"STAKEHOLDER PARTICIPATION IN MEXICAN WATER POLICY"

Jordi Vera Cartas

Wageningen, January 2005

Thesis supervisors:

* Professor.Arthur Mol
Environmental Policy Group
Department of Social Sciences
Wageningen University, Holland

* Dra.Maria Luisa Torregrosa
Department of Water and Society
FLACSO, Mexico

“ con el poder siempre hay que estar muy atento, porque en cuanto los ciudadanos se descuidan el poder tiende a imponerse y a ejercerlo de una manera autoritaria” *(Saramago)*

ACKNOWLEDEGEMENTS

This was for me a very interesting exercise which allowed me to get to know more about the social perspective into environmental issues. Bearing in mind my previous experience was more related with biological sciences this research opened a whole new world. In order to explore this new world I got help from teachers, friends and institutions.

I would like to thank my Dutch supervisor prof. Arthur Mol for his tele-supervision. Special thanks to FLACSO (*Facultad Latinoamericana de Ciencias Sociales*) and Rita Valuezela. They offered me a very warm welcome and a nice space in their institution. Other than them, my Mexican supervisor Dra. Maria Luisa Torregrosa and Karina Kloster helped me a lot once in Mexico. Our common perspective on Mexican water issues and their strongly based knowledge were more than useful. Antonino Garcia and Edith Kauffer always had time for discussing and commenting on the latest water issues. Thanks for that.

Both CNA's national and regional officials were very helpful in delivering their available information. Without them and the interviewee's perspectives I couldn't have comprehended their interactions, worries and aspirations.

Aparte de ellos hubo muchos amigos sin los cuales no habría podido completar esta investigación. Existe una canción de Serrat que mi madre convirtió en dicho: *"que va a ser de ti lejos de casa, nene , que va a ser de ti"*. Ahora lo puedo decir, si lejos de casa es en México pues puras cosas buenas. Que decir de las becas de alojamiento Burdiles-Camila-Olvera (en el DF), Bisbakis-Angélica-Flamenco (En San Cristóbal), Araceli-Luis (En Tapachula); de las burocracias resueltas por Miguel y la logística de Rosalinda. A Julio por transportarme. Muchas gracias por vuestro apoyo.

"Sólo Veracruz es bello!!!" ….y yo añadiría que Orizaba mas. Muchos besos para la familia Torres y las familias de las hermanas Beristain. Para Alejandro por los sufrimientos vividos estos años y por hacerte cargo de mi legalmente…en lo que te has metido chaval!.

Allá en mi rancho grande…en tierras Catalanas como olvidarme de mi familia y su constante apoyo moral y psicológico. Sin vuestro apoyo seguro me volvía "locu". A CAMHO, el Hogar de San Martín, Ji y otros amigos…siempre estáis allí.

En los nin-gen-ningens a mis cuates David, Rubén, Wengjin, Marce, Juan y Kathleen, Santosh, Andreas, An, Gracia, among others. A mis compañeros de pisos varios, por aguantarme, primera por ser Catalán (eh Itziar), por ser Escorpio (Alejandra) y por ser un gorrón (Lucho). Un abrazo muy fuerte para todos ustedes. Por ultimo pues a mi compañera de viaje, un viaje que ya se ha alargado por 2 tesis de maestría, un doctorado, miles de kilómetros y más de un sufrir. Un beso negrita.

Gracias a todos por vuestro apoyo y cuento con vosotros para la próxima. Esta tesis esta dedicada a todos, pero especialmente a los Alejandros (Torres y Flamenco) y sobre todo a *ma mare*.

ABSTRACT

The pressures threatening Mexican water bodies and aquifers are diverse. In order to achieve the necessary transition to a more sustainable water management several authors advocate for a stronger inclusive participation in water management. Dealing with participation and citizen involvement are very recent trends in Mexico. Until the end of the eighties social participation in the decision making process was barely existent. The transition from authoritarian political systems to democracy should promote decentralization and local empowerment, involving the participation of the relevant stakeholders. Mexican Laws express the need of a stronger stakeholder inclusion in water policy making: "Hydraulic Plans have to be all-inclusive governing documents that integrate a National Hydraulic Program starting from the local level".

The National Hydraulic Program is the ground planning instrument of the Federal executive. It presents the principles, objectives and strategies that orientate the government's actions for water management in a certain period (2002-2006). The only federal authority responsible for formulating, actualizing and looking after the National Hydraulic Plan (NHP) is the National Water Commission (CNA). The federal government has promoted specific mechanisms to enable participatory water policy making at a National (Forums with experts, Water Consultive Council and Societal consultation), Regional (River basin councils and commissions, COTAS or Statal water consultation councils) and sometimes local level (river basin committees).

The objective of this research is to identify the level of participation, its range and possible effects, on Mexican water policy processes. To do so the role of the different stakeholders in the design and implementation of the Mexican hydraulic program 2001-2006 will be analyzed.

Although stakeholder participation in water policy making has been advocated by the CNA and its National and Regional Hydraulic Programs, participation through the facilitated participatory mechanisms occurred at a very low level, mainly during the design phase of the policy process.
Participatory mechanisms at a national level lack the necessary representitiveness and do not facilitate the necessary inclusion of "the diverse societal perspectives".
At a regional level, participation under the current planning scheme has been basically inoperative. The most remarkable participatory mechanism has been the River basin council, which couldn't actually enable a representative and inclusive participation of the relevant stakeholders. The Council functioned as a target group of information in the design and implementation phase of the policy making process.
At a local level, participatory mechanisms have not been widely promoted. Even when River basin committees were installed these have not been directly involved in regional nor national water policy making. Once they can overcome several of their constraints, these mechanisms have the potential of facilitating local citizen representation in local water policy making. Integrating those grassroot initiatives, which are focusing on self-governance capacity building, which are not directly controlled by the CNA would enrich the process.

The paternalistic relation government-citizenship has affected the process. Both citizens and institutions are inexperienced in interacting through participatory platforms. The current water policy process has to be considered a valuable learning exercise, the first trial to include participation in water policy making.

Sumario

En México, las presiones que amenazan a las aguas superficiales y los acuíferos son diversas. Varios autores abogan por una mayor participación incluyente en la gestión del agua con el fin de alcanzar la necesaria transición a una gestión más sustentable del recurso hídrico. En México las prácticas participativas y el involucrar a los ciudadanos han sido tendencias recientes. Hasta finales de los 80 la participación social en el proceso de toma de decisiones fue prácticamente inexistente. La transición de sistemas políticos autoritarios a sistemas democráticos debería promover la descentralización y el empoderamiento local incluyendo la participación de los actores relevantes. La Ley Mexicana expresa la necesidad de una mayor inclusión de los actores en el desarrollo de políticas hidráulicas: "los planes hidráulicos deben ser documentos rectores incluyentes, que logren integrar un Programa Nacional Hidráulico empezando desde el nivel local"

El Programa Nacional Hidráulico es el instrumento de planeación base del ejecutivo federal. Este documento presenta los principios, objetivos y estrategias que orientan las acciones gubernamentales en la gestión del agua para un periodo determinado (2001-2006). La única autoridad federal responsable de formular, actualizar y monitorear el Programa Nacional Hidráulico (PNH) es la Comisión Nacional del Agua (CNA). El gobierno federal ha promovido mecanismos de participación específicos que tienen como objetivo permitir la construcción de una política hidráulica participativa. Estos mecanismos participativos se han habilitado a diferentes niveles: Nacional (foros con expertos, Consejo consultivo del Agua y la Consulta popular), Regional (Consejos y Comisiones de Cuenca, COTAS y Consejos Consultivos del agua Estatales) y Local (Comités de Cuenca).

