

Workshop Contributions

A few theoretical elements on legal institutional and sociological issues in Water & Politics

Bernard Barraqué, LATTs-ENPC

Abstract

If we are going to develop a better understanding of this topic, which covers legal institutional as well as socio-economic issues, we need to improve the theoretical dimension to give an intellectual framework to the numerous case studies presented.

I would like to contribute first by recalling the evolution of water rights and institutions in Europe, where there are indeed growing common features beyond the initial double diversity (centralised vs subsidiary countries, and Roman vs Common law). Second, I intend to recall a few specificities of environmental policies, which in turn may explain why new approaches like the *advocacy coalitions* (Paul Sabatier) were developed. Lastly, I would like to insist on the present weakness of the analysis of urban water services conflicts in terms of sociology. Here again, the specific history of Europe, with the “municipalism” should not be forgotten.

Bridging the Gaps between Technical and Political: Training Senior Water Managers what they need to know about Conflict Management, Consensus Building and Participation

Jerry Delli Priscoli, U.S. Army Corps of Engineers

Abstract

The world has changed for water resources managers, planners and decision-makers. Today, especially in the context of new demands for Integrated Water Resources Management (IWRM), water managers and planners often work in teams involving multiple disciplines and not just engineering and associated technical fields. Increasingly they work in multi-agency teams, which involve a variety of public, NGO and private sponsors. Today's water managers and decision-makers must consult with a broader range of stakeholders, publics, and NGOs, locally, regionally and often internationally. And, they must do all this while operating in a world of increasing demands on water.

Technical excellence remains necessary for creating sustainable water management decisions – perhaps even more necessary than ever. However, it is not sufficient. People all over the world need technical engineering competence more than ever. However, the ability to put that competence in service of those who need it depends, in many cases, on changing the relationship between the experts and those whom they are serving. This course aims at helping to build, to modify or to create such new functional relationships.

This new water resources decision-making environment requires at least two sets of skills. First, it requires excellent and broad technical skills, which reach across disciplines to consider alternatives that in the past were often not evaluated. In addition, today's water decisions often rest on a scientific basis that is itself incomplete. This sometimes means that water decision-makers must first get agreement on what studies need to be conducted and, data collected, to ensure that decisions are based on science, not rhetoric. As a result, water planners and managers need a breadth of technical knowledge that goes beyond the traditional excellence in engineering.

Second, water planners and managers need another set of skills – the skills of designing and conducting processes that draw together partners, stakeholders and publics, resulting in decisions that enjoy broad cross sectoral and often transboundary, public support. The era where water planners and managers decide-announce-defend is rapidly disappearing. In this new era, water management is done with (as opposed to being done “for” or “to”) potentially affected agencies, public and private organizations, individuals and others.

This paper outlines these skills. They are the skills which will help water resources decisions makers avert conflict, deal with water conflict should it arise, use water decisions as a venue for dialog when others are closed to parties locked in various types of non water conflicts. They include how to:

- Identify the characteristics of effective participatory, consensus building and conflict management processes
- Design and facilitate multi disciplinary teams, as needed in IWRM, a variety of interactive workshops and large and small meetings.
- Identify behaviors that escalate conflict during a dispute with other agencies, stakeholders, or the public – and identify behaviors that halt this escalation
- Select appropriate techniques for a participatory process
- Design basin wide organizations and frameworks for action.

- Implement participatory programs
- Understand and use new techniques of facilitation, communication
- Interest based negotiations and consensus building.
- Understand and identify stakeholders
- Articulate why design participatory programs
- Others

The paper discusses most effective methods for training senior managers in these skills. Such training should be designed to teach skills, as well as concepts. When learning a skill, it isn't enough just to "know about" the skill. Skills have to be practiced, preferably in conditions that replicate the circumstances under which the skill will be used. For this reason, the general sequence for each skill taught should be: (1) brief presentation; (2) a class activity or team exercise in which you apply the skill; and (3) a class discussion or debriefing to focus in on key issues or important things that were learned from the activity.

This means that the training is interactive, and the active participation of managers itself becomes an essential part of your learning. For example, each team exercise can become another opportunity to learn more about working in teams. All skills require practice – and the more you practice them the better you will get. Training can provide the basics of each skill. But in reality it gets the senior manager started and helps them to reinforce the skills learned with regular practice on the job.

Large organizations need a strategy for delivering such training. The most effective method is to bring the training to working teams who are actually engaged in field. In this way field problems are solved using new skills and the training occurs in real time among those who actually work together. Increasingly the traditional methods of selected individuals taking time from the actual work team to take a course alone, is ineffective and expensive method to internalizing such skills. In addition, such training can be effective tools in broader overall organizational change strategies.

Water, Wine, Vinegar, Blood: on Politics, Participation, Violence and conflict over the Hydrosocial Contract¹

Jeroen Warner, Wageningen University

Abstract

While 'water wars' are not as rife as predicted in the 1990s, the world is currently facing a spate of conflicts over water, most famously the case of Cochabamba, Bolivia. The article argues to see them not as conflicts over the resource itself, but over the terms of engagement between state and society.

The emerging Hydro-Social Contract Theory (HMSC) can be helpful in describing such crises, usefully connects the interaction with society with the interaction with natural resources. It highlights the crossroads between conflictive and cooperative junctures in social relations.

In terms of the HSCT, recent conflicts over privatisation and infrastructural projects seem to highlight crises of the Lockean contract. This article suggests that dissenting voices demand the serious consideration of a third type of hydrosocial contract – the Rousseauian hydrosocial contract.

Introduction: Water politics, water wars?

The interest in politics and conflict seems to be on the rise in the water sector. The fact that the World Water Council organised a workshop in Marseille late February on the theme, bears witness to this awareness. In the water world, *water politics* is often seen as a nuisance, if a fascinating one. This is implicit when J. Anthony Allan (1997) praises virtual water as a solution that still works *without* politics, while Mollinga (2001) sees politics as a constitutive aspect of every-day life, which has the potential for empowering marginalized groups once they have learned how to work the system. More than anyone Mollinga has stressed the 'essentially contested' and hence political nature of water.

Concomitantly, *water conflict* started to considerable attraction to scholars and journalists, if not always with great sophistication, in the 1990s. While clearly competition (contest) for resources is not necessarily conflict-ridden, and conflict does not have to be violent. Such niceties however were lost in the debate on water wars dominating the close of the 20th century since Starr and Stoll (1990) sounded the alarm in *Foreign Policy*. In those days, political leaders, notably in the Middle East, repeatedly claimed that water would be a cause for war (a *casus belli*), and prominent international spokesmen such as GWP's Ismail Serageldin were (apparently mis-) quoted as saying the next war would be about water, not oil.

Aaron Wolf (1995) and others have made a strong case that there is scant evidence to back the water wars thesis up. As a result the debate on water wars reached the consensus that water wars *between* states are not as likely to happen as people thought. In this contribution I shall argue that the debate ignores other types of conflict, which on the one hand are highly localised, on the other hand have a clear link with global actors and players. One such conflict erupted at a time when the 1990s debate on water wars seemed to end on a positive

¹ This paper was presented on the kind invitation of the World Water Council, during a meeting on 'Water and Politics' in Marseilles, February 2004. The conceptual framework expands on ideas first expressed in an AWIRU paper (Warner 2000). This paper follows up from the SOAS Water Issues paper no. 67 (Warner 2004). It has enormously benefited from inspiring discussions with Hans van der Veen, Mark Zeitoun and Rocio Bustamante, to whom I extend my deepest gratitude.

note – the uprising against the privatisation of water services in Cochabamba, Bolivia. While the media label ‘war’ turned out to be rather exaggerated: Gleditsch puts the minimum at 25 casualties – in Cochabamba, one person was killed) it reminded the world that locally a lot of incidental violence takes place.

Also, the stand-off had powerful repercussions throughout the world as a display of fierce resistance to privatisation and a state’s ham-fisted handling of it. I will advance the case that what Neumann (1998) has called the ‘violisation’ (in Figure 1: the fifth stage) of this conflict resulted from clashing perspectives of what is proper governance between public (Bolivia), private (Aguas de Tunari) and civil-society (the *Coordinadora*) – which will be described in terms of (hydro)social contract theory (Meissner & Turton 2003). I will sketch three hydrosocial cosmologies (or rationalities). The bias of these three perspectives provides different answers to the key question of political science – ‘cui bono’ (good for whom?).

Violent water conflict: a conceptualisation

The allocation and management of water easily becomes politicised when fundamentally different views of water are at stake (Donahue and Johnson 1998). When they are contested, external interventions (projects) can become ‘battlegrounds’ (if usually not the violent kind) between different perspectives that are negotiated or fought before they are implemented. Because project initiators often do not realise that there is question of contest over wider issues – even if the projects are in themselves innovative, user-oriented and participatory, see Warner (forthcoming) - the fact that social actors will avail themselves of information and devise strategies to resist or renegotiate their interest comes as a surprise to them (Long 2001).

In the case of Cochabamba, the conflict over water took shape in the context of a dispute over rights, and in a wider sense over resource governance and control. Conflict happens when two or more parties want the same thing, and use *power* to get it (Frey 1993). This dynamic can, but does not have to, take the form of politicisation and even violence. The five states (or stages) of conflict outlined here can be an analytical tool. To help understand the transition of politicisation to ‘violisation’, this article proposes to see politics and war as different nodes on a *continuum* of conflict. We can identify five stages along the continuum of conflict (Fig. 1 below).² Because of the preoccupation with ‘water wars’, the section below will expound on the ‘violisation’ stage.

² As Mouffe (1994) reminds us, the term ‘politics’ at root encompasses two meanings - that of “*polemos*’ (war) and that of “*polis*” (city-state). We are also reminded of the famous dictum by Clausewitz, army general under Bismarck: ‘war is the continuation of politics by other means’. As Neumann (1998) explains: ‘If (...) the political is a question of who gets what when, then war becomes one of a number of mechanisms by means of which a certain distribution can be realised (...)’ The waging of war, however, adds something more to the speech act of declaring war, and the crucial thing added is the use of force - that is, a violisation of politics’.

Non-politicised ↑ ↓		'the state doesn't deal with the issue and it is not in any other way made an issue of public debate and decision' (Neumann, 1998). It is a "non-issue" to the actors involved
Politicised ↑ ↓		'the issue is part of public policy, requiring government decision and resource allocation (or some other form of communal governance)' (Neumann, 1998)
Securitized ↑ ↓		'the issue is an existential threat requiring emergency measures and justifying actions outside the normal bounds of political procedure' (Neumann, 1998)
Opportunised ↑ ↓		the issue offers such a chance to improve a situation that it justifies actions outside the normal bounds of political procedure (Warner 2004)
Violised		the issue has escalated in intensity to the point that violence is employed and the normal conventions violated; violisation = the process whereby an already securitised issue such as identity becomes a <i>casus belli</i> over which blood must run' (Neumann 1998)

Fig. 1 Five stages of conflict

Three perspectives of 'violisation'

The most famous narrative of how conflict becomes violent is the Malthusian 'water wars' thesis, claiming scarcity will lead to competition, a scramble for resources resulting in violent conflict. An interesting variety of the realist 'dog-eat-dog' perspective is violence created by abundance rather than scarcity (Gleditsch 1998). The availability of an abundance of resources in a locality attracts gold diggers like honey to the bees, and in so doing can spark violent competition between those 'bees'. While there are some examples of 'honey-pot' violence, for example over diamonds (Duffield 2000) - I have called this 'opportunisation', Fig. 1 (see Warner 2004)– the imperative that the prize should be taken by any means. No such violent examples are found yet in the water sector, though it can be argued (Warner 2004) that development states make water development into a national security issue thus legitimising extraordinary measures such as curfew, state of emergency, that have the logic of war.

Against this Malthusian perspective, so-called *Cornucopians* maintain that there is no real water scarcity – it is a matter of distribution and efficiency, and tapping underused social resources.

Ohlsson and Turton's (1999) social resources, pointed at an important, and underrated factor putting scarcity into perspective. Ohlsson and Turton suggest that social institutional capacities (Homer Dixon's 'social ingenuity') – in my own shorthand: one's 'water IQ'.

Given a sufficient availability of such resources, an adaptive process would ensue. Allan has pointed at the redistributive capacity of the international trade system – very usefully highlighting the role of the highly interdependent global political economy.

The search as to what it is that may relate scarcity and violence is still on. The present contribution surmises a third, critical political-economy perspective, which points at a view of 'violisation' that mainstream analysis is not so attuned to: structural violence. This view shares the Realist idea that scarcity can be induced by resource capture (Homer Dixon 1994) but they see this capture as an example of the structural iniquities in the current world system rather than one possible use of power - a structural bias against the poor and the

disenfranchised. Water pollution, inequitable ownership to some critical scholars is evidence of 'structural violence' (Shiva 2001), a term originally framed by John Galtung to refer to any constraint on human potential due to economic and political structures (<http://www.psych.ubc.ca/~dleighton/svintro.html>). Manifestations of this violence, in this perspective, are the building of big dams and ongoing privatisation – in which the state colludes with international capital and panders to US-led donors in what they term the 'neo-liberal Washington consensus'. Such iniquities are not solved by improving literacy rates and hospital beds. In this perspective, the water essentially belongs to humankind as its common heritage, it is a human right, and can be delivered but not owned by the public or private sector. The struggle to eliminate this structural violence may bring about outbursts of incidental violence.

This view of 'violisation' seems important in that the past decades have seen no international water wars, but a great deal of virulent, sometimes violent controversy over dams, channels and privatisations, supported and spurred by NGOs, who have become increasingly adept at playing the international field, blowing up seemingly minor local controversies (Shell's Brent Spar platform, Bangladesh's Compartmentalisation Pilot project, Turkey's Ilisu Dam, and indeed Cochabamba) into international political scandals. In this respect the need for large infusions of private capital has proven an Achilles heel for dam projects.

Box 1

Three theories of resource stress

- 1 Malthusians:
 - a. Scarcity leads to war
 - b. The "honey pot" of abundant resources may be a focus for greed that the honey pot argument. A surfeit of resources (resource curse) elicits a scramble of gold diggers.
 - 2 Cornucopians: Scarcity leads to adaptation.
 - 3 (Anti-)Globalists: Scarcity is the consequence of the structural violence of an inequitable global system.
-

Controversies over privatisations and big dams are usually considered to be about the water itself (first-order conflict), and in so doing engage the market, the political sector or coercive means as conflict resolving mechanisms. It is important to understand that conflict over water is very often a flashpoint for a bigger conflict, bringing to a head wider disputes (a good example is the Euphrates dispute, Warner 2004).

This article highlights the special case where the conflict concerns the rules of engagement (second-order conflict) - procedures, discretionary powers, property relations. The call on customary rights in Cochabamba (*usos y costumbres*) suggests that the property rights, procedures and even identities (as peasants, as indigenous irrigators) are fundamentally at stake, reflecting an unease with what was seen as the 'sell-out' (privatisation) of various sectors: electricity, trains, water. This suggests a *second-order* conflict, about the just-ness (legitimacy) of rights, procedures, (mis) management for allocating water. The most fundamental conflict, which could be termed third-order conflict, concerns the systemic legitimacy of the political process – brief, state-society relations.

This requires us to look more deeply into the role of the state and its relation to society.

Second-order conflicts, states and (hydro) social contracts

The Westphalian state is held to have the legitimate monopoly on the means of violence and destruction. It has other means at its disposal – such as the educational system, to inculcate loyalty – but ultimately, the means of violence are its key power resource. As the legal representative of a country, a state can present itself as *pars pro toto* – the security of the

state is the security of all – and thus paint itself as a disinterested peacekeeping party. However, in sometimes glaring instances, the state is often seen to act as a stakeholder in its own right with parochial self-interest treating water as a political good (Johnson and Donahue 1998). Considering the state as a potentially self-interested actor rather than a neutral arbiter opens up the possibility that states do not always provide their citizens with good security deals. The noted historical sociologist Charles Tilly's (1990) intriguing account of state formation may guide or at least provoke us here. Tilly notes that Westphalian states have not always been around, tend to result from quite violent processes, and (as evidenced by the implosion of the USSR) are not sure of their continued existence. To survive, states make protection deals (contracts) with their citizens. These contracts are not necessarily of the genteel kind – they may be concluded under duress.³ States procure legitimacy from their citizens in a range of ways, from coercion to consensus-building, but always on the basis of some kind of security provision. Citizens on their part procure security from the state for dear tax money, with no certainty of durable protection. The state will only tolerate alternative suppliers of security when the security issues are minor; when, not, they prefer to have potential competitors in their pocket. This gives states a power-driven rationality.

