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From the political-economic drought to collective and sustainable water management

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From the political-economic drought to collective and sustainable water management[2]

Interventions in the organization of the hydrological cycle are always political in character and therefore contested and contestable.
–E. Swyngedow (2009)

Over the past months the Caribbean island of Puerto Rico has experienced one of the worst droughts in years3. However this is not an isolated phenomenon, the country has been suffering for a while a progressive worsening of the quality, availability and distribution of water (Torres Abreu, 2009; Pérez Figueroa, 2012)4. The local press has argued that a "rainfall deficit" is the cause of the problem. For example, in a recent article on water pollution, a journalist began by claiming that "the concern about the availability of water in Puerto Rico has been lately intensified, especially because of the scarcity of rainfall during the last year and the drop of lake levels; a causal relationship largely controlled by nature" (Rivera

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[3] Translator's note: See Rosario (2015) for a recent update of the draught in Puerto Rico (84,74% of the territory and over 2.78 million individuals are affected by the actual draught).

[4] This drought is not exclusive to Puerto Rico. The United States also has been experiencing one of the worst droughts in history, with over 58% of California in a situation of "exceptional drought" (The Daily Take Team, 2014). The Earth Policy Institute notes that global water scarcity is perhaps the most underrated issue related to natural resources that the world faces today (EPI, 2014).

Arguinzoni, 2014). When the press has analysed the "human" influence on the drought, it has made reference to the "waste" of water by the government due to poor infrastructure5 (Alvarado León, 2014), and to the "misuse" by some social groups (particularly people with pools in public housing). The drought is presented as a "natural" and "administrative-technical" problem (read: apolitical), which can be remedied with larger and more "efficient" infrastructure and management of the supply system.

However, some analysts have begun to raise important issues that have been forgotten in this narrative. For example, Jose Rivera Santana (2014) and Arturo Massol (2014) very rightly refer to "the other drought": the shortage of land-use planning, of infrastructure investment, of inter-agency coordination, and of political vision and willingness to take action on this necessary and urgent matter (see also Rivera Santana, 2000; Torres Abreu, 2009).

In this article I would like to examine more closely the reasons why these problems of planning and the management of water are so persistent. I suggest that they are rooted in the political-economic system of Puerto Rico6. From this perspective, planning in Puerto Rico has successfully encouraged the accumulation of capital in certain sectors, but not the common wellbeing and sustainability. On the other hand, traditional solutions based on the construction of infrastructure, which respond to the logic of this model (capitalist developmentalism), have also failed. In order to confront this situation it is necessary to transform these traditional schemes and start to conceptualize water as a common good that must be managed collectively for the well-being and sustainability of the population.

5 The water lost through leakages, etc., which is around 60%.

6 By politics here I am not referring only to party politics (although this is also relevant), but to whom and how decisions are made, what are the rules of the game (the institutions), the dominant actors, the power relations and interest involved, the ideologies and discourses which legitimize the decisions taken, etc.

Economic growth at all costs

> "We are despoiled by open pit mining, large dams, roads and pipelines, uncontrolled urban growth, large touristic developments, privatizers of water, by those who appropriate biodiversity via commodification, by those who commercialize and impoverish our cultural richness, by agribusiness, the advertisement and pervasiveness of junk food, loggers, the tourism entrepreneurs who take over the landscape, drug cartels ... We are despoiled by countless Mexican and transnational corporations, and we are despoiled by the government who is its solicitor and accomplice, who in addition criminalize those who defend life and are opposed to the advancement of barbarism that means death". [Declaration of the collective of Mexican organizations "Por la tierra, por el agua y por la vida" (La Jornada, 2014)].

In capitalist developmentalism, economic growth is the primary goal and is something inherently positive, correlated with "development" (Latouche, 2011)7. In this context, the Puerto Rico Planning Board measures "economic activity" by the pounds of concrete sold and the amount of oil and electricity consumed. Under this model, the planning of land and water use are subordinated to economic growth. In fact, the creation of the Puerto Rico Planning Board (by Law 213 of 1942) had the clear objective of guiding the economic development of the island, not the preservation of resources. Similarly, the Puerto Rico Water and Sewerage Authority (AAA for its Spanish acronym), the public corporation in charge of water management on the island, responds to bondholders and considers Puerto Ricans as 'clients' who should receive a 'service' (Torres Abreu, 2009).

