

The Use of Workshops as a Planning Tool in ILBM

Lessons from Lake Chapala, Mexico

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Abstract

The First Latin American Workshop on Integrated Lake Basin Management (ILBM), organized by the International Lake Environment Committee Foundation (ILEC), Corazon de la Tierra, (Heart of Earth, a Mexican civil-society organization); the Secretary of Environment and Sustainable Development (SEMADES, Jalisco State government, Mexico), the Water Commission of Jalisco State (CEA) and the Technological Institute of Higher Studies (ITESO, Mexico) was held from November 17th to 22nd, 2008,. The goals pursued were: To foster in Mexico and other Latin American countries the ILBM as a practical approach for basin planning and implementation of sustainable practices; to strengthen the cooperative links between federal, state and municipal government levels with universities, research centers and civil society groups; raising the capabilities to develop and apply integrated projects; and to construct a common ground to apply the ILBM in the sub-basins of the Lerma-Chapala Basin and other watersheds in Latin America.

The use of a workshop to promote ILBM in Latin America was selected as a practical tool, attractive for many institutions which identified it as a opportunity to learn of this approach (scarcely known in the region) and, simultaneously, present their own findings and activities. This paper presents how the Organizing Committee was integrated, the criteria applied to invite and select participants, the methodological structure defined to promote close interaction between participants-speakers and the kind of desired outputs to be obtained. This workshop was designed as a first stepping stone to create a collaborative network on ILBM in Latin America, collecting data about its application in the local basins where the participants work and learning along the process from their particular experiences.

Keywords: ILBM, Lake Chapala, Latin America, methodological structure, compromises.

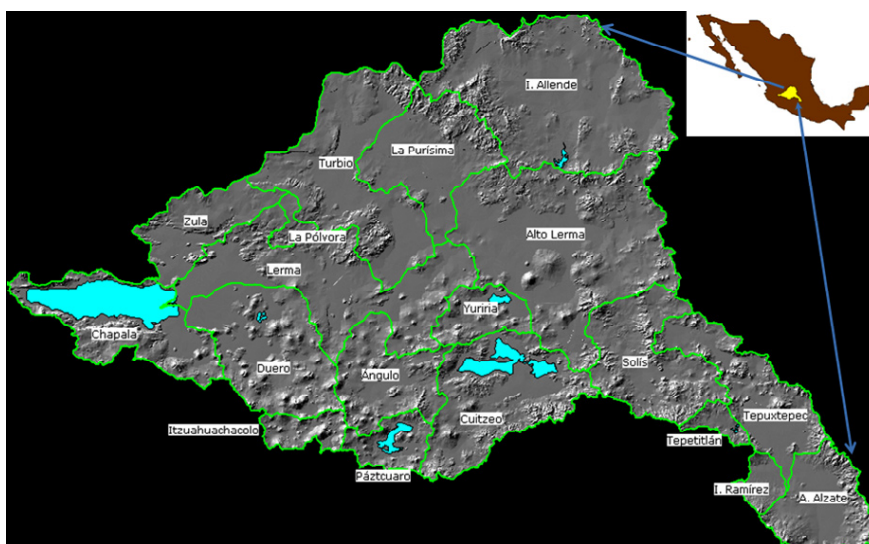
I: Lake Chapala basin

Lake Chapala is the largest lake in Mexico and the third in size on Latin America. It forms part of the most important (in economic, population and productive measures) Mexican watershed, the Lerma-Chapala, with a surface of 51,887 km² which includes part of five states (Cofler, et al, 2006). There are around 15 million inhabitants in the basin plus another 20 million persons who are external basin users (Mexico City and Guadalajara City, Mexico's biggest urban areas). The lake stands at an altitude of 1,525 meters above sea level. It extends on a surface of 114,000 hectares and has a maximum storage capacity of 7 897 billion cubic meters (Valdez et al, 2000). Lake Chapala is a shallow body of water, its deepest part reaches only 8 meters.

Lake Chapala serves a wide variety of uses: fisheries, water source for about 4 million dwellers from lakeshore and Guadalajara City; it plays a core role in regional climate control, favoring maintenance of nine different types of ecosystems; has an extraordinary fish endemism (severely damaged during last 50 years) and strong tourism potential, which is, until now, only partially developed.