This puts into perspective the developing ideas on the hydrosocial contract (Turton and Ohlsson 2000, Meissner and Turton 2003; Warner 2000). Hydro-Social Contract Theory (HSCT) usefully connects the interaction with society with the interaction with natural resources. It postulates that after a period of abundance in which supply vastly outstrips demand, in times of crisis in water availability necessitate the (re)negotiation of 'contracts' between state and society. This contract requires a state to become 'Hobbesian', characterised by a hydraulic mission, geared at the maximum deployment of manpower and means for the development of all water resources within reach.

Social-contract theories hold that a legitimate state is one that is, has been, or perhaps might be the object of an agreement among parties, explaining why citizens accept the state's monopoly on the means of coercion. Hobbesian states take final responsibility for security provision in all aspects – economic, social and physical, with a strong state that appropriates many, national-interest issues – a 'development' state first and foremost and dams, pipelines, hydro-power installations become militarised - it incites a commitment to an 'hydraulic imperative' internally, and will try and protect its trading and development drive against competitors. This has consequences for state behaviour in times of scarcity. When facing basin closure they will reallocate water resources by decree rather than a spontaneous or guided process of adaptation. When conflict arises, they will intervene. This is the *Hobbesian-Malthusian* connection.

Many states are no longer guided by the hydraulic imperative. Two simultaneous processes bring this change on: resource stress and the limits to state power. As a result of the trend to outsource and privatise security functions, civil society capacities are increasingly called on in contributing to its own security provision (e.g. in the domain of water: flood proofing and flood warnings). This has changed the traditional 'security contract' in complex ways.

Ohlsson and Turton (2000) surmise that increasing resource stress is bound to spark a reflective process (environmental consciousness) that brings a transformation into a Lockean type of state. It brings in environmental watchdogs (NGOs) and calls for participation and dialogue with interest groups. In addition, it is attempted to rationalise water consumption by introducing pricing mechanisms, thus bringing in the private sector to perform governance tasks. This is reflected in the current emphasis on trilateral partnerships between public, private and civil-society actors, thereby increasing the number of players in the equation.

³ Tilly (1990) argues they take the form of protection rackets, styled after mafia practices of requesting protection money to clear your shop from the attacks of rivaling hoodlums. Part of this protection racket is that your shop is at risk of being arsoned every now and then, showing you that your protectors mean business. Conspiracy theorists would argue that a recent private-sector example of a global protection racket was the Millennium bug.

Brief, as Ohlsson and Turton see it, the increasing costs of such a supply-side strategy again precipitate a second crisis, which may lead to migration, opposition, unrest and civil disobedience. Here (often societal) pressures force the state to make a transition to a phase of 'reflexive modernisation'.

Lockean states take a hands-off approach to force and intervention. They are facilitators rather than directors, their security commitment is a minimum programme of protecting private property. The Lockean concept of security relegates security provision to the military sector, the rest is up to the private sector and civil society. The idea is that as trade and interdependencies expands, the military sector will have less and less to do. It regards as a transitory phenomenon that many states are still the Hobbesian kind and that resource conflict at times turns violent. Market forces and social consciousness would also imply a more 'rational', way of managing resources geared at allocative efficiency. In this tradition, Turton and Ohlsson's (2000) model sketches an optimistic broad-brush development of states from water supply (Hobbesian hydraulic mission) to demand (Lockean resource efficiency) management in response to a need to adapt to resource stress. The belief that stress can be 'solved', an thus avert wars, may be called the *Lockean-Cornucopian* approach to water wars.

While the above sequence is not deterministic, and seems biased to countries in semi-arid regions, the HSCT certainly appears to 'hold water' as a heuristic for countries in transition like India, Mexico, Turkey and South Africa, where a more 'trilateral' approach to water management is growing.

However, in the eyes of radical observers, contracts can go bad, too. The world is currently facing a spate of contested interventions in the water sector, some in developed countries (Spain), most in developing countries with 'weak states'⁴. Such states will more easily resort to violence to make up for their legitimacy deficit, and rely on foreign aid rather than a domestic tax base for infrastructural projects (FAP in Bangladesh, Arun in Nepal are other examples).

The perceived reasons for this crisis go beyond the territory of the country under scrutiny. A critical international political economy (IPE) perspective – bringing the theory back to its intellectual source – highlights that states take different positions in the international system ((van der Pijl 1992; Warner 2000). Indeed, whether a state comes out as the Hobbesian or Lockean kind is not only dependent on domestic factors and on the dominant philosophies in international aid and credit institutions (Biersteker 1992).

This 'micro-macro link' can be quite urgent - because states need money, they are quite happy to rely on international aid rather than a domestic tax base. Kleptocratic state systems commonly view infrastructural projects as a way of cream off a percentage (*bakshish*) at times inviting the suspicion that the actual intended social benefits of water projects take a backseat to kickbacks. Because of the deficiency in systemic legitimacy, intended beneficiaries easily perceive such projects, however well-intended by their initiators, as interference from outside. Weak states tend to respond to any opposition to water development projects with violence giving them a pseudo-Hobbesian sheen, but without the legitimacy.

External dependency also makes them highly amenable to external conditionalities that bring in fresh funds, even conditions that require them to change the hydrosocial contract with their citizens.

⁴ Weak states are states that do not have or have failed to create a domestic political and societal consensus of sufficient strength to eliminate the large-scale use of force as a major and continuing element in the domestic political life of the nation' (Buzan 1991: 99).

In the 1990s the international governance system was strongly oriented at restructuring states in the South away from Hobbesian providership (Biersteker 1992) advocating 'good governance' (Lockean) practices such as decentralisation, privatisation and participation. This required the rationalisation of the state and a changing hydrosocial contract. In most states this would mean the curtailment of a colossal state - in Bolivian terms, the model rather meant an expansion into areas the state had never bothered with. Such change, when perceived as 'imposed', has been resisted vehemently in several countries, in struggles championed by international NGOs.

In a water context, privatisation of water is anathema to what may be called the Rousseauian social contract (cf. Rousseau 1762). Arguing that government should see to the rights and equality of everyone, Jean-Jacques Rousseau, the original social contract theorist, has been seen as a forefather of the French and American revolutions – with the crucial difference that he dismissed the notion of private property. In a water context, the view of water as common heritage of mankind as advocated by the high-profile Group of Lisbon (Petrella 1998), which advocates a 'global contract'. It is also reflected in the Cochabamba Declaration drawn up by the protest coalition in 2000 (Box 2) is a modern interpretation of the Rousseauian hydrosocial contract. For Rousseau, government and morality were strongly bound up with each other. If a state ceased to be moral, it lost its legitimacy.

This third, *Rousseauian-(anti-)Globalist* perspective of water wars, then, sees the Cochabamba conflict as a resistance to (that is, the violent renegotiation of) a new hydrosocial contract, the terms of which had been set in negotiation with international rather than local players. Not only was there an absence of prior consultation of one of the contracting parties (the citizens), these latter felt 'robbed' of traditional rights. The ensuing 'contract' thus seemed to display traits of a bad protection racket – a state that offers little protection but takes your belongings without asking (Homer-Dixon's 'resource capture'). Indeed anti-globalists are acutely aware that the social contract can be annulled. In this sense Locke and Rousseau think alike: '(W)henever the legislators endeavour to take away or destroy the property of the people (...) they put themselves into a state of war with the people, who are therefore absolved from any further obedience' (Locke 1690).

The below section will describe in more detail the dispute over Cochabamba's water supply, which at first indeed seemed to be a *first-order* conflict (a struggle about the water itself) but rapidly expanded into a *second-order* conflict about the rules and procedures, and who makes the rules: the hydrosocial contract (Warner 2000).

Box 2: Rousseauian thinking in Bolivia

From the Cochabamba Declaration: (October 2000)

- 1) Water belongs to the earth and all species and is sacred to life, therefore, the world's water must be conserved, reclaimed and protected for all future generations and its natural patterns respected.
 - 2) Water is a fundamental human right and a public trust to be guarded by all levels of government, therefore, it should not be commodified, privatized or traded for commercial purposes. These rights must be enshrined at all levels of government. In particular, an international treaty must ensure these principles are incontrovertable.
 - 3) Water is best protected by local communities and citizens who must be respected as equal partners with governments in the protection and regulation of water. Peoples of the earth are the only vehicle to promote earth democracy and save water.
-

Politicisation and violisation of water conflict in Cochabamba

The social contract between Bolivia's society and the state was already shaky. Indeed, When Bolivia shed military dictatorship in 1982, the country was in disarray; ever since, public service provision has been poor and corruption rife. Banzer's Bolivia (in his autocratic era as well as his democratically elected comeback) was never a model of 'good governance'. Peña Cazas (1997) shows up the elemental interwovenness of politics and big bucks, with many of the trappings of a kleptocracy (Assies 2001).

The unease came to ahead around the provision of potable water to Cochabamba, the sprawling capital of Cercado province, which together with Quillacollo province, forms Bolivia's 'Central Valley'. It has a chronic shortage of water and water quality is appalling. To improve water provision for Cochabamba city, the military dictatorship established the state-run utility SEMAPA⁵ in the mid-1970s by. SEMAPA however had to contend with rapid population growth (from 75,000 in 1950 to half a million at present), partly due to an inflow of workers in decommissioned tin mines in 1985 and to dry spells in the 1980s (Assies 2001). Despite SEMAPA's efforts, citizens of the city of Cochabamba continue to suffer diarrhoea and worse because of the polluted water. UNESCO observed in 2000 that the city 'has no more than five hours of water a day, and only 40 percent of farmers in the surrounding area have access to clean water' (http://www.unesco.org/courier/2000_12/uk/planet2.htm)⁶.

In addition, recurring droughts compelled SEMAPA to look elsewhere for fresh sources of water for its customers, producing enduring conflict with irrigators in the Central Valley. After the drought of 1976, for example, irrigators claimed SAMAPA's ten new 120m wells in rural Vinto undercut their own wells (Assies 2001, Bidaseca 2004) and in 1992 local governments joined forces with protesters when SEMAPA again intended to drill wells in the region. Subsequent years saw further conflicts between town and country, worsened when it turned out that the costly, internationally funded water well projects were underperforming.

It is important to realise that the Cochabamba water war was set in a context where the government so far had taken almost no formal control of the water sector. Unlike the 'hydraulic missions' of semi-arid regions, a semblance of state control of the water sector is recent in Bolivia. Water management has traditionally been carried out and governed by local patterns of traditional rights, with a tacit understanding of non-intervention on the part of the state.

Somewhat paradoxically, then, in order to be a model student of structural adjustment, Bolivia's state had to become *more* rather than less assertive in the water sector. The Bolivian state indeed was an 'early adjuster' and enthusiastic participant in the spate of privatisations in the developing world of the late 1980s and 1990s: it sold off its mines, airlines, railways and electricity sector, and its plans to divest itself of its phone system only foundered because no bidders came forward. The privatisation of Cochabamba's water in 1999, then, surprised nobody, but the way this was done is more controversial: a package deal of water management contract, hydroelectricity generation, and a complex tunnel. In fact there is a strong feeling that the privatisation scheme was designed as a window of opportunity to revive a long-standing scheme, the Misicuni tunnel project to augment the supply of Cochabamba's water, a project that had laid dormant as a complex, highly problematic project.

⁵ SEMAPA = *Servicio Municipal de Agua Potable y Alcantarillado*; Municipal Potable Water and Sanitation Service.

⁶ At the time of tendering, most of the poorest neighborhoods were not hooked up to the network, so that state subsidies to the water utility mainly benefited industries and middle-class neighborhoods; the poor paid far more for water of dubious purity from trucks and handcarts, or relying on independent systems.

Started in 1998 and finished in 2001, the very difficult 19.3 km Misicuni tunnel is a 45-year dream (<http://www.tunnelbuilder.com/bolivia.htm>) of bringing water from the 4-5,000 m high Cordillera over a mountain ridge to the Cochabamba Valley, at 2500 m. The \$300 million deal involved a 40-year concession, a \$130 million dollar dam (to store rainy-season water) and a \$62 million tunnel as well as water purification plants and sewage farms.

The eventual deal involved three elements:

- 3) 1 privatisation of the Cochabamba water system
- 4) 2 building the Misicuni project
- 5) 3 paying off past debts

Aguas de Tunari, an American-Spanish-Bolivian joint venture formed only a few weeks prior, with a majority share for Bechtel/International Water, was the only bidder to come forward. Worries about the feasibility and profitability of the project reduced the project to Misicuni-*lite*: the quantity of potable water was halved to 1200 l/s, irrigation water reduced from 1400 to 500 l/s, and electricity generation halved to 150 GWh/year (Assies 2001). Moreover, water prices were allowed to go up drastically. Tariffs were raised threefold to help complete the dam and tunnel project, guarantee a 15-17% profitability and pay off past debts.

In principle, neighbouring municipal authorities were happy to see the Misicuni tunnel go ahead, as it would put an end to the dispute with SEMAPA over drilling. Moreover, the secrecy with which the deal was conducted instilled suspicion in an already wary civil society. As they learnt of the deal, the citizens of the Central Valley felt they had to shoulder the costs of a megalomaniac project, a project that also took away their water rights.

The high-quality water the Misicuni aqueduct was to carry to Cochabamba-city was already claimed as customary rights by the irrigators of the Cochabamba valley. From now on they would have to obtain licences for their wells, diversion channels and other water infrastructure. This made the issue an incendiary one very quickly. In terms of the five stages of conflict (Fig. 1) taking to the streets was still a (dramatic) form of politicisation. By actually taking siege of the city, taking it away from state control, the protesters 'securitised' the issue, that is, legitimising an illegal move on the grounds of a 'life and death' argument. Both the protesters and the government responded in ways outside the normal rules of political engagement: protesters took siege of the city, blocking all entryways, while the state shored up all normal liberties under the state of emergency was pronounced by President Hugo Banzer in April 2000. However, a boundary was soon to be crossed into the territory of 'violation'.

At the start of 2000 an unusual urban-rural alliance including peasants, industrial workers, environmentalists joined by street kids, the Coordinadora de la Defensa de Agua y de Vida, shut the city down for four days. The government swiftly promised to reverse the price hikes. When this reversal proved slow in coming, the Coordinadora staged a march in February, which was answered with teargas and gunfire blinding two young men and injuring 175 protesters. In April, peasant organisations (FEDECOR) joined the urban protest when they saw communal rights threatened by the privatisation of rural water systems. The state of siege was pronounced and protest leaders were arrested. However, when footage of an army captain was seen firing into the crowd, killing a young protester, these images provoked international outrage and drew responses from NGOs as far afield as Australia and Canada (www.blueplanet.com). The cause for Misicuni was lost there and then, and soon the government declared the privatisation process void. Bechtel/International Water left the country later that year⁷, as a new water law leaning more on social rather than financial

⁷ In November 2001 the Bechtel Corporation launched Round Two in the Cochabamba water war, filing a demand of \$25 million against Bolivia in a trade court operated by the World Bank. Bechtel's aim, it claims, is simply to get back what they invested. It went through the ICSID trade court under a 1992 Bilateral Investment Treaty (BIT) between the Netherlands Holland and Bolivia. This was possible as in late November of 2000 Bechtel had created new holding companies in Holland.

principles was drawn up, though it may take years to take effect. SEMAPA was reinstated as water supplier, now supplemented with representatives from the Coordinadora. Bewilderingly, the next year SEMAPA, which had always run deficits, reported it was now a profitable organisation – causing the government to doubt the credibility of this sudden change in performance of its own utility (Assies 2001).

These structurally unresolved hydrosocial issues are important to keep in mind when looking at participatory solutions. Recent decades have seen the rise of participation in the water sector, most spectacularly in the Indian state of Andhra Pradesh where some 10,000 WUAs were created at a stroke (Moench 2001). Multi-stakeholder participation (MSP) in fora, platforms, dialogues and partnerships and is currently on the rise as an exciting democratic innovation. MSP takes participation a step beyond WUAs, which are usually farmer-dominated, to include representative from national and/or local governments, domestic use, fisheries, industry, energy, tourism concerned (Steins and Edwards 1998).

Usually multi-stakeholder platforms tend to be promoted by NGOs, universities and donor organisations as a way of giving a democratic voice to stakeholders, managing conflict and decentralising water management (Warner and Moreyra, forthcoming). A novel development in this participatory wave is that the Inter-American Development Bank, shocked by the images of the Cochabamba water war, made multi-stakeholder participation a *conditionality* for new loans to Bolivia. Such a national platform was duly created: CONIAG (the Inter-Institutional Water Council). CONIAG was established as a 'space for dialogue and agreement between the government and the economic and social organisations to fine-tune the current legal, institutional and technical framework on water-related issues, so as to tidy up and regulate the administration of the water resources (CONIAG 2002), to gather information and design in interaction with the users – a consummately 'Lockean' approach. However, despite its appealing acronym, CONIAG failed to turn water into wine – it has met several times but no results of note have so far been forthcoming, while new and similar conflicts over water and, of late gas exports to Chile (September 2003), broke out. So far the establishment of CONIAG could not be expected to be much more than a symbolic gesture to obtain loans, not change anything about the underlying acrid conflict⁸.