El objetivo de esta investigación es identificar el nivel de participación, su rango y posibles consecuencias, en la política hidráulica Mexicana. Para alcanzar este objetivo se analizará el rol de los diferentes actores en el diseño e implementación del Programa Nacional Hidráulico 2001-2006.

Aunque la participación de los actores del agua fue fomentada tanto por la CNA como por sus Programas Nacional y Regional Hidráulico, la participación que se dio a través de los mecanismos facilitados fue baja, principalmente durante la etapa de diseño en el proceso de planeación.
Los mecanismos participativos a nivel nacional carecen la representatividad necesaria y no facilitan la indispensable inclusión de las "diferentes perspectivas sociales".
A nivel regional, la participación (facilitada) bajo el presente esquema de planeación ha sido básicamente inoperante. El mecanismo de participación más relevante, el Consejo de Cuenca, no facilitó una participación de los actores (que sea) representativa e incluyente. El Consejo funcionó como un grupo principalmente receptor de información durante las etapas de diseño e implementación del proceso de planeación.
A nivel local los mecanismos de participación no han sido extensamente promocionados. Incluso en aquellas cuencas donde existían Comités de Cuenca instalados, estos no estuvieron involucrados en el proceso de planeación ni regional ni nacional. Existe un gran potencial para promover la representación ciudadana en los procesos de planeación hidráulica local si se superan las limitaciones que hasta la fecha presentan los mecanismos participativos implementados. La inclusión de iniciativas generadas por organizaciones de base, dirigidas a construir capacidades de auto-gobierno locales e independientes de la CNA, sería enriquecedor para el proceso.

La relación paternalista gobierno-ciudadanía ha afectado a la participación en el proceso de planeación. Tanto los ciudadanos como las instituciones son inexpertos en la interacción a través de plataformas participativas. El presente proceso de planeación hidráulica debería ser considerado un ejercicio valioso de aprendizaje, el primer intento de incluir la participación en el proceso de desarrollo de políticas hidráulicas.

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

LIST OF SECTIONS IN THE ANNEXES

CHAPTER 1: "INTRODUCTORY CHAPTER"

1.1. Problem description

Like any other citizen in the world, Mexico's 97,4 million inhabitants (CONAPO, 2000) require water for living. Be it for personal consumption, aquaculture / agricultural uses, industrial activities or hydroelectric power creation the amount of water used in Mexico (CNA, 2001) in 2000 was estimated to be 215 km^3. Even though the per capita availability of 4624 m3/year (CNA, 2001) is considered medium for international standards still 6% of the urban and 32% of rural population do not have coverage of potable water (CNA, 2001) .

Average availability of the resource does not show the **unbalanced distribution** of water resources within the country. Less than a third of the country's waters lie in 75% of the territory where most urban areas, industrial facilities and irrigated lands are located (Gonzalez-Villareal et al., 1994). In such a context, **overexploitation of aquifers** in relative water scarcity zones is a growing concern. The 32 overexploited aquifers of 1975 turned to 96 in 2000 (CNA, 2001). The situation could be further aggravated if the present migratory patterns and population growth expectations are reached (26 million more Mexicans in 2025) (CONAPO, 2000) . Far from covering present needs, preserving water resource for **future generations** must also be considered. Other than exploitation and access to freshwater, **water pollution** is still an important environmental problem and a main health hazard. Only 76,2% of the total population has access to sewerage services and of that recollected residual water, 23% is actually treated (CNA, 2002). Such mismanagement creates a situation were, of the 535 national surface water bodies: 5% are classified as excellent (water can be drunk even without treatment), 22% are considered "acceptable" (needing some degree of treatment to be drinkable) and the remaining 73% still present acute pollution problems to different degrees (CNA, 2001).

The problems described so far have been menacing Mexican waters for decades already. However, there are other new patterns in today's Mexican reality which have to be considered. These didn't exist 30 years ago. The **effect of NAFTA** (North-American Free-Trade Agreement) and other trade agreements which have shifted both the agriculture production and the industrial growth, while promoting migratory flows, have been issues basically ignored by the water profession as a whole (Biswas, 2001). Other issues, like the link between **energy and water**, require a much more effective policy integration to improve national welfare (Biswas, 2001). Hydroelectric production and it's environmental, social and economic impacts should be considered if integrated water management is aimed. All this problems, framed in the "**era of participation**", democratization and government transparency, make the design and implementation of Mexican water policies a challenging matter. The transition from authoritarian political systems to democracy should promote decentralization (Assetto, 2003) and local empowerment, involving the participation of the relevant stakeholders. Several authors (Ostrom, 1990) consider that only with a stronger participation of those stakeholders directly related to water resource management, is that, the *commons exploitation* problem can be prevented.

The Mexican constitution (article 27) establishes that national water bodies are public goods and that, as such, ultimate authority over water falls on the state. Even when the Federal Executive grants concessions for individual exploitation and use (for periods of 5 to 30 yr), responsibility still remains under the Federal government. Institutional water management has been taking place in Mexico for over 80 years (Gonzalez-Villareal et al., 1994). The governmental institutions in charge of water management have shifted from one Ministry to the other: from the Ministry of water resources (1946-

1976) to the Ministry of Agriculture and Hydraulic Resources[1] (1976-1989). This until the creation, in 1989, of a central agency[2], the National Water Commission (CNA, following the initials from the Spanish name: *Comisión Nacional del Agua*) which is the sole authority for federal water management. This Commission is in charge of the promotion /execution of both federal infrastructures and those necessary services for water quality preservation. Be it as it may, several authors (Castro et al., 2004) have discussed that the CNA solutions to water scarcity don't focus on political or social aspects, or even legal, cultural or environmental but rather trusts on the technical capacity of its officials, the majority of which are engineers.

As: Mexican waters are public goods threatened by several pressures, and, the CNA is the federal entity responsible for it's regulation, the strategies of the Commission to overcome the threats menacing this *national security resource* are of public interest. The NHP is the ground planning instrument of the Federal executive and presents the principles, objectives and strategies that orientate the government's actions for water management. According to the National Law on Waters (1992) the CNA is responsible for formulating, actualizing and looking after the National Hydraulic Plan (NHP). Policy-making, the definition of policy goals and the selection of a particular policy instrument over others, can reflect the power structures existent within society (Weiss 2001).

The latest NHP leads the governmental guidelines for the period 2001-2006, representing the "*feeling of the Mexican people*" (CNA, 2001). Bottom-up approach during the NHP policy making process should take place. By Law (2004) the Hydraulic Plan must be an all-inclusive governing document which: "the CNA, with support from the River Basin organisms and the governors of the states, has to integrate starting from the local level until the NHP"[3]. This inclusive participation in water management has been defended by several authors as the tool necessary to make the transition to more sustainable water management (Wester, 2003). Although stakeholder participation in water management is frequently advocated, actually including the poor and achieving substantive stakeholder representation has proven elusive (Cleaver, 1999). More often than not, participation is little more than token consultation with no decision-making power in hands of the people concerned (Wester et al., 1998). Often some aspects, as those related to the environment are excluded (Castro et al., 2004). Meanwhile the OECD, of which Mexico is member since 1994, remarks that democratization processes imply promotion of "society's ability to identify and solve environmental problems" (Janicke et al., 1997).

Dealing with participation and citizen involvement are very recent trends in Mexico (be it as practice or used in the political discourse). Until the end of the eighties, due to the historical relation state-society, social participation in the decision making process was barely existent (Peña, 2004). Their relation was characterized by its verticality and corporatism. If existent, participative frameworks and social initiatives were most of the times co-opted, excluded or repressed (Castro et al., 2004). On the other hand, Mexican citizen mistrust politicians for being corrupted and manipulative for electoral purposes. Under such a context, as Castro (2004) puts it, "a participative culture, a real representation, can only be built in a mid-long run".