Lerma-Chapala is the most exploited basin in Mexico, mainly for agricultural irrigation (an estimated 80%), but also for urban and industrial uses. There are 552 big and

Figure 1. Lerma-Chapala basin



medium size dams on the basin, which altogether with direct extractions and diversions have deeply affected Lake Chapala in-flowing rivers, increasing the lake natural tendency to fluctuations, making them more frequent and severe. Lake Chapala diminished to 13% of volume storage in 2002 and recovered only due to extraordinary rainy seasons during 2003-2004. Federal government data report that hydrological balance is consistently depleting from 1-5 meters per year. Lerma River, the main affluent for Lake Chapala, has been severed in long sections, losing its ecological flow most of the year.

Other problems affecting Lerma-Chapala Basin are invasive species (aquatic hyacinth and mojarra fish), solid deposits; pollution (from tanneries, tequila producers, petrochemical and furniture factories, etc.) Heavy metals (mercury, chrome and others) are also found in some areas of the lake, generating health risks linked to fish consumption. Also there is eutrophication derived from agrochemicals, cattle excrement and cities' waste water (Valdez, et al, 2000), producing algae blooms in warmest periods of the year.

A strong deforestation process is going on: SEMARNAT (Secretary of Environment, a federal agency) calculates that 1 million hectares of natural vegetation disappeared during 1980-2000. Since 1800, 60% of total natural vegetation surface has vanished. That increases floods and forest-soil erosion, which is deposited on bottom of the lake and riverbeds, increasing flood risks. One of these floods affected 4000 hectares in 2004, forcing the use of dynamite to blow a dam and release a huge quantity of water to solve momentarily the problem. Around 60% of the basin surface shows some kind of erosion. Combinations of water loss, pollution and invasive species have severely impacted biodiversity.

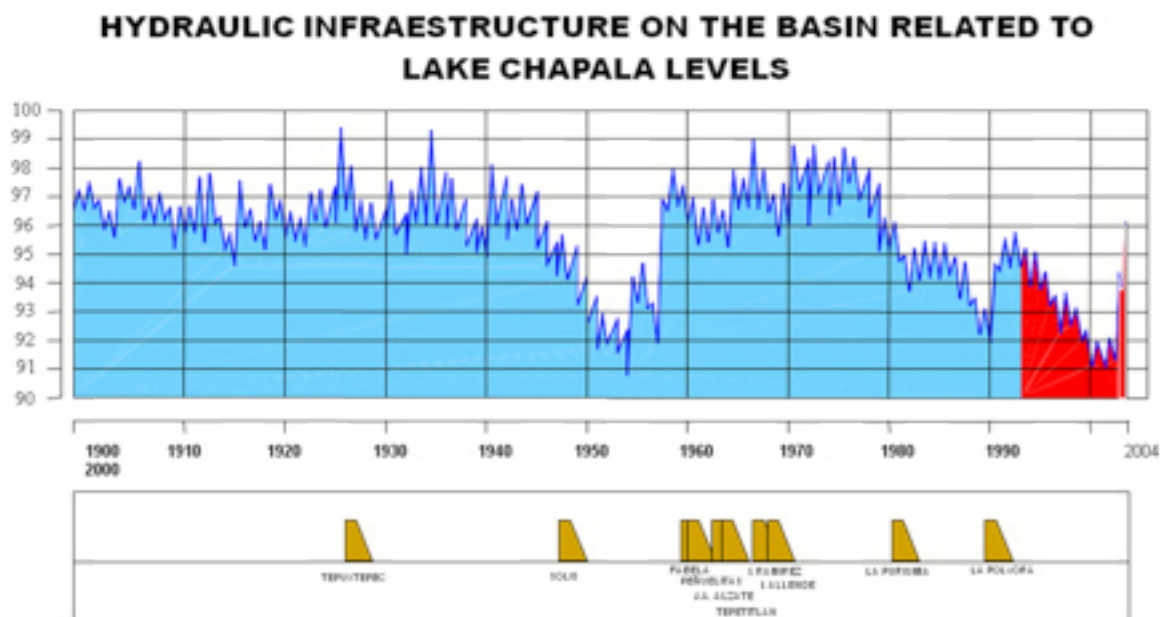
The basin is considered to have strong problems despite its "higher priority for conservation status" and of being "priority hydrological area" defined by CONABIO-National Commission of Biodiversity (Arriaga, 1998).

