FROM UNIVERSAL PRESCRIPTIONS TO
LIVING RIGHTS: LOCAL AND INDIGENOUS
WATER RIGHTS CONFRONT PUBLIC-PRIVATE
PARTNERSHIPS IN THE ANDES

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With growing water scarcity and conflicts in many regions of the world, water rights and property relations have become a pivotal issue in water legislation efforts, policy debates and rural development programs. Still, there appears to be an enormous lack of understanding of what these water rights and property relations are in actual practice. For the most part, policymakers, intervening agencies and rural development institutions typically approach water rights as globally applicable, entitlement recipes. Water rights are portrayed as universally defined procedures that prescribe rational water-use claims and authorize corresponding user licenses. For peasant communities and indigenous water user organizations in the Andean region—as with many parts of the world—the right to water has many components that go beyond universal reasoning and policies. Water rights involve access to resources, context-defined privileges and agreements on system operations. Water rights also include decisionmaking powers over control, issues of belonging (i.e., hydraulic identities—water's role in a particular culture) and agreements that closely intertwine the normative, infrastructural and organizational domains of water control. All these components are created, reconfirmed and then re-created in location-specific historical processes within particular cultural and political contexts.

This analysis focuses on the dynamics of water rights in irrigation water control—responsible for 80 percent of the freshwater consumption in the Andean region—within a wider socioeconomic, cultural and political panorama. It emphasizes that there is an enormous variety of definitions and uses of water rights in practice, and that its meaning and function cannot be assumed. Therefore, to understand the space- and time-specific meaning of a water right, it is necessary to close the policymakers' prescriptive manuals and examine rights in their relation to the legal complexities at the local level.

Despite claims to the contrary, water policies and intervention practices in the Andean highlands often neglect the cultural pluralism inherent to local and indigenous
water rights practices, undermining and replacing them with externally controlled allocations, organizations and institutions. The practice of introducing "rational water rights" and "efficient water use" as the vocabulary in discussions of integrated and participatory water management has proven to be quite effective in achieving this objective.

In other analyses, I have examined and criticized the subtle (and not so subtle) efforts to subjugate Andean water rights and user collectives to bureaucratic policies and to the interests of international, neoliberal water privatization programs. This paper takes a closer look at the problematic practices of many of the public-private partnerships (PPP) that, with the strong support from international policy institutions, increasingly dominate the Andean waterscapes. This paper also demonstrates that Andean user collectives—erroneously dealt with as either public or private—do not always accept this modern approach of sidestepping and consider this method to be a violation of their water rights and essential needs.

**Water Rights and Legal Complexities**

In general terms, the right to water authorizes the use of a flow of water from a particular source and requires one to abide by legally or locally established privileges associated with the water right—such as access and operational rights, decisionmaking and control rights, and representational rights, amongst others—provided that certain obligations associated with the water right are fulfilled. But behind such general notions, community water control harbors a tremendous diversity of "living water rights." This diversity is an intrinsic consequence of the historical process of matching regulatory norms, organizational forms and hydraulic infrastructure to the particular social and agrophysical requirements of each locality. Additionally, living water rights result from the water users' negotiations and user-manager encounters within each irrigation system and the confrontation with wider power structures. Here, the interaction among different socio-legal frameworks is crucial, as is the incorporation of a set of rules related to the subsequent irrigation traditions in the Andean region. Such traditions range from the historically rooted, indigenous traditions, as well as Spanish-colonial and hacienda traditions, to the more recent bureaucratic and neoliberal policy traditions that have developed in the region over the last two decades. Rather than constituting a bounded framework clearly corresponding to these traditions, contemporary peasant and indigenous irrigation management combines elements from various official and unofficial traditions, sources and organizations that interact within each specific irrigation system. Often these local rights and rules are not written down; nevertheless, they usually consist of a clear, widely popularized pattern of norms that are part of the collective local memory and reference framework. For these reasons, each system and every water-user collective has its own particular background logic along with general norms, which constitute the heart and fundamental pivot of the system.