1 "legally responsible for nation's water; urban and industrial, water for hydropower and water quality felt under other ministries" (Rap et al., 2004)

2 initially linked to the Ministry of Agriculture and Hydraulic resources, but then (after the Rio conference, 1992) attached to the Ministry of Environment and Natural Resources (SEMARNAP). The new structure and its institutional relationship makes evident the environmental concern of Mexican authorities with respect to water issues. Regardless of the change of institutional structures, the main goals of the CNA are not environmental protection or regulation, but infrastructure construction and operation (IADB 2003).

3 3rd Title, 2nd Section, Article 15bis

1.2. Research Question

1.2.1. Objective of the Research

The objective of this research is to identify the level of participation, its range and possible effects, on Mexican water policy processes. To do so the role of the different stakeholders in the design and implementation of the Mexican hydraulic program 2001-2006 will be analyzed.

1.2.2. Research Framework

Before starting with the research objective formulation, a general understanding of the different steps needed to realize the objective have to be considered. Drawing up a research framework like the one shown below (Figure.1.1.) can be helpful:

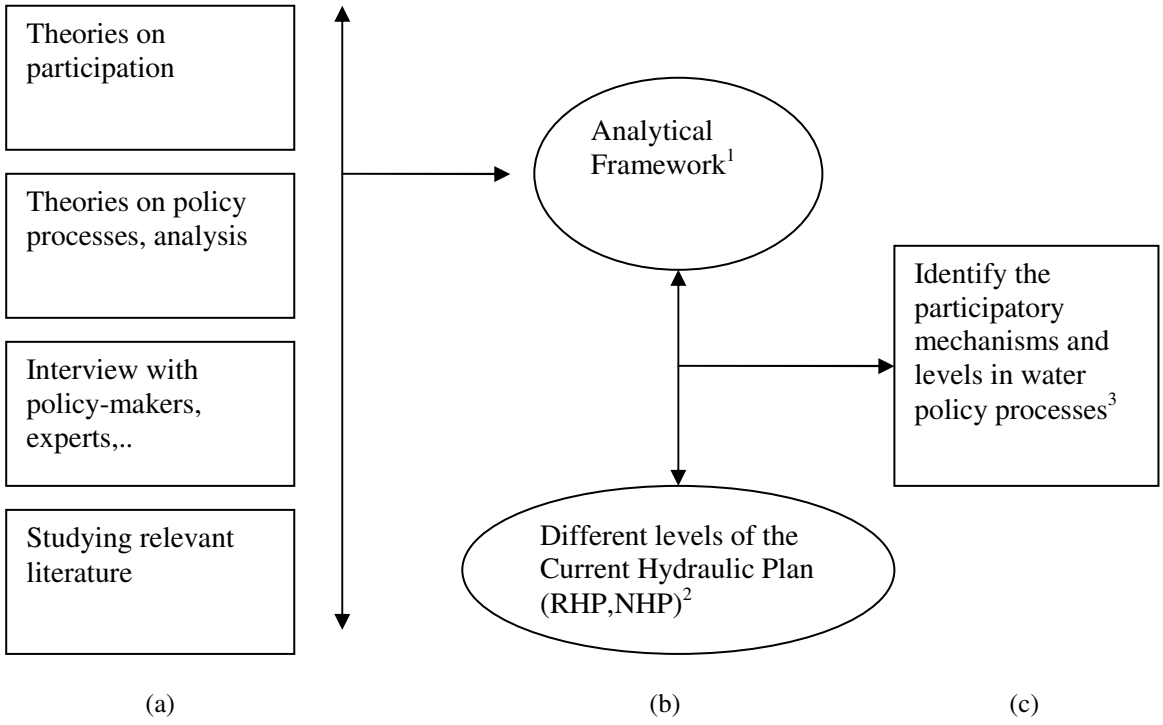


Figure 1.1. Research framework for water policy analysis.

[1]*Research perspective (what will be the approach of the research)*
[2]*Research Object (of those policy processes related to water resource management in Mexico this research will confine its study to the National Hydraulic Program (NHP)*
[3]*Object of the research: Intended result of the research*

Research framework formulation:

(a) A study of the stakeholders involved / not involved in the Mexican water policy in the light of analytical criteria gathered from different Theoretical backgrounds (b) by which the current Mexican hydraulic plan (NHP) is analyzed. (c) The results of this assessment will contribute identifying the participatory mechanisms occurring in water policy making.

1.2.3. Research Questions

Having the research objective defined, with the help of a research framework design, the next step is to characterize the main **central question** of this research.

- *What is the role of the different stakeholders participating in the policy processes involving the design and implementation of the actual National Hydraulic Plan (NHP)?*

Sub-questions

1. *How does Mexican water policy process look like at the different governmental levels described?*
2. *What are the institutions, platforms, structures that allow participation during the policy process?*
3. *How does participation take place in the different steps of the policy process?*
4. *What have been the consequences / impact of such participation?*
5. *How can participation in Mexican water policy processes be improved?*

1.3. Theoretical framework

Since the publication of the tragedy of the commons (Hardin, 1968), which symbolized an inevitable environmental degradation when individuals commonly use a scarce resource, there has been several theories explaining how to prevent such "tragedy". Some say that more State control is necessary. Governments should take care of resource management in order to prevent *the commons* exploitation. Others argue that privatization and private involvement is necessary to solve the tragedy tendency we are advocated to. I personally support a third theory, developed by Ostrom (1990), which stands for a stronger participation in resource management of those stakeholders directly related to it. This argument, on stronger citizen participation in natural resource management, water management in our case, involves issues of Governance.

Using the concepts of governance in public policy discussions is an extended practice. These words are generally related with issues of participation, decision-making and the idea of subsidiarity, which is, managing collective issues in the closest range as possible to a certain individual. A useful definition of governance is that used by the Canadian Institute of Governance: "Governance comprises the traditions, institutions and processes that determine how power is exercised, how citizens are given a voice, and how decisions are made on issues of public concern"[4]. Water issues, and the decisions taken among it (water policy for example), are of public concern. Water is an essential resource for any human activity.

If further contextualizing the concept of governance within natural resource management, the definition developed by Bovaird et al (2002) might be interesting to explore. Governance is then defined as "*those decision-making processes that the different river basin stakeholders, involved in hydraulic issues, have achieved under a consensus, and that aim to improve both the quality of life of the river basin and the well-being of the actors that participate in it*". Therefore, governance in water decision making involves moving from a monopolistic situation, where the federal government has full control of water resource management and its decisions, to a situation were the diverse actors involved

[4] www.iog.ca

in river basin water management participate in the decision making process. But how is participation during policy making understood? The same authors define it as the "the mechanisms under which the several *stakeholders* that live or work in the river basin have an influence, partial or total in one or several stages of *water policy making*: those decisions affecting the hydraulic resources, the implementation of those agreed decisions and their evaluation".

The conceptualization just presented involves reflecting on issues of: How is participation linked with the several stages of the *policy process*?, Which are the *stakeholders* that can participate? Which is the level of *participation* allowed? These are some of the issues which will be dealt in this research. However, finding an adequate framework to explore these issues requires deepening on the concepts of: policy process, stakeholders and participation.

