LA-0063-Negotiations between users and agencies to rescue Lake Chapala in Mexico
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Reaching Negotiated Agreements for Surface Water Allocation in the Lerma-Chapala Basin, Mexico: Putting Social Participation First

A central finding of the Comprehensive Assessment of Water Management in Agriculture is that ***in many rivers basins, further appropriation of water for people is not possible because limits are reached and in many cases, breached. In these cases where basins are closing, allocation of water is a critical concern for negotiation processes that requires more informed choices between stakeholders***. In the Lerma-Chapala Basin, where excessive surface water use over the past twenty years nearly resulted in the drying up of Lake Chapala, government agencies and water users entered into a negotiation process to improve surface water allocation mechanisms to reverse this trend.

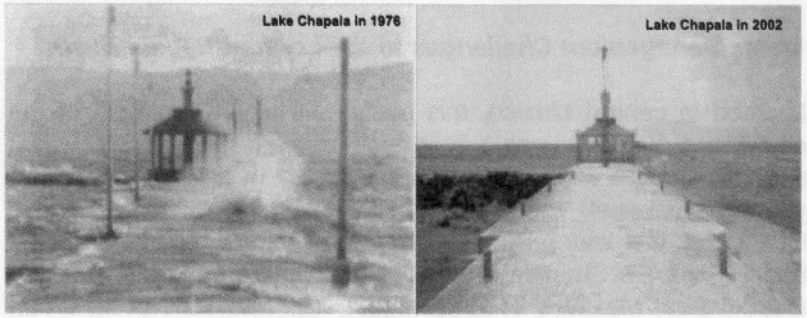
Water Management Challenges in the Lerma-Chapala Basin

Located in central Mexico, this basin is a telling example of the challenges that sustainable river basin management poses. In last decade, surface water use exceeds supply in all but the wettest years. As a result, water levels in Lake Chapala, a shallow lake located at the low basin, dropped precipitously between 1996 and 2002. Lake Chapala is situated in Jalisco State, and provides Guadalajara, Mexico's second largest city, with 75% of its urban water supply. Despite efforts by the federal government to increase lake levels through water transfers from upstream irrigation districts in Guanajuato State to the Lake, by June 2002 the lake had dropped to 14% of its capacity, the second lowest level recorded since systematic data collection began in 1934.

This brief is based on a basin synthesis study conducted by a research partnership involving the Social Participation Group of the Instituto Mexicano de Technología del Agua (IMTA), Mexico, the Institut de Recherche pour le Développement (IRD), France and the Irrigation and Water Engineering Group/Wageningen University, the Netherlands. For more information see www.iwmi.cgiar.org/Assessment/Research_Projects/basin_synthesis_study_lerma-chapala.htm

River Basin Area	54,300 km²
Mexico's Gross National Product	9%
Population	11 million
Irrigated Area	794,000 ha
Mexico's Irrigated Area	13%
Area of Lake Chapala	1,112 km²
Mean depth of Lake Chapala	7.2 m

The desiccation of Lake Chapala placed severe strains on the institutional arrangements for water management in the basin between 2000 and 2003, with irrigated agriculture receiving the brunt of the blame for this environmental disaster. The water transfers from irrigation to the Lake increased conflicts between states and water users, not least because their impact on lake levels were minor and farmers in the irrigation districts were not compensated for the reduction in water allocations for irrigation.



Reaching Negotiated Agreements for Surface Water Allocation

An important step towards improving water management in the Basin was taken in April 1989 when the Mexican president and governors of the five states located in the Basin signed an inter-governmental river basin management agreement to strengthen mechanisms for water allocation, to improve water quality by treating effluents, to increase the efficiency of water use and to conserve the basin's ecosystems. In September 1989, a Consultative Council (CC) was created to translate the agreement into action. A surface water allocation agreement to maintain Lake Chapala's water levels was signed in 1991 and annual meetings have been held since to determine surface water allocations. The Lerma-Chapala Consultative Council became the Lerma-Chapala River Basin Council in January 1993. The Council currently consists of a Governing Board made up of the CNA director, the five state governors and a representative for water users sectors.