Conclusion

This article has proposed two orders, three perspectives, and a 'ladder' of five stages of conflict to put some order in the conceptualisation on 'water wars'. Each of the three perspectives is a rationale for engaging in conflict, and as such can contribute to our understanding of conflicts. The Malthusians understand about scarcity and power play, but should be puzzled by the fact that some of the most explosive international issues concern river basins that are *not* water stressed - the Euphrates Tigris being a prime example. The infectious optimism of the Cornucopians shows that the scope for redistribution of water resources through technical, institutional or economic change is much wider than previously believed, but does not account for the continuation of explosive situations.

The discussion of the anti-Globalist perspective has added a structural element to the debate, which is an important dynamic in many recent, media-grabbing conflicts. It seems useful to conceive of three ideals of hydrosocial contract currently living side by side and clashing at times.

The present contribution has highlighted a class of violent conflict that is not so often analysed. Still, the Cochabamba 'water war' can be explained in the context of a wider conflict over the social contract, i.e. the division of responsibilities between public, private and civil society. Like the social contract, the business contract was handled rather carelessly (opportunistically), and the participatory 'solution' has not solved anything so far.

⁸ I am indebted to Rocio Bustamante for this information

The sad upshot of the episode is that Cochabamba still has poor water and sanitation services, and that violence is still ongoing – most recently over gas exports to Chile (a conflict that claimed many more victims than the ‘water war’ despite somehow not deemed worthy the label ‘war’ by the international media). Despite efforts to start a consultative process between key stakeholders, an opportunity to turn water into wine still results in a brew the colour of blood and the taste of vinegar. The Cochabamba Water War of 2000, then, saw the ‘violisation’ of an ongoing privatisation issue. The article suggests that the terms of the social contract need to be carefully negotiated by governments before making a radical change when a window of opportunity opens.

References

- Allan, J. Anthony, ‘Virtual water’ (1997): a long term solution for water short Middle Eastern economies?’ SOAS/KCL Water Issues Group, Occasional Paper No. 3, <http://www2.soas.ac.uk/Geography/WaterIssues/OccasionalPapers/#trade>
- Assies, Willem (2001), "David vs. Goliath en Cochabamba: los derechos del agua, el neoliberalismo y la renovación de la propuesta social en Bolivia", *Revista T'inkazos*, No. 8. La Paz: Fundación Pieb (Programa de Investigación Estratégica en Bolivia), pp: 106-131.
- Bidaseca, Karina (forthcoming), ‘La lucha por no silenciar el río y por recuperar el control del agua. Resistencias locales y globales en Narmada y Cochabamba’, in Jeroen Warner and Alejandra Moreyra (eds.), *Conflictos y Participación. Uso Múltiple del Agua*, Montevideo: Nordan.
- Buzan, Barry (1991) *People, States and Fear*, Longman, 3rd edition.
- ‘The Cochabamba Declaration’, December 8, 2000.
- Cohen, M. D., March, J. G., & Olsen, J. (1972). A garbage can theory of organizational choice. *Administrative science quarterly*, 17, 1-25.
- CONIAG, Action Plan, 2002
- Donahue, John, and Barbara Johnson (1998), *Water, Culture, & Power: Local Struggles in a Global Context* (Washington, D.C.: Island Press).
- Duffield, Mark (2000), The Emerging Development-Security Complex. In Paul Collins (ed.), *Applying Public Administration in Development: Guideposts to the Future*. London: John Wiley and Sons, pp. 359-372.
- Finnegan, William (2002). ‘Leasing the Rain’, *The New Yorker*, http://www.newyorker.com/fact/content/?020408fa_FACT1, 18 April 2002.
- Frey, Frederick W. (1993), "The Political Context of Conflict and Cooperation Over International River Basins", *Water International*, 18 (1), 54-68
- Gleditsch, Nils Petter (1998), Armed Conflict and the Environment: A Critique of the Literature’ *Journal of Peace Research*, 35 (3): 381-400
- Homer-Dixon, Thomas F., 1994, “Environmental Scarcities and Violent Conflict: Evidence from Cases”, *International Security*, 19 (1) (Summer): 5-40.
- Locke, John (1690), *The Second Treatise of Civil Government* <http://www.constitution.org/jl/2ndtreat.htm>.
- Meisner, Richard and Anthony R. Turton (2003), The hydrosocial contract theory and the Lesotho Highlands Water Project, *Water Policy*, 5(2), 115-126.
- Moench, M., Caspari, E. & Dixit, A., (eds). (1999). *Rethinking the mosaic: investigations into local water management*. Kathmandu, Nepal Water Conservation Foundation and the Institute for Social and Environmental Transition.
- Mollinga, Peter P. (2001) Powerful tools - tools of power. A selective overview of the water and politics literature with a critique of rational choice theory and an example from South India, *Futures* 33 (8), pp. 733-752.

- Mouffe, Chantal, 'For a politics of democratic identity', paper given at the *Globalization and Cultural differentiation* seminar. March 19-20, 1999, MACBA'-CCCB
http://www.macba.es/antagonismos/english/09_04.html.
- Neumann, B. Iver, (1998) 'Identity and the Outbreak of War', *International Journal of Peace Studies* 3(1): 7-23.
- Peña Cazas, Waldo (1997): *Teoría y práctica de la corrupción en Bolivia y el mundo*, Cochabamba: Serrano.
- Petrella, Riccardo (1998), *Le manifeste de l'Eau Pour un contrat mondial*, Brussels: Labor
- Rousseau, Jean-Jacques (1762), *The Social Contract or Principles of Political Right*. (translated from the French by G. D. H. Cole) <http://www.constitution.org/jjr/socon.htm>
- Shiva, Vandana (2002), *Water Wars. Privatization, Pollution, and, Profit*. South End Press.
- Starr, Joyce, 'Water Wars. Profit', *Foreign Policy*, Spring 1991, pp. 17-36.
- Steins, Nathalie A., and Victoria M. Edwards (1998) "Platforms for Collective Action in Multiple-Use CPRs", Paper Presented at "Crossing Boundaries," the seventh annual conference of the International Association for the Study of Common Property, Vancouver, British Columbia, Canada, June 10-14, 1998. <http://www.indiana.edu/~iascp/abstracts/612.html>
- Tilly, Charles (1990), *Coercion, Capital, and European States, AD 990-1992*. Cambridge, MA: Blackwell.
- Turton, Anthony R. and Ohlsson, L. (2000) *Water Scarcity and Social Stability: Towards a Deeper Understanding of the Key Concepts Needed to Manage Water Scarcity in Developing Countries*. SOAS Water Issues Study Group Occasional Paper 17. University of London, London.
- Warner, Jeroen (2000), 'Integrated management requires an integrated society. Towards a new hydrosocial contract for the 21st century', AWIRU Occasional Paper, <http://www.up.ac.za/academic/libarts/polsci/awiru/papers-jeroenwarner.html>
- Warner, Jeroen (2004) 'Mind the GAP? Working with Buzan: the Ilisu Dam as a security issue' SOAS/King's College London Water Issues Paper No. 67.
- Warner, Jeroen and Alejandra Moreyra (forthcoming), 'Introducción: Participación para solucionar conflictos por el agua: sueño, pesadilla o espejismo?' in Jeroen Warner and Alejandra Moreyra (eds.), *Conflictos y Participación. Uso Multiple del Agua*, Montevideo: Nordan.
- Wolf, A. T. (1995) *Hydropolitics along the Jordan River: Scarce Water and its Impact on the Arab-Israeli Conflict*. Tokyo: United Nations University Press.

The Emergence of Sustainable and Participatory Development in Dams. Lessons from Political Science Research.

Stéphane La Branche, Associate researcher, Environmental and Energy Policy Department, Grenoble, France.

1. Introduction ¹

This paper offers some conclusions and research recommendations arising from a ten-year theoretical and empirical research programme, by focusing on the results of three specific researches representing a significant part of the sustainable development field. The first was undertaken in 1999, on the impact of a sustainable and participatory development (SPD) project on the traditional values, beliefs and power relations in three small Ghanaian communities.² The aim was to understand the process by which international norms are internalised by individual actors at the local level in a non-Western cultural setting. One of the theoretical aim was to develop a power relation analytical framework that can take into account both local and international level phenomena.

The second, to be concluded in July 2004, is an extensive literature review on the field of participation in the environment in France.³ Our project also includes a comparison with Quebec, as well as an international component, with over two hundred articles, books and institutional reports reviewed. The aim is to offer a portrait of the notions and theoretical frameworks used by research since the 70s in France: what are the main concepts and issues analysed? More significantly, we also found important questions that were **not** asked by research, of which three are highly significant:

- 1) Research has not really looked into the issue of potential conflicts between environmentalism and democracy. Are democratic procedures necessarily ecological? There are cases of civil society refusing ecologically-friendly energy-producing methods (a French community rallied against electric windmills) or a 'green' tax (the case of Switzerland, in a national referendum?⁴ This is a critical issue for decision-makers: how is a decision to be made when a choice must be made between the wishes of a population as expressed through a participatory procedure and an ecologically-sound project, while both are requirements of SPD?
- 2) Research often assumes that norms and beliefs go hand in hand, yet they are different. More problematic still, we do not understand how an international norm can be transformed into an individual belief, nor do we understand the role of individual beliefs in the creation of international norms and, more generally, regimes. This is directly related to the issue of SPD's legitimacy.
- 3) What are the philosophical, historical and cultural origins of SPD? Does it differ from conventional development (i.e., modernity, rationality, economic, directive, large-scale, etc.), or as a French author argued, is SPD the same old box with a different packaging?⁵ If it does differ, is the emergence of SPD as a new regime the sign of a change in thinking? Indeed, multidisciplinary, relational, multi-level thought,

¹ My sincere thanks to the French Institute of Energy and Hydro 21 (the European centre for sustainable development in hydraulic energy) for financing the research on dams.

² La Branche, 2002a. I apologise for the numerous self-references, but the goal of this article is to propose a coherent framework by which to address some of the issues raised in different researches whose details have been published elsewhere.

³ With Warin, 2003, undertaken for the French Ministry of Ecology and Sustainable Development.

⁴ Audetat et al, 2004.

⁵ Latouche, 1994.

necessary to understand environmental issues, and dams are a perfect example of this, may well reflect deeper changes in our recognition of problems and the solutions we bring to them.

These issues drive my current, third, research on SPD in dams, this article's main theme. Thus, while this research is theoretically oriented, it also includes strong empirical and comparative components (between France, Quebec, Turkey and later on, Ghana and China). As a way of getting at some of these questions, I will first offer a few conclusions drawn from three political science disciplines: International Relations research on SPD, French and Quebec research on participation in environmental policies, and regime theory. I will focus on some common threads among these researches, rather than on differences, threads that indicate weaknesses in SPD theory, research and practice. I end with a few suggestions for an analytical framework able to provide both theoretical and empirical answers in the field of dams.

2. Regime theory and SPD in dams.

Of all IR theories, regime's theory explains best the process by which norms may become a relatively well coordinated set of rules and norms supported by institutions and procedures, i.e., a regime. However, even *it* fails to explain how and why legal or political norms become legitimate to actors, or in other words, how these norms transform themselves into individual level beliefs or contrarily, how legitimate rules become illegitimate, a process that is often caused by actors' strategies and pressures. This would explain why the approach cannot answer its own basic question: why and how does a regime emerge, persist and end?

The aim of the current research on dams is to understand the process by which imposed international SPD norms are transformed into individual beliefs and, inversely, to understand the strategies by which individuals attempt to a new development regime. While the report of the World Commission on Dams⁶ offers some thoughts on some of these issues, arguing for the integration of SPD norms into all phases of a project, the report did not address some fundamental problems related to SPD, such as its efficiency, a potential conflict between environmentalism and democracy⁷, or its potential negative social and cultural impact on local communities and culture. Indeed, one needs to ask the following question: Is SPD really the total answer to problems caused by conventional development, as its proponents tend to argue or does SPD just perpetuate the sins of his forefathers?⁸ These two positions seem, indeed, more determined by researchers' ideology than by careful, methodologically and theoretically based research.

A research in Ghana indicates that SPD's results are mitigated. While highly positive in terms of physical health, access to clean water, and in some social aspects (women have stopped fighting over water), it has had a deep impact on some cultural values and power relations, such as a loss of legitimacy for the chief's councils and elders (but an increase for the chief's), and a loss of traditional moral beliefs and ethics.⁹ The point is not to dismiss SPD, but it is clear that we are far from understanding the expected effects of SPD, and even less its unexpected impact. Yet, it is becoming the dominant regime in matters of national and international development everywhere on the planet. How did this occur in a context where large-scale non-participatory development was dominant for so many years? This is directly related to several as-of-yet unresolved issues at the very heart of regime theory: how is a regime created? How and why does it persist? Why does it end? The hypothesis here is that in the final analysis, *the persistence through time of a regime*

⁶ World Commission on Dams, 2000.

⁷ Sabelli, 1995.

⁸ Latouche, *op. cit.*, only dealt with the theoretical issue of modernity's characteristics, such as an exacerbated individualism, binary rationality and a pervasive economism, not offering any empirical data for his arguments.

⁹ La Branche, 2003c.

*depends on the actors' perception of its legitimacy*¹⁰, which is directly related to the issue of *trust between actors*. This hypothesis is not as easy to operationalise as it may seem at first sight, and this, for several reasons, both theoretical and empirical. Indeed, whichever the type of regime theory one looks at (liberal, neorealist or, to a lesser degree, constructivist), the researcher is faced with several issues (s)he is most likely to be uncomfortable with when formulating this type of hypothesis.

Firstly, there is the issue of **multilevel analyses**. Indeed, the hypothesis implies that individual-level beliefs may have an influence and a role to play in international relations, in a field still dominated by the neorealist view that States - and grudgingly, a few IGOs, such as the IMF or the World Bank - are the only legitimate and significant actors of the international system. This is related to the global political and ideological context: since the end of the cold war, the field seems to have developed a type of theoretical allergy against attempts at developing multi-level analyses of international phenomena. Yet, this cannot be avoided any longer, because of the very nature of the problems raised by dams and SPD: environmental issues are inherently multidisciplinary; they involve different types of actors, as well as the physical and natural world, animals, people, technology, etc.

Secondly, there is the problem of **values**. IR theory is very wary of psychological factors¹¹ and does not, on the whole, have the tools to integrate it into its analysis, which partly explains why even constructivist regime's theory, even though it has no problem recognising the significance of values and individuals in IR, still suffers from a serious lack of empirical research to demonstrate its valuable points, as does postmodernism.¹² This reticence by IR theory at engaging in multi-level analyses and at integrating values in its analysis explains why so few have attempted to deal with **the issue of legitimacy**. Yet, if one is to open new avenues of research in the fields of sustainable development and water, and find solutions, then it is necessary to engage in this type of theoretically-grounded empirical research. Indeed, such a re-conceptualisation of the notion of legitimacy allows us to go beyond the limited coercive explanation of power as a force that allows an actor to force others to obey him-her, a view at the heart of most regime theories, and even more generally, political science. This view is faulty because, among other reasons, it cannot account for the fact that non-hegemonic actors' *strategies* played an essential role in the emergence of the SPD regime.

This differs markedly from the political science's dominant approaches, whether liberal, systemist, realist or Marxist who all share a similar vision of power, as if it were a good someone possesses or not or as if it were a force an actor can use to influence or impose his/her will on others. Strangely for a discipline that has power as its core issue, even political scientists who focus on power have not really developed the concept beyond the domination approach. Dahl¹³ saw power as a tool that an actor can use against another in order to *force* the second actor to act in certain specific ways. A few years later, Barach and Baratz¹⁴ went further by putting the actors in a larger context whereby an actor can *limit* the choice of others and influence their decisions by structuring an agenda. One should note, however, that for these authors, if there is consensus between actors, no power is involved, *power existing solely in conflict*¹⁵, which is wholly inadequate, as research on power relations between actors in environmental negotiations show¹⁶. Lukes attempted to go beyond by not limiting himself to the 'visible' aspects of power: the most efficient form of power is the ability to

¹⁰ La Branche, 2003b.

¹¹ Rosoux, 2001.

¹² La Branche, 2003d.

¹³ Dahl, 1957.

¹⁴ Barach and Baratz, 1962.

¹⁵ Interestingly, one should note that this is the way much of the literature on water has dealt with the issue.