1.3.1. The Policy Process

Among the many policy conceptualizations found, the one presented by Holland (1998) seems representative for water policy analysis. Policy, as he defines it, relates to: "what to do, the process of social and political decision-making about how to allocate resources for the needs and interests of society"[5]. In this definition it stresses the need of reflecting society's interests both in the policy documents and the resources that are distributed during its implementation. This implies that society must participate in the whole policy process. However, the process of policy-making is not a standardized process. The found literature presents several perspectives which try to explain it.
The *Linear Model* (Simon,1957; Easton,1965,..)[6] focuses on decisions and its different stages of implementation. In this classical approach, science is used by politicians to make rational decisions that are afterwards implemented by bureaucrats. This rather instrumental view on decision making is not completely outdated. The different steps of policy making presented by this linear model, even though not always present, can be helpful for understanding the idea of "process". A process that moves through different stages: from an agenda setting, to a design, implementation, analysis and evaluation. The linear model has been further complemented by several authors (Dobuzinskis,1992; Smith and May ,1980)[7] which consider policy-making as an ongoing process of negotiation and bargaining between several actors over time. These stakeholders, in a constant process of negotiation and interaction, end up constituting networks or interaction groups which may influence policy-making. When analyzing the policy-making processes associated with a vital natural resource such as water, visualizing which are the different stakeholders and how they interact will be necessary.

In addition to this different perspectives on policy processes, there are several important aspects which should be considered when analyzing it (Holland et al., 1998):

-*Context* influences policy change (socio-economic, historical and institutional circumstances in which policy occurs may be relevant). In the case of environmental policy, more specifically water policy-making, the context in which its taking place (the laws of nature) is very particular. Both the social arena, including its economic side, as well as the physical environment shape policy practices.

-Policy making can be *chaotic and complex* (a tangled web of constitutional decrees, legislative acts, institutions, rules, guidelines, objectives, orders; which can be issued by officials at different levels, and in accordance with strongly rooted traditions and practices)

-Changes in policy do not necessarily lead to changes in outcome (policy can exist as intention, or as a symbol, but may never be put into practice)

[5] Hill (1993) defines public policy as: "A set of interrelated decisions taken by a political actor or group of actors concerning the selection of goals and the means of achieving them within a specified situation where these decisions should, in principle be within the power of these actors to achieve"
[6] in Keeley et al. (2003)
[7] in Keeley et al (2003)

Bearing all this in mind and considering that policy-making is complex, sometimes a chaotic process of many stakeholders interacting in the decision-making: How can one find policy? What should a researcher analyze? In our research, and having considered Holland et al (1998) statement: "most policies exist as strategic statements, regulations or laws, underpinned by conceptual norms, formulated to address predefined problems, and implemented usually in the **form of projects or programs**" we will analyze the complexity and the stakeholders participating in the Mexican National Hydraulic Program 2001-2006. When analyzing the Mexican NHP I will focus on the different steps of the policy-making **process**: AGENDA SETTING, DESIGN, IMPLEMENTATION, MONITORING, EVLUATION and RE-DESIGN and study the occurring participation. I will also concentrate on the **decisions** taken and executed during that process and try to relate them to the stakeholders which were involved in taking them.

1.3.2. Stakeholders

Having conceptualized the policy process and defining the National Hydraulic Program as the research object to be studied, the next step is to define what's understood by a stakeholder. This reflection will bring us to the final concept of participation.
"Stakeholders are those who have an interest in a particular decision, either as individuals or representatives of a group. This includes people who influence a decision or can influence it, as well as those affected by it"(Hemmati 2002).

Water policy-making involves bringing together people and organizations from very different backgrounds interacting in a multi-stakeholder process. A first assumption is that water, and what happens to it, affects every human being. All Mexican citizens should be represented by one or another stakeholder. Involving the whole society might be a difficult task. That's probably why the National Water Commission (CNA) focuses mainly on 4 institutionally arranged spaces when grouping society's involvement in water policy-making. These are "river basin councils, experts, consultive councils and citizen consultation" (CNA, 2001). However, under the Mexican context, one should always remember that involved stakeholders are many times restricted to water *users*, that have a recognized water title, thereby excluding those without water rights (Wester, 2003). In this thesis both users with title and without title are considered. Be it a water user with title or not, it is always important to bear in mind that the concept of stakeholder, which has gradually substituted the concept of actor[8], can be very general therefore, misleading. The river basin council (diversity of users), for instance, or, even the CNA (with its different directions) represent different kinds of interests and goals. Within such stakeholders, many times, only the voices and versions of the vocal few are raised and heard (Cornwall, 2003).

Water policy affects everyone; it's an issue of public concern. From our previous conceptualization we know that policy is not something punctual, but a process of making decisions, which takes time and implies several steps. Analyzing how all individuals participated in water decisions and how they did so in the different stages of the process would not necessarily be the best strategy to follow. As we are dealing with issues of participation, influencing decision-making,… I assume that united individuals can have a greater impact, greater lobbying capacity than those individuals by themselves. Under such assumption I restricted my analysis to those stakeholders that participate as **groups of individuals** (organized or not), rather than the individuals themselves. That is, I will focus on identifying institutions, organizations and associations that include several voices and which are **already outlined in the policy** documents as representative.

[8] in Spanish there isn't a clear translation of stakeholder

Once the stakeholder is identified, it is relevant to pay attention to how is this group of individuals **organized**, what is their **structure** and **composition**, what are their main interests, how they operate… Not to forget the **origin** (governmental, grassroot organization,.) and **autonomy** (especially financial) that a particular stakeholder may have.

1.3.3. Participation

Support for participation has become an accepted principle for many countries and organizations (Wester, 2003). It has been the centre of attention for researchers for over two decades (relatively new concept), and, lately, it has been adopted by mainstream institutions which seem to consider it "the single right approach". Participation, like sustainable development, has become a fashionable term. Due to this change of focus the concept has been criticized for its emptiness, for the difference between theory and praxis that it brings[9]. Such emptiness, frames Participation as a container concept: Everyone can take out what they like. Its role as a policy/intervention tool can also be quite diverse.

What it means and what such overall concept implies is not universally accepted. Participatory-processes imply conflicting interests, different perceptions, non-matching knowledge and power differentials that need to be considered. For some it entails inclusion, the creation of spaces for the minorities to exercise their voices and begin to gain more choices,... but on the other it may not precise to which extent such "exercise" has to be considered. More often than not, participation is little more than token consultation with no decision-making power in hands of the people concerned (Wester et al, 1998). The user representatives in the second World Water Forum pointed out that participation for them represents something else, which cannot be limited to asking users to participate in government programmes (Wester, 2003). Bringing stakeholders together will not automatically mean having a representative outcome policy. Participation must imply sharing power: democratic participation of citizens in elaborating and implementing water policies and projects, and in managing water resources. All this arguments present the existence of different LEVELS in participation.

The following figure (Fig.1.2) can be used as an indicator for the different participation levels and the style of governance that it implies. In the same way, government agencies adopt several roles in the participation process, each with its own degree of interaction with the other stakeholders. Achieving a more interactive participation, that is, a "meaningful" participatory level (Hemmati, 2002), requires, among other: Capacity development, information, knowledge, time and resources from the different participants.

Style of Governance	**Role of Participant**	
Facilitative	Initiator	Interactive
Co-operative	Co-operative partner	
Delegating	Co-decision maker	
Participating	Advisor	
Consultative	Consultant	Non-interactive
Open authoritative	"target group" of information	
Closed authoritative	None	

Figure 1.2. Ladder of Participation (van Ast et al, 2003) based on Propper and Steenbeek, 1999).