Thus, to understand local irrigation management in the Andes, it is critical to examine these historical and cultural perspectives and the prevailing constellation of social, economic and political power structures because, to begin, it is insufficient to focus exclusively on local communities. First, local Andean irrigation systems adopt from—sometimes unconsciously—externally imposed rules and rights, particularly those emanating from state law. Understanding local socio-legal practices requires an understanding of how original norms of the state or external legal systems have become entangled in local communities. This may also be a conscious local strategy. State law constitutes an important source of power in that local water-user communities often seek to use its rules, rights and procedures to their advantage when circumstances require it. When conflicts arise, stakeholders strategically shop around to select the rules and procedures from varying socio-legal systems that may legitimize, defend and strengthen their particular claims. Second, while local law informs users' behavior and orientation in the Andean region, state law cannot be underestimated as a powerful source of imposing norms on locally managed irrigation systems. At the very least, it is an important tool that is activated by external agents in attempts to normalize and control local users, who often are seen as unruly in their eyes. Here, it is common to observe that state institutions and officials draw from their own normative background as they have little knowledge of, or simply deny, local understandings and applications of water rights. This is most evident when state efforts to legitimize and impose the official legal framework do not succeed, stirring local resistance. Thus, state law and water policies constitute both threats and opportunities for local and indigenous water user communities in the Andes.

The strong interaction among prevailing normative systems that shape local water rights (e.g., state water law, religious tenets and indigenous customs) becomes increasingly complex in cases in which additional water rights practices are generated or imposed by multiple project interventions in irrigation. These irrigation and water management projects and programs—often implemented by nongovernmental organizations (NGOs), international companies or consortia of public and private entities to set up or rehabilitate water-use systems with support from donor agencies—commonly set their own criteria for irrigation management. This project law usually finds its roots in local NGO principles (water rights addressing gender, environment and local management); in national policy projects (in the case of irrigation management in which governments turned system management over to user groups); or in international policies and intervention programs (based on the installation of market principles and private water rights regimes).
The socio-legal frameworks of local and indigenous water-use systems in the Andes may be analyzed as “semi-autonomous social fields” surrounded by rules and enforcement emanating from the broader societal setting. This field "has rule-making capacities, and the means to induce or coerce compliance, but it is simultaneously set in a larger social matrix which can, and does, influence it." As Sally Falk Moore observed, they are semi-autonomous, not only because they can be affected by norms and enforcement under other normative systems—such as the national legal framework—but also because stakeholders in the social field can mobilize these outside norms, or threaten to do so, when negotiating or confronting other actors in the social field. They also have a certain degree of autonomy because the legal or "outside" norms have a limited function and scope within local water territories, in which user groups' own rights, obligations, and authorities are often strong and quite important.8

For their intrinsic cultural diversity—as well as local, national and international hybridization—the contents of water rights cannot be assumed. Instead, they need to be analyzed empirically. This includes defining—and finding a balance among—the components of a water right (e.g., consumptive use rights, non-consumptive access rights, usufruct and income-earning rights, and control and decision-making rights). Additionally, clarification is needed regarding the duties linked to rights, the conditions and mechanisms to acquire rights, the operational rules attached to rights and the legitimacy and enforcement capacity attached to certain rights. The complexity of the water rights picture is not restricted to irrigation and water management practices alone. Water allocation and distribution in Andean communities are closely enmeshed in economic and non-economic institutions and networks of social and political relations, some of which have little or no relationship with the management of water resources. Access to, and consolidation of, water rights are attached to all types of non-water related rights and duties.

Indeed, unlike government-granted or market-based water rights that are commonly related to individuals (typically males), water rights in peasant and indigenous communities are generally granted to families that belong to a collective.9 These families build important elements of their identity by forming part of a community and its collective irrigation system. Moreover, the rights of each individual are derived from these collective rights and membership responsibilities.10 In most collectives having a strong sense of community, all households who fulfill their duties are entitled to water use. This right is normally non-transferable by individual decision-making because it belongs to the collective; when one stops using water, it reverts back to the community. By contrast, in regions and systems in which water rights have become individualized over time, rights and obligations are consequently separated from other fields of community life. As such, the notions of both individual and collective rights acquire different meanings. In Chile, for example, water rights are individualized by law. This means that users compete with each other and among irrigation systems that, at the same time, require collective management.

The mechanisms to acquire water rights in local and indigenous systems often differ from national regulations or market-based transfers. Apart from claims to territorial rights based on historical struggles and negotiations (or rights allocated through marriage, inheritance and local forms of exchange), the prevalent way in which local Andean communities have historically obtained ownership of water is through investments of vast amounts of labor (in collective labor parties) and other resources in the construction of irrigation infrastructure. Through such investments in collective construction, infrastructure, along with a household’s right to water, are established. Two different types of rights are thus constructed: the above-mentioned collective rights of users within one irrigation system vis-à-vis third parties, and individual (or household level) rights that refer to those of water users within one irrigation system and specify their claims vis-à-vis each other. Thus, the local investment processes in irrigation not only establish the community’s relation to their water-use system, but also their relations within the community. Such relationships constitute the social basis for collective action in various irrigation tasks.11 After constructing the systems, labor contributions to maintenance not only serve to keep up the infrastructural system but also to actualize property rights. It is the motor of most peasant and indigenous systems’ user management and sustainability: creating infrastructure means creating collective and individual rights. Likewise, re-creating and maintaining the system means re-creating and maintaining rights.