This model has led to the prioritization of economic activities with intensive use of water –the military, petrochemical and pharmaceutical industries, 'mega-hotels', agro-industries, and especially the unlimited urban sprawl. The island-city proposal by the ex-governor Pedro Rosselló8 should be remembered, as well as the argument by the Puerto Rico Association of Home Builders that 84% of the country's developable land is still undeveloped. Water is a valuable economic asset for this

7 According to this model, more economic growth equals more development.

8 Translator's note: Roselló was the 7th governor of Puerto Rico (in office from January 2, 1993 – January 2, 2001).

growth, and so is privatized, allowing private interests to profit from this resource at the expense of the ecosystem. Now, paraphrasing the question about how many shopping malls can Puerto Rico endure (Cintrón Arbasetti, 2014), I wonder, how much more economic growth can the country endure? How much growth can water withstand?

Consumerism and the normalization of demand

According to Torres Abreu (2009), the problem of water in Puerto Rico is strongly linked to a management approach based on meeting a growing demand through improvements in the efficiency of the system and the construction of infrastructure. Attention to the conservation of water –to "handling the demand"- has been null. Uncontrolled urban growth without limits has played a central role in the "constitution and permanence" of this "operating logic" that assumes the demand and its consequential growth as something natural (Torres Abreu, 2009)9. Moreover, in the logic of economic growth, the increase in water consumption (as well as electricity and gasoline consumption) is considered not only "natural" but also positive.

In fact, consumerism –the unlimited desire of goods and services- is the central strategy of economic growth, and in the case of Puerto Rico, is closely associated with the colonial ideal of the American Dream. This has an obvious direct impact on water consumption: for example, the obsession with a house with a grass lawn, or with a clean car (and the consequent proliferation of car-washes). The numbers speak for themselves: the average consumption of water per subscriber (residence) in Puerto Rico is estimated at 164.1 gallons per day10, almost equal with the United States (176 gallons11), but more than 20 times the average consumption of an

9 Is interesting to see similarities with other contexts, such as Barcelona (Spain), where the logic of unlimited and uncontrolled urban growth is also central to understanding the occurrence of drought (Otero et al., 2011).

10 Translator's note: About 621.2 litres per day

11 Translator's note: About 666.2 litres per day

African family (see http://water.org/). In the context of a country where no one has ever been called upon to save, but to spend (and where the government itself does exhibit the conscientious use of water), it is easy to understand why the exhortations to save water are overlooked.

The drought of equality

The persistence and increasing inequalities that characterize capitalism (Picketty, 2014) are exhibited and influenced in many ways in the management of water. From this critical perspective, in many cases, the shortage is not due to the physical absence of water, but rather to the lack of monetary resources and of political-economic power (Swyngedouw, 2009). According to the Water Plan of the Puerto Rico Department of Natural Resources (DRNA for its Spanish acronym), in 2007 there were 141 communities with "chronic deficiencies" in the provision of potable water (DRNA, 2007). For example, in Rio Grande (a municipality in the north-east region) the communities of the so-called “cradle of the rivers” have had chronic water problems over the last twelve years (Rivera Arguinzoni, 2014b). According to the AAA, the solution lies in improving the water intake of the 'Espíritu Santo' river. The explanation of "rainfall deficit" is not suitable in this case, due to the presence of large evergreen gardens; the pools and golf courses enjoyed by tourists and residents of the luxury housing estates and hotels in the area. In fact, it is precisely this great touristic-residential expansion of the northeast coast, which has contributed to the water problem. Perhaps water intake could solve the issue in the short term, but if uncontrolled development in this area continues, it will not be sufficient, or only could be at the expense of the ecosystem.

Similarly, the threat of eviction to residents of public housing due to their use of plastic pools contrasted with the silence of the government and the press about the major consumers of water on the island –the pharmaceutical sector, luxury housing

estates and hotels, car wash centers, the Coca Cola company and other companies that profit from bottling water, etc.12

This story is not new. In 2007, the AAA launched a consumer campaign against illegal water connections, which were threatened with prison sentences. However, these threats did not reach United States government entities on the island, as the Post Office and the Roosevelt Roads Military Base, which for decades used millions of gallons of water without paying (Primera Hora, 2007). If the water is really scarce, why is a sector of the population allowed to have luxurious and lucrative use of the resource? And, given the existence of this "untouchable" sector, with what legitimacy does the government demand water conservation (or even worse, water rationing) from the majority of the people?

The technical-productivist "solutions"

We have already seen how the process of capital expansion, especially (sub)urban and industrial expansion, carries an intensive use of existing water resources, creating scarcity, the impacts of which are unevenly distributed in the population . The typical response of states to the problem of an increase in demand –which again, is considered as "natural" and positive- is the development of infrastructure (eg. dams, aqueducts, desalination plants) to capture, treat and transport more water (Swyngedouw et al., 2002). Many times, these projects are imposed in an authoritarian manner, ignoring the resistance of local groups (Swyngedouw, 2009).

