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THREATS TO A SUSTAINABLE FUTURE: WATER ACCUMULATION AND CONFLICT IN LATIN AMERICA*

By Rutgerd Boelens, Mourik Bueno de Mesquita, Antonio Gaybor and Francisco Peña**

INTRODUCTION

In Latin America, debates over natural resource management policies and legislation fill discussion forums. This is a needed discussion as coherent policies that both promote democratic, equitable water use systems and also safeguard the sustainability of water resources are rare in the region.¹ The absence of effective water regulation that considers the common interest and long-term water availability results in poor management and use of natural resources, driving explosive conflicts.² As in many regions of the world, there is growing demand and competition for access to water in Latin America. Agricultural, industrial, mining and energy companies, as well as large cities and housing developments, have altered socio-natural geography and are changing the rural panorama profoundly.³ These recent demands are competing with existing water rights and ignoring local water management rules in rural communities and indigenous people's territories.⁴ Moreover, climate change and ecosystem degradation are further reducing water availability in the region.⁵

Generally, new water reform processes have done little to curb this situation and some have even worsened it. In many cases in Latin America, elites and corporations have taken advantage of government interventions.⁶ New international privatization policies trample over the water rights of indigenous and other rural peoples, monopolizing water access and control.⁷ This article reviews the general context and issues of water governance in Latin America and analyzes the accumulation of management power by a few elites through modern extractivist policies and neoliberal governance. Using case studies in Ecuador, Mexico and Peru, this article also illustrates how the prevailing water economic and policy models lead to a deepening of societal water conflicts, triggering reactions "from below."

THE CONTEXT OF WATER GOVERNANCE

Studies in Latin America have shown a serious disconnect between water laws and actual governance. This is particularly evidenced by fragmented enforcement of these regulations with separate agencies administering different water uses.⁸ These agencies take actions that are often contrary to public interests and collective rights.⁹ State projects and water management agencies also favor political agendas, often creating economic opportunities for elites and government players.¹⁰

As a reaction to the Latin American government's disjointed and inefficient efforts to manage water resources, there is consensus among most of the region's stakeholders—both groups with investment power and indigenous organizations,

promoting a move toward decentralized water management.¹¹ Water management agencies have thus initiated decentralization and privatization schemes that have transferred some authority to local or municipal authorities, user groups, private companies, and public-private institutions.¹² However, redefining water policy is difficult given the varied ideologies and interests held by the relevant stakeholders.¹³ Among the issues discussed is whether water can, or should, be treated as a privatized commodity rather than as a fundamental, non-transferable human need.¹⁴ Discussion also centers around what roles the State and private sectors should play in decentralizing water governance, as well as whether market forces could effectively allocate water to meet various needs.¹⁵ Even if these difficult ideological questions are answered, current Latin American governance structures provide a challenging platform for the effective implementation of new water management ideas. In some cases, weak agencies run by bureaucrats or local elites leave little room for multi-actor participation.¹⁶ Therefore, even if the government takes action to decentralize or privatize water services and establish water markets they are face inadequate regulation and enforcement.¹⁷

Furthermore, central government agencies also reject and supplant local and indigenous water management initiatives.¹⁸ In general, cultural practices of water management are not taken into consideration in national lawmaking; society is portrayed as homogenous, with no room for differing water rights or forms of water governance.¹⁹ Water policies and laws often assume that simply adopting official legal norms will work to shape and standardize the multi-faceted reality of water management, creating a "modern", "efficient" and "rational" management system.²⁰ Therefore, these methods of local water management are discriminated against, and water rights are instead turned over to "modern production and producers" – legally and illegally.²¹

**This paper presents results from investigations done by researchers associated with the International Justicia Hidrica / Water Justice Alliance (www.justiciahidrica.org), in collaboration with the NWO-WOTRO (Netherlands Organization for Scientific Research) inter-Andean projects 'Struggling for Water Security in the Andes' and 'The Transnationalization of Local Water Battles', all coordinated by Wageningen University, The Netherlands.*

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These centralized practices have disrupted a localized, pluralistic water management system that has existed for centuries, especially in irrigation-based communities that have developed management practices by incorporating both ancient water traditions and modern norms.²²

Water accumulation and control by the few is a long-standing problem in Latin America. Recent national and international policies, combined with the economic power of multinational corporations, make this problem more pressing than ever before. Water thievery by these privileged stakeholders in times of increasing scarcity, is leading to numerous conflicts, most of them local.²³ Unfortunately, these conflicts are usually not mentioned in the national or international media.²⁴ The few local conflicts and protests that do reach the national media, which is dominated by the ruling political and economic power sectors, are immediately demonized.²⁵

Latin America is not the only place where public water policies are problematic. International interest in coordinating better water management and enacting laws to enable local decision-making is growing.²⁶ This vision calls for a greater decentralization of power from national authorities to local watershed organizations, where local citizens would have a voice in deciding how to allocate water resources.²⁷ The following sections present some Latin American examples from Ecuador, Peru and Mexico that highlight the issues of water governance.

