ALTERNAUTAS

(Re)Searching Development: The Abya Yala Chapter

Vol.3 – Issue 2 [December 2016]

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Lake Atitlán, Guatemala: "The Possibility of a Shared World"

Alternautas is a peer reviewed academic journal that publishes content related to Latin American Critical Development Thinking.

It intends to serve as a platform for testing, circulating, and debating new ideas and reflections on these topics, expanding beyond the geographical, cultural and linguistic boundaries of Latin America - Abya Yala. We hope to contribute to connecting ideas, and to provide a space for intellectual exchange and discussion for a nascent academic community of scholars, devoted to counter-balancing mainstream understandings of development.

How to cite:

Travieso, E. (2016), Lake Atitlán, Guatemala: "The Possibility of a Shared World", *Alternautas,* 3(2), 70-80. URL : http://www.alternautas.net/blog/2016/11/30/lake-atitln-guatemala-the-possibility-of-a-shared-world

Editor : Alternautas
http://www.alternautas.net
London, UK.
ISSN - 2057-4924

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Lake Atitlán, Guatemala: "The Possibility of a Shared World"[2]

Conflicts around development issues are increasingly focused on water. These conflicts tend to intertwine a struggle over whether water should be treated as a commodity with struggles over how its management should be configured, and by whom (Castro 2008). Latin America has emerged as a particularly relevant region for these debates (Ávila-Garcia 2016).

This article presents the case of Lake Atitlán, in the Sololá department of Guatemala, where long-standing conflicts and divergent imaginaries have made it difficult to create consensus about how to solve an ecological problem. The article is based on four months (April to July 2016) of ethnographic fieldwork, in three towns and one village on the shores of the lake. Many names and other identifying details are left out, due to safety concerns.

Theoretical framework

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[2] This article was originally published in http://www.alternautas.net/blog/2016/11/30/lake-atitln-guatemala-the-possibility-of-a-shared-world on November 30th, 2016.

Political ecology, and in particular the concept of "hydrosocial territories" developed by Boelens et al. (2016), offers a useful frame of reference that helps to make sense of the controversy surrounding Lake Atitlán. The starting point is that imaginaries about "nature" are socially constructed. Plural constructions of the same "natural" territory can coexist, and their (re)production entails conflict, in ways that are intertwined with the struggles over control of natural resources in the territory. The lens of "hydrosocial territories" allows for analysis of these phenomena in sites where water is a central concern. In short, struggles over the control of water are also struggles about the epistemological and social configurations that motivate, frame and enable competing claims.

This article adopts the "hydrosocial territories" perspective to offer an empirically-grounded analysis of the competing claims that different groups make about Lake Atitlán. Then, it evaluates the implications of the interaction between the groups in light of Mella's (2015) ethical theory. This theory, rooted precisely in the Latin American context of conflicts "in the world of development," allows for going beyond a description of what is at stake, to suggesting criteria for truly creative action that could "reinitiate the possibility of a shared world."

Lake Atitlán: Context

Lake Atitlán is home to some 300,000 people. The great majority of these people belong to the Kaqchikel, Tzutujil or K'iche' Mayan ethnic groups. Tourists are attracted by the volcano-framed lake's spectacular beauty, and others are attracted by the tourists; the population has thus grown, especially in the town of Panajachel. Along the edge of the lake, wealthy families have built vacation homes.

Though exact statistics are hard to come by, local activists estimate that most families have access to less than half a hectare of land, while a few non-indigenous landowners control most of the surrounding hillsides. Their plantations are characterized by monoculture and the heavy use of Green Revolution inputs. The main crops are grains and vegetables to the North of the lake, and coffee and avocadoes to the South. There are also some protected forest areas.

Algae blooms in 2009 and 2015 have raised awareness about pollution in the lake. The blooms are caused when wastewater from the growing towns, coupled with fertilizers and soil erosion from the farms, overfeed cyanobacteria with phosphorous and nitrogen (Chandra et al. 2013; Chandra et al. 2014). Even if these explanations are not universally known or accepted (cf Harvey 2012), concern about the effects of pollution and algae blooms – fish kills, a decline in tourism, and gastrointestinal diseases for approximately 80,000 people whose only source of drinking water is the lake itself – are widespread (data from fieldwork).