Timeline of developments in the Lerma-Chapala Basin

1980	Lake Chapala starts to lose volume after 30 years of high levels
1989	Irrigation Management Transfer at the national level
1989	Lake Chapala has lost 75% of its maximum volume
1989	Agreement between governors in the Lerma Chapala Basin
1992	First Agreement for the recuperation of Lake Chapala
1995	Recuperation of the Lake Chapala to 75% of its maximum volume due to high rainfall
1992	River Basin Councils inspired by the French model of river basin management
1996	User representatives incorporated in the Basin Councils
1999	First release of water from dams under the responsibility of the federal agency
2002	Lake volume is at 14% of its maximum volume
2002	Re-opening of negotiation
2003	Modeling of water balance and strong criticism of the rainfall data base by farmers
2004	Meeting of governors with the President
2004	Lake volume at 75% of its maximum volume due to exceptionally good rains
2004	New Agreement for the protection of Lake Chapala

The Lerma Chapala River Basin Council has worked in the past years to find a solution for Lake Chapala. The two main stakeholders are irrigation users along the Lerma River upstream and Lake Chapala supporters downstream. Between 2002 and 2005 a negotiation

process took place to reach a new surface water allocation agreement. The process focused on defining a new algorithm to allocate surface water between users, and avoid the disappearance of the lake. This process was led by the National Water Commission (CNA), the representative of the federal government in the Lerma-Chapala River Basin Council, and incorporated representatives of the five states in the Basin as well as water users associations of the irrigation districts in the Basin.

In spite of institutional deficiencies, the negotiation process could overcome two problems successfully. The first problem was that the stakeholders that would be affected by an agreement without compensation did not trust data and the hydrological model. A set of meetings with farmer representatives yielded a consensus, which paved the way for a new stage of negotiations. The second problem was the lack of basic information (social, economic, environmental). A survey was conducted that indicated a surprisingly high willingness for environmental conservation and compensations of farmers from the whole population, including the farmers themselves.

What a good negotiation process requires

Objective: In a simplified example of a three-party negotiation (two stakeholders and a government agency), it is clear that the negotiations must be balanced to be successful. Not only the two stakeholders must gain from the negotiated agreement, but also the agency must gain prestige and credibility for future negotiations. Consequently, the society as a whole gains as well.

Consequence: The authority performs several roles: mediation in the negotiation; generation of knowledge; application of collectively decided rules; ensuring that third parties are not affected; representation of the public interest; granting of financial compensations on behalf of society.

Process: The negotiation is a process which takes time to generate knowledge and to advance in discussions until the final resolution. It happens that everyone is not entirely satisfied, but the process should not be blocked by systematic obstructions, which would reveal a basic problem.

Method: The negotiation rests on the representatives of each party, responsible for informing and consulting their constituency (farmers for example). The representative thus signs the resolutions on behalf of their group with the agreement of a large majority. As the representative must be legitimate, the authority must be legitimate too. It would not entirely be the case if a doubt remained on its capacity to enforce sanctions for infringements made against the common resolution by individuals or minorities (called free riders).

Constraints in the negotiation process in the Lerma Chapala Basin

Poor leaders' legitimacy: Farmers' leaders were not fully democratically elected by their constituency. Furthermore, farmers are poorly informed on the whole about the basin stakes and the negotiation. As the leaders are not fully recognized, they can only receive programs or subsidies, but can give nothing to other parties on behalf of the farmers. Indeed, the poor legitimacy of leaders can lead them to be spontaneously dismissed for more demagogic, radical leaders.

Politicized local authority's credibility: A disagreement between federal and state authorities leads each party to follow his own authority and negotiation becomes a politicized, entangled struggle between authorities. Furthermore, as an authority supported a group, this group was self-confident in all its arguments and became more radicalized in the conflict.