[9] from http://www.dow.wau.nl/iwe/ennugi/research/Research%20Context.htm

Participation seems to be difficult, time-consuming and expensive. At this point one may question: Why participate? What for? Which are the **assumed** benefits of Participatory processes?. It is assumed that participation serves several objectives, among other, it increases the quality of decisions (as it can integrate several views and perspectives on the same subject) and it generates the necessary commitment (Hemmati, 2002). Furthermore, it is linked with higher societal goals, as it is part of a significant development in democracy: aimed at replacing one power with many and creating a situation where decisions taken are informed and owned by all relevant stakeholders. By taking part in the initial communication and ultimately, the decision making process itself, its implementation and evaluation, people are much more likely to take ownership of the decisions that emerge and the results obtained. Objections in the policy implementation phase may also be prevented when stakeholders participate (van Ast et al, 2003). Other than the potential benefits expressed by Hemmati (2002) several authors defend that participation can be used by participants to hide framed actions, for political manipulation or to dress-up authoritarian decisions.

As it has been presented several authors have made useful distinctions in the way participation is legitimised or conceived (as a method, as a necessity, a nuisance to please certain actors, as manipulation, negotiation in a social process, etc) and what its potential benefit / limitations may be. A universal meaning of the concept participation does not exist, due to all different perspectives of users and uses.

In this research I will conceive participation as "*the mechanisms under which the several stakeholders that live or work in the river basin have an influence, partial or total in one or several stages of water policy making: those decisions affecting the hydraulic resources, the implementation of those agreed decisions and their evaluation*". It is important to bear in mind Long's (2001) insights on participation, in which participation cannot be "made", because the individuals **always** participate in the social arena. All individuals participate but the degree to which they do so differs. As it was previously presented participation has different levels, which can be qualitatively visualized through a "ladder of participation". In order to analyze at which grade participation is occurring in the several stages of the water policy process I will use several concepts that will help me determine such level.

Bearing in mind that participation is an every-day action, which involves everyone; in this research I will focus on, that participation which is relevant for water policy making. In order to be able to locate such participation I will restrict my research in identifying those **Spaces or Mechanisms** were several stakeholders interact, and, were water policy decisions have been specifically taken. In order to identify such spaces I will initially concentrate on those that are identified in the policy documents themselves (councils, meetings etc). The spaces we are talking about can be something punctual, let say a meeting with experts, or something already structured, for instance discussion platforms, councils, boards… Focusing on the governmentally-identified participatory spaces will be a first step to visualize other spaces for participation which not necessarily are identified by the government as such. Especially important will be to identify the **Origin** of such spaces and the main actors involved in their promotion. The origin of a platform or a council talks about the legitimacy of such structure. Furthermore an historical perspective of a particular platform can give us insights its maturity. Meaningful participation needs **time**. Participating through a specific mechanisms is a process, a process were the participants need to learn about how does the mechanisms work, its possibilities, what happens to the decisions taken, etc. Participation involves **Interest** of the participants, willingness to interact. That is a pre-condition for a negotiation or interactive decision-making processes to take place. The **Frequency** in which this interaction occurs will also be a relevant element to be observed. Frequency enables us to visualize the **continuity** or not of a participatory process.

After having cleared what are the mechanisms that enable stakeholder interaction I will look at their formal operation. To do so I will look at how are the spaces structured, its composition and its **functioning** and evaluate to which extent these elements are enabling participation. Multi-stakeholder processes involve dealing with representatives of the different groups (ex.river basin councils or committees). **Representiveness** of such spokesman is a key issue in such cases. It is important to understand who are those spokesmen talking for, who are they representing and through which process were they designated or elected. Representiveness legitimates a spokesman voice and position.

Stakeholder interactions aim to discuss, make decisions, commitments or **Agreements** between the involved stakeholders. Those agreements which are relevant for water policy will be targeted. Once the agreements are made we will observe through mechanisms are this implemented. I assume that decision-making can only be meaningful when the agreements taken have an implementation mechanism.

Other than exploring which are the main participatory spaces were water policy is made, I will identify other spaces which aren't specifically identified in the water policy documents but which can bring us some insights on other forms of participation.

1.4. Research Strategies and Methodological approach

Our research design has now to focus on how is the policy process going to be identified, which are the relevant stakeholders involved and how to get insights on the previously identified participation elements. The research design will enable us to analyze the three main concepts in order to bring light to the research questions.

As previously mentioned in the research questions, in this research I am interested in looking at participatory processes at different governmental levels. The national level will involve analyzing the *National Hydraulic Program* (2001-2006) and the associated documents that gave its origin. This analysis will present the several stages of the process. Furthermore, I will analyze the contents of the program and concentrate on the decisions that were taken for its elaboration and implementation. These decisions can be later contrasted with those taken in the participatory platforms.

Being the National Water Commission the federal institution legally responsible for the national water policy making, interviewing the water planners responsible of water policy-making was the first step to understand how the process evolved. In Mexico city, were most institutional headquarters are, open interviews aiming to understand the National Planning policy process, their relation / responsibilities within the plan, the stakeholders involved,…were carried out. Access to the policy documents and further documental analysis helped identify the stakeholders involved and facilitated the selection of an adequate **case study** area. A case study was necessary in order to comprehend the water policy process at a regional or a local level.

Considering that the conceptualization of participation is so diverse and the actors involved in water management are so many, choosing a case study area that can be representative for the processes occurring at a national level was challenging. Mexico is hidrologically divided in 13 regions, each one with its own Regional Hydraulic Program document (linked to the National Hydraulic Program). All 13 regions have similar governmentally promoted spaces/mechanisms for participation, mainly the river basin councils, commissions, committees and COTAS. In order to choose for a representative region I focused on choosing a region where those participatory mechanisms were considered representative. According to the *CNA's River basin management,* (Mexico City): "the Coast of Chiapas, area within region XI, is the most representative national example of participatory

processes…. enabled by its installed river basin council and its supportive 3 river basin committees" (CNA central river basin manager). Representativeness or not of that region is not something easily determined. However, for the institution in charge of developing water policy, the CNA, the coast of Chiapas is representative for its participatory processes. Being a national reference for the participatory processes that in it take place, I assumed that it would also be representative for the participation in the water policy process. Under such criteria, is that I choose region XI and the Coast of Chiapas.

There were other arguments that helped me decide on this region. Region XI "Southern Border" has abundant hydraulic resources, increasing economic interest, several national ecological reserves and has suffered several episodes of social unrest. Furthermore, it is an area were I had previously established a network that granted me access to the main stakeholders involved in regional water management. The whole region XI (which is 3 times bigger than Holland), has several platforms for stakeholder participation. It has two installed river basin councils (Coast of Chiapas and the Grijalva-Usumacinta) and several river basin committees (auxiliary organisms of the councils). In Mexico, river basin committees are multi-stakeholder participatory platforms that deal with local water issues (sub-basin level or micro-basin level). However, committees have not been installed in all the country. This regional is exceptional in this case. Five out of the national total of 13 committees, are functioning in this region.

Choosing between the two regions river basin councils implied taking the CNA's judgement as relevant while considering several other factors. Efforts to constitute the Coast of Chiapas river basin council started around July 1997, while in the Grijalva-Usumacinta it wasn't until early 2000. According to that, and bearing in mind the relevance of a platform's history, the Coast of Chiapas council should be a more mature organization. What is also particularly interesting of this river basin council is that it was coordinated by the regional *Programming sub-management* from 1997 to 2000[10]. This is of particular importance considering that during that time, from 1997 to 2000 the programming sub-management was involved in designing the regional water policy. Another policy-related selection criteria was that the Coast of Chiapas river councils "validated the information contained in the RHP as the governing document for regional hydraulic program"[11] earlier than the Grijalva-Usumacinta did[12]. The implication of such validation will only be understood after comprehending who makes decisions in this river basin council, how are they made and what are the implications of those decisions (Chapter 4.3).

Aiming to understand how local dynamics affected regional and national water policy implied studying the river basin committees. In the Coast of Chiapas there are 3 (Lagartero, Zanatenco and Coapa). Zanatenco (the first one to be installed) and Lagartero were chosen for this research analysis. In both cases the municipality has created *River basin management offices* which coordinate water management at a municipal level. This management offices help organize the stakeholder interaction and focus it on water issues. In the case of the Coapa, installing such *River basin management* was more complex and is not yet completely functional.