¹⁶ Amy, 1983, 1987.

change the preference of others in order to increase one's advantage¹⁷. Unfortunately, Lukes does not explain why actor 'Y' lets his/her preference be changed by 'X'. Moreover, there is an implication that 'X' has an advantage that allows him/her to change 'Y's preference when all actors are in the same position. Much more recently, Hay also criticized Lukes in these terms. While Hay attempted to offer a 'positive' vision of power in which actors can attempt to influence the general context, a *field of possibility of action*¹⁸, he failed to develop his idea. Common to these approaches is that knowledge is seen as a way to increase one's power: knowledge is power, which is freedom of action and *ergo*, greater influence. But, as Foucault argued, knowledge and power do not necessarily lead to greater freedom of action or influence. Most useful here is to present his idea of internalisation. It should be noted here that while Foucault does not offer a complete answer to the power issue, yet, he does offer an interesting base from which can pursue further this type of research.

For Foucault, power is not something one possesses or loses nor is it coercion. Rather, power is a relationship between actors that produces ways of thinking, knowledges and truths, which lead to *individual and social* practices. Knowledge transmits and disseminates the effects of power¹⁹, while "truth" is a status given to certain knowledge by power. Truth is 'understood as a system of ordered procedures (...). "Truth" is linked in a circular relation with systems of power, which produce and sustain it (...). "A regime of truth" ²⁰. The relation between truth, knowledge and power explains why power does not only prevent; it *produces* relations, knowledge and truth. An important point is that the production of truth means that not all knowledge has the status of truth. Subjugated truths are those knowledges that have been defined as illegitimate, made unaccepted and unacceptable by the regime of discourse (i.e., those sets of knowledge which 'dominate' in a field), and which are accompanied by subjugated practices²¹. It is from these that resistance and alternatives arise. Power, thus structures, encourages and also produces specific ways of thinking, behaving as well as constructing one's identity and social reality. As argued by Keeley, these notions offer a framework, yet to be completed and refined, by which we can explain behavioural changes caused by the internalisation of new norms²². It becomes possible to better understand the dynamics by which legitimacy is constructed, and hence, the basis of a regime's capacity at persisting through time, at promoting certain values and behaviours beyond its formal limits and hence, at gathering support. The conclusion here is that coercion and domination are not the only forces, and, actually may not *even be the most significant* in a regime's construction, persistence and demise. Legitimacy and the process of (de) legitimation hence become fundamental to theory since, without actors' beliefs, one can only talk of an imposition of rules, a process that is highly likely to engender opposition and resistance, and in the long run, cannot sustain a regime's viability, and still less its legitimacy. Let us add as well that regime theory tends to focus on *stable behaviour*, while change and instability remain largely ignored²³. This is one of this research's contributions to the field as it concentrates on the process of change, which a foucauldian approach to regime theory can integrate.

My research on the construction of an SPD regime in the field of dams addresses these issues directly. The general research questions are the following: how does a specific discourse such as conventional development change status, going from being legitimate, i.e., seen as true, valid and good, to being seen as less legitimate? How and why has SPD become more legitimate? What are actors' role and strategies in this process? Then, how are SPD norms transmitted to the local level (thanks in large part to international organisations) and transformed into beliefs and values? Clearly, a change in regime is taking place: the 90s

¹⁷ Lukes, 1974.

¹⁸ Hay, 1997, p.50.

¹⁹ Foucault, p. 69, 1980.

²⁰ Ibid, 1980, p.133.

²¹ Ibid, 1980, p. 81-82.

²² Keeley, 1990.

²³ Berman, 2001, p.234.

have seen the widespread emergence of participatory procedures, rules, norms and laws at both the national and international levels in all types of projects, be they local or large infrastructures. Yet, most explanations of this process remain rather descriptive, saying that it did occur but not explaining how. Large infrastructure projects such as dams did not escape this trend as indicated by the World Commission on Dams' Report and by the World Bank's introduction of ecological and participatory norms in its structural adjustment programmes in the early 90s (only to go further in its 1997 Report, by incorporating these norms into its notion of good governance).

3. The issue of legitimacy and the internalisation of international norms.

To pursue this type of research, and better understand legitimacy, one needs to distinguish norms from values. For the sake of this research, a norm is a rule or an institutional culture *imposed* by an actor on others who then follow it *because they must*, usually for fear of retaliation, cost, scandal or fines. A value is a *belief* by actors that a norm, behaviour or an idea is 'good', 'true', and thus, that it *should* be obeyed because of its intrinsic worth. Hence, a value is directly related to legitimacy. The SPD regime's emergence and increasing importance in international development would thus depend on the actors' dissemination and internalisation (the processes by which a norm is transformed into belief at the individual level) of these norms, i.e., on its legitimacy. This argument allows us to tackle several unresolved issues in regime theory, such as why some regimes emerge or persist without a hegemonic power, which is SPD's case. Whether in France or in the field of international development, the increase in participatory procedures comes from pressures put on decision-makers by civil society and local NGOs of all types. In France, some of the key actors were university researchers and a few high placed administrators working mainly in three ministries; agriculture, public works and environment. These actors were able to promote SPD through projects, calls for research and financing. They were influenced by social scientists working on protest movements and by local and national groups refusing the imposition of nuclear power plants, railways and dams. In other words, individual and non-scientific actors played a key role in the elaboration of a new national-level development regime and in its institutionalisation as a legitimate way to engage in public policy, which raises the issue of the notion of "epistemic community".

The notion seems to, at first sight, offer an already well-elaborated approach to non-State actors. However, it remains flawed because it only includes *scientists, experts and intellectuals*. Yet, we know that non-scientific actors have an influence through political, economic and moral pressure. Hence, the epistemic community approach cannot take into account the increasing importance of global civil society, nor a deep trend in domestic and international politics: decisions are increasingly based not on scientific expertise and data but *on political acceptability*. This would, in part, contribute to explaining the dramatic increase in participatory procedures in the last ten years. In addition, a survey shows that scientific evidence has played only a minor role in international environmental agreements since the Stockholm conference of 1972²⁴. Another example of non-scientific actors' influence can be drawn from Canada. Lepage points out that the divergent interests of small communities blocked an ecologically and technically-sound water-management project²⁵. One should also note that the French population refuses GMOs, no matter scientific evidence: they simply 'do not want it on their territory', the Nimby effect. Lastly, decolonisation was driven as much by changes in economic modes of production in the colonial powers as it was by a change in values and ideas regarding legitimate power and human rights²⁶. The implication of these different points is fundamental: the most stable form of a regime, of *'governance without*

²⁴ Zürn, 1998, pp. 617-649.

²⁵ Lepage 2003.

²⁶ Jackson, 1993.

government', would be based not on the imposition of rules but on the internalisation of these rules, and hence, their transformation into individual beliefs.

These different examples highlight my argument regarding the necessity of theoretically and empirically addressing the issue of legitimacy in order to explain regime change. While, obviously, not all actors are significant, one cannot presume without analysis that some are significant while others are not. All actors are *potentially* significant -even terrorists who, while they may not be 'legitimate', have a significant impact on international politics. This implies that researchers need to, before engaging in analysis, determine which actors play a role and what type of role they play.

4. Measuring the process of dissemination and internalisation of SPD norms in dams.

The major problem for regime theory, and for the research on SPD in dams, in addressing the issue of legitimacy is to show that rules and norms have a power and an influence *of their own*²⁷. This is related to another problem: existing approaches tend to remain on the theoretical level, not offering much empirical data. This also applies to constructivism, even though it is best armed conceptually to get at this essential question since it allows us to integrate non-state actors as significant elements in the process by which a regime is created, persists and ends.

The theoretical development of the notion of legitimacy remains sorely lacking even in political science partly because the view that legitimacy can only come from the State is still dominant. However, some researchers have addressed this issue. For Hurrel, a regime is based on its legitimacy, which comes from a shared sense of belonging to a community, whose rules serve as a link between actors and institutions²⁸. There is, however, a problem of level of abstraction with this definition in that, institutions and rules cannot be the origin of legitimacy; *they can only be its object*. Legitimacy can only rest, fundamentally, on individual beliefs, whether scientifically 'true' or not. As Hurd argued, it is a relational quality between actors, defined by their perceptions of an institution or a rule. A norm becomes, at the institutional level, a rule, and it can then influence behaviour and contribute to the actors' definition of interest²⁹. This has considerable import for constructing an empirical research on regimes. It implies that one has to get at individual values and strategies, for example, through participant observation, interviews and organisational analysis. What are the strategies and actors' behaviours that contribute to the rise of the SPD regime, with its specific norms, in the field of dams? This has implications for the notion of actor.

The actor conceptualised actor is not merely a victim forced into accepting the rules of the game. Obviously, different actors play different roles, but more importantly, the same actor may play different roles within the social, political, and economic relations (s)he dealing with in attempting to achieve his-her goals. In addition, his-her strategies and degree of success in either promoting certain norms and values as well as resisting them also differ. What is important here is to understand the process by which the status of two different types of development has changed, and the actors' strategies in this process. Why are actors who once resisted conventional development practices now gaining the upper hand? Inversely, how and why have these once dominant actors modified their stance in order to attempt to counter the strategies of actors now in a better position for promoting SPD? The very change in status of these actors shows that the idea of a dominant actor forcing his-her will over dominated actors is lacking. While this discussion deserves further elaboration, the point is that a re-conceptualisation of the notion of legitimacy implies changes with regards to how we define - and thus analyse - who the significant actors are in the international system.

²⁷ Hurrel, 1993.

²⁸ Hurrel, 1993.

²⁹ Hurd, 1999.

The field research's goal is to produce empirical data offering a better understanding of actors' strategies in the dissemination and the internalisation of SPD norms in dams. I will thus develop further the type of field methodology used in my 1999 field research in Ghana, which showed that values associated to individualism, equality and rationality carried by SPD projects at the local and individual levels caused changes in traditional cultural values, behaviours and power relations, between elders and youths, men and women, chief's councils and population³⁰. It also showed that by associating themselves to the project, chiefs were able to improve their own legitimacy and status. The question is now whether the emergence of the SPD regime leads to a new, improved status for NGOs and other institutions that promote it relative to other actors (governments, IGOs, other NGOs, etc). This certainly was the case for the Canadian international development agency working in Ghana, relative to national NGOs as well as most other governmental development agencies, and most significantly, relative to the Ghana government itself, the Canadian agency acting as the top advisor to the president in the elaboration of a national water strategy.

The research on dams will attempt to determine whether this is also the case with pro-SPD NGOs in the various institutions involved in the dam's project. What was their influence on the dam's type, size, functions, on compensations offered to affected groups, on ecological and on the social measures incorporated in the project's phases? Then, a more critical issue will be addressed: are these interests incorporated into the decision-making process because of coercive measures such as international agreements and national laws, because of NGOs' pressures or because these actors believe in the 'rightness' of this type of decision-making process? The field research will thus first draw a portrait of the actors' characteristics: position, objectives, strategies, arguments and beliefs related to the environment and participation, social representations. Then it will attempt to understand the role of individual values, beliefs and strategies in the emergence of the SPD regime as well as the very relative demise of the conventional development regime, understanding that this is an-going never-finished process and that both types of development co-exist, at times competing and at other times cooperating. In the long run, the aim will be to evaluate the degree of success of actors' strategies, project by project, by seeing whether they succeeded in having SPD norms integrated into the decision-making process and then, evaluating whether or not their interests and demands were actually implemented, and to what degree.

A basic issue remains, one that is daunting by its apparent complexity and its « fuzziness », yet fundamental to this research: how are we to recognise a norm from a belief, i.e., when a norm has been internalised and thus, transformed into a belief? Without answering this question, one cannot address the fundamental issues raised here. Several possibilities exist. Berman suggests analysing cases where sanctions do not exist even though specific and persistent behaviours continue to take place³¹. While useful, this does not seem sufficient nor wholly realistic, as there are always either explicit or implicit sanctions: the Nimby effect and real or potential sanctions are always present, such as fines and fear of scandals. One can also attempt to see if the actor is ready to accept setbacks in his-her career, spend some of his-her own money or time in his-her efforts at promoting SPD norms and values (this is the case of some of the actors we interviewed in our research on SPD in France, and in another, on expertise and democracy in France). If an actor does follow SPD principles without having to or if (s)he does so in an institution that does not promote it, then chances are that his behaviours will have emerged from individual beliefs. We can also take the example of a regime that exists without the presence of a hegemonic power, or a regime created by non-hegemonic actors, which is the SPD's case.

³⁰ La Branche, 2002b.

³¹ Berman, 2001.

Addressing these issues will allow us to evaluate how far SPD norms have disseminated, to what type of actors and how deeply they have been internalised. This, in turn, has very real implications for decision-makers who are trying to implement measures linked to the Kyoto protocol. In the absence of internalised environmental norms, on what basis is the decision-maker to decide? Where are coercive, motivational or punitive measures best applied? For which type of ecologically damaging behaviour and related to which type of political and environmental goals? Which actor should be targeted with which type of measure? How can trust and water-based interdependencies be built between actors, between countries and between sectors? Finally, evaluating SPD itself will, in turn, allow us to improve it where possible, find other methods where necessary and better still, determine where a combination of conventional development and SPD practices is best suited. Indeed, it might be wise not to reject conventional development entirely, even though it tends to be highly directive and not participatory. We forget too often that participation is not always efficient, that it may even be counter-productive in terms of achieving environmental goals³². Which leads us to our last, deeply political and controversial, yet essential, question: how is one to choose between democracy and ecology when sustainability and participation are in opposition?

References

- Adler E. "The Emergence of Cooperation: National Epistemic Communities and the International Evolution of the Idea of Nuclear Arms Control". *International Organization (I.O.)*, vol.46, no.1, 1992.
- Douglas J. Amy. « The Politics of Environmental Mediation ». *Ecology Law Quarterly*, vol.11, no.1, 1983. Pp.1-19; *The Politics of Environmental Mediation*. NY, Columbia Univ. Press, 1987.
- Audetat M., Joseph C., Kaufmann A., Leresche J.-Ph. "Usages et limites de l'expertise scientifique dans la négociation des risques climatiques et biotechnologiques". L. Dumoulin, C. Robert, S. La Branche, Warin P. (eds). *Les Usages politiques de l'expertise*. PUG, 2004.
- Barach P. and M.S. Baratz. "Two Faces of Power", *American Political Science Review*, no. 56, 1962. Pp.947-52.
- Berman S. "Ideas, Norms, and Culture in Political Analysis". *Comparative Politics*, vol.33, no.2, 2001.
- Bloom W. *Personal Identity, National Identity and International Relations*. Cambridge Univ. Press. 1990.
- Bodon V. *La modernité au village. Tignes, Savines, Ubaye. La submersion de communes rurales au nom de l'intérêt général 1920-1970*. PUG, Grenoble. 2003.
- Breitmeier H. and Wolf K.D. "Analysing Regime Consequences: Conceptual Outlines and Environmental Explorations". In V. Rittberger (ed.) 1993.
- Brian K. *The economics of hydroelectric power*. London : Edward Elgar Publishing, 2003.
- FIVE ARTICLES PUBLISHED IN *Les Cahiers du GERMES, Environnement, conflits, participation*. No.2, 1979. Association du GERMES and Min. de l'Equipement :
- Nicolon A. "Quelques thèmes de réflexions et de recherche suggérés par les conflits liés à l'environnement". Pp. 9-18 ; and "L'avenir des modes de gestion d'environnement : analyse de l'opposition à un site nucléaire. Le cas du Blayais". Pp.59-80.
 - Ranelli P. "Les conflits au niveau d'un bassin hydrographique". Pp.81-112.
 - Bidou D. "Participation des usagers à la gestion de l'environnement". Pp.185-202.
 - Tenière-Buchot P.F. "Débats publics et choix décisionnels : le problème de la participation à la politique de l'environnement". Pp.203-212.
- TWO ARTICLES PUBLISHED IN: *Les Cahiers du GERMES. Les politiques de l'environnement face à la crise*. TOME III, Association du GERMES and Min. de l'Equipement. no.11, déc. 1985 :

³² Lepage, Gauthier, Champagne, 2003.