The pipeline proposal

In this context, an association of vacation homeowners, Asociación de Amigos del Lago Atitlán (AALA), has taken initiative. The association commissioned two reports by scientists and engineers from Guatemalan and U.S. universities,[3] who presented a diagnosis of the problem and a proposed solution (Chandra et al. 2013; Chandra et al. 2014). These USAID-funded reports constitute the principal publicly available source of information regarding the lake's pollution issue.

According to the reports, untreated sewage, especially from Panajachel, is the single largest cause of pollution, as well as the most dangerous one in terms of human health. Further, the situation might soon reach a "point of no return," where the level of deep water dissolved oxygen would provoke a shift to "internal loading" of nutrients, making it much harder to deal with the algae blooms. Based on these findings, AALA suggests that intervention strategies should prioritize wastewater.

The reports consider two possibilities for wastewater management. One is fully treating the wastewater before it reaches the lake, and the other is diverting the wastewater to prevent it from entering the lake at all. The first is evaluated as unfeasible, since full wastewater treatment is complex and expensive; the second option is considered more viable.

[3] The universities are U. del Valle de Guatemala; U. del Valle Altiplano; U. Rafael Landívar; U. of Nevada, Reno; U. of California, Davis; and California State U. Chico.

Following the reports' advice, AALA proposes a project that would collect sewage from around the lake basin and pump it southwards, where it would first be used to make methane gas (to be traded for carbon credits), and then to irrigate some 1,000 hectares of farmland with nutrient-rich water. These uses, along with hydroelectric energy generated by turbines inside the downward sections of the pipeline, would make the project self-funding and even profitable. The project is explicitly modeled after Lake Tahoe, in the United States.

This proposal has the backing of Autoridad para el Manejo Sustentable de la Cuenca del Lago de Atitlán, which is the governmental authority – presided over by Guatemala's vice-president – that is responsible for the management of the lake (AMSCLAE 2014). Through the Inter-American Development Bank (IDB), the Spanish Agency for International Development (AECID) has provided US$1.2 million to fund a full feasibility study, which would be the intermediate step before starting the construction (AMSCLAE 2014). A lobbyist from the Asociación de Amigos del Lago Atitlán has been engaging local government authorities and Catholic clergy from around the lake, to create favorable public opinion for the feasibility study (data from fieldwork).

The association presents its proposal as "the only" solution, and in fact it is the only concrete proposal being publicly discussed by policymakers. However, fieldwork revealed that most people around the lake are only vaguely aware of any of the project's details, beyond its sarcastic popular nickname, "el popoférico" ("the poopway"). Meanwhile, some local groups who have gathered information are in strong opposition to the project.

Opposition and counter-proposals

Opposition is rooted in both mistrust of the project's proponents and concerns about its content. The fact that the vacation homeowners behind the project are some of Guatemala's wealthiest and most powerful people, with ties to an extremely corrupt government, lends itself to a hermeneutics of suspicion by the indigenous

communities that see that social group as their oppressor (data from fieldwork). In that light, local activists have pointed out (in interviews) that the project's proponents are the same outsiders who have taken over what was once public land (the lake edge), and that many previous "mega-projects," in the activists' opinion, have benefitted nobody but the urban elite. This history is compounded by the lack of consultation with local communities about the proposal, and the lack of transparency even when there has been some communication.

Although the 1,000 hectares to be irrigated have not been explicitly identified, there are credible rumors to the effect that the wastewater pumped from the lake basin would be destined for one of the sugar plantations that dominate the country's southern coast. The Guatemalan sugar industry, controlled by the country's oligarchy and backed up by government policy and international finance (Alonso-Fradejas, Caal Hub and Chinchilla Miranda 2011: 31-37), is known for leaving entire communities without water by diverting rivers and sucking up aquifers for its unsustainable monoculture (cf eg Tizol 2016).[4] In that context, many activists interpret the pipeline proposal – which would pump water away from Central America's largest freshwater reservoir – as simply a continuation of this trend (fieldwork data). Since there is currently no legal framework in place to protect water as a public good, or even to regulate its use,[5] there is no reason at all to believe that the best interests of the lake communities would be protected in such a case.