ECUADOR: CONCENTRATING WATER IN AGRI-BUSINESS

Ecuador has witnessed two simultaneous growing trends over the last three decades: the increase in water use for agriculture and the development of irrigation for particularly profitable crops.²⁸ In the field, this is producing a certain type of commodities.²⁹ In the past, exports were mainly dry land crops, but current exports now require higher irrigation water content.³⁰

Irrigated cultivation of certain commodities has become a necessary condition for competitiveness in the international and national markets where costs are low and the selling prices are high.³¹ Some crops, such as bananas and flowers, would never reach the international market without irrigation.³² The main exporters of these water-intensive crops are the countries of the South; in Ecuador, for example, all corporate agriculture (“agribusiness”) for export is irrigated.³³ This practice has spread throughout Latin America, including growth in Mexico, Colombia, and Peru. The domestic large-scale agriculture market is also highly extractive of water resources, as evidenced by water-demanding sugar cane production.³⁴ In contrast, agriculture for domestic consumption from small and medium farms, including coffee and cacao for export, is not irrigated for most crops.³⁵

This asymmetry helps explain the highly differentiated dynamics of production and reproduction in these distinct types of agriculture. In Ecuador, agribusiness profits for some crops are high while profits for other crops are extremely low or non-existent, especially for most small farmers.³⁶ Thus, to narrow the specificity of the agricultural crisis, only small farming has a crisis while large-scale agribusiness is booming.³⁷ Agribusiness hoards the best land, almost all the water, and all

the profit.³⁸ Ecuador is heavily concentrating water with the industrial few - this is the age of water dispossession.³⁹

Neoliberal policy has given national and multi-national power groups a normative framework to ensure their monopolization of Ecuador’s water and land.⁴⁰ Water is plundered two ways: formally, through concessions or authorizations granted by the Ecuadorian government, or illegally.⁴¹ This historical, long-standing process has continued to grow over these last decades.⁴² The concentration of water in the hands of a few mirrors the similarly inequitable distribution of land in Ecuador. According to official figures, rural and indigenous populations with community-based irrigation systems account for eighty-six percent of users, but have only twenty-two percent of the irrigated land area.⁴³ What is worse is that these populations have access to only thirteen percent of total water flow whereas the private sector, representing one percent of agricultural production units, has amassed sixty-seven percent of the water.⁴⁴ When it comes to land distribution, three quarters of farms in the country account for only twelve percent of arable area, while the two percent of farms owning larger than one hundred hectares account for forty-three percent of the national total.⁴⁵ Water, like land, is becoming increasingly scarce, and most irrigation-ready water has already been allocated formally or seized illegally to national or international corporations.⁴⁶

Examining some examples reveals the magnitude of this water theft. Water monopolies are evident in three parishes in the Ecuadorian province of Imbabura where large farms are allocated ninety-one percent of the flow and only nine percent is left for small and medium farms.⁴⁷ In the lower Guayas river basin, case studies of six rivers show that seventy-six percent of water flow is used by sixty-one companies, while nearly one thousand small and medium farms are left with the remainder.⁴⁸ In the Guayas province, some sixty-two companies formally receive water for irrigation at an average rate of six hundred liters per second, an amount that could irrigate one thousand small farms on the Ecuadorian coast.⁴⁹ It is common in these areas for large companies to block an entire river without government authorization to use all or part of its flow.⁵⁰

Of further concern, some large companies control the entire production process, including the transformation of products, the marketing of inputs, and capital goods.⁵¹ In Ecuador, an estimated 400,000 hectares of farmland (out of eight million total) are dedicated primarily to agribusiness and the industrial production of sugar cane.⁵² This area constitutes only five percent of the country’s farmlands but demand at least 400,000 liters per second of water.⁵³ To put this in perspective, this flow rate is eighty percent of the total volume granted by the entire country in 2008 (499,000 liters per second).⁵⁴

Increasingly, this concentration of water rights and use in the hands of a few creates conflict with and mobilization by the larger population. These conflicts have historically been localized as the farmers and rural residents who are affected cannot afford to oppose the more powerful organizations.⁵⁵ However, increasingly, conflicts have begun to branch out from the local level to become regional, and even national, mobilizations.⁵⁶

MEXICO: CONCENTRATING WATER RIGHTS IN A COUNTRY WITH HIGH SOCIAL POLARIZATION

In modern Mexico, it is not only water rights that are being concentrated but wealth as well. Scholars estimate that fifty to seventy-five percent of Mexico's population can be classified as poor.⁵⁷ Half of them are in "food poverty," a federal classification whereby their income is not enough to provide the calories required to survive.⁵⁸ In the year 2008, the wealthiest ten percent received thirty-six and a half percent of the nation's income, while the poorest ten percent received a mere four and a half percent.⁵⁹ Fifty families repeat and interweave their names on lists of the country's most industrial, financial and service groups, thirty-nine of which are among the country's richest families.⁶⁰ The deciding threads of Mexican economic life are held by a small, powerful ruling class.⁶¹

Post-revolution Mexico, which for decades claimed to grant social rights and promote "balance among production factors," has instead driven the concentration of wealth to favor the most powerful economic groups over the past thirty years.⁶² For example, the political class transferred government property to private ownership in exchange for juicy bribes to top officials.⁶³

Similarly, there has been a wave of water rights concentration by large landowners (mainly in northwestern and northern Mexico), and by industry, especially those using large volumes of water. Examples can be seen in the food industry, chemical plants, cement plants and mining industry (particularly open-pit mines using huge quantities of water to separate metal ores by leaching).⁶⁴ Real estate developers also purchase low-priced agricultural water rights to transfer for urban use.⁶⁵ These developers increasingly expropriate the water of rural communities and small localities to supply resort developments (Acapulco and Cancún for example) and expropriate community springs to promote "green" tourism.⁶⁶

In such a socially polarized country, this water concentration is not as visible as it should be. The media tends to conceal the realities about the concentration of water rights and uses, claiming that water is scarce due to global warming, and waste by municipalities.⁶⁷