Having selected which would be the most relevant subjects to be studied a research strategy to compile the necessary information was designed. In order to identify those relevant stakeholders I studied the river basin councils and committee **minutes** (they include a list of participants). That list also enabled the evaluation of the participant's interest. Assumed that attendance to a meeting is a significant indicator of interest (be it political, social, economical..) I counted the number of times that each

[10] due to internal CNA organization: the "Rural programs and social participation sub-management" took care of the Grijalva Usuamacinta and the "Programming sub-management" of the Coast of Chiapas
[11] approved in 17th ordinary session of rhe GSE river basin council Coast of Chiapas (9th July 03)
[12] validated on the 10th GSE (2nd December 03)

participant attended the meetings. The values obtained are not absolute, but indicative of the interest a particular stakeholder has in participating. The minutes also presented the main agreements taken by the platforms and the frequency of those meetings.

Other than minute analysis, I approached several identified actors. In order to obtain relevant data on their participation, open interviews, informal chats and observation "in situ" of the processes taking place were considered as the most adequate methods to apply. Information on the origin, structure, composition, implementation tools to execute the decisions,… were of special interest for the research. Data on the selection of representatives, as explained by the interviewed or supported by documental basis, was specially relevant.

The methods and selection criteria presented were considered the most suitable considering the research objective. The three concepts used to answer the research questions cannot be quantified and was not the aim of the research to do so. This is a **Qualitative** research and its objective is to identify, not quantify, the level of participation, its range and possible effects, on Mexican water policy processes.

1.5. Justification and Overview of the thesis

1.5.1. Justification

Since the 28th of November 2002, the United Nations Committee on Economic, Cultural and Social Rights has recognized the right of access to adequate water for essential human needs as a fundamental and inalienable human right (Green.Cross.International 2004). Such committee also urged to organize an effective participation of citizens and local communities to ensure the equitable and sustainable management of water resources. All users (men, women, youth, indigenous people and minority groups) must participate at all levels of organization, management and decision-making concerning water policy. After analyzing the results of this research one can evaluate whether or not Mexico is achieving such international commitment.

Understanding a policy process is not only important for the outcome itself: the National policy document resulting from it. Some policy papers are never implemented or have a low efficiency. Be it as it may, and independently from its implementation or not the importance of policy-making resides in the policy process. The interaction between actors, the goals and targets that result from the negotiation, and the instruments designed show which is the style and **will**[13] of the nation.
In the case of natural resource management, and the specific example of water, which is an essential element for life, such will becomes decisive.

Not much has been written about the process of policy-making, not to mention water policy making in Mexico. Furthermore the actors involved and to which extent are they participating is not clear. This research can contribute to further understand this process and so benefit several actors such as policy-makers (the CNA in particular), watershed councils and societal organizations among others that would like to have a greater influence in how their water is managed. Once a clearer picture of how does the policy processes occur in Mexico, policy redesign and change may occur easier.

[13] Edelman (1971) (quoted in Ham et al, 1984) draw attention to the many times symbolic purpose of policies. He argued that policies may often be more effective in giving he impression that the government is taking action than in tackling social problems

1.5.2. Overview of the thesis

In order to contextualize our study, the following chapter will introduce the Mexican political system and the laws that frame it. Later, the same chapter will deepen on the Mexican policy-making process from a historical perspective until the actual National and Regional Hydraulic Programmes (2001-2006). Furthermore this chapter will help us visualize what is the origin, the structure and functioning of the institution responsible for water policy making, the *National Water Commission* (CNA).
On Chapter 3 the first step of the policy process will be presented. The designing process of both the NHP and RHP are introduced and the relevant stakeholders involved in this process are identified. The NHP contents: goals, indicators and timeframe for implementation will be presented in this chapter too. At the end of Chapter 3 those mechanisms enabled for participating in the NHP design will be discussed. Chapter 4 deepens the understanding of policy-making and brings it to a regional level. By identifying the stakeholders and analyzing a key interactive platform as the river basin council Coast of Chiapas, participation in regional policy making will be discussed. Chapter 5 will go one step further and describe how is municipal or local water policy achieved and which are the stakeholders involved. The main multi-stakeholder platform, the river basin committees will be analyzed. At the end of the chapter other spaces for participation are presented.
After such analysis a better understanding of how are local needs articulated at a regional level and then at a national level will be accomplished. Chapter 6 will discuss the main research findings. Furthermore, I will discuss what is the potentiality / limitations existing in the federal institutions and participatory structures previously described (river basin council and river basin committee) within participatory water policy-making. Chapter 7 will summarize the main findings of the research in some conclusions while exploring further possible research on this field.

CHAPTER 2: "MEXICAN HYDRAULIC POLICY / PLANNING"

2.1/- Mexican Legal and Institutional Framework

2.1.1. Mexican political system

Under the 1917 Constitution, Mexico is a Federal Republic of 31 states and a federal district containing the capita, Mexico City. The president is elected, under universal suffrage, for six year terms and can never be re-elected. The congress consists of the 128 seat senate (elected every 6 years) and the 500 seat chamber of deputies elected every 3 years. The president has the faculty of appointing the ministers. Within the actual presidential cabinet the federal secretaries (what would be equivalent to the ministries in Holland) include 19 secretaries[14] of which the: Secretary of Environment and Natural Resources (SEMARNAT); Secretary of Agriculture, Livestock, Rural Development, Food and Fisheries (SAGARPA); Secretary of Energy (SENER) and the Secretary of Public finance and Credit (SHCP) are some of the most relevant for this research.

Each of the 31 states has its governor which is elected for 6 year terms, its own executive, legislative (state senators every 6 years and state deputies every three) and judicial powers. States are divided in municipalities which are governed by a municipal president which is elected every three / four years (depending on the state constitution). Mexico began to decentralize federal functions in 1983, transferring to states and municipalities a broad range of official functions and powers, land use planning and ecological preservation among others (Rodriguez, 2003), however, their ability to implement this mandate "remains circumscribed to the constitutional limits on municipal governance, political centralism, and the want of fiscal resources" (Assetto, 2003).

The major parties involved in the political arena include: **PRI** (Institutional Revolution Party; previously named PNR, 1929, and PRM, 1938, it changed name in 1946; until 2000 held monopoly over all political activity); **PAN** (National Action Party; of whom the actual president is member), **PRD** (Democratical Revolution Party; originated from some PRI disaffected members at the end of the 80´s) and **other** minor parties (Workers Party, PT; C*onvergencia*; Mexican Green party, PVEM). It's important to bear in mind that the latest presidential election (2000), were a non-PRIst president was elected (Vicente fox) broke a political PRIst monopoly of more than 70 years[15].

2.1.2. Legal Framework

The legal framework regulating water matters in the country is basically represented by:
- The *Political Constitution of the United States of Mexico* (articles 27, 28 and 115).
- The *National Water Law* (LAN), which is a prescribed law of article 27 constitutionalist in the matter of national waters. (First published the 10th December 1992; latest reform on the 29th April 2004).

---

[14] Secretary of Agriculture, Livestock, Rural Development, Food and Fisheries (SAGARPA); Secretary of Communications and Transport (SCT); Secretary of Public function (SFP); Secretary of Social Development (SEDESOL); Secretary of Economy (SdE); Secretary of Education (SEP); Secretary of Energy (SENER); Secretary of Interior (SEGOB); Secretary of Public Finance and Credit (SHCP); Secretary of the National defense (SEDENA); Secretary of the Agrarian Reformation (SRA); Secretary of Navy (SEMAR); Secretary of Environment and Natural Resources (SEMARNAT); Secretary of Foreign Affairs (SRE); Secretary of Health (SSA); Secretary of Public Security (SSP); Secretary of Tourism (SECTUR) and Secretary of Work and Social Prevision (STPS) .

