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Myths about Water Wars: Scarcity, Hydro-diplomacy, and Extractivism

Developing countries and regions like Latin America have witnessed for more than fifty years the advance of an ideological battle, but also a pragmatic political project that has radically transformed the life of society: neoliberalism. The situation of water in our countries has transformed as a result of the adoption of the changes reached by consensus in supra-national bodies and international conferences like the 1992 Dublin Conference. They have voted for polemical approaches such as conceiving of water based on the profit motive (rentier capitalism) as a scarce economic good subject to the laws of the market. The opposing view, a guarantor approach, emerged as a counterweight to rentierism, and enshrined in the United Nations 2010 resolution “The

Human Right to Water and Sanitation.” Adopted and recognized by the member states, this resolution seeks to guarantee rights in the face of neoliberal deregulation, privatization, and the commercialization of water.

However, budget restraints and the reduction of states’ ability in areas like the provision of potable water and sanitation services or the transfer of irrigation districts to private hands have made the rentier conception of water a reality. This means that it is fully viewed as an economic resource, prompting, for example, the concentration of water rights in a few hands. The failures of institutional arrangements and deficiencies in public policy, together with the ravages caused by extreme climate conditions (droughts, flooding, and hurricanes, among others), have also maliciously sown confusion about its scarcity.

In 2020, the UNESCO recognized what had been debated in academia for more than two decades: that the water crisis manifested in a supposed natural scarcity is actually

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an institutional one caused by failures of the market. To this must be added that it is also the result of the exclusion of other forms that go beyond the rentier or guarantor paradigm, such as the lack of recognition of original peoples' sacred vision of water, causing marginalization and exclusion of communities that do not participate in the market.

Water, a Strategic Resource?

The scarcity discourse took root because of essentialist views in the study of water. The lack of awareness about the hydrological cycle and its physical distribution caused the simple statement that there was a first distributional factor—that the world's water was 97 percent salt water and 3 percent fresh—to be sufficient to feed collective hysteria. Studies suggest that continental fresh water is abundant, but not all of it is physically accessible or financially profitable. This is the case of water in glaciers, permafrost, and permanent snowfields at the poles (69 percent). Then there are groundwater sources (30 percent), and surface water in lakes, streams, and rivers (less than 1 percent). They all form part of the political debate about scarce resources. What is more, hydro-geological findings suggest that the volume of groundwater (693,000 km³) that has been in the sub-soil for more than 100 years is almost three times that of surface water (239,000 km³), located in the soil, atmosphere, vegetation, rivers, and lakes.¹ If fresh water is abundant, what is creating the scarcity?

Attractive ideas like those proposed by Harald Welzer or the studies by Nicholas Robinson and James Fergusson describe real and hypothetical scenarios involving wars over the lack of water.² Strictly speaking, they point out that extreme climate plays an important role when, in addition, local armed conflicts are underway in northern Africa and the southern part of the Arabian peninsula, sparking migratory flows that alter the political stability and peace in the old continent.

This vision is also promoted in our region: numerous specialists state that the migratory flows to the United States are due to the existence of a supposed "Central American dry corridor." All these visions lack rigorous analysis of local spatial-temporal conditions, which will assuredly be characterized by the concentration of enormous volumes of water in few hands, the lack of infrastructure to purify water, or the unequal distribution of

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the land, not to mention the adoption or not of the human right to water and sanitation. In reality, the combination of all these elements creates competition for water, which in turn creates scarcity and increases its character as a strategic economic resource, but for the privileged few.

Even so, based on a spatial analysis that sees states as the protagonists, the proposals that insist on viewing water as an energy resource, like oil or gas, that can be extracted from other places to be incorporated into the market, causing wars for its strategic domination, continue to be attractive. Nothing is further from the truth, however. It has not yet been demonstrated that using the glaciers to supply high water-consuming productive sectors like agriculture or industry is profitable. This is simply because it has not been possible to shorten the space-time distance between the poles and those big consumers. What is worse, groundwater is what has stimulated population growth, industry, and agriculture, causing its accelerated depletion in less than four decades. Heading the list are precisely countries like India (21.70 km³/year) and the United States (10.66 km³/year),³ and this is a central reason to assess the natural water scarcity in the subsoil and its relationship to the creation of internal conflicts.

Cooperation and Hydro-diplomacy

The State University of Oregon's data base on conflicts over water around the world suggests that water has prompted more consensus and cooperation than military conflicts. For example, the governance of transboundary waters could be considered a field that would tend to cause conflicts, but what has prevailed in recent years has been consensus. And today, the United Nations has encouraged hydro-diplomacy, even creating a professional field for it.

We should remember that fewer than seventy years ago, states had to establish specific governmental re-

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gimes for their border areas, since being neighbors with other countries, cultures, and peoples demanded authorities capable of maintaining order and peace in cross-border trade and the defense of national sovereignty. A late-blooming issue, which came after the establishment of immigration and customs authorities, was the distribution of shared water sources like rivers and lakes. The UNESCO estimated in 2021 that 281 transboundary basins were shared among 151 countries, where 42 percent of the world's population lived on about 62 million km² of land. It also stated that below these basins are more than 592 transborder aquifers and that that number will rise as the presence and dynamics of transborder groundwater are studied more.