Finding legal documentation of this water concentration is no easy task. The Mexican Public Register of Water Rights (REPDA) is an unreliable instrument with rampant under-registration of actual use, disclosing little about concessions realities.⁶⁸ Not recording the water used, or under-recording, is common practice in Mexico and is often tolerated or even promoted by the agencies responsible for enforcing the law.⁶⁹ Although federal administrators often complain that small and medium farms are the ones to blame, there is evidence that industry, urban water supply companies, and even the government are guilty of under-reporting actual usage.⁷⁰ For this reason, inequality in accumulation of water rights is revealed through direct evidence, such as the size of water facilities, production volumes, amounts of wastewater discharged, and the like.⁷¹

This under-recording reveals at least two different things. First is the existence of a legal pluralism in which indigenous and rural communities do not feel it necessary to register their

water use, simply because this use is perceived to be based on their local and historical water sources and rights.⁷² The second revelation is that large landowners who under-record avoid paying for their water rights, demonstrating the power of the Mexican elite in conjunction with governmental complicity.⁷³ Corruption also enables major under-recording of industrial water use and pollution by large industries.⁷⁴

Water rights are no exception to the overall concentration of wealth throughout Mexican society. The government's asserted efforts to incorporate society into the water management responsibility are far from the truth. Watershed councils, theoretically designed to assist this management and build consensus, don't work because they have become yet another arena for deal-making by controlling elites.⁷⁵ The councils systematically exclude rural groups, small businesses, environmental organizations and social platforms.⁷⁶ For example the construction of the *La Parota* dam (designed to supply tourism businesses in Acapulco) was completed without notice from the watershed agencies supposedly responsible for sustainable water management.⁷⁷ Conflicts over water continue to increase in number, intensity, and regional coverage.

PERU: NATURAL RESOURCE GOVERNANCE AND SOCIO-ENVIRONMENTAL CONFLICTS

The recent history of water governance in Peru demonstrates the contradiction between nationalization efforts by reform governments in the 1970s and a push for privatization in recent decades.⁷⁸ Common themes in this recent history include the denial of rural communities and small farmers' management of their own water sources, the concentration of water access with the few, and the centralizing of water control in government agencies and economically dominant sectors.⁷⁹ When Alan García took office as President in 2006, he aggressively promoted a neoliberal policy that included the total opening of investment in agro-export, mining, hydrocarbon extraction, and forest concessions.⁸⁰ He also declared social protests to be "anti-system."⁸¹ In July and August 2008, the Peruvian government prepared a portfolio of ninety-nine legislative decrees to fill the gaps in Peru's policies on natural resources, environment, water, land access, and the management and organization of rural and native communities.⁸² These decrees ushered in a Trade Cooperation Agreement, generally known as the Free Trade Agreement, with the United States and intensified neoliberal economic policy.⁸³

The Amazon indigenous peoples' movement led protests against these legislative decrees which threatened their territories and livelihoods.⁸⁴ They argued that the national government was not recognizing their rights to territory, natural resources, and their cultural systems.⁸⁵ These groups pointed out that Peru's Constitution obligated the government to consult them before any legislation involving them.⁸⁶ The government's response has been both counterproductive and repressive.⁸⁷ The conflict led to the violent repression in Bagua, in the Amazon region.⁸⁸ And while the government made some concessions, its lethargy and lack of political will gave indigenous peoples little to no hope.⁸⁹ The same goes for the protests by Andean peoples

and communities about mining companies.⁹⁰ The relationship between government and civil society is quite fragile and there is no productive dialogue.⁹¹ Admittedly, this dynamic has earned some indigenous movements political presence and influence in Peru⁹²—for example, the government is promoting the legalization of land titles and family ownership of land in rural communities of the Highlands⁹³—but the successes are limited.⁹⁴ The formalization of water rights among as groups and individuals ultimately grants mining companies access to water and land owned by communities.⁹⁵ Rural households are threatened with the disappearance of community farming and communal resource organization.⁹⁶ These conditions are encouraging youth to migrate to seek alternatives in cities or mining.⁹⁷

A new water law, drafted by a team of professionals in urban Lima, enacted with little debate in Peru's congress,⁹⁸ speaks broadly of integrated water resource management by watersheds.⁹⁹ This new law, however, actually reinforces top-down management, creating local offices that are strongly dependent on their central offices.¹⁰⁰ This practice promotes watershed councils that do not effectively involve constituents.¹⁰¹ Moreover, though the law makes vague claims to regulate the “usage and customary” rights of rural and indigenous communities, in practice it leaves significant gaps regarding the scope of privatizing water management and access.¹⁰²

The weak management of water resources by Peru's public sector has resulted in widespread water pollution as well as increased concentration of water access by extractive industries and some major cities.¹⁰³ These trends are further generating socio-environmental conflicts. For example, the Ombudsman Office, which monitors conflicts in Peru, reported 32 socio-environmental conflicts in April 2007 and 132 in October 2009 (79 percent involving mining and hydrocarbon companies).¹⁰⁴ The conflicts between corporations and local communities center around inter-basin water transfer, water access, and ownership. Some of the corporations involved include hydropower companies, rural communities, and mining companies.¹⁰⁵

Conflicts have also increased between communities in micro-watersheds regarding water division, scarcity and degradation. The effects of climate change over the last thirty years have only worsened these problems.¹⁰⁶ In the Peruvian Andes, for example, communities are estimated to have lost fifty percent of their water from sources such as springs and high-altitude wetlands (*bofedales*), creating vulnerable rural communities and decreased food security.¹⁰⁷ Although Andean communities are accustomed to climate variations, they are also facing increasing limitations on social governance of rural communities under such adverse circumstances.¹⁰⁸ Lack of vision and limited socio-technical capacity for public governance provide no support for Andean adaptation efforts, which is worsened in conflicts with economically powerful stakeholders.¹⁰⁹

