

The Transboundary Dispute Over the Waters of the Silala/Siloli

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Abstract: The waters of the Silala/Siloli, located in the Atacama Desert dividing Bolivia and Chile, originate in Bolivia and flow for four kilometers before entering Chile. The waters then commingle with the San Pedro tributary and debouch into the Pacific Ocean. And yet this tiny basin, located in one of the most remote and inhospitable places on earth, forms what the U.N. calls one of the most hydrologically vulnerable basins in the world. Questions of law and fact blur the legal status of these waters. This paper discusses this case and the evolving legal relationship between groundwater and surface water regimes.

Introduction

In the hyper arid region of the Atacama Desert, crossing the disputed border between Chile and Bolivia, a waterway barely eight kilometers long is a subject of intense dispute. Bolivia refers to the water as the Silala; Chile refers to the water as the Siloli. The question of which country owns the water is now before the International Court of Justice (ICJ: 2016).

The waters are said to originate from the high altitude wetlands (*bofedales*) formed by groundwater springs in the Bolivian *Altiplano*. They traverse approximately four kilometers through Bolivian territory then into Chile, feed into the San Pedro tributary, then into the Loa River ox bow, before trickling into the Pacific Ocean (Mulligan & Eckstein: 2011).

Bolivia claims the flow of the water was channelized and redirected by Chilean concessionaires in 1908. Authorities in the Bolivian Prefecture of Potosi granted a Chilean railroad company (the *Ferrocarril de Antofagasta a Bolivia* (FCAB)) access to the water to run steam engines in pursuit of nitrate extractions. The company replaced its steam engines with diesel locomotives in 1961, but by that time Chile had found other industrial and potable uses for the water.

Bolivia “reversed and annulled” that concession in 1997 and Bolivian President Evo Morales claims Chile is now stealing the water (Morales, 2016).

Which country owns the water? The answer to this question depends on whether the Silala/Siloli is a river, and what connection that watercourse

may have to underground transboundary source water. Chile claims the Siloli naturally flows across the border, and that its earlier channelization facilitated that flow, but did not alter its natural course. Chile claims the Siloli is a river. Bolivia rejects the existence of any hydrological connection between the water and Chile (Bazoberry, 2002). If left in its natural state, the Silala marshes would pool in place, fed by seventy springs arising exclusively in Bolivia (Robles Belmar, 2016). Bolivia rejects the idea that the Silala is a river.

This dispute highlights definitional problems of international law generally, and focuses attention on the developing relationship between groundwater and surface water and the little known transboundary aquifer and watershed of the Ollagüe-Pastos Grandes (Mulligan & Eckstein, 2011), which may be part of the unitary water system. This paper reviews relevant legal considerations relating to the identification of international rivers, updated in legal parlance to mean international watercourses, and identifies geological considerations that may inform the opinion of the Court.

The Diminishing Resource

The U.N lists two hundred and seventy-six transboundary river basins in the world, along with two hundred transboundary aquifers. (Transboundary Waters, 2013). Forty percent of the world's population share these waters (Dellapenna, 2001). In the Anthropocene age, acute concerns about fresh water and non-navigable watercourses now have the potential to erupt into major conflicts between states. Bolivia and Chile are among the most water-rich countries in the world (World Factbook, 2016). But water conflicts draw critical attention to the evolving relationship between groundwater and surface water regimes, certainly in the great hydrographic basins of the world, and, as this case details, in one of the smallest and most remote catchments on earth.

From Rivers to Watercourses: A Long History

International legal nomenclature regarding rivers has been updated. The term watercourse, as opposed to river, is now preferred because the former term is broader. It conceptually includes groundwater basins that may cross borders and feed surface waters in one or more states. This circumstance may inform proceedings before the ICJ.

International legal discussions behind this broader focus were drawn out over nearly forty years. When the U.N. first took up the question of defining

a watercourse in 1959, it had to drop the issue due to widespread disagreement (McCaffrey, 1988). Attention turned to functional articulations and preliminary studies on how rivers are used. In 1970, the U.N. General Assembly tasked the International Law Commission with the project, and it produced draft articles in 1991, (Draft Articles), and revised draft articles in 1994 (McCaffrey, 1988) . The U.N. General Assembly finally adopted a definition of a watercourse in 1997. According to the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (Watercourses Convention, 1997), a watercourse is “a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus” (Art. 2a)). An international watercourse “means a watercourse, parts of which are situated in different States” (Art. 2(b)). Watercourses are differentiated from the legal regime of wetlands, which are “areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters” (Ramsar Convention, Art. 1).

Seventeen more years passed before the Watercourses Convention obtained the required number of signatures to come into effect (on August 17, 2014). The delay was caused by further tensions that had developed regarding the use of watercourses. The Convention upholds the customary principle of equitable utilization of watercourses (Art. 5), but also emphasizes that such use must preserve the integrity of the watercourse (Art. 7). Reconciling these two seminal features of the Watercourses Convention presents unresolved legal questions. Customary international law is relevant in transboundary watercourse disputes. Two-thirds of these watercourses are not covered by international agreements (Wouters, 2010). Neither Chile nor Bolivia has ratified the Convention, but both countries recognize that much of this law also has a basis in custom. Chile requested the Court to declare that the Silala/Siloli is an international watercourse and to adjudge the applicability of customary international law to the Silala/Siloli River system (Application, 2016).