In Puerto Rico, the story has been no different. According to Torres Abreu (2009) the 'Super Aqueduct' is a paradigmatic example. Although the severe drought of 1994 was the catalyst to promote and justify the construction of this pharaonic edifice, the project had been under discussion since long before. The construction sector was one of its leading proponents, and as former governor Pedro Rosselló argued, this project was going to allow urban expansion on the northern side of the

[12] See the recent press release from several major professional law entities in the island (Ramirez et al. 2014).

island (Torres Abreu, 2009). In fact, the project facilitated uncontrolled housing construction in this area. Also, it is important to note how Rosselló executed the Super Aqueduct project, ignoring the concerns that were made by several groups of the population. Similarly, the great aqueduct that carries water to Culebra -an island-municipality of Puerto Rico, located about 27 km east of the Puerto Rican mainland- was not constructed only (or mainly) to address a deficiency of water on this island, but to facilitate the development of luxury tourism, with hotels like the W and summer mansions.

On the other hand, in the Capital Investment Plan of the Puerto Rico Water and Sewerage Authority and in the Water Plan of the Puerto Rico Department of Natural Resources, the construction of new infrastructures, including dams, are foreseen in order "to meet the increase in demand of the resource". Likewise, during the current drought, several mayors and legislators of the western side of Puerto Rico have proposed the construction of a dam in the region, not only to deal with drought, but also as a measure to meet the new demand generated by tourism and residential projects from the Puerta del Sol initiative (Rodriguez, 2014). Thus, the strategies to respond to the climate with a logic of capital accumulation are combined with a partisan political agenda, which seeks to gain electoral support with projects that show "that something is being done". In contrast, environmental conservation initiatives –of natural areas and water- are considered as politically unprofitable (Torres Abreu, 2009).

But in the long term, demand will continue to grow, and eventually Puerto Rico will run out of spaces (and probably of money) to build dams13. Other experiences in the past have already shown the great socio-ecological impact of such projects in Puerto Rico. For example, with the construction of dams in Caonillas and Dos Bocas, which allowed the industrial and urban development of the capital city (San Juan) and the coastal zone, thousands of acres of the best agricultural land in Utuado (a municipality in the central mountain area) were flooded, which

13 The DRNA Water Plan already noticed this space constraint.

subsequently severely affected the economy of the town (Matos Matos, quoted in Colon Rivera et al., 2014).14

Towards a systemic transformation: the water as a common good

> "Ecology isn't 'love of nature': it's the need for self-limitation… of human beings with respect to the planet on which they happen to exist by chance." (Castoriadis, 2005)[15]

The lack of real solutions to the problem of water management in the current political-economic system should not be a surprise: its own logic works against sustainability. Therefore, to really address the urgent problems of water, a transformation of the current system is needed. In other words, it is essential to visualize and implement alternative forms of the organization, production and management of natural and environmental resources in Puerto Rico. The developmentalist / growth-oriented model proposes an 'inevitability of progress', buries past and present alternatives, and subsequently obscures other alternatives for the future (Otero, et al., 2011). In contrast, the model of natural resources as common goods provides the basis for practices and alternative discourses on water management.

Firstly, this model requires a change in the conceptualization of water from an economic asset for capital accumulation to an essential resource for life, human welfare and ecological sustainability (Bakker, 2007). In other words, the purpose of managing water should be to protect the resource and the ecosystem to which it belongs (especially watersheds), while its access is guaranteed (to everyone equally). The economic model of Puerto Rico must also change to one based on principles of wellbeing and sustainability, cooperation and solidarity, rather than competition and capital accumulation. This means that the basic consumption of water or the

14 In addition, another water-related problem are the floods that occur over any minor rain. Nevertheless, it is widely accepted nowadays that planning is the main cause of this problem (eg. Ruiz Marrero, 2003).

15 I thank Giorgos Kallis for this quote

ecosystem functioning should be prioritized over the profit of companies such as Applied Energy Systems16 or sectors such as the construction and hotel industries. Likewise, it is necessary to transform agriculture in Puerto Rico towards an ecological option that does not contribute to the degradation of water resources and is better able to cope with droughts.