- Mattout P., Metayer G. "Evaluation d'une procédure de participation régionale sur un projet technologique majeur. Le cas de la commission locale d'information sur la centrale de Civaux". Pp.429-438.
- MacGilchrist R., Olivry D. "L'utilité sociale de la participation : vers un pragmatisme social. Exemple du Projet de Barrage de Saint-Geniez--d'Olt". Pp.469-487.
- Caubet C.G. "L'impact des grands barrages". *Ecologie et politique*, no.2, 2002.
- "Un tribunal de l'eau en Amérique centrale". *Ecologie et politique*, no.24, 2002.
- Dahl, R.A. "The Concept of Power", *Behavioral Science*, no.2, 1957. Pp. 201-205.
- Faucheux S. and Nicolai I. "Les firmes face au développement soutenable : changements technologiques et gouvernance au sein de la dynamique industrielle". *Revue d'économie industrielle*, vol.83, 127-146. 2000.
- Finnemore M. "Norms, Culture, and Power Politics: Insight from Sociology's Institutionalism". *I.O.*, vol.50, no.2, 1996.
- Finnemore M., Sikkink K. "International Norm Dynamics and Political Change". *I.O.*, vol.52, no.4, Pp.887-917. 1998.
- Formiga Johnson R.M.. "La nouvelle politique de l'eau au Brésil : forces et enjeux d'une transformation vers une gestion intégrée". *Revue Tiers Monde*, no. 166, 2001.
- Foucault M.. *Surveiller et punir : la naissance de la prison*. Gallimard, Paris. 1993.
- *Power/Knowledge*. Harvester, Brighton. 1980.
- *L'archéologie du savoir*. Gallimard, Paris. 1976.
- Franck T. *The Power of Legitimacy Among Nations*. NY, Oxford University Press. 1990.
- Gagnon L., Klimpt J-E., Seelos K.. "Comparing Recommendations from the World Commission on Dams and the IEA on Hydropower". *Energy Policy*, no. 30, pp.1299-1304.
- Gurowitz A.. "Mobilizing International Norms. Domestic Actors, Immigrants, and the Japanese State". *World Politics*, Vol.51, No.3, avril 1999.
- Haas P.. "Epistemic Communities and the Dynamics of International Environmental Co-operation". In Rittberger (éd), pp.168-201.
- Hasenclaver A., P. Mayer, V. Rittberger. *Theories of International Regimes*. Cambridge university press. 1997.
- Haufler V.. "Crossing the Boundary between Public and Private: International Regimes and Non-State Actors". In V. Rittberger (ed.), 1993.
- Hay C.. "Divided by a Common Language: Political Theory and the Concept of Power". *Politics*, vol.17, no.1, 1997. Pp.45-52.
- Heggelund G. M. *The decision-making process for the Three Gorges Project Resettlement in China*. Doctoral thesis, Fridtjof Nansen Institute, University of Oslo, 2002.
- Hurd I. "Legitimacy and Authority in International Politics". *I.O.*, vol.53, no.2. 1999.
- Hurrel A.. "International Society and the Study of Regimes. A Reflective Approach". In Rittberger (ed.), 1993.
- Jackson R. "The Weight of Ideas in Decolonization: Normative Change in International Relations". In J. Goldstein, R. Keohane (eds.). *Ideas and Foreign Policy: Beliefs, Institutions and Political Change*. Cornell univ. Press, Ithaca. 1993.
- Jönsson C. "Cognitive Factors in Explaining Regime Dynamics". In V. Rittberger (ed.) 1993.
- Katzenstein P. (ed). *The Culture of National Security: Norms and Identity in World Politics*. NY, Columbia University Pres. 1996.
- Keeley J. "Toward a Foucauldian Analysis of International Regimes". *I.O.*, vol.44, no.1, 1990.
- Kollman K.. Prakash A. "Green by Choice? Cross-National Variations in Firms' responses to EMS-Based environmental Regimes". *World Politics*, vol.53, no.3, 2001.
- Krasner S. "Structural Causes and Regimes Consequences: Regimes as Intervening Variables". In Krasner (ed.), *International Regimes*. Ithaca, NY. 1983.

- La Branche S. *Mondialisation et terrorisme identitaire*. L'Harmattan, Paris. 2003a. 284 p.
- "La transformation des normes de participation et de durabilité en valeurs ? Réflexions pour la théorie des régimes". *Revue Études Internationales*, vol.34, no.4. 2003b.
- "Vers une évaluation du développement durable appliquée aux aménagements hydrauliques". *Revue Énergie*, special issue, no. 546. Pp.305-309. 2003c.
- "Rex can bite: A Review of Postmodernism in I.R. (1989-2000)". *The Review of International Affairs*, vol.3, no.1. Pp.63-78. 2003d.
- "Westernization of Political Legitimacy in Ghana through NGOs". *The Review of International Affairs*, vol.2, no.1. Pp.80-99. 2002a.
- "Les effets de la mondialisation sur les relations de pouvoir à Nkwanta and Kasei". *Afrique Politique*. Pp.285-299. 2002b.
- With Warin P. "La participation du public : questions, réponses et absences. Rapport intermédiaire", Ministry of ecology and sustainable development, France. 2003. 96 p.
- Laïdi Z., "Mondialisation et démocratie" *Politique Étrangère*, 1999-2000.
- Latouche D. *Les dangers du marché planétaire*. Presses des sciences politiques, Paris. 1998.
- "Développement durable : un concept alibi". *Tiers monde*, vol.35, no.137. 1994.
- Lepage L. "Les controverses environnementales sont plutôt culturelles que scientifiques". In *Les sciences sociales de l'environnement. Analyses et pratiques*. B. Dumas, C. Raymond and J-G. Vaillancourt (eds). Pp.133-147. 2002.
- Gauthier M., Champagne P., "Le projet de restauration du fleuve St-Laurent : de l'approche technocratique à l'implication des communautés riveraines", *Sociologies pratiques*, no.2 2003.
- Le Prestre P. "Facteurs de progrès en coopération internationale pour l'environnement : essai en marge d'études récentes". *Études internationales*, vol. XXII, no.1, 1991.
- Ecopolitique internationale. Guérin, 1997.
- Lukes S., *Power: A Radical View*. London: Macmillann, 1974.
- Macgilchrist R. "Les jeux de participation dans les grands projets hydrauliques". *Cahiers du Germes*, no.12, 1987.
- Martin-Amouroux J-M. *L'Economie mondiale de l'énergie*. La Découverte, 1990.
- McCully P. *Silenced Rivers. The ecology and politics of large dams*. London: Zed Books, 2001.
- Ménard C. "Enjeux d'eau : la dimension institutionnelle". *Revue Tiers Monde*, no. 166, 2001.
- Mermet L. "La négociation". In J. de Montgolfier and J.-M. Natali. *Le patrimoine du futur. Approches pour une gestion patrimoniale des ressources naturelles*. Economica, Paris. 1987.
- Meublat G. "La gestion partagée des fleuves à long terme de l'eau en Tunisie". *Revue Tiers Monde*, no. 166, 2001.
- Morsel H. *Des barrages, des usines et des hommes*. Grenoble : PUG, 2002.
- Müller H. "The Internalization of Principles, Norms, and Rules by Governments: The Case of Security Regimes". In V. Rittberger (ed.) 1993.
- Nelson G. "Internationalising Economic and Environmental Policy: Transnational NGO Networks and the World Bank's Expanding Influence". *Millennium*, vol.25, no.3. 1996.
- Risse-Kappen T. (ed.). *Bringing Transnational Relations Back In - Non-State Actors, Domestic Structures and International Institutions*. Cambridge University. 1995.
- Rittberger V. (ed.). *Regime Theory and International Relations*. Clarendon Paperbacks, Oxford. 1993.
- Roseneau J. "Les processus de la mondialisation : retombées significatives, échanges impalpables and symbolique subtile". *Revue études internationales*, vol.24, no.3, 1993.
- Rosenau J., Czempiel O. *Governance Without Government: Order and Change in World Politics*. Cambridge Univ. Press. 1992.
- Rosoux V.-B. *Les usages de la mémoire dans les relations internationales*. Bruylant, Bruxelles. 2001.

- Sabelli F. *Ecologie contre nature. Développement et politiques d'ingérence*. Presses universitaires de France-IUED, Paris. 1995.
- Simard L. *Conflits d'environnement et participation : le cas des lignes THT en France and au Québec*. Thèse de sociologie, IEP de Paris. 2003.
- Suliman A. (ed.). *Ecology, Politics and Violent Conflict*. London: Zed Books. 1999.
- Tenière-Buchot P.F. "Débats publics et choix décisionnels : le problème de la participation à la politique de l'environnement". *Cahiers du Germes*, no.2, 1979. Pp.203-212.
- Theys J. "Gouvernance environnementale : entre innovation et impuissance". *European seminar on democratic governance*, Florence, 2000.
- Varaschin D. *Tignes, la naissance d'un géant*. Artois Presses, Arras. 2001.
- Varone F. "Le choix des instruments de l'action publique; analyse comparée des politiques énergétiques en Europe et en Amérique du Nord". *Revue internationale de politique comparée*, vol.7, no.1, 2000.
- Vaux H. J. *Managing and resolving conflict in the use of water. An international perspective*. Edward Elgar Publishing, London. 2003.
- Vogler J. and Imber M.F.(eds). *The Environment and International Relations*. Routledge, London. 1996.
- World Commission on Dams. *Dams and Development A New Framework for Decision-Making. The Report of the World Commission on Dams*. Earthscan, London. 2000.
- Young D.R. "Alternative Models of Government-Nonprofit Sector Relations: Theoretical and International Perspectives". *Nonprofit and Voluntary Sector Quarterly*, vol.29, no.1, 2000.
- Young O. "The Politics of International Regime Formation. Managing Natural Resources and the Environment". *I.O.*, vol. 43, no 3, 1989.
- Zürn M. "The Rise of International Environmental Politics. A Review of Current Research". *World Politics*, vol.50, no.4, 1998.

Packaging Policies as a Vehicle for Reforming the Water Sector: the Case of the Californian Drought and the Central Valley Project Improvement Act

Itay Fischhendler^{1*} and David Zilberman²

* corresponding author

Department of Geography, The Hebrew University of Jerusalem, Mount Scopus, Jerusalem 91905, Israel. Fax: 972-2-5883347; Tel: 972-2-5883346; E mail: fishi30@hotmail.com

College Of Natural Resources, Department Of Agricultural & Resource Economics, 207 Giannini Hall #3310, University Of California Berkeley, Ca. 94720-3310

Introduction

The need to adopt a sustainable water policy based upon environmental and economic factors is evident. These views are reinforced in the literature, and reflect the significant growth in demand for water (Allan, 1994; Wilhite, 1997; Sexton, 1990). However, closer observation reveals that when the water sector is reformed, the measures adopted deviated from predefined policies (Zilberman, 2002; Dinar, et al, 1999).

Water policy development, promulgation and advocacy do not occur in a vacuum. Rather they occur in the context of existing institutions, federal, state and local agencies and interest groups (Ingram, 1973). Hence, any water policy is likely to have some distributional implications that will result in both opposition and support from these various interested groups. The water policy literature has often highlighted the distribution of power between the interest groups as an explanatory factor for water policy choice (Rausser and Zusman, 1992; Brooks et al, 1998). Often the narrow interests of agricultural lobby groups override broader considerations in water policy development and implementation (Rausser and Zusman, 1992). As a result environmentally based water programs are blocked and water supply policies are adopted.

Fragmenting or splitting existing and traditional coalitions and replacing them with other coalitions (coalition breaking) has been suggested in order to change the distribution of political power and obtain environmental reform (Hajer, 1995; Maddock, 2004). Yet, little research exists that examines under what conditions existing coalitions can be fragmented and in what circumstances new coalitions can emerge in support of environmental reforms.

Of interest here is how policy packages (several policies negotiated together and unified into one piece of legislation) may have an effect of uniting divergent interest groups into a coalition with a common policy agenda, while at the same time fragmenting the existing alliances. By broadening the stakeholder base and consequently the political support environmental water reform may be more likely to occur.

The case study demonstrates how legislative packaging is established and works. The package enacted water market mechanisms, brought in tiered water pricing, developed a wildlife restoration fund and allocated water for the environment in California. All this was achieved by the Central Valley Project Improvement Act (CVPIA), which is also tied to a larger package (the Reclamation Project Authorization and Adjustment Act).

The paper first discusses the Californian case study itself. How a policy package was formed, its use and misuse and its enactment is described. Section two identifies the conditions for successfully reforming the water sector through a packaging strategy.

The Central Valley Project in the 1980's

34.5 Million Acre Feet (MAF) of water consumed in California in normal years throughout the 1980's. About 20-25 percent of this water is provided through the Central Valley Project (CVP) built about 60 years ago. The CVP water and infrastructure is owned and operated by the Bureau of Reclamation. Ninth percent of CVP water in the 1980's went to agriculture. This water is delivered by the Bureau of Reclamation to more than 250 water irrigation districts under long-term 40 years renewable service contracts. Since the price of the water is set when the service contracts are signed and is based on ability of irrigators to pay, water is provided for agricultural use at less than the true cost (Whal. 1989). Furthermore, the Bureau did not clarify the conditions under which water transfers would occur between the CVP irrigation districts. Finally, supply to users beyond the CVP area, was prohibited this included water provided by the Metropolitan Water District (MWD) to the growing urban centers in southern California.

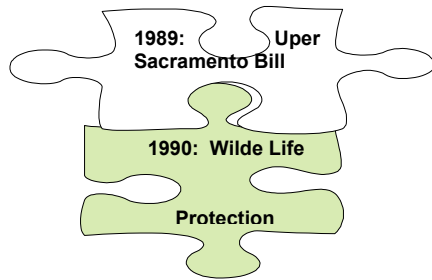
Environmentalists and urban representatives during the 70s and 80s proposed to reform the way CVP water is allocated. Many of these proposals sought to modify existing service contracts to allow them to be renewed for lesser quantities of water and shorter periods of time (Whal, 1989). Other proposals focused on the need to remove all barriers for voluntary water transfers including those outside the CVP jurisdiction.

The need for to reform the Californian water sector became more urgent given the 1987 to 1992 drought. The drought had drastically reduced the base-flow in most of the Central Valley Rivers and adversely affected water quality in the Sacramento- San Joaquin Delta. Consequently, the California environmental and urban leaders called for a redistribution of water resources. Yet, the water-rights holders reluctant to endorse the establishment of such reforms. They feared of changing the existing legal system of water rights priorities.

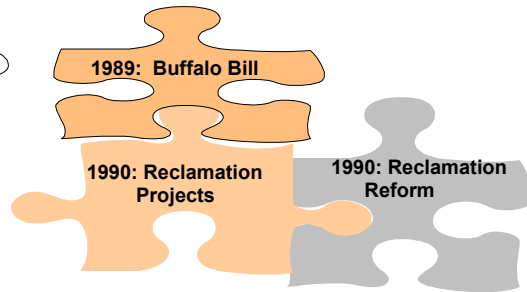
The next section examines how a policy package was formed to reform the Californian water sector.

Reforming the CVP through Packaging Building a policy package

Round 1: During 1990 a bill (H.R. 4700) to restore fish and wildlife in the CVP area was introduced by George Miller a congressman from California. His bill incorporated many of the provisions of a similar bill - the Upper Sacramento Wildlife Bill offered a year before (**fig.2a**). Neither bills passed the house floor. At the same time, a Congressman from Wyoming introduced the Recreation Projects Bill (H.R 2567) that included the provisions of an old bill – the Buffalo Bill. Later in the year Miller attached H.R 2567 to 22 other bills, which would establish various reclamation projects in eight western states (Beard, 1995). Then Miller decided that the bill H.R 2567 would be packaged together with the Reclamation Reform bill, a bill aimed . Yet this reclamation projects package (**fig.2b**) died in the final moments of the 101st Congress.



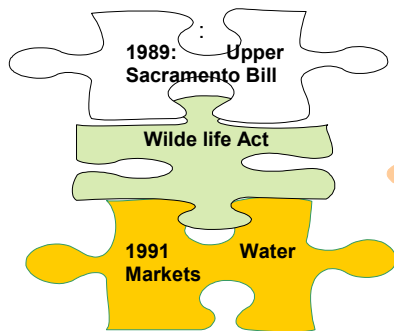
1990 CVP Wildlife Package (Fig 2a)



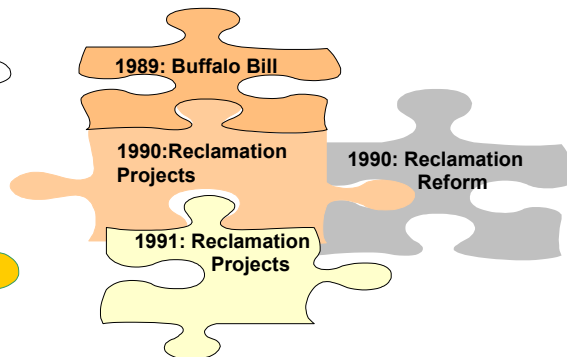
1990 Reclamation Projects package (Fig 2b)

Round 2: At the beginning of 1991 another version of the CVP wildlife bill was again reintroduced to the House by Miller, and to the Senate by Bill Bradley the Chairman of the Senate Subcommittee on Water and Power. Bradley's bill included water market terms as well as G. Miller's wildlife provisions. In response to the Miller and Bradley wildlife bills, the agricultural sector introduced their own environmental bills to the Senate and the House (S. 2016) (H.R. 3876) (Golb, 1996). Their bill included the same wildlife provisions in Miller's bill and allowed the Central Valley water to be sold including outside the CVP area (**fig 3a**). S. 2016 passed the senate without any amendments.