The newest Peruvian government regime has a different discourse regarding rural communities and indigenous peoples, speaking of “inclusion.”¹¹⁰ However, as seen in neighboring Bolivia and Ecuador,¹¹¹ which also have governments who are supposedly “anti-neoliberal” policy discourse is often only

rhetoric as mega-cities and agribusiness or extractive industries pressure for water access and control for— *water flows in the direction of power*.¹¹²

CIVIL SOCIETY RESPONSES

A variety of responses from populations affected by dispossession of water or land and environmental pollution have emerged. In general, such mobilizations are both dispersed and localized throughout the continent.¹¹³ They vary from road blockades to litigation, and eventually to partial agreements.¹¹⁴ Frequently, mobilizations rely on specialized advice from civil society organizations working with local leaders.¹¹⁵ In some cases, mobilizations can lead to the temporary inclusion of the conflict into public and political dialogues.¹¹⁶ However, any dialogue is typically prolonged over long periods of time while the controlling elite maintains the status quo by dividing the mobilizations and prosecuting their leaders.¹¹⁷ However, a select few civil society responses have been more successful. In Ecuador, for instance, various social groups—mestizos, *montubios*, indigenous and Afro-Ecuadorians—mobilized to advocate for the inclusion of water rights principles in the Ecuador Constitution in 2008.¹¹⁸ These groups, working with the Water Resources Forum (*Foro de los Recursos Hidrídicos*) and the National Constituent Assembly (*Asamblea Nacional Constituyente*), held three major events focusing on the issues of water rights, allocation, and concentration.¹¹⁹ Approximately 1000 civil society delegates from around the country participated, discussing water rights at length.¹²⁰ The conclusions of the delegates were then delivered to the Assembly, whose representatives publicly committed to incorporating the proposals for the equitable redistribution of water in the political and constitutional plane.¹²¹ The Constitution, approved in October 2008, incorporates the proposed redistribution of water in the following terms:

The Executive Branch, within two years after the entry into force of the present Constitution, shall review the situation of access to irrigation water for the purpose of granting concessions, avoiding abuse and inequity in the fees charged for water use, and guaranteeing more equitable distribution and access, especially for small and medium-sized farm and cattle producers.¹²²

It should be clarified, however, that the Ecuadorian government has not followed through with this proposal.¹²³ More pressure is needed from social organizations, particularly along coastal regions where the concentration process is the most severe.

Currently, a new water resources bill is pending in the Ecuadorian legislature.¹²⁴ Also addressed was the human right to water.¹²⁵ Without a doubt, one of the most transcendent subjects in the debate was the decentralization of water.¹²⁶ The national indigenous movement also presented on two main themes. The first revealed the large amount of irrigation that is concentrated among the wealthy as a result of the concessions or water theft.¹²⁷ The second was the implementation of a collective right under the 2008 law that makes water a public asset.¹²⁸

In Mexico, less powerful social groups, such as rural and indigenous, low-income urban residents, and small businesses,

are also taking various lines of action. These groups are promoting local management and action, such as advocating that private corporations obtain renewable permits from local communities to develop and use water resources, and pay communities to preserve water resources from production.¹²⁹ The movements focus on local control of springs, rivers and wells in addition to some agricultural water.¹³⁰ These community actions have involved regulations on access to water, shared responsibilities to maintain common availability, defensive actions to protect community assets, and agreements with neighbors.¹³¹ A second promising trend is the preference for smaller water systems and less-centralized administration. In the last two decades, social opposition to large water systems, such as inter-basin transfers and dams, has come back to life.¹³² Conversely, governmental programs are now accepting smaller works, even involving direct labor input by local inhabitants.¹³³

A third trend is an increase in mobilization and direct political action, particularly in the heaviest conflicts. These actions generally overlap with local action, involving coalitions of community authorities, groups of neighbors, and national or international non-governmental organizations.¹³⁴

In Peru, like in Mexico, the mobilizations are usually less coordinated and less integrated between local and national movements.¹³⁵ However, increasing social mobilizations has generated political influences that commonly express themselves in electoral processes and strengthen movements at the regional and national levels.¹³⁶ These movements generate high expectations by the affected populations, but their impacts on big interests and dominant powers are rarely substantial.¹³⁷ Instead, the influence of international opinion is frequently more influential in the Peruvian government.¹³⁸

When mobilizations begin to have a political presence, the government actively works to divide the movements and weaken momentum.¹³⁹ Recent political changes that promise social and cultural inclusion or new discourse rarely come to fruition.¹⁴⁰ For actual change to take place there needs to be a restructuring of the Peruvian government and a redefining of its relationship with the population.¹⁴¹ In Peru, the government resistance is ever-stronger, easily overcoming the cries for water equity by social mobilizations.¹⁴²

CONCLUSION

In the last three decades, Latin America has experienced aggressive governmental implementation of neoliberal policies that are favorable to extractive exploitation and agro-export companies.¹⁴³ This has generated the accumulation and concentration of natural resources in the hands of the few at the expense of water security, food security, and less-privileged parts of society.¹⁴⁴ The affected parties are enveloped in frequent conflicts. State interventions often end unfavorably for rural and indigenous people in light of the massive power asymmetry and cultural marginalization.¹⁴⁵ Under these circumstances, these parties feel increasingly excluded and marginalized, making protest intense.¹⁴⁶