History provides perspective relating to the customary development of transboundary water law. Entitlement to water was first established in the private law of Rome not according to right, but according to use. (Kluber, 1819). Entitlements were said to “run with the land” and as a consequence, relationships arose whereby the territory of one title holder was made to “serve” the interests of another. This practice hardened over

time into the doctrine of servitude. Owners of servient land were subject to its burdens; they could not obstruct the flow back over into the territory of the dominant owner, for instance. Owners of dominant land enjoyed the benefits of the natural servitude, although they, too, had obligations not to alter or haphazardly throw watercourses onto the downstream territory of the servient.

The doctrine of servitude entered into international law but with serious degradations to its composition over intervening centuries. The passive obligation to minimize invasion or injury created incongruities between upper and lower riparians and compromised the integrity of the resource. (Fastenrath, 1987). Its most absolutist expression resulted in the Harmon Doctrine (1895). Adulterations to the flow of the Rio Grande and its affluents caused by irrigation as far away as Colorado resulted in a crisis for twenty thousand Mexican inhabitants around El Paso del Norte when the Rio Grande ran dry in June 1894. Although the 1848 Treaty of Guadalupe Hidalgo protected the flow and exercise of navigation rights in the border region between Mexico and the United States, the United States Attorney General, Judson Hudson, noted the adulterations took place above the waters pertaining to navigation. He opined: “The fact that there is not enough water in the Rio Grande for the use of the inhabitants of both countries for irrigation purposes does not give Mexico the right to subject the United States to the burden of arresting its development.” (Official Opinions of the Attorney-General, 1898).

Never widely embraced or put into effect, the Harmon Doctrine generated a search for alternatives. This search proffered the restrictive theory of prior rights, which valued the establishment of entitlement to water based on the first user, but eventually ceded influence to negotiated standards, ultimately leading to consideration of a balancing test involving equitable use and preserving the integrity of the watercourse. This balancing test reflects legal language crafted by the *Lac Lanoux Arbitration* (1957): “States are today perfectly conscious of the importance of conflicting interests . . . and of the necessity to reconcile them by mutual concessions.” A general emphasis on mutual accord can be found in the 1992 Dublin Statement on Water and Sustainable Development, in the work of the International Law Association’s Helsinki Rules (1966) on the Uses of the Waters of International Rivers, and the International Law Commission’s Draft Articles on Transboundary Aquifers.

In fact, erosions to the statist view that emphasized the historically dominant riparian date internationally to the *River Oder Case* (1929), where the nature of a legal partnership – in the form of a community of interest standard between riparians -- was acknowledged by the ICJ's predecessor, the Permanent Court of International Justice. The community of interest standard embeds a need to promote the equitable utilization of the resource and, although disputed as an established international legal rule, has found expression directly and indirectly in the ICJ's more recent *Pulp Mills Case* (2010) and the *Case Concerning the Gabčíkovo-Nagymaros Project* (1997). It has also found expression in the Cooperative Framework Agreement of the 1999 Nile Basin Initiative, the 2002 Senegal River Water Charter, and the 2003 Protocol for Sustainable Development Lake Victoria Basin. How this standard applies in the impending case between Bolivia and Chile depends first, but not exclusively, on the establishment of a hydrological connection between the two countries involving the disputed watercourse. There's the rub.

Transboundary Aquifers – An Early Stage of Development

Hydrologists differentiate subterranean zones of saturation and subterranean zones of aeration. Not all water underground is groundwater because variances in soil porosity and permeability create obscure clear-cut classifications (Dellapenna, 2012-13). International law only recently has turned attention to the turbid legal status of transboundary groundwater (Eckstein, 2011), but notable examples have generated formal and consultative arrangements, including the Genevese Aquifer along the French-Swiss border, the Hueco Bolson Aquifer between Mexico and the United States, the Abbotsford-Sumas Aquifer System in West Africa, and the Guarani Aquifer in South America. Environmental, economic, human rights, conflict and governance add layers of complexity onto developing legal considerations regarding ownership. (Zodrow, 2010).

This question surrounds the waters of the Siloli/Silala. But poor historical relations between the two countries impede scientific inquiry into the hydrological relationship between the underground and surface systems of this watershed. Complaints arise that both countries have forestalled efforts to provide scientific opportunity to investigate patterns of alluvial erosion, incidental runoff, intermittent flow and hydrologic connection. Some element of risk attaches to ceremonial profanations of abuse employed by both countries to villainize the other and victimize the self. An interesting problem would arise if the hydrological basin commingles

groundwater and surface water regimes shared by the disputants, prompting consideration of a condominium relationship. In family law, such an outcome would test the limits of public policy as a forced cohabitation. In international transboundary water law, what new meaning could the Court impart to the evolving community of interest?

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*A detailed presentation of this paper will appear in 52(1) *Stanford Journal of International Law* (2017) (forthcoming).

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