In 1991 the House again overwhelmingly approved the new version of H.R. 2567 (now called H.R 429). This bill included the same reclamation projects and the Reclamation Reform bill. Miller and his committee attached H.R 429 to 17 other separate bills, with the aim of initiating the construction of other Bureau of Reclamation water and land projects in the west directly affecting 12 states - **fig 3b**

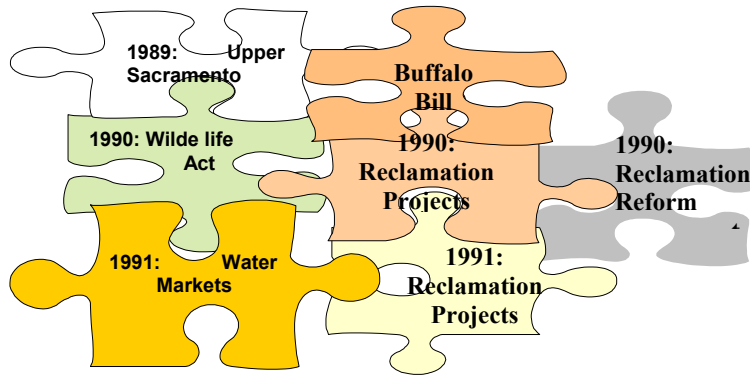


CVP Wildlife Package 1991 (Fig 3a)



1991 Reclamation Projects package (Fig 3b)

Round 3: In 1991 while the Central Valley and the reclamation projects packages were discussed separately by both the Miller and Bradley committees, Miller and Bradley decided to pack the two bills together (Beard, 1995). On November 199, Miller brought the Reclamation Projects Bill before the House to be amended, and to include some of the major components of his Central Valley bill. As a result, from the end of 1991 the CVP wildlife package (now called the Central Valley Project Improvement Act) became Title 34 of H.R. 429. - **fig 4**. H.R. 429 passed the Senate on April 10, 1992.



1991: Unified Package (Fig.4)

The next section traces the rationale behind the packaging maneuvers

Why packaging

Building a sectorial coalition

Since Miller was concerned with the third party impact of water transfer on the environment his 1990 wildlife bill did not include water transfer provisions (Beard, 1995). His bill was not endorsed by many of the environmental groups, which wanted the bill to include water transfer provisions and new contract renew provisions. Including these elements they believed will raise the support of the urban sector in their wildlife as they will be able to buy the CVP water. The environmental sector was especially seeking the MWD support that they assume is crucial for passing the bill (Graff, 1994). Indeed, as suspected by the environmental sector, the Miller bill was in fact stopped short of a house floor vote by CVP agricultural interests (Somach, 1998).

A year later George Miller realized that unless he built a coalition behind the legislation it would not move forward. So Miller and Bradley had several meetings with MWD representatives to fully explain their needs, with the aim of building an alliance between the environmental and the urban sectors.

At the same time the urban sector looked to expand their water resources. The urban sector recognized that since there was a strong objection by the environmental sector to any new water construction the solution therefore was tapping the CVP water through water markets (Boronkay, 1997). Yet, early meetings between MWD and the agricultural sector aimed at initiating water markets only resulted in a deadlock (Boronkay, 1997). The urban sector understood that to increase urban water supply, the wildlife act initiative would have to include water transfer provisions. To this end, they conditioned their support for Bradley's and Miller's bills on water market provisions (Boronkay, 1997). The result was that when Bradley introduced his bill in 1991 in the Senate, it was cloaked around water markets.

As an alliance was build between the environmental and the urban sector the agricultural sector realized it has to incorporate market provisions in their upcoming environmental bill. Adopting market provisions would enable them to gain the support of the MWD for their bill, and in so doing defeat the Miller and Bradley bills which would cut their water quotas and their contract length (Peltier, 1993). As the agricultural sector became aware of MWD support for the sale (Somach, 1998) they worked with the representatives of the MWD to incorporate market provisions in their bills (Peltier, 1993).

The environmental and the agricultural sectors competed for the support of the urban sector for their respective bills. This enabled the urban sector in California to differentiate itself from the agricultural sector, and to demand their part of the water budget (Boronkay, 1997.). The experience mobilized the urban coalition to bond together to form the “California Urban Water Agencies”, the “Western Urban Water Coalition” and the “Share the Water”. Attaching water markets provisions to the pending environmental bills also engaged the Californian business community including, the Bay Area Economic Form, the Business Roundtable and the Bank of America to support the environmental bill (Peltier, 1999).

Building a regional coalition

It was clear to Miller that the largest obstacle to getting the bill through lay in the Senate. There were many western Republicans in the Senate who had no interest in water reforms as their states had been receiving federal subsidies for years. (Beard, 1995, p. 30). Therefore, Miller concluded that there was a need for a regional coalition to support his bill. This was to be beyond a narrow Californian coalition between the environmentalists and the urban sector. To this end, Miller and Bradley, in 1991, rolled all the CVP wildlife bills in with the Reclamation Projects Authorization bill (Beard, 1995). Miller and Bradley, by way of a packaging strategy, informed all states in the west that their bills would not become law until the CVP reform was achieved (Peltier, 1993). This strategy was aimed at forcing the agricultural sector in California to the negotiation table. Otherwise the entire western water legislation would have been delayed (Nelson, 1993). To ensure further support for the bill from the other western states, they included 17 other western states’ projects. For example to ensure Arizona’s support for the bill, the Grand Canyon Protection Act was included (Rhodes, 1991). As expected by Miller and Bradley many of the Western states wanted their projects so badly that they were willing to sell out the Californian provisions in order to get what they wanted (Golb, 1996). As a result of this hostage strategy, Congressmen from states included in the package bill abandoned their former Californian allies in favour of their own projects (Golb, 1996; Peltier, 1993). Among them is Wyoming, Arizona and Utah that since they were concerned for their projects included in the package pushed the bill forward with the CVP included within (Beard, 1995).

The Final Packaging Maneuvers (round 4)

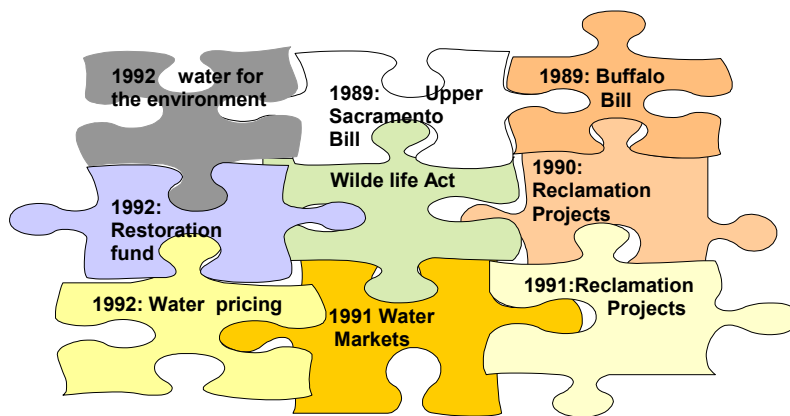
In February 1992 Miller introduced a new house bill (H.R. 5099). The bill in order to get the support of the MWD mirror the transfer language in the agricultural environmental bill and allowing individual waters users to transfer their water without the district’s approval (Peltier, 1993). It also included tiered water pricing provisions in order to get the support of the Californian fisheries sector (Nelson, 1993). Finally it established a wildlife restoration fund, limit the length of the contracts to 20 years and allocated 1.5 million acre feet of water to the environment. Miller’s bill passed the House on June, 18th, 1992.

As the H.R. 429 package moved out of the Committee of Energy and Natural Resources to the Conference Committee where both the House (H.R. 5099) and the Senate (S.2016) CVP bills were to merged it was stripped of the Reclamation Reform Bill (**fig 5**). Excluding the Reform Bill was due to the need to remove all barriers that could have blocked the CVP reform (Beard, 1995).

The conference committee process could be described as a classic sausage making exercise of cutting deals. Often one element of the package was traded for another, for example allocating less upfront water for the environment in return for more money to the restoration fund. Finally, the water allocated to the environment under normal years was reduced to 800,000 acre feet. It also imposed a 25 percent surcharge on people who sold water to outside the CVP rather 15 percent, the tier pricing has changed, and the contracts were set for 20 years.

On October, 6 the House voted 244 in favor and 159 against the compromise bill. 139 of the 192 Western congressman caught in the package supported the bill. Three days latter the Senate voted 83 in favor and 8 against. Only 3 were from the west. President Bush signed the law on October 30, while expressing his discontent with the provisions that relates to the CVP.

This Law, which cost in the order of \$2 billion included provisions for water transfers, water pricing, water for the environment, and new contract conditions concerning the CVP. It also included 39 other bills, which initiated 57 projects in the western states. These covered diverse topics that included settlement of Indian water rights claims, management of recreation at Bureau of Reclamation facilities in the western regions and the establishment of water projects in many western states- **fig 5**.



Finale Repacking (Fig. 5)

Discussion and Conclusion

Water policy is often stressed as a matter of strict economic and environmental discipline, but in real life it is the political process that determines the policy selection. The political process requires obtaining sufficient support for policy proposals. This study has documented the construction of a winning coalition of interest groups through packaging. The wining coalition included both sectorial and regional advocacy coalition. The sectorial coalition included the Californian urban and environmental sector. The coalition was created through including water markets provisions within the CVP Wildlife bill since market provisions provided mutual benefits to all sectors. The urban sector gained by being permitted to buy CVP water; while the environmental sector was now in a position to finance the restoration and was now able to purchase water directly to develop wetlands areas. And perhaps most importantly the agricultural sector was now permitted to sell the water at a market price, with the revenues compensating for the water provided to the environmental sector. The regional coalition was created through packaging the wildlife bill together with Project Reclamation Bill. Attaching these two bills together secured the support of all states covered by the bill in the CVP reform, if this did not occur, projects in their states would not be covered by the law.

Yet, packaging is likely to involve a larger number of participants in a regime and hence it may raise the transaction costs of an agreement. This could explain the delay in the enactment of some of the Reclamation projects and in impingement upon the sovereignty of California in water related issues. It was also found to result in economically unsatisfactory

elements in the implementation phase of the bill (Weinberg, 2002) and in other case studies. Limitations on the ability to adapt management regimes to changes in the environment (Fischhendler, et al forthcoming). However, it may also open avenues for linkages and logrolling that essentially widen the vested interests that will determine if a water policy is accepted or rejected. In other words, since the CVPIA was reformed through packaging, the question is not whether or not to build packages, but rather how to reduce their cost.

This study identified some of the cost-reduction requirements for a successful packaging. It includes the need to build it around the right **size**. The stronger the opposition, the more projects to circumvent the opposition will be included in the package. The size of the package was also influenced by the perceived political time or opportunity to get the bill through. The shorter the period of time, the more comprehensive the reform package could or had to be.

It also the **timing** factor that contributed to the package's success. The unfairness and ineffectiveness of the current allocation system was highlighted by introducing the package when many of the water contracts between the Bureau of Reclamation and the districts were about to expire and during a continued drought. Finally it was the **structure** of the negotiation process as a repeated game that contributed to its success. Between 1989 until the reform was legislated in 1992, the CVP wildlife bill was brought before the House and the Senate for voting each time in a different shape and form. It was also changed during the pre-floor legislative arena. A repeated game allows coalitions to form gradually, thus allowing outsiders to join the coalition.

In conclusion, this paper has demonstrated how environmental and economic beliefs are not enough to form a winning coalition to reform the water sector. This study takes a different approach. Rather than focusing on the optimal policies, it focuses on the feasibility of options. The most feasible way to advance water reform is through a package of policies that unites divergent stakeholders in an environmental policy regime and at the same time fragments the existing alliances. Packaging may not be the best economic solution. But it may be much better than current situations. Too often, there is no agreed-upon water policy at all or policies are enacted too late. Then, the costs of inaction become prohibitive.

References

- Allan J.A. 1994. Overall perspectives on countries and regions. In: *Water in the Arab World: Perspectives and Regions*, ed. P. Rogers and P. Lydon, Harvard University Press, Cambridge.
- Boronkay, Carl. 1997. "The Passage of the Central Valley Project Improvement Act, 1991-1992: the Metropolitan Water District Perspective," an oral history conducted in 1997 by Malca Chall, Regional Oral History Office, the Bancroft Library, University of California, Berkeley, 1999.
- Bradley, Bill, 1992. Statement of Bill Bradley a Senator from the State of New Jersey before the Subcommittee of Water Power and Offshore Energy Resources, May, 14, 1992. In: Legislative History Miscellaneous Articles and Background Information related to Public Law 102-575 Reclamation Projects Authorization and Adjustment Act of 1992. Part 2. p. 139-141
- Brooks, Jonathan C., Colin Cameron and Colin A. Carter. 1998. Political action committee contributions and U.S. congressional voting on sugar legislation. *American Journal of Agricultural Economics*, 80(3): 441-455.
- Dinar, Ariel, Balakrishnan Trickur K, and Wambia, Joseph. (1999). *Political Economy and Political Risks of Institutional reforms in the Water Sector*. World Bank research Paper, 1999.
- Fischhendler, I., Eaton, D., and Feitelson, E. "The Short and Long Term Ramifications of Linkages Involving Natural Resources: The U.S.-Mexico Transboundary Water Case". *Environment and Planning C, Government and Policy*, forthcoming
- Golb, Richard K. 1996. "Passage of the Central Valley Project Improvement Act, 1991-1992: the Role of John Seymour," an oral history conducted in 1996 by Malca Chall, Regional Oral History Office, the Bancroft Library, University of California, Berkeley, 1997.

- Graff, Thomas J. 1997. "The Passage of the Central Valley Project Improvement Act, 1991-1992: Environmental Defense Fund Perspective," an oral history conducted in 1994 by Malca Chall, Regional Oral History Office, the Bancroft Library, University of California, Berkeley, 1996.
- Hajer, M. 1995. *The Politics of Environmental Discourse*. Clarendon Press, Oxford.
- Ingram, H. (1973). The political economy of regional water institutions. *American Journal of Agricultural Economics*:10-18.
- Maddock, Tara A. 2004. Fragmenting regimes: how water quality regulation is changing political-economic landscapes. *Geoforum* 35: 217-230.
- Nelson, Barry. 1993. "The Passage of the Central Valley Project Improvement Act, 1991-1992: Executive Director, San Francisco Bay Association," an oral history conducted in 1993 by Malca Chall, Regional Oral History Office, the Bancroft Library, University of California, Berkeley, 1994.
- Peltier, Jason. 1993. "The Passage of the Central Valley Project Improvement Act, 1991-1992: Manger, Central Valley Project Water Association," an oral history conducted in 1993 by Malca Chall, Regional Oral History Office, the Bancroft Library, University of California, Berkeley, 1994.
- Rausser, Gordon C., and Pinhas Zusman. 1992. Organizational failure and the political economy of water resources management. In: *The Economics and Management of Water and Drainage in Agriculture*, ed. Ariel Dinar and David Zilberman. Boston: Kluwer Academic Publishers.
- Rhodes, John J. 1991a. Supplemental Views of the Honorable John J. Rhodes III. In: Legislative History Miscellaneous Articles and Background Information related to Public Law 102-575 Reclamation Projects Authorization and Adjustment Act of 1992. p Part 1. p. 1170-1172
- Sexton, R. (1990). Perspectives on the Middle East water crisis: analyzing water scarcity problems in Jordan and Israel. In *Irrigation Management Network*. London Overseas Development Institute (Paper 90/3f, December).
- Somach, Stuart. 1998. "Passage of the Central Valley Project Improvement Act, 1991-1992: the Central Valley Project Water Association Perspective," an oral history conducted in 1998 by Malca Chall, Regional Oral History Office, the Bancroft Library, University of California, Berkeley, 1999.
- Weinberg, M. 2002. Assessing a policy grab bag: federal water policy reform. *American Journal of Agricultural Economics*. 84(3): 541-556
- Wahl, Richard .W. 1989. Markets for Federal Water: Subsidies, Property Rights and the Bureau of Reclamation. Resources for the Future, Washington, D.C.
- Wilhite, Donald A. 1997. Responding to drought: common threads for the past, visions for the future. *Journal of the American Water Resources Association*, 33(5):951-959.
- Zilberman, D. (2002). Individual and institutional responses to the drought: the case of California agriculture. *Water Resources Updates*, 121:17-21.

"Liable but Not Guilty": The Political Use of Circumstances in a River Basin Council (Mexico)

Eric Mollard¹, Sergio Vargas Velázquez²

Being inspired to some extent by the French model, Mexico has a modern institutional framework open to social participation. About negotiation processes on water, both countries share stalemates with posture toughening or delay practices as the questioning of "hard" hydrological data by stakeholders. As institutions and negotiations show parallelism in both countries, differences in governance have to be called upon to explain what has been called "a poorly regulated space" in Mexico, namely the use of authoritarianism increasingly challenged by social groups as well as many difficulties to get and enforce a collective decision. A special attention has to be paid to politicization of water because it illustrates some of these difficulties as well as it mirrors another feature of political recent history in Mexico: the transitions.