During such creation-based processes, the mutual bonds of obligation required to operate and sustain the systems—together with collective ownership in which each user’s rights, shared water history, myths, customs, rituals and struggles are embedded—allow users to identify with their system and each other, and engage in collective action. These creation-based processes are typical of the collective nature of water in the Andes; in most cases, quite beyond presumed Andean solidarity, water can be managed only by means of day-to-day collective action. Collaboration, instead of competition, is the only way to survive and secure water rights in this extremely adverse environment.

WATER POLICIES AND POLITICS

Recently, there has been growing attention to policies that concern peasant customs, indigenous cultures and rights in the Andean region.12 Most countries in the region have accepted international agreements and are working towards greater recognition of ethnic plurality and multiculturalism. Recent constitutional recognition of
multicultural diversity in Andean countries (such as Peru in 1993, Bolivia in 1994 and Ecuador in 1998), together with the ratification of the International Labor Organization (ILO) Convention 169 concerning Indigenous and Tribal Peoples in Independent Countries, are important examples. Despite these high-level constitutional changes, state systems remain grounded in a general, nationwide, positivistic application of law. Under the banner of equal rights among all citizens, this equality imperative is used to prohibit rights from being tailored to local situations. No exceptions can be made that would recognize the validity of diverse and different water rights systems in the nation-state. Water laws and regulations tend to follow a strong monistic, political model, which does not recognize local, cultural principles of water management, nor does it acknowledge particular needs, assets or organizational forms. Countries such as Peru, Ecuador and Chile have enacted special legislation for peasant and indigenous communities, but also fall into the traps of first, extracting and simplifying the presumable essence from group identities and collective rights systems in order to, subsequently, naturalize and codify these identities and rights repertoires. In this way, such special laws and policies often contain and cage local, vibrant, living identities, rights and communities in strict categories and control their dynamics and, at the same time, make rights and practices illegal that are not recognized.

Indeed, local rights make sense only in the local context and lose their relevance in national legislative frameworks. For Andean communities, a water right, placed out of its context, is not a water right. As previously mentioned, water rights are closely related to local processes of identification and use collectives actively embed water rights in their community context. But this local integration and heterogeneity is a fundamental obstacle and headache for national water bureaucracies and international players. They require a uniform, predictable playing field with exchangeable rules, rights and resources. Additionally, they call for a single representation of authority to foster their objectives of controlling water management and/or enabling the transfer of water resources and rights according to universal market laws. In practice, the imposition of bureaucratic, nationwide regulations—or adhesion to market prescriptions—ferociously challenges local, collective water rights’ frameworks and their dynamics. Rather than changing social differences among the water haves and have-nots and bringing more equal distribution of water resources, equality ideology is put to work as a discursive and political-administrative tool to deny the right to be different, thus compelling all users to practice the same water control and management rules forced by an equalizing regime of governance.

Creating such universal prescriptions does not reflect universal best interests. Instead, it neatly follows the image and interests of the dominating class, ethnic and gender groups in the Andean countries. In the Andes, the water rights equality model is white, masculine, legalistic, technocratic and occidental. Water policies are a clear reflection of this. Rodrigo de la Cruz rightly concludes that “the principle of equality before the law is valid for the identical and profoundly unjust for the diverse.” For this reason, rather than building on fashionable discourses of participation and decentralization, it is crucial to recognize that, for policies claiming to take into account local water rights systems, reconciling interests and decentralizing management fundamentally entails redistributing resources, authority and power. This refers to the power of users and involved non-users, as well as the consensus-building and policy- implementing agencies themselves. Societal relationships and power structures decisively influence water policy, lawmaking and the enforcement of them. Therefore, any consensus-building policy cannot escape the question of divergent stakeholders’ positions, knowledge, interests, powers and diverse water control strategies. Such a policy must demystify all of the discourses based on terms of equity, democracy and popular participation that fail to make clear how to achieve such goals.