II. Workshop precedents

History related to Lake Chapala shows few collaborative efforts between academic, government and civil society groups, reflecting the conflictive processes which dominate the basin scene. During past six years there has been a tense calm between groups of water users, after a period (extending from 1998 to 2002) when the desiccation process of Lake Chapala placed tremendous strains on the institutional arrangements for water management in the basin (Wester, 2006). Most of conflicts happened inside the Lerma-Chapala Basin Council, organism created back in 1989 to reach agreements and solve problems related to water use, but centered only in water distribution, ignoring basin management components.

The Basin Council emphasizes the role of water users and water agencies, usually ignoring links between rivers with Lake Chapala, forest management, crop planning and urban development issues related to water recharge, quality and volume. Also receiving small consideration are the paper of researchers, universities, environmental agencies and civil society organizations, which rarely gained access to the council and only as speakers. This defective stakeholder involvement has generated that since 1955 (worst Lake Chapala crisis ever) federal government have made 5 attempts to create Master Plans for Lake Chapala Basin, all of them dead before being implemented due to lack of social support.

Figure 2. Hydraulic infrastructure on the basin, linked to Lake Chapala levels (CEAS, 2005).



a) The Sustainable Development Program of Condiro-Canales mountain range

There is the basin a void of public access to information and very little development of organization linked to improvement of social, productive and ecological processes, excepting cases like the San Juan Nuevo (Michoacan state) self-development process, fishermen training in Lake Patzcuaro and the Sustainable Development Program of Condiro-Canales Mountain Range (Juarez, 2007).

This last program was started derived from an analysis of basin stakeholder process. From 1999 to 2002 hard clashes happened between irrigation farmers from Guanajuato State and ecologist organizations from Jalisco State. The situation was characterized by virulent mutual attacks and menaces of violent acts. Solutions promoted by the ecologists centered on taking water from Guanajuato's dams, which generated strong negative reactions from farmers. The Lerma-Chapala Basin Council managed to solve partially this situation, which had many political aspects.

After analyzing mentioned situation Corazon de la Tierra members decided in 2001 to structure a model that could work to improve identified weak points and later be widely applied on Lake Chapala basin, consisting in restoration, protection and sustainable use of forests through community involvement, promoting people participation and empowering to achieve deep involvement in ecological ordering of their territories. Our goal was to demonstrate in practice that such focus could work and generate medium and long term compromises from local people, also increasing their quality of life.

This model was applied in the Condiro-Canales Mountain Range, a space of 10,700 hectares with hydrological influence area of 40,000 hectares, allocated north of Lake Chapala. This Local Involvement-Ecosystem Management approach has since then accumulated outcomes and acknowledgements, being selected as one of eight successful projects on water conservation in Jalisco State during 2005, as one of four successful projects on Integrated Basin Management in Mexico (2005) and was finalist in The Kyoto World Water Grand Prize, celebrated as part of Fourth World Water Forum (Mexico, 2006). The program achievements allowed Corazon de la Tierra to be heard and to push forward basin processes involving federal government and other civil society organizations.

b) Constructing an Action Plan for Lake Chapala Basin

From November 1st-3rd, 2006; an experts workshop with the name "World Lake Vision: constructing an Action Plan for Lake-Chapala basin" was held with involvement of 12 Mexican and 6 international experts, counting with Corazon de la Tierra, ILEC, the National Commission of Water (CONAGUA), the Secretary of Environment (SEMARNAT) and IMDEC (Mexican Institute of Community Development, a CSO) as members of the