This article has analyzed how in Ecuador, Mexico and Peru this process of water concentration limits and seriously affects

potential for local development, prospects for survival among small communities and reproduction of the social fabric.¹⁴⁷

In “modern” Latin American societies, natural resources—particularly water—are valued predominantly in economic market terms, to the detriment of social, cultural and environmental values.¹⁴⁸ At the same time, these last two decades of international policies claiming to democratize water management and decentralize decision-making, have instead aggressively taken over governments in the Latin American region, obscuring any interference by the majority of localized water users.¹⁴⁹ Political and legal reform for water management is grounded in standardizing management norms.¹⁵⁰ To facilitate bureaucratic control by “hydrocrats,” or to create an efficient market for water rights along neoliberal lines, it is considered necessary to leave behind the practices of the rural or indigenous population labeled as “backward.”¹⁵¹ Diversity in rules and rights is actively discouraged because it would obstruct regional and international transfers and sales, which require a uniform legal framework.¹⁵² Local rules and rights are considered anomalies that would curb investments and profits.¹⁵³ Therefore, decentralized water policies are not replacing bureaucratic policies, but instead regiment and oppress local pluralism.¹⁵⁴ Government bureaucracies are “reformed” to draft and enact legislation that enables water markets to emerge.¹⁵⁵ Community and collective rights systems that do not fit in the neoliberal system are, by definition, denied as “backward” and “inefficient.”¹⁵⁶

For these reasons, there is a lack of trust between the government and civil society with obvious exceptions when shared public governance is recognized by the public.¹⁵⁷ This unwillingness to engage in intercultural dialogue about management of natural resources, water, land, and territory is problematic.

The effects and impacts of concentrated water rights by dominant economic producers will likely worsen with increasing climate change phenomena.¹⁵⁸ The vulnerability and poverty of rural peoples deepens as water is less available and competition increases. If this neoliberal policy and economic development model grounded in extractive industries and large agro-export companies remains, this situation of accumulation, concentration, and waste cannot change and conflicts over access to and uses of water, land and territories will only increase.

Nevertheless, “bottom-up” responses are useful. In some cases, large public protest and the proposals for alternative law and policy can be influential, potentially even influencing the national constitution, as in Ecuador. In other cases, as in Peru and Mexico, mobilization and alternative policy-making tend to be of lower profile and the few successes can be noticed especially in localized events. Along with protests and mobilizations by civil society and rural and indigenous communities against private and concentrated water rights, there is also a more subtle struggle for these constituents to establish and enforce their own rights and rules. 

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²⁵ The Ottawa Declaration also avows the member-nations' commitment to sustainable development of the natural resources within the Arctic. See *Ottawa Declaration*, *supra* note 15. Each member nation has enunciated a policy that supports the development of oil and gas reserves in the Arctic in each member-nation's respective "Strategy for the Arctic." See FINLAND PRIME MINISTER'S OFFICE, FINLAND'S STRATEGY FOR THE ARCTIC REGION 19-22 (2010); GOVERNMENTS OF DENMARK, THE FAROES, AND GREENLAND, KINGDOM OF DENMARK STRATEGY FOR THE ARCTIC 2011-2020 24-29 (Aug. 2011); GOVERNMENT OF ICELAND, A PARLIAMENTARY RESOLUTION ON ICELAND'S ARCTIC POLICY (2011); CANADA MINISTER OF PUBLIC WORKS AND GOVERNMENT, CANADA'S NORTHERN STRATEGY 14-16 (2009); NORWEGIAN MINISTRY OF FOREIGN AFFAIRS, NEW BUILDING BLOCKS IN THE NORTH 23-25 (2009); See also *Combines Strategies for the Arctic*, *supra* note 23, at art. G.

²⁶ See DEEP WATER: THE GULF OIL DISASTER AND THE FUTURE OF OFFSHORE DRILLING, NATIONAL COMMISSION ON THE BP DEEPWATER HORIZON OIL SPILL AND OFFSHORE DRILLING 126-127 (2011), <http://www.oilspillcommission.gov/sites/default/files/documents/FinalReportChapter4.pdf> (discussing the failure of government regulators to enforce necessary regulations and maintain proper enforcement to ensure that BP was not cutting corners and lacking in the necessary safeguards to prevent the oil spill).

²⁷ See NOWLAN, *supra* note 8, at 10 (noting that a "unique" aspect of the Arctic Council is the fact that provides indigenous people's of the Arctic with 'Permanent Participant' status and provides them with an ability to influence the council's actions).

²⁸ Nowlan states, "The Arctic Council's effectiveness is significantly enhanced by this innovative approach to indigenous peoples. There is a general consensus among the participants that indigenous involvement in the AEPS has made the process a different and more successful product. Their participation gives 'real life examples' of the impacts of policies and developments." See NOWLAN, *supra* note 8, at 11.

²⁹ See NOWLAN, *supra* note 8, at 15-16 (discussing the lack of enforcement and decision making authority vested in the Council).

³⁰ See *id.*

³¹ See SUSAN JAY HASSOL, IMPACTS OF A WARMING ARCTIC: ARCTIC CLIMATE IMPACT ASSESSMENT 2-5 (2004) (discussing the impacts resource extraction on global and arctic climate change. Further discussing responses to climate change through mitigation of greenhouse gas emissions, and citing the role of fossil fuels in adding to greenhouse gas emissions).

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¹ Jan Hendriks, *Water Laws, Collective Rights and System Diversity in Andean Countries*, in OUT OF THE MAINSTREAM: WATER RIGHTS, POLITICS, AND IDENTITY 168-71 (Rutgerd Boelens et al. eds. 2010).