[15] The most recent presidents have been Luis Echeverría (PRI,1970-1976), José López Portillo (PRI,1976-1982), Miguel de la Madrid H. (PRI, 1982-1988), Carlos Salinas de Gortari (PRI, 1988-1994), Ernesto Zedillo Ponce de León (PRI, 1194-2000) and the actual Vicente Fox y Quesada (2000-2006)

- The *Regulation of the National Water Law* (latest one in 1997; reforms on process, expected on 2005)
- *Statal Water Law* (when available), by the federal entities.
- The General Law on Ecological Balance and Environmental Protection (first one published the 28th January 1988, latest modifications on the 13th December 1996).
- The *Federal Law of Rights*.
-The *Law on Planning* (first one on January 1983; latest reform on June 2003).

2.1.3. Federal Institutions and Water

The Political Constitution of the United States of Mexico, in its article 27 establishes that the property of water resources included within the limits of the national territory correspond, originally, to the Nation[16]. As such, all major water bodies are a matter of federal responsibility. Operation and use of national waters will only be made by individuals by means of concessions that the Federal Executive grants, in agreement with the rules and conditions stipulated in the laws.

The unique authority for federal water management, in charge of defining national hydraulic policy and promoting / executing federal infrastructure (among other attributions given by Law[17]), is the "National Water Commission" (CNA, acronym in Spanish). The CNA was created in 1989, as a deconcentrated[18] administrative body, first, under the "Secretary of Agriculture and Natural Resources" (SARH, now disappeared), and since 1994, under the newly-created "Secretary of Environment and Natural Resources" (SEMARNAT). The CNA has technical, executive, administrative, managerial and budgetary autonomy. Even though this sub-secretary was recently given these attributions the origin of water institutions in Mexico was previous. Table 2.1 summarizes the hydraulic sector antecedents, both the institutions and the Laws, that regulate them (in subchapter 2.2 such historical process, and it's link to water policy, will be deepened).

When analyzing Table 2.1. one can perceive the great transformations that the water authorities have suffered with time. The organization moved from a strong orientation in the construction and operation of big infrastructure to a predominantly normative / support to local authorities function. Castro et al. (2004) point out that the "renewed identity", necessary to accomplish the newly determined functions; it's still a task in process that hasn't ended (especially if considering that latest reforms to the LAN which have just been published). Be it as it may, since CNA´s creation in 1989, water authority in Mexico is recognized as a non-sectorial authority (over sectorial interests and partial visions) with technical, administrative and management autonomy. Some authors consider such independence one of the greatest advantages of Mexican water management.

[16] only by exception, when one demonstrates that the waters do not have such character, they will be considered of private property. Therefore, the national waters are goods of public interest, which are inalienable, imprescriptible and unattachable.
[17] National Water Law (2004), Regulation of the National Water Law (1997) and internal regulation of SEMARNAT
[18] In Mexico, a deconcentrated authority is a semi-autonomous federal agency with the power to set its own policies, levy taxes and fines, issue permits and carry out acts of authority. This contrasts with decentralized public agencies, which are also semi-autonomous, but depend on their mother ministry overall policy guidelines and direction.

INSTITUTION	YEARS	FOCUS	LEGAL FRAMEWORK
National Irrigation Commission (CNI)	1926-1946	- Promote agricultural production by constructing hydro-agricultural infrastructure	*Law on Irrigation with Federal Waters (1926) *Law on Federal Property Waters (1934)
Secretary of Hydraulic Resources (SRI)	1947-1976	- Wider focus for integral development of hydraulic resources (direction, organization, control and resource use + construction of irrigation works, drainage, potable water and flood control) - Executive commissions are established in the main river basins.	*Reglamentary Law on the 5th Constitutional paragraph on subsoil waters (1947) *Law on Risks (1947) *General Law on Health Engineering (1948) *Federal Law on Waters (1972)
Secretary of Agriculture and Hydraulic Resources (SARH)	1976-1994	- Strengthening of hydro-agricultural infrastructure for food production	*Federal Law on Rights (1982) *Law on improvement contribution for Public Works in hydro-agricultural infrastructure (1986)
National water Commission (CNA)	1989-1994	- Decentralized body of the SARH. Focus on sustainable water development.	*National Law on Water (LAN; 1992) *LAN Regulation (1994)
National Water Commission (CNA)	1995-2000	-Under SEMARNAT, tendency to instrument a new water policy with an environmental focus	*Modifications to the LAN regulation (1997) *Modification to the LAN (April 2004)

Table 2.1. The Hydraulic Sector in Mexico: Historical View on Institutions and Laws

As already mentioned, the focus the water authority has kept since its origins has changed dramatically. Nowadays the **CNA´s mission** is to "*To administer and to preserve national waters, with the participation of the society to obtain the sustainable use of the resource*". Such "participation of society" is understood by the CNA as the "promotion of user participation in the river basin councils…..and placing the responsibility of construction, operation and maintenance of the hydraulic infrastructure in the hands of local authorities / users in order to obtain active social participation for the preservation of water quantity and quality (new water culture)"[19]. Later on the report, the objectives and strategic lines the CNA identified to accomplish such mission will be analyzed (see Table 3.3.). Furthermore, **CNA´s vision** as an institution is to be "a normative organization, with authority and technical quality, promoter of society's / government's participation in water management".

Having introduced the CNA's mission, it becomes clearer that participation of society is not another minor tool used by this institution, but it's rather a priority. Moreover, the statement of vision implies that decentralization of operational functions (the institution aims to become normative), to local governments and users, is a key strategy of the actual *sexenio*.

After describing the historical process for its formation and the actual mission and vision of the institution understanding how is it **structured** at a national level becomes relevant. The Commission is

[19] *In* http://www.cna.gob.mx/eCNA/Espaniol/Directorio/Default.aspx *(Description of CNA´s Mission + Vision)*

headed by a Director General, appointed by the president, which at a national level is supported by a Technical Council or governing body[20]. Internally the Commission has been reorganized several times (and will be again after the latest reforms), however, at this point the operational-territorial division is as follows:

-Central Offices *(see appendix Fig.A.2.1 for the federal organic structure*): Located in Mexico City, the central offices include several sub-directions and are the headquarters of the CNA. Some of the most important actions (*see Appendix section A.2.1*) include: the normative functions, they make the strategic hydraulic planning for the sector and intervene in interregional projects or those that overwhelm the regional capacities.

-Regional Offices (*see appendix section A.2.2. for regional organic structure*): In order to give a river basin focus and not so much a territorial management, the national territory was divided, under May's 1998[21] presidential decree, in 13 hydro-administrative regions according to hydrographic criteria (see Figure 2.1). These 13 Regional offices restructured the existent 6 Supra-Regional Offices[22] (which were already supported by several statal offices). Each regional comprises one or more river-basins. Basins then, and not states, are the basic division of the Mexican water management system (at least in theory). From a Federal perspective, each hydro-administrative region has a regional office *("Gerencia Regional")* and can have one or several Statal offices *("Gerencias estatales").* Regional Offices are responsible of federal competences within their region (*see Appendix A.2.2. for details*). Even though the degree of consolidation, both technical or administrative, is variable between regions, regional offices have incorporated, gradually, tasks and functions that previously were done centrally. With the latest legal reforms this regional offices will constitute the "River basin Organisms" (still to be created) .