Organizing Committee. After three working days the expert team came forward with a Proposal of Action Plan for the Lerma-Chapala Basin, which was then presented to a wide group of stakeholder representatives (117 participants coming from the five states of the basin, including municipal, state and federal government levels; universities, civil organizations, farmers, etc.) This diverse set of people received the information, analyzed and complemented it, finally generating 135 lines of action integrated in six Strategies: Optimal use of water; Prevention and control of water pollution; Biodiversity management; Social involvement for basin management; Monitoring of lake and its basin; and Sustainable management models. The fact that a proposal of this kind could be so widely structured, based in sound scientific information and experience from the expert participants and then backed up by the wide range of attendants was unprecedented. The document was checked and edited during next three months (comprising lines of action to 117), being publicly presented on March 22nd 2007, as part of the World Water Day. Next step was hard and long, because there was a coincidence of administrative changes on municipal, state and federal levels, which affected institutions like universities and even some civil society organizations (CSOs). That implied that most of 2007 and part of 2008 was used for lobbying the Action Plan document with new people on charge on the offices, to let them know its thematic contents and to convince them about its importance. Derived from previous processes, a close link with Jalisco state government was developed, creating common confidence to start new joint activities. Also bonds with the National Institute of Ecology (INE, a federal agency) were strengthened, thanks in good part to the fact that the head of INE's Integrated Basin Management Office took part in constructing the Action Plan. Despite these achievements it's important to mention that the way wasn't an easy one. Meetings and presentations were scheduled with CONAGUA, local and federal congressmen and municipalities. A common perception was that the Action Plan was "too inclusive and extensive" meaning that no institution could accomplish to aboard it completely, meaning that several stakeholders needed to work together to reach shared goals, so a common reaction was to decline participation because that represented little political gain.

As result of several meetings we concluded that several conditions could help to push forward the Action Plan, being these: a) to distribute specific lines of action among particular actors, to be reached more easily; b) to promote it at the international level, specially linked to other lakes in Latin America; c) to use a sub-basin approach, to involve regional stakeholders and make feasible to reach outcomes in a shorter term; d) to create a common ground with government agencies to broaden visions and cement long-term processes.

Using such ideas as guide we supported the Ramsar Declaration for Lake Chapala promoted by IDEA (a CSO with strong background in legal aspects) and SEMADES;

taking to ourselves and promoting with Jalisco state government (through the Secretary of Rural Development) action lines related to ecological sanitation, forest management (mainly in Condiro-Canales mountain range) and environmental education, with reachable goals in short and medium terms. The Action Plan workshop experience was presented in the XII World Lake Conference (held in Jaipur, India in November 2007), being distinguished with the Ibaraki-Kasumigaura Prize for "its outstanding content". The case was also presented in the First Arid and Semi-arid Lake Basin Forum, held in Argentina the same year. Both activities were publicized in Mexico, alongside with presenting in Mexico The World Lake Vision Action Report (ILEC, 2007) which includes a chapter related to Lake Chapala. These three activities allowed to create interest for the issue, fostering the perception of the Action Plan solidness.

For promotion of the sub-basin approach there is an alliance established with INE, research institution that leads the federal agencies working in the Lerma-Chapala basin. This group coincides with promotion of sub-basin management and selected five of nineteen as priority. Among those five the Lake Chapala sub-basin (also named Direct sub-basin) was included. Finally, with intention to create common ground with government agencies the ILBM workshop was selected as the better option, derived of several considerations explained further.

III. Organizing the workshop

The use of a workshop to promote ILBM in Latin America was selected as a practical tool, attractive for many institutions which identified it as a opportunity to learn of this approach (scarcely known in the region) and, simultaneously, present their own findings and activities. This activity aimed to reach several goals a) To foster in Mexico and other Latin American countries the ILBM as a practical approach for basin planning and implementation of sustainable practices; b) to strengthen the cooperative links between federal, state and municipal government levels with universities, research centers and civil society groups; c) raising the capabilities to develop and apply integrated

projects; and to construct a common ground to apply the ILBM in the sub-basins of the Lerma-Chapala Basin and other watersheds in Latin America.

The workshop idea was initially presented to the Secretary of Environment and Sustainable Development (SEMADES, Jalisco State government, Mexico) to count with a strong local actor supporting it. SEMADES showed immediate interest to back-up the idea, which was presented to ILEC members during the XII World Lake Conference held in Jaipur (India) from October 29th to November 2nd, 2007. Next three months (December 2007-February 2008) were used to define concrete times and contents of the workshop, also to integrate two more Mexican institutions, the Water Commission of Jalisco State (CEA) and the Technological Institute of Higher Studies (ITESO, Mexico), the last one providing the academic backing-up to validate academic credits.