² Anthony Bebbington et al., *Federating and Defending: Water, Territory and Extraction in the Andes*, in OUT OF THE MAINSTREAM. WATER RIGHTS, POLITICS AND IDENTITY 320 (Rutgerd Boelens et al. eds., 2010); KATE BERRY & ERIC MOLLARD, SOCIAL PARTICIPATION IN WATER GOVERNANCE AND MANAGEMENT: CRITICAL AND GLOBAL PERSPECTIVES (Routledge 2009).

³ See generally Jose Esteban Castro, *Water Struggles, Citizenship and Governance in Latin America*, 51 DEVELOPMENT, 72 (2008) (exploring some of the trends and problems that have arisen in Latin America surrounding water access).

⁴ *Id.* at 75; PAUL H. GELLES, WATER AND POWER IN HIGHLAND PERU: THE CULTURAL POLITICS OF IRRIGATION AND DEVELOPMENT (Rutgers Univ. Press 2000); Antonio Gaybor, *Acumulación en el campo y despojo del agua en el Ecuador*, in JUSTICIA HÍDRICA: ACUMULACIÓN, CONFLICTOS Y ACCIÓN CIVIL 195-208 (Rutgerd Boelens et al. eds. 2011).

⁵ UNITED NATIONS ENVIRONMENT PROGRAMME, Climate Change Hits Hard on Latin America and the Caribbean, (Apr. 6, 2007), <http://www.unep.org/documents.multilingual/default.asp?documentid=504&articleid=5558&l=en>.

⁶ Francisco Pena, *Acumulación de Derechos de Agua y Justicia Hídrica en Mexico: El Poder de Las Elites*, in JUSTICIA HÍDRICA: ACUMULACIÓN, CONFLICTOS Y ACCIÓN CIVIL 209-22 (Rutgerd Boelens et al. eds. 2011)

⁷ *Id.*; see also Erik Swyngedouw, *Dispossessing H2O: The Contested Terrain of Water Privatization*, 16 CAPITALISM NATURE SOCIALISM 81, 81-98 (2005); KAREN BAKKER, BEYOND PRIVATIZATION: WATER, GOVERNANCE, CITIZENSHIP (2010); MIGUEL SOLANES & ANDREI JOURAVLEV, COMISIÓN ECONÓMICA PARA AMÉRICA LATINA Y EL CARIBE (U.N. CEPAL), RECURSOS NATURALES E INFRAESTRUCTURA: WATER GOVERNANCE FOR DEVELOPMENT AND SUSTAINABILITY 22-25 (2006).

⁸ U.N. CEPAL, Recursos Naturales e Infraestructura, *Administración del agua en America Latina y el Caribe en el umbral del siglo XXI*, 12, (July 2001) (by Andrei Jouravlev).

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¹⁰ Hendriks, *supra* note 1, at 17-72; Mourik Bueno de Mesquita, *Agua, concentración de recursos naturales y conflictos en el Perú*, in JUSTICIA HÍDRICA: ACUMULACIÓN, CONFLICTOS Y ACCIÓN CIVIL 179-94 (Rutgerd Boelens et al. eds. 2011).

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¹² Rutgerd Boelens & Margreet Zwarteven, *Prices and Politics in Andean Water Reforms*, 36 DEVELOPMENT AND CHANGE 735, 735-58; BAKKER, *supra* note 7.

¹³ Hendriks, *supra* note 1, at 168-71.

¹⁴ Swyngedouw, *supra* note 7, at 82.

¹⁵ *Id.* at 83-84.

¹⁶ Pena, *supra* note 6, at 214.

¹⁷ *Id.* at 85 (discussing the establishment of regulatory bodies and the subsequent budgetary issues that led to inefficient operation).

¹⁸ Rutgerd Boelens, *The Politics of Disciplining Water Rights*, 40 DEVELOPMENT AND CHANGE, 307, 315-18 (2009) [hereinafter *Water Rights*].

¹⁹ *Id.* at 313-14.

²⁰ Boelens & Zwarteven, *supra* note 12, at 739-44.

²¹ Castro, *supra* note 3, at 73; Bebbington et al., *supra* note 2, at 313.

²² Bebbington, *supra* note 2, at 307-31.

²³ Rutgerd Boelens, Armando Guevara-Gil & Aldo Panfichi, *Indigenous Water Rights in the Andes: Struggles Over Resources and Legitimacy* 20 THE JOURNAL OF WATER LAW 268, 275-76. [hereinafter *Indigenous Water Rights*].

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²⁵ *Id.*

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²⁸ James Keese, *International NGOs and Land Use Change in a Southern Highland Region of Ecuador*, 26 HUM. ECOLOGY 451, 464-66 (1998); Carols Larrea & Lisa L. North, *Adjustment Policy Impacts on Truncated Development and Democratization*, 18 THIRD WORLD Q. 913, 915-29 (1997); See generally Victoria A. Lawson, *Government Policy Biases and Ecuadorian Agricultural Change*, 78 ANNALS ASS'N AM. GEOGRAPHERS 433, 434-49 (1988).

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³³ *Id.*

³⁴ *Id.* at 199.

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³⁶ *Id.*

³⁷ *Id.*

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³⁹ *Id.*

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⁴⁴ *Id.*; Leontien Cremers et al, *Institutional Reform in the Andean Irrigation Sector: Enabling Policies for Strengthening Local Rights and Water Management*, 29 NATURAL RESOURCES FORUM 37, 41 (2005).