As a consequence of ignoring prevailing power structures, regional Andean water policies often lack explicit, comprehensive discussions about existing interests or their influence on decisionmaking in integrated watershed management programs; they often are established intervention policies, so-called proven rules and professional criteria. Thus, many programs are grounded in the implicit norms of professionals, institutions and legal regulations, emphasizing, above all, efficiency and productivity in technical and economic terms. Also, in the socio-organizational field, there is a tendency to develop and impose the most theoretically efficient and rational organizational structures and rules for consensus-building entities and negotiation platforms, which are often neatly aligned with the formal decisionmaking structures. As a result, many artificial organizations have emerged, often to channel institutions’ interests and messages or to reinforce national legal regulations. This simultaneously implies the neglect of local institutions, property relations and system-building arrangements, with consequences that go far beyond forming systems that are not adapted to local needs. In this paper, rather than focusing on the outright encroachment of local and indigenous water rights (which also takes place in many parts of the Andes, with or without policy support), I will highlight how the very rationality of well-intended water development often misunderstands indigenous property relationships, dramatically affecting the beneficiaries.

**How Irrigation Development May Lead to the Destruction of Local Property Rights**

Investments made by outside agencies not only interfere with existing irrigation infrastructure, and with the organizational structures needed to operate the changed
infrastructure. They often also change the very heart of the irrigation system—its water rights foundation. In their eagerness to build the facility and transfer knowledge, public and private interventions often impose their own rules of the game and ignore people's own normative systems, especially the notion of creating hydraulic property. This can paralyze or destroy the foundation of collective action in community water management. For this reason, many systems can be found in the Andes that, despite a long history of community self-management, can barely get back into operation after a purported improvement project that distorts the system's rights-obligations relationship.

For example, Gerben Gerbrandy and Paul Hoogendam present the cases of Tiraque and Punata in Bolivia, which faced intensive fighting and serious water management conflicts after external investment reversed water property relations. These cases illustrate Walter Coward's observation:

> If state investment occurs in settings with existing community irrigation facilities...the usual property consequence is the destruction of existing property relationships. That is, property relations built around the prior investment process and the property objects that have been created are disrupted, confused, and muddled to the extent that they no longer serve to organize social action. This occurs because the State either ignores or discounts the ownership of existing facilities and water rights and lodges the rights to all new hydraulic property in itself.

In this context, the basis for continuing collective action and water provision is removed by expert intervention.

The Aranquez irrigation project in Cotahuasi, Peru also illustrates a similar reality. After initial intervention activities that stretched out over a period of more than fifty years, the state agency, in 1997, began extending and lining an existing earthen canal in order to provide extra irrigation water to six communities that were already practicing irrigation, mainly by using several smaller, ancient canals. Project strategies concerning labor investment by user communities were vague and chaotic. The head-end community left all the work to tail-end communities, justifying this action by stating that they did not need the extra water. The communities at the far tail-end of the area did not join since they were not involved in planning. After decades of broken promises, they no longer had faith in the success of the politicians' project. The community in the middle-reach had to deliver all the work. Some wealthy land owners hired peones (day laborers). Others worked personally to build their water property rights, reasoning that they could create water rights by investing their labor when creating water infrastructure. Some contributed too much, others too little, and conflicts within and among communities broke out. The provincial council built the main intake without any user involvement, creating new property confusion since the allocation of corresponding water rights was not clear for the users. Despite official promises of a large multi-community system bringing prosperity to the region as a whole, currently only the water users of two head-end communities can make use of the system, and conflicts continue. Even within these communities there is disorder and conflict since the state agency allocated legal water rights to all users proportional to the area they own, in spite of the fact that not everyone contributed sufficient labor days—or even any labor at all—to create their hydraulic property rights.

Another illustration is the Canal Nuevo case in the Mollepata region, Cusco, Peru. In the late 1970s, the government intervened through a PPP to build a large irrigation canal, depending entirely on external expert knowledge. The canal, which was to irrigate the land of Mollepata, would cost millions of dollars, but was designed without consulting with local communities. Marcahuaylla is one of these communities that was promised to benefit from the project but, as all the others, it was negatively affected. Cirilo Hermosa, one of the leaders from the Marcahuaylla community, explains:

> Mollepata suffered from irrigation difficulties, because there were ancient canals, but they had been abandoned, due to landslides and all. The State stepped in, with engineers, to make an irrigation canal. They quickly conducted studies, hired their people, and got the machinery working to begin building. We didn't know, there were no meetings in Mollepata, the mayors were involved a bit, but no one talked with the people.