Poor federal authority's credibility: Even though the federal administration has good facilitators in negotiating, its history and poor local water management have resulted in a low level of legitimacy. For various reasons, it has not been able to legalize or sanction free riders. As the federal water agency is weakly trusted by society, parties to the negotiation take a high risk as it is likely that the other party does not enforce any collective outcomes.

A restriction-based negotiation: The main shortcoming in the negotiation has been the type of negotiation, which is not a win-win one a priori. Indeed, while they are no clear compensations for farmers, who get a right to use water from the government, they will be the unique party to be affected and they will receive nothing: it is clearly a one-party restriction. It would result in a subsidy from the farming profession to Chapala Lake. Social participation is then only a façade for an authoritative decision to be taken.

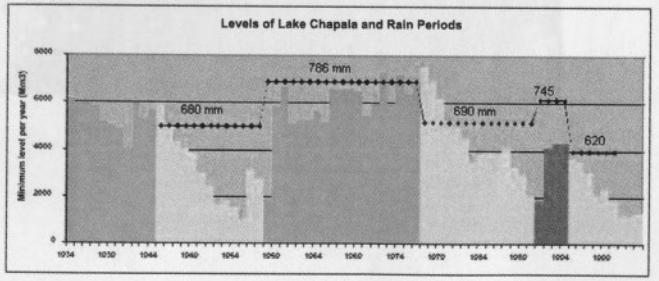
A non integrated management: The integrated management of natural resources means the coordination of the different government agencies, which can be included in the discussion within the River Basin Council. When new dams are approved, when modernization programs are negotiated on an independent basis, when the other federal agencies or state government agencies have their own programs and objectives, the negotiation is undermined. Additionally, third parties are not taken into account, such as groundwater users when canals are lined or downstream users when modernization reduces return flows.

Putting social participation first

Is it possible to be successful with a poorly legitimate authority and leaders? What have been the consequences so far and what will be the consequences in the future if nothing is done? It is crucial to put social, more than technical or organizational, factors first to recover legitimacy for leaders and agencies, meaning longer rather than short term programs. Other factors would be necessary, such as countervailing and precise powers at different scales or changes in the power structure, but we focus here on recovering legitimacy.

Many solutions and money have been put forward to tackle the environmental crisis: technical solutions such as canal lining, low pressure irrigation, improved agronomic technology, as well as institutional solutions: Groundwater Committees, Basin Council, Citizen Organization for Water, Water User Association. To date, no solution has been effective and not a drop of water has reached the lake as the result of a social consensus. On the contrary, unrest both from lake supporters and from farmers surged with a decreasing trust in government agencies while money was invested elsewhere. Legitimacy is the main issue and social participation the first priority.

An authority is necessary to enforce decisions. It means that social participation and authority have to be developed alongside each other. For authority, their roles have to be clearly defined, but it has to be independent from users and politicians, only depending on law. Social participation is not only a way to make the decision more efficient: it is a way to put social first to give legitimacy to any leadership in the society. It is also a countervailing power necessary as a second condition to solve the water crisis, which is primarily a crisis of trust.



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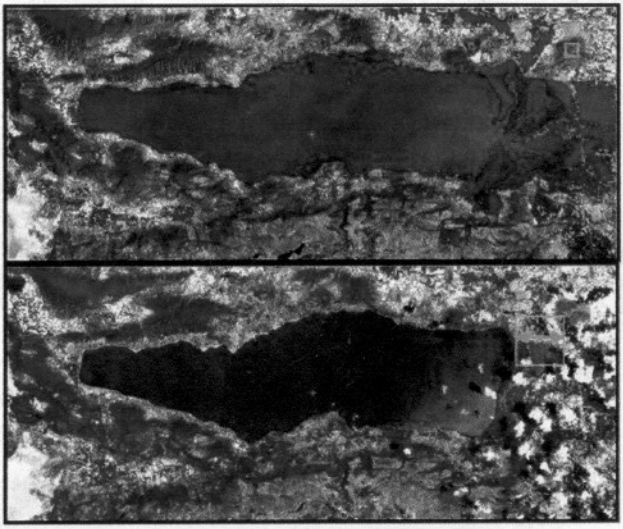

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