Before identifying political resources mobilized within a river basin council in Mexico, some differences about governance deserve to be noted (governance includes stakeholders' practices and pressure means in and out the negotiation space). In France, some experience has been yielded in open negotiation; the exercise of prefect's authority is subjected to many associations; and the politicization of water remains circumscribed. Participative experiments recorded successes, in particular in highly conflictive grounds like the Marais Poitevin, the Camargue and, more recently, in the management of the Beauce groundwater. Some hidden solving conflict mechanism exists through the dinner between a high ranked politician and a senior official in charge of the issue: "you reduce your project, I undertake the financing". Money extinguishes the controversy under two prerequisites: a strong public opinion and the legitimacy of such a practice after a prior participative process. In Mexico, not only the public opinion is incipient and elected representatives are less accountable vis-à-vis their electorate, but the politicization of public debate is stronger with representatives up to state governors openly supporting one stakeholder against others.

To identify interfering processes in Mexico, the paper characterizes the conflict and the negotiation blocking within a basin council (1st part). Political factors are analyzed through the use of climatic and political situations by the different actors, the first one making possible some successful hits in the opinion whereas the second one permanently changes the power relationships (2nd part). This factual history, which connects national and regional times, highlights leverage and structural interference for political action (3rd part). In conclusion, if the responsibility for the difficulties reflects the political play, as much within the institutional framework that in the daily practices, liability is discussed, as well as the political conditions required for a successful social participation.

1. Stage, action, actors: a classical play

1. Ménagement à trois or Ménagement à cinq? Elementary principles

A conflict opposes at least two parties which can declare war or decide to negotiate. The stronger imposes a conflict on the weaker and, apart from any moral countervailing power, be internal (population) or external (the concert of the nations), rivalry can badly finish for one of the two parties. Curiously, the weak part can also find interest to enter a conflict under certain conditions of supra-parties institutions or countervailing power, without which it can lose

¹ Institut de Recherche pour le Développement, France. Eric.Mollard@ird.fr

² Instituto Mexicano de Tecnología del Agua, Mexico. svargas@tlaloc.imta.mx

against the stronger one. Indeed, the weak party gains in an open conflict, with little chance to lose anything, since it can gain something, such as gathering a population around a leader or giving legitimacy to an action, in other words creating a cultural identity. Such situations show that the controversy very often calls upon a third actor, be a public opinion (people or nations), morals or a formal authority. Indeed, in old times, despotisms insensitive to political counterweights led to wars and, consequently, to empires until forces were balanced by distance and internal weaknesses such as nationalities. Much later, blocks and alliances created supranational institutions, more as a governance than a real government.

Within a national context, a recognized authority is a prominent actor who, even not physically present, is able to decide a deadline in negotiation, to avoid a fratricidal combat, to define standards and, ex post, to sanction in case of contract non-compliance. The three-actor ménage is acknowledged as the most common. However, it is perhaps the case of a divorce; it is much less the case of a social conflict.

Indeed, political operations are more open and they largely go beyond law and the issue of the conflict. For example, the current controversy on dams goes on law details or on intensive agricultural model that water from reservoirs will supply, much more than local ecology modification or population displacement. This shift in strategy and scale is prone to any politics, and what is valid for dams is valid for a lot of other issues in resource management. One can even consider that the nature of open conflicts is different where laws are strictly enforced, because minorities want to take full advantage of their right, but with the detail that such numerous conflicts hardly exceed local or individual situations; when law is not the only reference, communitarian, long-term conflicts are usual.

The Mexican case gives an illustration of a general issue where two additional actors have to be summed up to the three traditional parties. The first one is an alternative authority. In Africa, land litigation opposes two parties, each one frequently calling upon civil law and common or religious law. The controversy moves upward and becomes a conflict between authorities which, if there is no temperance from both respected institutions resulting from a general balance of power, can lead to secession. In Mexico, ways and customs are sometimes called to rescue a party, as well as the presidency of the republic or an initiative for changing law.

Finally, what we call the fifth party is that which suits more any instrumental politicization of water as a means to gain legitimacy in public opinion or among stakeholders. This fifth part gathers actors who do not directly play around the negotiation table, but who are likely to interfere outside. This fifth acting party mainly deals with politicians, such as members of parliament in relation to lobbies, and with any agent with interest in conflict or in a particular solution of the latter. For example, the president of the republic indirectly intervenes when a conflict can affect him (see further). A lobby would seek modifying rules or law in order to direct a local conflict towards the desired solution. Another way of acting is, for electoral purpose to weaken by all the means a political party, that politicians seize a conflict on water to politicize it.

In Mexico, water suits many types of operations and politicization. We firstly examine some interventions and instrumentalization from actors who seek in a local conflict to build legitimacies and to weaken adversaries' one, with the clear result of a whole decreasing credibility in policy within public opinion. We will analyze then why water in Mexico is so openly politicized by connecting such current history with political transitions the country has gone through for more than ten years.

2. A definitely political transition

Firstly, political regime in Mexico was characterized as authoritarian by authors such as J.L. Reyna, J.L., Meyer and Aguilar or R. Ai Camp. All stressed the concentration of political

power and public decisions at federal level, as well as “no written” rules. Secondly, corporation organization under the control by federal executive authority (ultimately by the president in a strongly-presidential regime) was another main feature. Negotiations were common but the federal authority defined who could be a valid interlocutor. Thirdly, such regime was handled through a politically-dependent bureaucracy and technocracy. All these features resulted in a populist regime in the hands of state party (PRI or Revolutionary Institutional Party). Such political culture with client and corporatist relationships, as well of “no written rules”, has managed political life in Mexico for many decades. Nowadays water management in river basins with conflict solving, rule enforcement and technical decisions yet relies on such practices even though the political framework changed a lot.

In the last decade, citizen mobilization mirrors the will for more room against authoritarian regime. Actions against the State, as Zapatista movement, or through electoral process aim at making a political shift in a long process of transition, whose one of the milestone was the presidential elections in 2000. The search for democracy is not simple because it goes through the destruction of traditional, operative bonds between elites and people. Well, as Olvera states it, “the nature of this process destroyed little by little the last bonds and intermediations between the political system and the society, but new ones were not constructed, which explains that the alternate in the power has not meant until the moment a true reform of the relations between the State and the society and that have not either opened still new forms of citizen participation in the public life.” (2003: 13-14). Transition means a deficit between elites and social demand for conflict solving, law enforcement or basic needs. Social participation, as in basin river councils, faces many difficulties, which mirrors the transition to democracy.

The politicization of water issues in Mexico results from such transitional processes. Social groups such as farmer organization, political parties or government agencies still follow traditional behavior and negotiate under the previous scheme while spaces and whole-society expectative for institutional interlocution are changing. Alongside, state disengagement and decentralization gave more room to local issues. In such a context, water is not a political issue at the federal level, but it is at the provincial level. As a consequence, negotiation in a water basin council is a highly political issue.

3. A definitely political negotiation on water

In Mexico, government pays careful attention to two watersheds because of their economic importance and potentially conflictive dynamics. They are the Lerma Chapala river basin in middle Mexico and Rio Grande river basin at the border with USA. We will analyze the basin where the Lerma River throws in lake Chapala, the largest in the country.

The Lerma-Chapala Basin covers 54,300 km² and crosses five states (Mexico state, Querétaro, Guanajuato, Michoacán and Jalisco). Its agricultural sector is dynamic with nearly 800,000 ha under irrigation, namely 13 percent of the irrigated area in the country, while a rapidly growing industrial sector accounts for 35% of Mexico’s industrial Gross National Product and 9% of its overall GNP. The basin is the source of water for around 15 million people: 11 million in the basin and 2 million each in Guadalajara and Mexico City. From a water perspective the basin is in crisis, with demand exceeding supply in all but the wettest years. Average water availability per capita is 882 m³ per year while the percentage of water use versus available water in the basin is 109%, making it one of the most water-scarce basins in the world.

The main controversy in the basin opposes farmers upstream, localized as a majority in Guanajuato state, and Lake Chapala defenders downstream, in Jalisco state. The lake lost more than 80% of its volume in the 20 last years. The second city in the country, Guadalajara, is also located in Jalisco. As the city pumps nearly 60% of its domestic needs

out of the lake, on the one hand, and as it is the main venue for groups active in favor of the lake rescue, on the other hand, Jalisco government defends the lake as well. Conversely, Guanajuato state defends farmers, less for reasons of electoral balance than for contingent and historical reasons. Indeed, current president of the Republic, Vicente Fox, when he was governor of Guanajuato, had made water a political combat tool against water federal administration. Farmers who benefited from unconditional support against Jalisco made pressure on the new governor, who had to answer a verbal escalade on both sides. This politicization of a water current affair finished to escape initial protagonists and led to instrumentalizing by other outsiders.

II. The play: a negotiation

Each Mexican recognizes that "all is politics" in his country; at the same time, he feels mistrust towards the political field as if the elected officials' practices and a weak commitment to solve any problems ended up even aggravating eroded legitimacy towards authority. Water management is only one aspect of the "all-politics", so that we underline in the narration of a social process what comes under this topic.

1. Antecedents of negotiation

As the largest lake in the country, exceeding the surface of the Geneva Lake, Lake Chapala is a national symbol. Located in the central high plateau downstream of the Lerma River, its volume has not ceased dropping since 1980 to approach 15% of the total capacity in 2003. The actors in the negotiation, supported by the hydrological decision support system, quickly agreed to designate two culprits: upstream irrigation and pumping for drinking water by the second city in the country, Guadalajara, located at some kilometers from the lake. Later it has been added a set of dryer years whose role has been quickly discussed. The last element of the consensus is agriculture, which uses 80% of available water and which is hydraulically and economically poorly efficient: it is consequently the object of all requests, even is accused by some sectors.

As this stage, we note that all the assumptions were not explored and that other explanations have been accepted without discussion: it is the case of over granting of surface water rights, concept recovered from ground water and wells, or of a stronger pressure exerted on farmers than on city. Experts have no time or independence to deepen the issues as independent, scientific institutes might do it. At the same time, some of them are aware of the role they play in legitimating negotiation on a scientific ground (interviews with representatives and experts). Finally, it is not improbable that further negotiations will be questioned and delayed because of such possible shortcomings.

Lake reduction gave place to an early alarm since 1989. At the time, Carlos Salinas de Gortari, as the Mexican president, made environment a personal crusade apart from electoral considerations. Training in high technocracy made him sensitive to international issues and environment whereas, on the institutional level, he got an uncontested authority on the country and on the then-unchallenged party (PRI). On his own initiative, he invited the 5 governors of the Lerma Chapala basin to sign an agreement with the federal executive.

The governors' agreement (1989) and Surface Water Distribution Agreement (1991) raises 3 questions today:

1. Were these agreements hydrologically founded?
2. Were they legal?
3. Have they been enforced?

In 1991 the agreement on water distribution did not address any method of water transfer to the lake. Such absence raises not only the question of the reason of a key point (indecision supports Guanajuato), but still that of the illegality of the procedure when water is let out from the dams by 1999 and annually since 2001, as it has been argued by Guanajuato Water State Commission and representatives of agriculturists. Actually, a federal trial pronounced in 2004 following the request of farmers considered that water let out from the dam is illegal.

Agreement implementation between 1991 and 1999, when the first release to lake takes place, was probably faulty, not because of the application of the algorithm which sets water volumes to be taken away for agriculture, but because of the questioning about water savings carried out by the application of the algorithm. Interviewed experts consider the possibility of water allocation to alleviate potential conflicts while others stresses the difficulties to precisely quantify the links between rain, irrigation and Lake Chapala levels.

First negotiations held in 1991, as idealistic as they can appear today, thus led to trade-offs which are time bombs today. In other words, old weaknesses are current problems. Moreover, the ecological release of water since 1999 did not succeed in stabilizing the lake. While the supporters of the lake consider the yearly 200 Mm³ as "aspirins", such volume spurred farmers' anger. Vis-à-vis this incipient confrontation, the negotiations began again in 2001 within the river basin council with presuppositions we have just seen.

2. The negotiation round

The table of negotiation welcomes not only state stakeholders in an institutional venue (basin council), but also the main authority and the negotiator (merged in the federal water agency). In this small group of experts, policy is not invited meanwhile it is omnipresent.

a. The institutional weaknesses of the river basin council

The river basin council arisen from 1992 water law is an advisory institution chaired by the federal water administration which holds the whole authority. Later on the representatives of six water uses were added to state representatives. Law modifications passed at the beginning of year 2004 confirmed the interest in social participation and in the basin council but did not solve three basic problems (without counting its advisory nature, choice which was discussed publicly).

- The lack of an own budget directly subjects the council to states and agencies, which only fund when they find their interest. For example, any search for information of social or technical nature to clarify council's decisions is prone to such limitations. Such a context suit opportunistic behavior for funding research only if it is expected to strengthen the position of one stakeholder. As there is no solidarity between states, any alliance is not likely to be done. Finally such a play is favorable to the federal water agency, which is the only stakeholder which can finance the request.
- User representation is the second main problem. Representatives firstly serve states, and their relationship to the base is quasi non-existent. For example, a young agricultural leader elected as the representative for agriculture was thanked by a state simply by removing its local mandates, which automatically removed him from remaining in the council. On the other side, people can question any collective decision that affects their interests by changing a leader. Nowadays elections are open and transparent but it is not universal suffrage, what provides argument to call into question a representative.
- If the council is advisory vis-à-vis the government agency, reality is more subtle. In addition to the charges of favoritism (see further) or to susceptibility when discussion agenda is changed without previous notification, the federal administration is open to social participation and gives more weight to consultation when it is itself politically weak or when country mobilizations are likely to overflow. Political weakness took

place in 2003 when one option for water law modifications was a revamping down for the federal water agency. It happens in 2004 too when high ranked staff in many government agencies was susceptible to be laid off. Conversely, government agencies have little contact with population (they never gave account to the mass media) and they are only accountable to the political sphere. By focusing criticisms from all users, such agency is a very useful scapegoat to protect politicians and avoid to them, in their turn, to be accountable.

Consequently, the basin council was constituted without countervailing powers. In the Lerma Chapala, this window has been used by two belligerent states to put forward their position. Such staging has a congenital weakness since the fight between both parties cannot achieve solution: river basin council could be doomed to darkness or, when it is under limelight, to failure.

b. The group of experts

The Group for Planning and Water Allocation is a technical committee within the basin council to discuss hydraulic scenarios. It is composed by state-appointed experts chaired by the federal water agency. Experts and scientists are not spared from politicking, i.e. by particular interests beyond the water issue.

i. Most experts know themselves from a long time. They are often former civil servants from water agencies and some of them already took part in designing the algorithm in 1991. As old hierarchies and friendships go on, such personal networks result in two consequences: one is rather benign insofar as the states which do not form part of it feel insulated. In such a case, strategy is then to call upon university competences or national or international consultants. The second consequence can be perverse in a country where client or group relationships have managed public affairs for a long time. In such a context, a very strict rule of independence would be enforced as in the new water user associations. Indeed, many associations have a regulation which stipulates the impossibility of family relationship with the board. Even though any compromising is not proven, the doubt became certainty for the opposing parties at the point to potentially call into question any decision.

Experts work with the political purpose of their backer, mainly the states. Their technical skills are used for supporting or invalidating hydrological data or simulator. For Guanajuato, which will lose and seeks compensations (for the moment no explicit), the objective is to delay any decision. One expert thus reached to cast doubt on the validity of rain official data and another proposed to make a new simulator.

Federal administration plays a key role in the committee of experts. The negotiator is free to call upon other experts within the agency, who are sometimes high ranked managers to recall the stakes. When negotiations resumed, administration produced its own scenario which gave them more room to manage water in the dams, especially reducing agriculture allocation following consecutive dry years. Other experts had then perceived the negotiation revival as the means for imposing its own solution.

ii. A hydrological decision support system was designed to make negotiation easier. A computerized program simulates run-off in sub-basins according to rain from a database of daily rain during fifty years. The decision support system was carried out by a governmental research institute specialized on water at the request of the federal administration.

The simulator produced from now on two significant breakthroughs in negotiations. It made it possible to obtain the agreement of all stakeholders on data reliability when any attempts for negotiating was called into question by one or the others. In addition, it made it possible for each state to define its strategy and to propose scenarios (that the simulator can classify).

The computerized system is unceasingly improved and it is today a cornerstone in basin negotiations.