Nevertheless, the elites knew how to get along with the agencies implementing the project, and it turned out that the canal was mainly going to benefit the largest farmers, including the former government engineers who had managed to get a lot of the land awarded to them during the period of agrarian reform between 1969 and 1979. Hermosa states:

> The canal was going to benefit the richest people, the big fish, not the poorest people like us up here. They grabbed the best land, where the canal was leading to. People had been swindled by the big guys. Who were they? The mayor had a hacienda, the governor had a hacienda, the judge had one of the biggest pieces of land. The small farmers had no vote, or even any voice.
Furthermore, local norms and previous experiences of building region-specific canals were completely ignored. As Hermosa states: "Designs were made on the basis of aerial photography. As if they were gods, they designed the system from the air, with their aerial photos. And we were all obliged to turn over our land where the canal platform would go through." Santiago Quintana, another farmer and leader of the same community, agreed:

Just the engineers, with the authorities of Mollepata, made the design; but there was no discussion with the local inhabitants—no, just a frontage study... They drew the platform, where to run the water, finished the study and started the construction, trespassing through farms without anyone's permission. Abusively, they began digging the ditch for the canal, without paying any compensation for the land or even the crops we lost... since it was for the people's good, development for the people's progress, no losses were reimbursed. It made no sense to complain.

After three years of construction, the project failed as soon as it was inaugurated. Only a minimal portion of the 1,800 liters per second design capacity went through the canal, and only for a few days. Quintana relates, 

It worked for two or three days, but with only about 30 liters per second of water... The water dried up and there were landslides. Now it is an elefante blanco (white elephant) without use. It was a tremendous disappointment.

The canal crumbled and was abandoned without any technical, financial or social solutions to restore it. Quintana says,

The canal was too expensive for us to take it over. The engineers vanished, since the work was not done properly, they abandoned it. There was no water; it didn't work. They got some good out of it, since they were paid their salaries, and they took away most of the money, in transportation, materials, cement and so on.

The great inability to imagine the consequences of their technical design for local contexts, and an unwillingness to understand existing norms, strategies and labor relations—such as faenas (collective working parties) for hydraulic property creation—was a basic weakness of the design process. As Quintana explains:

There were no community work parties in this canal, just paid laborers from Cusco, Puno, the North... They got manpower from anywhere, so we acquired no ownership ourselves... Like any company, they did the work, as simple as that. As if they were the boss, they came in and paid people to work.

Hermosa also talks about strong biases the experts brought to their vision:

This type of canal is bad. The technicians came from the Coast but did not know the Highlands. The conditions, the land, is different here. The project was turned over to contractors, canal specialists from the North, who didn't know how we work, how we live, but just rushed through their studies without talking or working with people.

As a result, for many years people in the region lived under conditions of great water scarcity. Many fields and crops were directly trampled down by the white elephant; farmers invested household money in credit to purchase seeds, fertilizers and other irrigation inputs, and desperately waited for the Canal Nuevo water to arrive. Hope and confidence were also destroyed by the outside experts: perceived water scarcity was worse then ever before. Only since the mid-1980s have marginalized groups in the region been able to break free of their dependence on local elites, government agents and construction enterprise experts. As Quintana comments, they regained self-confidence:

We wouldn't agree to let such a company in again. We can manage the authorities in town by ourselves. We no longer let a study come through just like that. Now we complain... We value our ancient canals La Estrella and Marcahuasi. Now our experience has changed, the organization has moved on, now we are more solidly organized... A beneficiary now has rights, a vote, a voice to demand whatever, but it didn't use to be that way.

Communities have rehabilitated the old canals under an agreement formulated and written with the assistance of a local NGO, which used an interactive methodology, so that communities could apply their own norms in creating water rights, and thus generate collective hydraulic property. This outcome resulted despite the presence of the PPP expetocracy. As Hermosa explains, "With experience, with the thrashing we got from this project, with this phantom canal, we have learned to stand up and fight."
Sometimes, in projects to develop state-controlled systems, there are clear intentions to increase government control over "unruly" peasant and indigenous communities in new command areas, in political, economic as well as in hydraulic terms. In such projects, although the rationality of confusing local property rights and potential destruction by intervention practices is often not understood, it is certainly welcomed by the ruling parties. In other cases, as happens in many PPPs for water system construction, these disastrous side effects leave interveners unclear about where they went wrong. An easy solution is to blame the users for their lack of expertise and their insistence on sticking to backward rules and water rights. Families are, therefore, left behind with a new white elephant.