A useful way to assure reaching of workshop goals from the very beginning was to create a commitment from the involved Mexican institutions to registry part of their staff as participants, counting with four seats for each organization. Also, each institution promoted the workshop call with their own contact networks, referring solicitants to an Academic Committee that checked the applications using as criteria a) that solicitors had practical experience in lake management and/or related issues, b) the grade of influence on their basins of work, trying to assure application of acquired learning; and c) a presentation of motives.

The call presented synthetically ILBM structure, emphasizing the practical approach of the workshop and the opportunity to learn directly from ILEC experts that participated on its structuring and application on several world lakes. Also the opportunity to present their own experiences and receive feedback from participants and expert speakers was highlighted.

Response to the call was huge, showing the existing need and interest on the issue. 55 requests were received from Mexico, Cuba, Argentina, Guatemala and Colombia. With

Figure 3. Summary of participants.

Number of Meeting Participants	37
Residency of Participants	34 from Mexican States (Estado de Mexico, Guanajuato, Jalisco, Mexico City, Michoacan, Morelos, Queretaro) 2 from Argentina 1 from Guatemala
Participants Field of Activity	13 researchers from public agencies and universities; 12 members of government agencies of three Mexican states 2 members of municipal governments 9 members of civil society organizations 1 private consultant
Residency of Workshop Speakers	2 from Japan (Masahisa Nakamura and Katsuya Tanaka) 1 from Philippines (Adelina Santos Borja) 1 from USA (Walter Rast) 1 from Guatemala (Juan Skinner) 1 from Mexico (Helena Cotler).

the focus to have a dynamics that allowed close learning the number of participants was pre-established in 30, but the demand forced to raise it, counting finally with 37 participants. Also equilibrium in the kind of institutions represented was previously defined, to avoid overrepresentation of any of them (Figure 3).

Six applicants from other countries were approved but three of them couldn't make the trip derived from institutional reasons (one from Cuba and two from Colombia), so their places were covered with Mexican participants.

The workshop structure was defined to promote close interaction between participants and speakers. First part was directed to establish the general ILBM framework, explaining development of the concept and its strong practical approach. All first day was dedicated to this issue. After that, particular sections of ILBM were presented by the speakers (all of them highly praised) mixed with participants' experiences. To foster feedback attendants' presentations were made in group, putting together two to three of them and opening question and answer sections immediately after. This proved a powerful tool to create strong analysis and exchange of ideas. For Lerma-Chapala basin and Santiago River basin (a dramatic case with strong health aspects) this provided the rare opportunity for institutions to share a space that usually don't do. Several participants expressed surprise about the experiences presented by others, even when they were working in the same basin. This part created certain openness to different ideas which were listened without intermediaries.

The third day (November 19th) a field trip was conducted. Initially some participants asked why this activity wasn't scheduled for first day, the answer being the intention to have a defined ILBM framework to see the lake and its basin from a different perspective, which, according to comments from participants was well achieved. This activity also fomented interaction in close level, all participants and speakers being invited to provide and share information during several stations, becoming the trip an environmental interpretation process.

Before and after the field trip participants presented a diverse and integrative collection of projects, including issues as fisheries, weed infestation, pollution, eutrophication, run-off, deforestation, etc. In the fifth and sixth days all of them formed teams of discussion to identify practical ways to apply the ILBM approach in their basins of origin. In this last part of the workshop was possible to define very precise compromises to be applied in the Lerma-Chapala basin and the Santiago River basin, both with particular characteristics, processes and actors, each one with huge problems derived in good measure from shattered management approaches which haven't took into account the principles of public involvement, developing of sound scientific information, complexity of the basin's components and need of long term compromises.

This last part of discussion and analysis was defined from the beginning as the top part of the workshop, to get particular products and compromises to be followed up. As pointed by several journalists during the opening act, there have been lots of workshops, meetings, congresses and fora about Lake Chapala, which have had little application or consequences. It was a public commitment that this activity would have continuity and that it was part of a long process started back in 2002 with Condiro-Canales program.