Another concern put forth by opponents is related to the magnitude of the project. Its size and complexity raise the stakes of failure, and the local communities – not the project's proponents – would bear the brunt of any malfunction. In the context of previous failures of top-down projects (including the abandoned attempt at a sewage treatment plant in Panajachel), such arguments are not just hypothetical.

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[4] Another factor that adds credibility to the rumor is the link between one of the largest coffee plantations located near where the pipeline would leave Lake Atitlán, and the country's largest sugar mill to the South; both are owned by the same family, and the sugar mill has recently received large loans from the IDB to expand its operations.

[5] A coalition of social movements and NGOs have proposed a bill with a legal framework for water; as of July 2016 it was awaiting debate by lawmakers.

Further, these projects have served to bring the country into debt. Indeed, the AECID funds for the feasibility study are already tied to a larger package that includes a US$50 million loan from the IDB (AMSCLAE 2014). Social movements see this debt, and its likely increase through the financing of the project's implementation, as dangerous in light of the entire region's history.

What the social movements propose (in public meetings, interviews and email correspondence) is to conduct a more thorough study of various options, evaluating not just their technical and economic feasibility, but also their social and ecological impact, with full participation by local communities. They tend to think that a more decentralized model, that would fully treat wastewater using ecologically sound methods at different locations, would be a safer bet. They also suggest that any proposal could first be tested with a pilot project at the much more-polluted Lake Amatitlán, which – because it is close to the capital city – would face greater scrutiny by more powerful stakeholders. Finally, the social movements insist that not just wastewater, but all the sources of the problem, must be confronted.[6]

The opposition and counter-proposals of the social movements are backed by the opinions of local and international scientists and engineers who they have consulted (though without the funding to conduct a full-fledged study comparable to that of AALA's allies), as well as by NGOs and local community leaders, including both traditional Mayan priests and some Catholic priests. However, they do not have the same access as AALA to the decision-making circle, despite their efforts to establish dialogue with both AALA and AMSCLAE. The reality of political violence against

[6] Indeed, the AALA-sponsored reports insist that sewage is the largest single factor, but never show the relative proportions of all the factors. In a powerpoint presentation given by the AALA lobbyist to Catholic clergy, one slide claims that 51% is due to sewage, while soil erosion accounts for 38% and fertilizers for 18%. Notwithstanding the problem that these add up to more than 100%, the AALA's own numbers would seem to indicate that conventional farming – counting fertilizers and soil erosion together – is a greater contributor to the pollution problem than sewage.

activists in Guatemala, including the recent murder of a water-rights activist,[7] is a form of intimidation that further hampers their advocacy efforts.

A radical alternative

Meanwhile, other local indigenous organizations, such as the Instituto Mesoamericano de Permacultura (IMAP), are proposing something even more radical, explicitly based on the non-anthropocentric Mayan cosmovision that aims to live in harmony with non-human beings. Dry composting toilets, combined with sustainable agricultural practices to care for soil fertility and prevent erosion, address all the lake's pollution-related problems at their root. Further, human waste is creatively turned into a resource by the composting toilets, as would the sewage pipeline, but the difference is that the benefits of this model go to local people, rather than faraway plantation owners, and that the use of the resource would both be sustainable and support food sovereignty. Another difference is that the technology involved in IMAP's proposal is simple, accessible and inexpensive.

IMAP both carries out these practices and teaches others to do the same. In so doing, IMAP demonstrates that the responsibility – and the power – to solve the problem can be grounded at the local level. This bottom-up approach circumvents the need to negotiate with the dominant system, because it not dependent on it. Instead, IMAP chooses to bear witness to the fact that an altogether different system is possible, by prefiguring it. More than a social movement, then, IMAP is what Dinerstein and Deneulin (2012) would call a "hope movement".

For now, in spite of the many advantages of IMAP's proposals, few people seem to take them seriously. In the case of elites, the unattractiveness of a model that dismantles dominant structures of profits and power should be clear. The lack of interest at the level of local communities, while more frustrating, is also

[7] A press release by a coalition of movements, dated 18 March 2016 and titled "Agua para la vida, no para las empresas", denounces the assasination of Walter Manfredo Méndez Barrios, environmentalist and community leader of La Lucha, Las Cruces, Petén, who was killed for fighting against oil palm companies and hydroelectric dam projects. This press release was distributed by members of social movements in Lake Atitlán.

understandable. IMAP's proposals are indeed technically simple and economically accessible, but they would require a widespread paradigm shift in order to achieve large-scale implementation.