A final illustration is taken from Licto, Chimborazo Province, Ecuador. In the design phase of the project, which excluded organized user involvement, the government irrigation agency was made responsible for designing, building and implementing the main infrastructure. Communities, the recipients of this resource, were involved in the integrated rural development project. As in so many projects, the unspoken idea behind it was that water users were to be organized and trained to be molded into a hydraulic-administrative structure designed by the state and its intervening partners. In order to implement the irrigation facilities according to the plan—the agency hired private enterprises in the early 1990s through public contracting procedures. These contractors' lack of commitment to the system, together with their technical ineptitude regarding site-specific techniques, not only led to acts of corruption, explosive cost overrun, delays and poor-quality canals, but also made it impossible for future users to become involved in decision-making about system design and implementation.

The technical choices made by the designers were remarkable. They were based entirely on high-tech theory, which called for capital-intensive facilities and unnecessarily large-scale solutions. From the outset, it should have been clear that the long conduction tunnels, the huge inverted siphons to cross gullies and river valleys, and the enormous biophysical works needed to protect the main canal—cut in extremely unstable slopes—would never be economically profitable. Furthermore, it became clear that the task of making the system technically and organizationally sustainable would be enormous. This high-tech, capital-intensive bias in Ecuadorian state irrigation systems has to do with the professional background of the agency's engineers, who were all trained in Western hydraulic engineering technology, biased towards large, flat irrigation areas (applicable only in the coastal area of Ecuador), and also with the revenue-seeking culture of the agency and the private companies it worked with. Many cases were reported in which original designs had been re-framed to become far more expensive—a direct result of the pressure of private construction companies, which had paid illegitimate bonuses to the agency to get the contract. They now could blackmail and claim the extra benefits they reasoned they were entitled to. For contractors, the more the designs were over-dimensioned the more they could tap public and local farmers' resources. The public agency employees in charge of monitoring the quality of water projects constructed by private enterprises were unable to present reliable reports since they were forced by their bosses to accept infrastructure of extremely poor quality. After receiving illegitimate payments from private companies, these bosses were not in a position to criticize the results of the offending companies given the threat of public scandal about corruption.

Contrary to common international policy wisdom, in Licto, as in many other irrigation systems in Ecuador and its neighbors, the present, universally-promoted PPPs in water development proved to be a strong hindrance to cost-effectiveness, timely delivery of irrigation works, sound infrastructure quality and, most of all, to constructing a technological system that would fit the needs, demands and capacities of the local population. The Licto peasant and indigenous user organizations no longer accept these practices and after years of struggle, they were able to take the project into their own hands. A fundamental tool for defending their system and organizing its management and upkeep was the users' rationality of water rights creation and re-creation. Against all water legislation and project frameworks, they established that water rights could not be bought or allocated as a state concession to individual users; they were to be earned through family investment in collective labor known as mingsas. Not only were the water systems adapted to their own interests, but the infrastructure constructed by these mingsas, with the help of NGOs, was of far better quality. Fundamentally, collective action formed the basis for the construction of infrastructure and water rights. Despite strong government resistance and claims by private sector enterprises that water contracts should be in the hands of expert institutions, a system was developed in which the communities themselves now manage the infrastructure and rights—from the management level to the field level—based on locally-developed rights definitions and arrangements.

Reflections

These cases are no exceptions. The policy world of water development, although full of participatory discourses, often conceptualizes intervention projects in terms of a dichotomous separation between expert knowledge and indigenous knowledge. On the one hand exist technical designs and expert knowledge and, on the other, unskilled labor and vague notions of indigenous knowledge and local resources—whereby the latter are instrumental for building infrastructures derived from the policies of the experts. The complex world of local water rights and property relations, rather than being the foundation on which to build sustainable systems, is instead
perceived as a hindrance to development and to a uniform playing field. Politicians, intervening agencies and water experts tend to consider water rights as consisting of universally applicable, standard formulas that relate water demand and water provision, juxtaposing the frameworks of positivist water science. Commonly, water laws and rights are seen as both instruments to engineer the water society and to provide the standards for the measurement of the existing reality. But far beyond universal manuals and irrigation regulations, there is another water world: one entrenched in the everyday lives of local peasants and Indigenous communities, for whom the relationship between water and survival is much starker.