To accomplish such compromise the participants were divided in three groups, according to the top topics identified through the six-day activity: Lerma-Chapala basin, Santiago river basin and training-experience exchange. The defined points and commitments were:

General:

Generation and operation of a task network to maintain an exchange of data, to share experiences and contribute knowledge in a rapid and effective manner to continue ILBM development in Latin America.

For the Santiago River basin:

- Produce a guide of responsibilities and attributions of the institutions... in order to orient stakeholders on how to request information, facilitate decision-making and reduce conflicts.
- Support and encourage strengthening of CSOs internal structures.
- Draw up a list of research topics to avoid duplicity and overlapping... and assuring the practical application of research findings.

For the Lerma-Chapala Basin:

- Create specific alliances to involve the different stakeholders in structuring and applying an action plan for the direct Lake Chapala sub-basin.
- Promote the creation of an Environmental Education Center in the Chapala-Jocotepec corridor and a center for documentary research.
- Organize an annual general meeting.
- Integrate a descriptive case study of Lake Chapala.
- ILEC assumes a commitment to promote the case of the Lerma-Chapala watershed as an ILBM focal point for Latin America.

The mentioned points were prepared and signed under the name of "The Chapala Statement 2008", which briefs the deep discussions of the all six-day workshop, marking a clear path to be followed for next three years.

IV: Workshop follow-up.

November seems to be an important month for Lake Chapala. In 2006 the experts workshop "Constructing an Action Plan for Lerma-Chapala basin" was held; in 2007 the paper presented at the XII World Lake Conference won the Ibaraki-Kasumigaura Prize; and in 2008 the reported ILBM workshop was conducted, allowing consolidation of a growing network for Lerma-Chapala basin and the beginning of another one at Latin American level.

In February 18th 2009, a follow-up meeting was developed with seven institutions attending the call and four more not present but renewing the commitment to take part in next activities. Complementary, previous meetings were conducted with SEMADES, ITESO and CEA to define their institutional involvement. All in account these are the current advances:

General (Latin American level):

- One participant from Argentina consulted with her institution (Los Algarrobos, that also attended 2006 meeting) and expressed a formal interest to organize the Second ILBM Latin American workshop, attending the South American region.

For the Santiago River basin:

- One participant from the Human Rights Commission of Jalisco State prepared and presented a detailed analysis and recommendation of Santiago River case. It's so huge and integrative that has been named "the Santiago Macro-Recommendation". It's composed with particular assignments derived to specific institutions, which are forced by law to provide a formal answer.
- A proposal for strengthening CSOS' structure is being defined between one workshop attendant (from El Salto municipal government), IMDEC (institution that took part in 2006's workshop), and the University of Guadalajara.

For the Lerma-Chapala Basin:

- Lake Chapala obtained Ramsar Status (February 2009).
- A proposal of Management Program for Lake Chapala was prepared by Corazon de la Tierra and presented to federal government for funding, with support from SEMADES and the State Committee for the Environmental Protection of Jalisco Wetlands.
- CEA offered support for starting the Environmental Education Center, providing furniture, computers and equipment. Chapala municipal government joined the project, conducting the procedure to obtain an adequate place from federal government, to be located in Ajijic.

- INE is currently organizing a meeting between representatives of the five priority sub-basins, scheduled for May, 2009.
- SEMADES accepted to conduct formal meetings with Michoacan state government to organize the Follow-Up Annual Meeting for November, 2009.

Conclusions: This workshop was successful, accomplishing all four particular goals mentioned in section III. There have been fast post-workshop achievements, derived from previous process. Nevertheless this workshop helped to accelerate stakeholder commitments, that other way probably would have needed a longer term. ILBM was identified as a practical and valuable tool, even by water engineers, highlighting governance as a priority. First stepping stone to create a collaborative network in Latin America was completed, opening a space for collaboration and mutual strengthening which will need careful following-up to consolidate. All Mexican institutions participating in the Organizing Committee are related to Lake Chapala direct sub-basin, which it's shaping as the strategic one to apply efforts and to push forward the process in the whole Lerma-Chapala basin under ILBM approach.

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