However, hegemony it acquired requires identifying possible presuppositions in the initial request by administration and raises the issue of political use of negotiations. Indeed, the simulator computes saved volumes and economic balance for a range of options. For example, the simulator ratifies factors for lake drying out without addressing other assumptions; furthermore, its calibration was quickly discussed. However, this strategy may not result from a political will, but from a hydraulic ethos in a technocracy poorly informed about the social functioning of water user associations.

iii. Negotiation process within the Group for Planning and Water Allocation was quickly blocked by experts appointed by Guanajuato government. Besides the state representative announced in 2003 that it would not sign any agreement this year. On its side, the federal agency was unable to set a decisive deadline without political support in a period of uncertainty for its own future. A May 2004 deadline appeared later without a real capacity to force stakeholders to get a decision. In case of no mutual approval, experts agreed not to modify the governors' agreement of 1991, such decision supporting any dilatory bearings.

3. Operations outside the negotiation table

We illustrate some political operations outside the negotiation round emphasizing on the art of taking advantage from circumstances. In the "all-politics", we examine the influence of the Mexican presidency, the Secretariat for Environment, the federal water agency and local and federal politicians. We examine how "big actors" influence local organizations and lobbies (one could also analyze how the latter use big actors). One could analyze sociopolitical relationship within the states and between state and federal executive, with many conflict, short-term inefficiency and erosion of longer-term legitimacy. If such aspects exist in all the countries, it still misses in Mexico a public opinion aware of its power and demanding accounts from the leaders.

Ghiotti (2004) states that "in the absence of a clear distribution of competences, [policies were used] to reinforce the intervention of institutions in search of legitimacy". The environmental policies became the object of an instrumentalization (i.e. materialization for other purposes or manipulation) beyond their only significance and this, as much by European Union, nations or local authorities. One can generalize this behavior in Mexico.

i. Politicians of opposition party in Jalisco mirror the experience they got as former rulers. In 2003, members of parliament from the PRI left their neutrality to openly support deputies and Jalisco government from the PAN party (National Action Party) in their fight to restore Lake Chapala against Guanajuato. Once this position clearly identified through the request for a Declaration of Ecological Emergency and the petition to give the lake its own voice for elections in the basin council, they overtook local PAN by demanding the president's intervention. Indeed, Vicente Fox, which had put an end to the historical hegemony of the PRI party at the presidential elections in 2000, had based his campaign in particular on environment. As they could not jeopardize the president (see further), PAN could not but decline a too benevolent offer, revealing limits in their ecological engagement. Such event linked with water is of course only one skirmish in a disputed electoral course.

ii. The position of president Fox in the Lerma Chapala basin reveals many political practices on water. His position was undermined by a contradiction until the unhoped-for reversal of the climatic circumstances in 2003. Indeed, exceptional floods filled the lake sufficiently so that presidential intervention would not be necessary until next elections in 2006. Before this climatic bonanza, the president owed, on a side, to make the lake filled to hold his electoral pledge for environmental protection and law enforcement (law provides that any wetland

must be protected) and, on the other side, to prevent any social turmoil of farmers in Guanajuato, state he was the previous governor.

Farmers knew this contradiction and they were able to benefit from it. The most satisfactory strategy for the agricultural leaders and the presidency was to weave a network of functional relations together. Obviously, uncontrolled mobilization can take place with poorly informed and highly organized farmers who are difficult to operate on the battle field. In addition, the Mexican president, if he takes into account the conditions of the basin, associates issues and can yield on water to guarantee other ones. It then becomes difficult to decipher such interlacing of *concerta-cesión*, mexicanism which can be translated as the culture of compromise. It raises the idea that executive has little room to operate or, on the contrary, that it has much more if one manages to decipher all the goals:

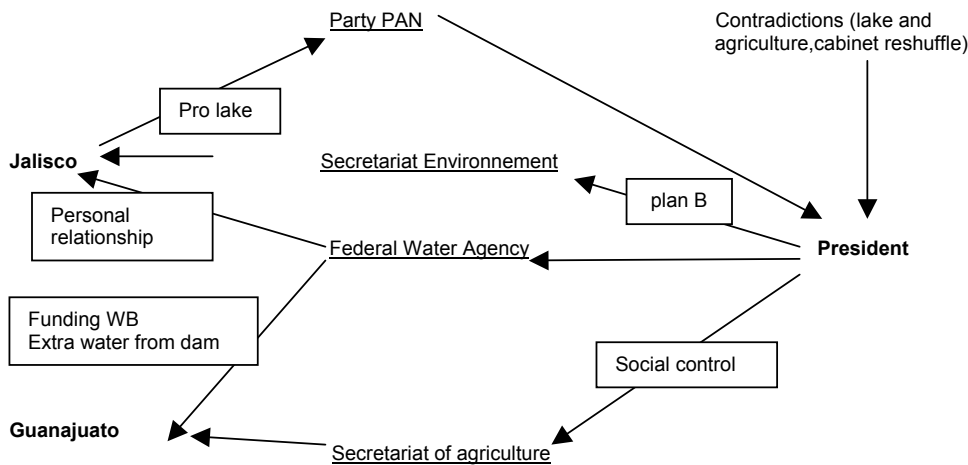
- At the local level, the president can aim funding at farmers in Guanajuato state. It is the case of credit for modernization in irrigation granted by the World Bank. It is probably the case of subsidies to cereal marketing through the secretariat of Agriculture or some substantial support directly channeled to Guanajuato government (this last assumption rests on the fact that the government of Guanajuato spends a lot for the farmers when electorate is firstly urban).
- The presidency has not bet all on water negotiation. Plan B or alternative option is the master plan for the basin. A first plan was presented in 2001 by the new, inexperienced Secretariat for Environment. Although this program did not plan but reforestations and sensible area protection without interfering with the productive sectors, it was locally rejected. In 2004, a new rehash, hardly more supported or negotiated, benefit from a strong line of promotion towards actors. In political words, it is expected that the failure one plan would lead to a strong political support for the other option.
- As other countries, Mexico experiences administration crisis and internal controversies in the institutional network. Even if these struggles are not strictly a political demonstration of interests, a poor regulating mirrors a political weakness. At the higher level too, negotiations to pass great laws (finances, administration, etc.) led the executive to bargain layoffs or the liquidation of research institutes, in particular that in charge of water. At the time of the second reading for the modifications of water law in 2003, the federal water agency tried to appeal against some modifications to the executive a second time (in vain because a bill cannot come back for a second time to the executive).
- Finally, the presidency intervenes on the two faces of the contradiction through the Secretariat for Environment on the side of the lake and through his secretary on the agricultural side. It is more a matter of the minister himself than the ministry. Indeed, the current holder is not only a president's personal friend but also, being the most important agro-entrepreneur in Guanajuato, he has effective relays to control agricultural leaders in Guanajuato. His leverage is of financial nature (see higher) and probably through hidden ways, for example by destabilizing any poorly-controllable local leaders. The local level in water management has consequently effects at the federal level with, during the first cabinet reshuffle at the end of 2003, the continuity of the secretary for agriculture whereas the secretary for environment, with a less political play and so far less necessary with a full lake until the elections, was thanked off.

iii. We lastly examine the case of Jalisco to achieve the political panorama in the basin. This state is important by its economy and demography, but also by some powerful entrepreneur groups and even its bishop. The fight for rescuing lake Chapala is probably less for environmental concern than for electoral purpose and, maybe, to reach a national debate by fighting with a weaker governor. While local newspapers announced great demonstrations of ecologists, small regroupings hardly were mentioned later in the same newspapers. In fact, a strong electoral concern directly in relation to water hides behind these political operations.

Guadalajara city, with more than 4 million people, supplies out of drinking water more than 50% of the population from the lake. This water is absolutely necessary because of a chronic shortage in investment, which will worsen because water price is among the lowest in the country. Thus, water price in the close city of León is 6 times that of Guadalajara. However increasing price would be an electoral suicide and Lake Chapala is vital not only for the city and its entrepreneurs, but also for political actors. Such convergence explains the alliance between the governor and the business milieu. However, it is difficult to explain to people such investment shortage and that Jalisco needs federal water to finance its drinking water. In other words, the purpose of the effort requested from the farmers is not only to restore a lake, but also to subsidize another state.

Whereas the local government of Guanajuato feels isolated in negotiations, feeling that is strengthened by an apparent lack of support from the former governor now president, Jalisco relies on various alliances:

- The state has the support from the secretariat for environment. This mainly moral help supports the legitimacy of the local leaders.
- Owing to the composition of the regional office of the federal water agency is accused to back up Jalisco.
- While others states do not involve in the basin controversy, Michoacán state recently decided to back Jalisco for a full lake. It abandons his invading farmers on the bare part of Lake Chapala against the probable revival of an environmental policy.
- Finally, the political party of the president, the PAN, is very active in Jalisco, a region with many traditional catholic entrepreneurs. In 2003, the president, belonging to a minority part of the PAN, needed the party to renew the image of the cabinet. He negotiated with his party and Jalisco, all the more easily as the lake had just filled and discharged him from his commitment with the farmers.



The diagram summarizes the configuration of circumstantial relations between big actors in the Lerma Chapala basin. The diagram does not take into account the trade-offs in laws under discussion in a context where the president only benefits from the partial support of the party which, itself, does not have the majority with the Congress.

III. Morals: moderate pessimism or optimism?

The first conclusion is the recent politicization of water in the basin. This politicization can be defined as the instrumentalization of a current affair for local electoral policy and lobbying close to the governors: entrepreneurs and landowners in Jalisco, agro-industrials in

Guanajuato. Skirmishes between political parties take place, but this politicization concerns two states and a president who belong to the same party. Local interest groups that do not have a satisfactory answer from the federal government or through traditional negotiation spaces, strives to get political support from their own states. In a context of decentralization giving more space to states, contradictions between federal and state governments are feed by such demands. That can appear curious insofar as, on the one hand, the party is affected (unless strategists think the contrary) and, on the other hand, water benefits from a broad consensus between the 3 big political parties at the federal level. As an explanation, the two conditions of such local politicization are that solidarity with government and party discipline are weaker than the search for a disputed local electorate.

The second conclusion states that the politicians in the basin (but not at the federal level) use the full range of methods to gain an electorate, revealing a more disputed democracy. These methods are undoubtedly varied in the state of Jalisco with personal contacts, manipulation of ecologists and agricultural associations, appeal to the president authority, bill for law modification or, when that is appropriate, law enforcement, without taking into account the manipulation of public opinion, not by aggressive adds as by diverting attention from the main concern. Finally, politicians are able to divert the law by allocating insufficient resources to administration (in particular the water agency which is then unable to carry out any control of wells or of polluting discharge), including research institute becoming dependent on backers and unable to explore other assumptions which one saw that they can become time bombs.

The third conclusion is that many current practices are related to political transitions that began in the 1990s. These transitions are embodied between the announced end of the populist system of redistribution which engaged reciprocities on all levels and disappointed expectative for more accountability and modernity among people. Indeed, the current weakness of political alliances prevents from renewing the social bond, partly broken, between elites and population. State disengagement and decentralization resulting from the same trend reinforce the vacuum that the newly empowered states try to fill. Institutions insufficiently opened to citizen become arenas where old solidarity and new initiatives interfere with legitimacy-seeking agents.

Water management in Mexico was largely modernized, but stubbles on difficulties aggravated by social participation manipulated by established groups. On a side, this institutional crisis does not go in the direction of a better effectiveness, except maybe electoral one in the short run. Conflicts on water multiply without hope of solution. The basin council and the lake are in the limelight while states strive to hide local conflicts, such as a violent demonstration by farmers against police force when the town of León started to pump overdraft ground water. Conversely, optimism comes back when we note that some institutional vacuum is being filled with many local initiatives independent of the existing structures, trade unions or lobbies. Politicians already tried to instrumentalize some of them. Must one hope that the number of initiatives is such as they will not be able to use all of them?

If politicians have an obvious responsibility in these plays and backfires, are they guilty? They are themselves actors of an organization and standards which generalize the masterwork of Crozier. Is it necessary to await a crisis and a new constitution? Or is it necessary to multiply alliances and negotiations so, at least, to depoliticize water? We arrive at the limits of the methodology used in this paper because so many factors intervene while neither history, nor comparison is able to distinguish the prime mover. Modeling or theory could perhaps do it, but that exceeds the objective assigned to this paper.

References

- Aboites, Luis. 1998. El agua de la nación. Una historia política de México (1888-1946). Mexico City: CIESAS.
- Ai Camp, Roderic. 2000. La política en México. El declive del autoritarismo. México, Siglo XXI.
- CNA, 1993. Plan maestro de la cuenca Lerma-Chapala: Documento de referencia. Mexico City, Mexico: CNA.
- CNA/MW, 1999. Proyecto lineamientos estratégicos para el desarrollo hidráulico de la región Lerma-Santiago-Pacífico: Diagnostico regional. Guadalajara, Mexico: CNA and Montgomery Watson.
- Cornelius, Wayne, Ann Craig and Jonathan Fox. 1994. Transforming State-Society Relations in Mexico: The National Solidarity Strategy. San Diego: Center for US-Mexico Studies, University of California.
- Ghiotti S., 2004, «Les Territoires de l'eau et la décentralisation. La gouvernance de bassin versant ou les limites d'une évidence.» Journée d'études Les territoires de l'eau. Université d'Artois.
<http://www.revue-ddt.org/colloque.htm>
- Greenberg, Martin H. 1970. Bureaucracy and Development: A Mexican Case Study. Lexington, Massachusetts: Heath Lexington Books.
- Grindle, Merilee S. 1977. Bureaucrats, Politicians, and Peasants in Mexico. A Case Study in Public Policy. Berkeley and Los Angeles: University of California Press.
- López R. Eduardo, Boris Marañón, Eric Mollard, Daniel Murillo L., Roberto Romero P., Denise Soares, Sergio Vargas V., Philippus Wester, Under press, Le gouvernement de l'eau au Mexique : légitimité perdue et régulation en transition. Territoires en mutation
- Meyer, Lorenzo, y Héctor Aguilar Camín. 1993. In the shadow of the Mexican revolution. Contemporary history 1910-1989. Austin, University of Texas.
- Mollard E., Paula Silva, Sergio Vargas, Flip Wester, 2003, Mexico: a governability of water in transition. Social and technical dynamic and elements of scenarios in the Lerma Chapala basin. IWMI, First Meeting of Comprehensive Assesment program, Columbo.
- Mollard E., Paula Silva, Sergio Vargas, Flip Wester, 2003, Pump Till You Drop: Institutional Responses To Groundwater Depletion In The Lerma-Chapala Basin, Mexico. IWMI, First Meeting of Comprehensive Assesment Program, Columbo.
- Mollard E., Sergio Vargas Velázquez, 2003, Démarrer une négociation au Mexique. Jeux d'acteurs et rôle du négociateur dans un espace peu régulé. Coll. Intern. NEGOCIA – PARIS : 11 et 12 décembre
- Mollard. E, Sergio Vargas Velázquez, 2002, "¡Que se seque el pinche lago!" Las asociaciones de usuarios de riego ante los retos ambientales (México). Alasru
- Mollard. E, Sergio Vargas Velázquez, 2002, Actores, iniciativas y conflictos en situación de transición política e institucional. Un primer acercamiento a la cuenca Lerma-Chapala. 2do Encuentro Chapala
- Mollard. E, Sergio Vargas Velázquez, 2003, La politización regional del agua en la Cuenca Lerma Chapala. Elementos de diagnóstico e impacto de las modificaciones de la ley de 2003. Reunión AMER, Morelia
- Olvera, Alberto J. 2003. "Las tendencias generales de desarrollo de la sociedad civil en México", en Sociedad Civil, esfera pública y democratización en América Latina: México. Alberto J. Olvera (coordinador). México, FCE.
- PRI. 1988. Los Retos de la Modernización. Agua y Desarrollo. Mexico City: PRI.
- Romero Pérez R., E. Mollard, 2003, Conflictos Sociales Por El Acceso Al Agua En El Distrito De Riego 087, "Rosario-Mezquite". Coloquio ANEIH, Zacatecas.
- Romero Pérez R., Eric Mollard, 2003, Las sociedades de responsabilidad limitada. ¿Un espacio de representación de interés agroempresarial? Coloquio ANEIH, Zacatecas.
- Rousseau, Isabelle. 2001. México: ¿una revolución silenciosa? Elites gubernamentales y proyecto de modernización. (1970-1995), México, El Colegio de México.

Stanford, Lois. 1993. "The "organization" of Mexican agriculture: conflicts and compromises". Pp. 188-201 In: Latin American Research Review.

Wester, P., Melville, R. & Ramos-Osorio, S. (2001). Institutional arrangements for water management in the Lerma-Chapala Basin. In A. M. Hansen and M. van Affreden (Eds.), *The Lerma-Chapala Watershed: Evaluation and management* (pp. 343-369). New York: Kluwer Academic / Plenum Publisher