In practice, these context-specific, collective water rights and management arrangements are squeezed between public and private water policy and rights ideologies, or between the powerful combination of these two. Cases show how this profound neglect of user involvement in the design, creation and rehabilitation of irrigation infrastructure prevents the creation or rearrangement of property rights according to local needs and, consequently, of a sustainable system. The unwillingness of users to participate in irrigation development and management is often explained by interveners as farmers’ lack of long-term objectives, backwardness or desire to stick to tradition. However, water users are usually conscious of what is happening, and interveners are unconscious of how their plans can muddle and destroy existing property relations that sustain local water control.

A major weakness in water project development and policymaking is the assumption that water allocation can succeed under prescribed frameworks that follow a certain chronological process with pre-established laws. They are based on the myth of water engineers, whereby the rational formulation and proclamation of best rules, rights and organizational forms sustaining technically optimal infrastructure, designed and implemented in phases that can be neatly planned, will lead automatically to predictable best outcomes. Under this approach, the state, market and intervening development institutions would be the overarching regulator of such a rationally optimal process. Mediation of this process by diverse water control interest groups is disregarded, and the human agent’s maneuvering room in the actual practice of designing and managing water control systems is denied or underestimated. However, despite the important impacts that these planning processes provoke in Andean water control, they generally do not proceed according to the pre-established frameworks specified above. Day-to-day water use, concrete management practices and policymaking result from ongoing processes of struggle and negotiation among diverse players, often with different capabilities and rights. The definition and distribution of water rights are not confined to the exclusive realm of conscious, rational planners and authorities, but are part of more widespread, socioeconomic processes and political battles. Contestation and contingencies commonly lead to the adaptation or transformation of legal policy and intervention projects causing unexpected outcomes in which different water user and non-user groups try to make their own projects.

At present, there is much criticism regarding government-centered approaches applied top-down and paternalistically in rural development and water management policies. Similarly, the opposing approaches of neoliberal thinking, with their emphasis on individualizing water ownership (a supposedly free market for water rights and privatization of water services) are facing increased grassroots and intellectual resistance. Quite rightly, these schools of thought are criticized because of their uniform, blanket prescriptions that fail to recognize or respect local diversity, thereby breaking down locally particular responses and organizational structures. There is a permanent field of tension between uniformity and diversification, universal prescriptions and local solutions, national authority and indigenous and peasant customary law, legal equality and local equity—in sum, generality and particularity. But the same criticisms of neglecting the complexity of local rights may be leveled against the participation industry. In many intervention programs and strategies, the concept of participation has degenerated into a universal commodity, handled and institutionalized by professionals and expert institutions, with social and technical prescriptions that ignore the historical roots, local norms and power contradictions within specific contexts. Consciousness-raisers raise the consciousness of the unconscious; capacity-builders build the capacity of the incapable.

Since national and international policies presumably need to be uniform in order to be implemented, often the diversity of principles and water rights in rural communities and the multiple forms of local management generated to provide specific answers for highly specific local contexts, are omitted from these new policies. Therefore, national and international policies and discourses in the Andean region, seek to disembed local water rights and undermine local hydraulic identities; this is an effort to make users de-identify with locality, bringing water rights materially, ontologically and/or political-administratively under the control of state, market and expert networks. The marginalized, peasant and Indigenous peoples do not ask to be included; they are already included, but in a society that seeks to equalize and standardize them under alien norms and under unequal power relation conditions. Thus, the matter in question ought to be a scrutiny of the participation discourse itself that, like the others, is also a specific conjunction of knowledge and power, creating its own particular truths.

Unless we understand the logic of peasant and Indigenous water management and rights repertoires—with all their equities and inequities—we will not be able to understand the causes of failure and the reasons for the resistance that often accompanies intervention processes. Alternative pathways fall on deaf ears. Rather,
the so-called successes of decentralization policies, privatization policies and expert-based integrated water management programs will be repeated within the same policymaking communities. But the picture is not entirely bleak. As many cases in the Andes region show, the water users in peasant and indigenous communities want to control their own water development, rather than obey the formal water designs, organizations or imposed indigenous rights developed for them by the state or international water rights experts and water policymakers. Local communities struggle to regain their water rights and defend their hydraulic identity. In this same reality of users appropriating water control, necessarily headed by the users themselves, there are ever more water professionals who intertwine their projects and knowledge with those of local user organizations. Through interactive, dynamic strategies, jointly devised by experts and end-users, local communities are challenging the policies and intervention presented above. In this realm, through increasing struggles and well-organized representation at negotiation platforms, water users and grassroots groups themselves can define and negotiate their water rules and obtain, defend and enforce their water rights, influencing the formulation of the rules of the game.