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- 50 *Id.*
- 51 *Id.*
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- 54 *Id.*
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- 61 *See id.*; Pena, *supra* note 6, at 209
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- 63 *Id.*
- 64 *Id.* at 212-13.
- 65 *Id.* at 213.
- 66 *Id.*
- 67 *Id.*
- 68 *Id.*
- 69 *Id.*
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- 72 *Id.*
- 73 *Id.* at 213-14.
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- 75 *Id.*
- 76 *See generally* S. VARGAS & E. MOLLARD, *PROBLEMAS SOCIOAMBIENTALES Y EXPERIENCIAS ORGANIZATIVAS EN LAS CUENCAS DE MEXICO* (2005).
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- 79 *See id.* at 985-86 (discussing legislation that while “democratic in spirit” deprives farmers of access to water and gives government bureaucracies the distribution power which is frequently misused).
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- 83 *Id.* at 15-18.
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- 113 *See generally* BAKKER, *supra* note 7.
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- 129 *See* Ortiz, *supra* note 129.
- 130 *See generally* Pena, *supra* note 6 (discussing general water reform efforts in Mexico).
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- 132 *See* CIP Americas, *Inter-American Development Bank Megaprojects: Displacement and Forced Migration* (May 19, 2010), <http://www.cipamericas.org/archives/2421>.
- 133 Saavedra, *supra* note 124.
- 134 U.N.E.S.C.O WATER: A SHARED RESPONSIBILITY 12 (2006).
- 135 Bebbington et al., *supra* note 2, at 318.
- 136 *Id.*
- 137 *Id.* (Noting that indigenous mobilization “is very far from being a sufficient vehicle for changing both the rules of the game and the ways in which this game is played such that indigenous and citizen rights of access to water, resources and self-governance are guaranteed”).
- 138 *Id.*
- 139 *Id.*
- 140 *Id.* (Explaining that that “constitutional change, no matter how apparently progressive, will do little to protect water rights while cultures of power continue to be inflected with authoritarianism”).
- 141 *Id.*
- 142 *Id.*
- 143 David Howard, Mo Hume, & Ulrich Oslender, *Violence, Fear, and Development in Latin America: A Critical Overview*, DEVELOPMENT IN PRACTICE, November 2007, at 714 (stating that the underdevelopment in Latin America can be explained by the exploitation of satellite areas for the economic development of the core. As a result, satellite areas remain undeveloped because they do not have access to their own resources).

¹⁴⁴ *Id.* at 715 (“The escalating depletion of . . . land, air, water, the corporatization and privatization of hitherto public assets, the reversion of common property rights won through years of hard class struggle to the private domain indicate a new wave of enclosing the commons”).

¹⁴⁵ Castro, *supra* note 5, at 75.

¹⁴⁶ *Id.*

¹⁴⁷ Boelens & Zwarteven, *supra* note 12, at 735, 741.

¹⁴⁸ Bebbington, et al., *supra* note 2, at 316-17; *Indigenous Water Rights*, *supra* note 23, at 271.

¹⁴⁹ *Indigenous Water Rights*, *supra* note 23, at 328.

¹⁵⁰ *Id.* at 271.

¹⁵¹ *Id.* (Explaining that “[l]ocal territories are invaded and existing water rights often neglected”).

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ Boelens & Zwarteven, *supra* note 12, at 735-58.

¹⁵⁵ *Id.*

¹⁵⁶ *Id.* at 744. (Revealing that “water reforms in the Andes threaten to destroy existing local and indigenous water rights systems”).

¹⁵⁷ *Water Rights*, *supra* note 23, at 328-29.

¹⁵⁸ DIK ROTH, ET AL., LIQUID RELATIONS: CONTESTED WATER RIGHTS AND LEGAL COMPLEXITY 1 (2005).

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¹⁹ See *The Lubrecht Conversations*, CHRONICLE OF COMMUNITY, Autumn 1998, at 9.

²⁰ USDA FOREST SERV., THE PROCESS PREDICAMENT: HOW STATUTORY, REGULATORY, AND ADMINISTRATIVE FACTORS AFFECT NATIONAL FOREST MANAGEMENT (2002), <http://www.fs.fed.us/projects/documents/Process-Predicament.pdf>.

²¹ USDA FOREST SERV., *Id.*

²² See Snow, *supra* note 3, at 2 (describing “collaborative conservation” as an emerging movement that “reaches across the great divide connecting preservation advocates and developers, commodity producers and conservation biologists, local residents, and national interest groups to find working solutions to intractable problems that will surely languish unresolved for decades in the existing policy system”).

²³ E.g., Snow, *supra* note 3, at 4.

²⁴ See Snow, *supra* note 3, at 2; see also Williams & Ellefson, *supra* note 7, at 1 (discussing the various stakeholders that may be involved in resource partnerships).

²⁵ See *From Troubled Waters: The Emergence of Collaborative Conservation*, in ACROSS THE GREAT DIVIDE 13, 13-14 (Philip Brick et al. eds., 2001) (introducing several essays that address the emergence of collaborative conservation groups).

²⁶ Philip Brick & Edward P. Weber, *Will Rain Follow the Plow? Unearthing a New Environmental Movement*, in ACROSS THE GREAT DIVIDE 15, 15 (“Collaboratives are a response to dysfunctional environmental strategies and policy processes, but are also symbiotically dependent on them.”).

²⁷ See Andrus & Freemuth, *supra* note 17, at 11 (concluding that collaborative processes “matter[] most” in the West).

