; that the gradient is on average 4.3% vs 6%. Likewise, some Bolivian scientists deny the existence of a gradient in the Silala high land, while others affirm a 30% gradient. In conclusion, the diversity of scientific data available does not permit a conclusive determination of the Silala’s nature.

3.3.2. Bolivian consent to the Chilean position

The following section argues that an agreement on the international status of the Silala exists between the parties. The agreement is not explicit, but arises from the conduct of the parties, which was recognized as valid for similar claims by the ICJ in the Pedra Branca case. Chile maintains that this consensual position was maintained for at least 93 years. The most important evidence of this agreement is the official map signed on 20 October 1904, which is annexed to the Peace Treaty signed on the same day. Such maps share the same legal quality as a treaty and are legally binding on the parties. In casu the map indicates that the Silala River crosses the border and connects to the San Pedro de Incaliri River. It, thus, demonstrates that the parties agreed on these geographic facts.

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129 Bazoberry, El Mito del Silala, 11; see Fuenzalida, El conflicto chileno-boliviano del Silala, .44; Interview with Bolivian Ambassador Teodosio Imaña Castro, Chair of the National Sovereignty and Boundary Commission of the Bolivian Ministry of Foreign Affairs (31 May 1996), in: Presencia, La Paz-Bolivia, annexed to Chilean application N°15, 1, affirms that there is a 30% gradient.
130 Bazoberry, El Mito del Silala, 14.
131 Bazoberry, ibid., 10.
132 Bazoberry, ibid., 10-11.
133 Bazoberry, ibid., 10-12.
134 Bazoberry, ibid., 14.
135 Infante, Fuentes, Cortes, Van Chrismar, Meza. (as detailed throughout the previous section)
137 Case Concerning Sovereignty over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malysia v Singapore), para.120.
138 Chile Application, para. 45.
139 Eritrea-Ethiopia Boundary Commission, Decision regarding Delimitation of the Border, para. 3.20.
140 Chile Application, para. 14-15; Map Annexed to the 1904 Treaty of Peace and Friendship.
Apart from this implicit acceptance, Bolivia unilaterally agreed to the Silala’s status through other maps and statements. Bolivia correctly ascertains that maps cannot alter the geographic nature of the waters and create a title or status *per se*. The *ICJ*, however, has clarified that maps serve as an indication of the legal position of a State. This is especially true for maps published by national authorities that do not favor the respective current national position. Bolivia published several maps labeling the Silala as a river that crosses the border to Chile throughout the 19th and 20th century. Starting in 1890 with a map of a Sergeant of the Republic of Bolivia, this concept was reflected in the maps of the Bolivian Geographic Military Institute until 1999, when the Bolivian Parliament prohibited all public agencies from employing the term “river” for the Silala, but rescribed the term “springs” instead. Moreover, this persistent conception of the international status of the Silala is confirmed by statements issued by the Bolivian and Chilean Directors of the respective boundary commissions with regard to frontier demarcation pyramids set up on the Silala River. The boundary commission conducted its demarcation works in 1906 and clearly identified the Silala River. Additionally, the Bolivian Foreign Ministry issued a clear and unequivocal official statement in 1996 emphasizing the shared nature of the Silala. The *ICJ* assigned “major significance” to statements issued by a Foreign Ministry with regard to territorial and sovereignty claims. Bolivia thus recognized the international status of the Silala watercourse. As both parties agreed on this matter, in accordance with Art. 3 UNWC, International Water Law is applicable to the Silala.

4. Conclusion

The *ICJ* has established clear guidelines throughout its jurisdiction on how to delimit sovereign rights over natural resources and territorial masses. Applying these legal principles to the case of Chile v Bolivia concerning the Silala, in particular the guidelines on how to evaluate whether a consensus on a certain sovereign matter has been reached, no other conclusion can be reached than affirming the international status of the Silala watercourse. The persistent recognition of this international status through the Bolivian government serves as evidence for the consensual position between both parties, which now binds both States to the international watercourse law. The *ICJ* respectively fixed the time limits for the submission of the Chilean memorial and Bolivian counter-memorial to the 3rd of July 2017 and 3rd of

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141 Note N° GMI-815/99 from the Bolivian Ministry of Foreign Affairs to the General Consulate of Chile, 16 November 1999, pp.3; for legal position see above.
142 See, *Case Concerning Sovereignty over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malaysia v Singapore)*, 271.
143 Eritrea-Ethiopia Boundary Commission, *Decisions regarding Delimitation of the Border*; para. 3.28; *Case Concerning Sovereignty over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malaysia v Singapore)*, 271.
144 Moreno, Justo Leigue. *Mapa Geografico y Cartografico* by Justo Leigue Moreno, annexed to the Chilean Application n°8.
145 Infante, The Altiplano Silala (Siloli), 904; Faundes, *Las Aguas que nos dividen: Causas y mecanismos de resolución de los conflictos por el agua dulce entre Chile y Bolivia* (2005), 15.
146 Minutes signed by Julio Knautd and Luis Riso Patron, 23 March 1906. In: Antecedentes Limites Chile-Bolivia, 2.
147 Minutes signed by Julio Knautd and Luis Riso Patron, 23 March 1906. In: Antecedentes Limites Chile-Bolivia, 2.
148 Press release from the Ministry of Foreign Affairs of Bolivia, 7 May 1996, Nr.2.
149 *Case Concerning Sovereignty over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malaysia v Singapore)*, 276.
July 2018.\textsuperscript{150} A decision thus cannot be expected before 2019, although from a legal point of view the outcome of the judgment should already be quite clear.

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\textsuperscript{150} ICJ, \textit{Dispute over the Status and Use of the Waters of the Silala}, Order, 1.7.2016, p.3.