NOTES


4 Religious law systems in the Andes do not just refer to formalized legal repertoires in, for example, Catholic or Protestant/evangelical churches; also the Andean supernatural world, with its own authorities, rules and rights perceptions, represent a strong and socially effective referent for most indigenous water users and communities. For instance, see Paul H. Gelles, Water and Power in Highland Peru: The Cultural Politics of Irrigation and Development (New Brunswick, N.J.: Rutgers University Press, 2000).


8 Ibid., 720.

9 Particularly in bureaucratically managed systems, official regulations establish that the irrigator receives personal rights to the water, even water fees and fines putatively to the government (indigency, etc.); since this individual irrigator is generally defined as the head of household, which usually means a male, national law generally introduces or reinforces gender inequalities.

10 As such, these embedded "individual rights" are thus radically different from "privatized water rights," as referred to in neoliberal water policies. See Rurigd Boelens and Margrit Zwanerl, “Prices and Politics in Andean Water Reforms,” Development and Change 36 (Winter 2005), 735-758.


17 Rodrigo de la Cruz, "Aupotes del Derecho Constitucional a la Ratio Juridica del Estatuto," in Derecho, Pueblos Indigenas y Reforma del Estadía, ed. de Cruz et al. (Quito, Ecuador: Abaco, 2006), 81.

18 Examples of non-users involved are politicians, donor agencies, as well as the downstream watershed inhabitants and other groups affected by water use.


20 Coward (1998), 499.

21 Lynch (1988) tells about very similar cases in Peru, for instance, the dreadful impact of irrigation development in San Marcos. After intervention, perceived ownership of already existing canals that were improved by the project it unclear. Local right holders have vested rights in the system, but those canals constructed and rehabilitated by the government are considered to be state property and cause permanent conflicts. Irrigators do not see why they should invest in maintaining or repairing these canals, which fall into disuse.


24 See Boelens (2008); Jan Hendriks, Promoción rural y proyectos de riego, La experiencia del proyecto "Rehabilitación del antiguo Canal La Estrella - Mollepata" (Cusco, Peru: CADEP, 1986).

25 Ciro Hermeo, (farmer leader, Marachuamay, Peru), in conversation with the author, January 2004. In Andean communities as Marachuamay, both community and irrigation leaders have non-renominated,
rotating posts (cargo), being appointed by the community for one or two years to join the community board. Biannual rotation aims at preventing the accumulation of power within certain persons and at the same time extends the universe of community members who are knowledgeable about directing and defending community interests and managing collective water affairs. I worked with the Marcahuaylla families from January to November in 1985, making regular field research visits to the region since then. The citations come from my tape-recorded field notebook, January 2004, and will appear in Boelen (forthcoming in 2008).

26 Ibid.
27 Ibid.
28 Santiago Quintana (farmer and irrigation leader, Marcahuaylla community, Peru), in discussion with the author, January 2004.
30 Quintana interview.
31 Ibid.
32 Ibid.
34 Ibid.
35 Ibid.
37 Revenue-seeking refers to actions (politicians, private enterprises, agency employers, etc.) who seek illegitimate benefits and try to shape public policy and the direction of public funds to their own advantage. The former state agency Instituto Equatoriano de los Recursos Hídricos was notorious for it, which was an important motivation for neoliberal backers and policymakers to promote its dismantling in the 1990s and privatize most of its functions. They reasoned that such illegitimate activities prevent the free market from functioning well in the irrigation construction and management field. Studies demonstrated, however, that although rent-seeking was indeed an enormous problem for state irrigation development, the neoliberal solution to brutally privatize the sector had induced devastating consequences, particularly for the poorer groups. The remedy was worse than the disease. See Leontien Cremer, Marjolijn Oudewaer and Rutger Boelen, "Institutional Reform in the Andean Irrigation Sector: Enabling Policies for Strengthening Local Rights and Water Management," Natural Resources Forum 29 (2005), 37-50.
38 Such practices led to the waste of sizable public financial resources, but also made the project drain far more user family resources. For example, the exaggerated dimensions of platforms (called a satellite graveyard by the local farmers) for locating the main canals fed to the outright expropriation of far more small-holders’ fields than necessary.
39 For private contractors, moreover, the mode of contracting implied that actively causing time delays in works execution was financially favorable, since the interest earned by putting advance payments in a bank account or investing it in other business activities was much higher than the financial penalties they faced for these delays.
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