Second, the conceptualization of water as a common good necessary for life and ecology implies that this is a resource owned by all inhabitants in Puerto Rico. From being merely "consumers" or "clients" of water, the inhabitants of Puerto Rico become members of a community with rights and collective responsibilities over this resource. Everyone should have equal access to water; we cannot allow some sectors to use it without restriction only because they can afford it, while others suffer shortages. This is very important since equality, beyond a principle, encourages collaboration among people for the sustainable management of natural resources (eg. Andersson & Agrawal, 2011) and removes one of the main motivations of consumerism: the race for social status.

Third, the concept of common good requires that people have the right and responsibility to participate equally and collectively in the management of the resource, which in turn requires a radical decentralization and democratization of all state structures that govern it, with a transition from "government" to collaborative water governance (see Bakker, 2007, 2008).

It is therefore necessary to recognize and promote the integration of community groups and civil society in water management, such as the cooperatives of local users who provide an effective water service to the inhabitants of rural areas in Finland and the metropolitan region of Wales, UK (Bakker, 2008). We must also establish effective and real mechanisms of civic participation in the decision-making process on water. For example, through advisory committees or seats on the boards

16 Translator's note: AES is the company proposing an incinerator in the Northwestern town of Arecibo. The incinerator would be located next to the 'Grande de Arecibo' River and would need to extract 2.1 million gallons of water daily from this river, which is the main source of water for the Caño Tiburones Nature Reserve, which as a coastal wetland is highly dependent on this water for its ecosystemic functioning. In 2013 the DRNA denied AES's application for this water, and since then AES has been heavily lobbying to make the agency change its decision.

of water agencies, such as in England; multisector boards and other participatory processes of watershed management (Antunes, et al, 2009; Kallis, et al., 2006); and through participatory budgeting as in the city of Porto Alegre, where citizens participate in deciding how the public water corporation will invest their contributions (Bakker, 2008). Likewise it is vital to recognize the duty to listen to grassroots movements that propose alternative visions of water management, such as the more than 40 organizations that already convened a meeting in San Salvador Atenco (Mexico) and three months of resistance sessions under the slogan "For the land, water and life" in order to "promote a national program against dispossessions, to unite and enhance the experiences of contestation and resistance, and to propose alternatives" (La Jornada, 2014).

In Puerto Rico, civil society and community and environmental organizations have played a key role in the conservation of resources, including water. From the origins of the environmental movement in the anti-mining movement (1960s), water protection was a central issue (Colón Rivera, et al., 2014; Concepción, 1995). Later on, Casa Pueblo resumed that opposition transforming it into a communal management of forests in the region, but always with water as a crucial issue. In 2013, after the fight against the northern gas pipeline, a multisector group led by Casa Pueblo presented a "national project", called The National Model Forest of Puerto Rico17, to protect the region where the respective pipeline –referred to on the island as the "death tube" -, would have passed through. Other entities such as 'Protectores de Cuencas' and the Estuary Program of San Juan Bay also promote practices and different discourses on water management, focused on conservation, restoration and multisector collaboration as a strategy to protect watersheds. In the 2013 AAA proposal, the public corporation outlined how some of the revenues of the proposed tariff increase would come from an environmental tax, which would be directed to funding the dredging of the 'Caño Martin Peña' and to the

17 See my previous column on this (García López, 2014).

"conservation of watershed". However the public corporation did not disclose specific details on these projects.

Still, there is a long road ahead to achieving civic representation in government decision-making structures. There is a need for more representation (communal, labour, scientific, and professional) on the governing board of the AAA. On the other hand, there are some 250 communities (approximately 150,000 people) without connection to the AAA water system, the so-called non-PRASA systems (Juarbe, 2007). These systems face challenges to meet water quality standards, but instead of thinking about integrating them to the public AAA system, why not support and strengthen their community water management?

Finally, the model of water as a common good also implies the reassessment of the technocratic solutions usually proposed to deal with the problem of scarcity. Puerto Ricans will have to identify the ecological limits of their consumption (the amount of water that can extracted without disrupting the ecosystem), and manage their demand. The limits are necessary to overcome persistent shortages due to capitalist consumerism; but, ultimately, limits on use should not be imposed on a top-down strategy, but consensually, through collective decisions (Schneider et al., 2010).

Global climate change will undoubtedly affect the material conditions (ecological) related to water, including rainfall patterns. There will likely be more and more intense droughts and storms of greater magnitude. To prepare for that future, we must change the way we manage water. We will have to organize and mobilize to change the political-economic system focused on economic growth and encourage an anti-hegemonic 'radical imagery'. For this radical imagery we should use Walter Benjamin's 'imaginative willingness' in a communion that transforms in a bottom-up strategy the relationship between individuals and the environment. Only then we will be able to overcome the water shortage.

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