²⁸ See Snow, *supra* note 3, at 6-7; Michael McCloskey, *The Skeptic: Collaboration Has Its Limits*, HIGH COUNTRY NEWS (May 13, 1996), <http://www.hcn.org/issues/59/1839>.

²⁹ See *infra* notes 49-68 and accompanying text (describing the Blackfoot Challenge as an illustration of agency involvement in the collaborative movement).

³⁰ See Snow, *supra* note 3, at 6-7 (“Collaborative groups are usually ad hoc and ex parte. They often lack corporate status and are informal in structure.”).

³¹ See generally Ed Marston, *The Quincy Library Group: A Divisive Attempt at Peace*, in ACROSS THE GREAT DIVIDE 79 (Philip Brick et al. eds., 2001) (providing a case study of the Quincy Library Group Partnership).

³² Herger-Feinstein Quincy Library Group Forest Recovery Act Record of Decision: Final Environmental Impact Statement, http://www.fs.fed.us/r5/hfqlg/archives/record_of_decision/ (last visited Nov. 4, 2011).

³³ Herger-Feinstein Quincy Library Group Forest Recovery Act Record of Decision: Final Environmental Impact Statement, *Id.*

³⁴ The National Forest Management Act of 1976, 16 U.S.C. §§ 1600-1614 (2006).

³⁵ ECOSYSTEM RESEARCH GROUP, DRAFT PARTNERSHIP STRATEGY FOR THE BEAVERHEAD-DEERLODGE NATIONAL FOREST (2006), <http://www.mtmultipleuse.org/wilderness/B-DpartnershipStrategy.pdf>.

³⁶ Ted Fellman, *Collaboration and the Beaverhead-Deerlodge Partnership: The Good, the Bad, and the Ugly*, 30 PUB. LAND & RESOURCES L. REV. 79, 93 (2009).

³⁷ See *supra* notes 4-5 and accompanying text.

³⁸ Fellman, *supra* note 36, at 95.

³⁹ Phil Taylor, *Wilderness Bills Proliferate as Promoters Hope to Break 2-Year Drought*, N.Y. TIMES (May 3, 2011), <http://www.nytimes.com/gwire/2011/05/03/03greenwire-wilderness-bills-proliferate-as-promoters-hope-16290.html?pagewanted=all>.

⁴⁰ *Public Lands and Forests Legislation: Hearing on S.1470, S. 1719, S.1787, H.R. 762, and H.R. 934 Before the Subcomm. on Public Lands and Forests of S. Comm. on Energy & Natural Resources*, 111th Cong. 45-46 (2009) (statement of Sherman Anderson, President and Owner, Sun Mountain Lumber, Inc.).

⁴¹ Ray Ring, *Taking Control of the Machine*, HIGH COUNTRY NEWS (July 20, 2009), <http://www.hcn.org/issues/41.12/taking-control-of-the-machine>.

⁴² Ring, *supra* note 41.

⁴³ Ring, *supra* note 41; see also ECOSYSTEM RESEARCH GROUP, *supra* note 35, at 4.

⁴⁴ E.g., Ring, *supra* note 41; ECOSYSTEM RESEARCH GROUP, *supra* note 35.

⁴⁵ Ring, *supra* note 41; ECOSYSTEM RESEARCH GROUP, *supra* note 35.

⁴⁶ E.g., Ring, *supra* note 41; ECOSYSTEM RESEARCH GROUP, *supra* note 35.

⁴⁷ ECOSYSTEM RESEARCH GROUP, *supra* note 35, at 23-27.

⁴⁸ Forest Jobs and Recreation Act of 2011, S. 268, 112th Cong. (2011); see also Ring, *supra* note 41.

⁴⁹ *Who We Are_History*, BLACKFOOT CHALLENGE, <http://blackfootchallenge.org/Articles/?p=185> (last visited Nov. 4, 2011); see also *Blackfoot Community Conservation Area*, BLACKFOOT CHALLENGE (Feb. 2010), http://blackfootchallenge.org/Articles/wp-content/uploads/2010/06/Blackfoot-Community-Conservation-Area_2010.pdf (mapping out the entire Blackfoot Community Conservation Area (BCCA)).

⁵⁰ *Who We Are*, BLACKFOOT CHALLENGE, <http://blackfootchallenge.org/Articles/?cat=3> (last visited Nov. 4, 2011).

⁵¹ Sonja Lee, *Blackfoot Challenge Rises to the Task*, GREAT FALLS TRIB. (Aug. 21, 2005), <http://blackfootchallenge.org/Articles/?p=116>.

⁵² Rob Chaney, *Montanans See Their Ideas in Obama Outdoors Initiative*, MISSOULIAN, (Feb. 17, 2011, 8:45 PM), http://missoulain.com/news/state-and-regional/article_71277f94-3b0e-11e0-be21-001cc4c03286.html (“‘I can’t stress enough how that impresses me, that Washington is finally starting to get it,’ said Iverson, a Potomac rancher and logger who helps lead the Blackfoot Challenge.”).

⁵³ Telephone interview with Denny Iverson, Treasurer, Blackfoot Challenge Board, (Feb. 24, 2011).

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Who We Are*, *supra* note 50.

⁶⁹ See *supra* note WETERING, *supra* note 15 and accompanying text.

⁷⁰ See *About VDCP*, VALLESCALDERA, <http://www.vallescaldera.gov/about/> (last visited Nov. 4, 2011).

⁷¹ Valles Caldera Preservation Act, 16 U.S.C. § 698v (2006); see also WETERING, *supra* note 15, at 18.

⁷² 16 U.S.C. § 698v (2006).