One example of cooperation around this issue is that of Mexico and the United States, with a more than 3,000-kilometer-long border, almost half of which coincides with the Río Grande/Bravo. After the conflicts early in the last century, in 1944 both countries signed an international treaty covering the distribution of Colorado River waters. After almost 325 additions made to the treaty, the management of the Tijuana River and technical concerns about the transborder aquifers were included. Institutions like the International Boundary and Water Commission have been considered worldwide a reference point for technical handling of transborder waters. Along these same lines, the 2,888-kilometer-long Danube River Basin is another outstanding case, with a surface area of 817,000 km², spanning ten countries, among them Germany, Austria, Hungary, Rumania, and the Ukraine. In the 1990s, they created a treaty for the distribution and protection of the basin's quality, considered a successful example of cooperation.

In 2016, as the Iberoamerican Directors of Water Conference was coming to a close in Campeche, Mexico, a meeting was held with the commissioners and heads of bodies in charge of managing transborder waters in Latin America, headed, precisely, by the International Commission



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for the Protection of the Danube River. Meeting participants invoked the importance of two international legal instruments for transborder waters, the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes (UNECE) and the UN Convention on the Law of the Non-Navigational Uses of International Watercourses (1997), both of which are binding, but which in reality are effective in only a few countries. The Danube River Treaty was based on the UNECE convention, which is why it is successful. Although Mexico and the United States are not part of either of these instruments, for many, they are an example of bilateral technical management of shared waters.

It should also be added that that meeting was witness to unease and tensions in Latin America. Presenters like the Binational Lake Titicaca Authority, involving Bolivia and Peru, displayed their disagreements about which country was most responsible for the deterioration of the water quality in South America's most important lake. The Río de la Plata Administrative Commission reminded participants about the difficult negotiations at the begin-

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ning of the century when Uruguay approved the operation of a cellulose plant on that river's shores under the aegis of a bilateral trade agreement with the United States, thus disrupting peace with neighboring Argentina.

In sum, the meeting showed that, while there is a dearth of treaties on transboundary water cooperation establishing equitable distribution and fair protection and surveillance of water quality, this has not been reason enough to spark an armed clash in the region. The same is the case in Asia, for example with the disappearance of the Aral Sea, which revealed the lack of success of the accords and treaties among its bordering countries. Given this, it is worth asking ourselves whether it is valid to continue to maintain that water is scarce and to conceive of it as a strategic economic resource that will spark wars and armed conflict.

Economic Integration and Virtual Water

In 1992, before the North American Free Trade Agreement (NAFTA) came into effect, Mexico approved a new regulatory framework for water. Inspired in the principles of budget adjustment, deregulation, and privatization, it freed up water rights, transferred irrigation districts to private hands, and centered its focus on managing concessions and minimizing its ability to create and maintain key infrastructure. This new framework, which reflects the authoritarian patronage system, has been effective in providing water rights to foreign investments associated with the current US-Mexico-Canada Agreement (USMCA).

A recent UNAM study found that industries like mining, controlled by Canadian multinationals, had acquired water rights for over 535 million m³/yr, a volume comparable to the 434 million m³/yr that Mexico provides annually in international reservoirs to the United States under the 1944 Water Treaty.⁴ Not only that, but the main beer producers, owned by U.S. and European conglomer-

ates, concentrated rights for more than 220 million m³/yr. Almost all these rights involve groundwater and are used to produce goods destined for the international market. It should also be remembered that virtual water is defined as the volume of liquid used in the production of different goods and productive processes such as meat, beer, mining, etc., and its use strictly depends on local arrangements and regulations. For some, this is an effective model of extraction of natural resources considered strategic for rich countries.

This shows the treaties and regional economic integration processes' effectiveness in legally protecting extractivism. In the case of water, the extractivist business model is based on a technical, scientific, legal framework that stimulates the emergence of thousands of local conflicts due to inequitable distribution centered on providing water to foreign investors and transferring to local or national authorities the ability to resolve resulting conflicts. This may be one of the best arguments to be examined in detail in the future, since it seems much more effective to promote regional integration than to spark armed conflicts to extract water from foreign territories.

The water wars must be understood as a topic for serious research. Meanwhile, many questions remain to be answered: What is the volume of virtual water funneled into direct foreign investments? Is the economic income and payment for fiscal rights beneficial to the country? To what extent does neoliberal policy promote equitable access to water? These questions show that the debate about water scarcity and its character as a strategic resource is far from resolved. ■■■

Notes

- 1 Petra Döell, Hannes Müller Schmied, Carina Schuh, Felix T. Portmann, and Annette Eicker, "Global-scale Assessment of Groundwater Depletion and Related Groundwater Abstractions: Combining Hydrological Modeling with Information from Well Observations and Grace Satellites," *Water Resources Research*, vol. 50, no. 7 (2014), pp. 5698-5720.
- 2 Harald Welzer, *Guerras climáticas. Por qué mataremos (y nos matarán) en el siglo XXI* (Buenos Aires: Katz Editores, 2010), and Nicholas S. Robinson and James Fergusson, "Groundwater Scarcity and Conflict. Managing Hot Spots," *Earth Perspectives*, vol. 1, no. 1 (2014), pp.1-9.
- 3 Tom Gleeson, Kevin M. Befus, Scott Jasechko, Elco Luijendijk, and M. Bayani Cárdenas, "The global volume and distribution of modern groundwater," *Nature Geoscience*, vol. 9, no. 2 (2016), pp. 161-167.
- 4 Édgar Talledos, *Captura política, grandes concentraciones y control de agua en México. Informe Agua* (Mexico City: UNAM, 2020), pp. 1-104.