Discussion

The theoretical tools of political ecology, and of "hydrosocial territories" in particular, can be fruitfully applied to the Lake Atitlán case. In this brief article, it is only possible to make some initial observations to show how several different aspects of the case can be illuminated with this multifaceted approach.

So far, we have mainly analyzed the conflict itself. We have seen how the mutual suspicions of the various actors can be followed as clues, to map out a political economy of concrete interests and histories. Indeed, the pipeline proposal is connected to a wider context of government policy, international finance and agroindustry's role in the dispossession of indigenous peasants in Guatemala (cf Alonso-Fradejas, Caal Hub and Chinchilla Miranda 2011).

We have also considered the ecological facts themselves. These can now serve as an entryway to investigate the political economy of their causes further. For example, the algae blooms are partly caused by an increase in the use of fertilizers. This increase is largely a reflection of the growth in non-traditional export crops, such as broccoli and other "winter vegetables" for the U.S. market (Novotny 2015). This productive change, in turn, reflects changes in moral economy – the entry of indigenous communities into the consumer economy through paid labor (Benson and Fischer 2007) – as well as changes in government policy which enables this form of agriculture (Isakson 2014). Of course, these factors themselves are linked to the whole political economy of land distribution and globalization.

The awareness of how hydrosocial territories are socially constructed also gives insight into our finding that the AALA has privileged access not only to state power and major funding, but also to university researchers. Indeed, epistemology itself – the way in which the ecological "facts" are constructed and deployed – has its own political economy, and the implications of this are reflected in the waters of Lake

Atitlán. Being the spokespeople of the scientific discourse around Lake Atitlán not only gives the AALA the legitimacy of having hegemonic "expert" knowledge on its side, but also the opportunity to frame this information according to their interests. In a further example of this dynamic, Harvey (2012) has shown that local media blamed Mayan women from the villages for the algae blooms, because they wash clothes with non-organic soaps, while ignoring other known causes which would have placed the burden of responsibility on much more powerful people, such as the plantation owners (who use fertilizers and allow soil erosion) and the hotel industry in Panajachel (which has massively increased the sewage problem).

Political ecology also takes epistemological questions to another level, to the current debate about the discordant ontologies at play in development-related conflicts (Escobar 2010). This lens can be helpful for understanding IMAP's explicit framing of its proposal as coming from within a Mayan cosmovision, in contrast to the Western cosmovision implicit in the pipeline proposal. At stake is not only a question of power, but also of alterity; elucidating how these two dimensions intersect is perhaps the greatest contribution of the hydrosocial territories approach to the conflict surrounding Lake Atitlán.

An at least equally pressing question, though, is how to bridge across alterities and balance power in order to create genuine consensus, rather than simply documenting the multidimensional violence of a yet another imposed development project. Mella's (2015) theory of ethical creative action in the "world of development" offers criteria that could orient such a project. A new, shared imaginary of the lake can still emerge, through an intercultural dialogue that attends to asymmetrical power dynamics, but is also rooted in mutual care, open to forgiveness and invested in building trust. Such a human encounter would go beyond mere negotiation; it would aim to "tirelessly reinitiate the possibility of a shared world" in which life can flourish (Mella 2015: 102).

This may seem even more idealistic than IMAP's call for the universal adoption of composting toilets, but there is indeed hope. Since 2007, international law and several Latin American countries have increasingly recognized the duty to seek the

free, prior and informed consent of indigenous peoples for development projects that affect them (Flemmer and Schilling-Vacaflor 2016). Even though the formulation and implementation of these policies leave much to be desired (Ibid.), they are a step in the right direction. In the case of Lake Atitlán, the meetings of AALA with church communities have been an opportunity for activists to personally engage the AALA representative and invite him to meet on their own terms (fieldwork data). Surely there is still a lot of work yet to be done; among its other meanings, Lake Atitlán represents a standing invitation for further research, especially research designed to engage all stakeholders in the generation of shared meanings.[8]

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