-Due to the internal changes experienced by the CNA, several functions, that don't imply authority, such as programmes and resources which were previously executed centrally, have been transferred to states, municipal governments or users. Example of such transfers include: irrigation districts (from 1989), municipal water services (since 1983 to municipal governments, and since 1993 concession to water companies) or the promotion of Statal Water commissions as decentralized statal organs which can assume federal responsibilities.

[20] Created in 1991 and, according to LAN 2004, Presided over by the secretary of SEMARNAT and integrated by the secretary of the SHCP + SAGARPA+ SS + SDS+ SdE+ SENER+ IMTA+CONAFOR (+ if suggested: 2 state representative + a civil society organization of prestige and experience related with the functions of the CNA) . One of the most relevant attributions of this Council is to coordinate the programmes and actions of the Federal institutions related with water. The LAN describes other attributions (Article 11)

[21] The decision of creating such regional managements was already taken in 1997 (Martinez-Lagunes, 1998). Even without having those regional in place, the statal regions started working with such perspective when elaborating their planning documents.

[22] Named: North-east, North, North-west, Lerma-Balsas, Valley of Mexico and South-east.

Figure 2.2. Hydro-administrative regions in Mexico (CNA 2004).

2.2/- Mexican water policy within the evolution of a Federal water authority

Understanding policy-articulation processes in Mexico requires placing the struggles between policy actors in the broader frame of historical, political and bureaucratic transformations (Rap et al. 2004). Even though it is not the final aim of this study to analyze historically the process of water policy-making in Mexico it is essential to understand the context that the current water policy-makers inherited. For this study it will also be interesting to see whether or not the main policy actors "struggling" still remain the same.

2.2.1. The origins of Mexican water institutions and its first planning steps

An analysis of Mexican water policies implies moving back to the period of the Mexican revolution (1910-1917) and the creation of the Nation itself, with the approval of the constitution (1917). At that time the triumphant political elites gathered in the *Partido Revolucionario Institucional* (PRI). It's essential to bear in mind that this party was to rule the country in a much vertical way, from 1929 to 2000, without much organized challenge. Through cleintelism, corporative representation and control the party successfully incorporated workers, farmers and the middle class (Camp et al.1999). Mexico's actual public policies require comprehending the "PRI´s policy-making way" as the influence it has had in both, politics and society, is still present.

Centralization of water management began in early 1920´s with President Calles (1924-1928) and it's programmes for construction of large-scale irrigation systems. On 1926 with the creation of the "National Irrigation Commission" (CNI); the first government agency devoted to design, construction and management of irrigation districts became a reality. At this time planning was done "work by work" and with the insufficient information available (SHCP and FCE, 2000). The creation of CNI entailed the control over large sums of money as well as political control as it entailed selection of beneficiaries for government programmes, access to irrigated agriculture, etc... This Commission was the precursor of the "Secretary of Hydraulic Resources" (SRH) which was created in 1946 under Miguel Alemán presidential term. The creation of the SRH was the answer to spread water

responsibilities within several federal agencies and ministries during the period 1930´s to 1945. During that period: Irrigation was under the CNI, Flood control under the *Secretary of Communication and Public Works*, Potable water under the *Secretary of Health* and Hydroelectricity under the *Federal Commission for Electricity*. Be it for correcting the dispersion of administrative efforts or for finishing the competition between "functional rivals" (Rap et al 2004), the creation of an agglutinative secretary was possible because of the lobbying efforts of the CNI director towards the then presidential candidate Miguel Alemán. Direct lobbying to presidential candidates has been a common practice in the PRI-governing periods[23]. It was during this period, under the SRH, that the first efforts to reorganize water management under the concept of "basin" took place with the promotion of 9 Executive Commissions[24] (Grijalva, Balsas, Pánuco, Lerma,…) (Castro el at 2004). The Commissions had a strong production-orientation due to the priorities of that time: the creation of agricultural infrastructure. These Commissions ended having strong influence, matter which caused strong opposition against them during the 50´s. The Commissions were at some point dissolved, and with their disappearance, the river basin approach to water management.

Between 1960 and 1970 some regional plans were made, for instance the regional hydraulic plan of the Centre (PLHICEN), of the Northeast (PLHINO) and the Northern Gulf (PLHIGON). Other than those plans, some other secretaries developed Activity-specific (for example, small irrigation, potable water and plot improvement) national plans (SHCP and FCE, 2000).

During the period, 1946-1976, the SRH consolidated its control, especially over the irrigation districts, and managed to keep the eternal rival[25], the *Secretary of Agriculture* (SAG), out (Rap et al 2004). At the same time, the SRH had gained international reputation for being efficient and competent. This helped the government, especially from the early 60´s, to acquire international loans, especially for irrigation construction purposes. At this point it's interesting to reflect upon how the *hydraulic bureaucracy*[26], as Rap (2004) puts it, has been created and how it gained power. Such expansion had occurred within an arena of tight relations between: Institutions (Faculty of engineers of UNAM and Chapingo National school of agriculture specially), Private construction companies, Professional associations and International organizations. The construction companies, frequently staffed by former members of SRH and with financial interests from the *hydrocrats*[27]**,** played a major role in the development of the SRH, as they served as contractors and consultants to the ministry. Furthermore, due to the good reputation of the SRH, senior SRH engineers did consultancies for FAO, IDB and the World Bank, establishing a good network of contacts which were key in obtaining the World Bank's support for the prestigious National Hydraulic Plan at the beginning of the 70´s.

[23] At the end of each sexenio, knowing that a relative rupture with the preceding administration typically takes place at the beginning of each sexenio, bureaucratic groups align themselves with and offer their support to close allies of the presidential candidate that will probably be appointed to top posts in the upcoming administration (Greenberg 1970)

[24] "Such Executive Commissions, similar to Tenesse Valley, focused more on irrigation, they did more programs than plans" (top planner for the Commission NHP at that time)

[25] The SAG from 1946 to 1951 had had the authority over the irrigation districts. The resistance of the SRH bureaucracy regained control in 1951. This example shows that Legal and policy transformations concerning irrigation management were subject to bureaucratic struggles between functional rivals, the SRH and SAG.

[26] According to Rap (2004): Those are the "various government agencies that were responsible for the allocation, distribution and use of the nation's waters and the construction and administration of hydraulic infrastructure".

[27] Contraction of hydraulic bureaucrats, used here (as in Rap 2004) to refer to engineers working in water bureaucracies.

2.2.2. A long-term policy document: The National Hydraulic Plan (1975)

It was in September 1972 when the Mexican government, the World Bank and the UNDP signed a tripartite agreement to develop a National Hydraulic Plan by 1975 (SHCP and FCE, 2000). The SRH created a special Plan Commission, a water master planning organization which would provide a frame of reference for future lending programmes in the field of water resources while developing a broader vision on water resource planning and management. This new bureaucratic body, led by who would be the first CNA director general in 1989, Gonzalez Villareal, departed from the traditional construction bias which has always been marauding the CNA. The staff of the Plan Commission was divided over national and regional planning groups (4 zones and 13 regions), in which foreign advisors from the World Bank had a key role in the development of policy ideas. After all, it was the intention of the Mexican government to incorporate such advice on the policy decisions. When analyzing the document one can appreciate the attempts to match estimates of future demands (by domestic, industrial and agricultural sector) with estimates for future supplies and specified alternatives / courses of action for meeting the project shortfalls. The Plan starts with a diagnosis of the social, physical and economical aspects which integrates with a hydraulic balance at a regional level. From there objectives, programmes,…for the different activities (irrigation and drainage, aquaculture, water supply for industry and communities, hydroelectricity, pollution,..). For each of these activities it had immediate goals, middle term and long-term goals, a complete vision for 25 years.
The Plan Commission worked from late 1972 until 1975 and created an impressive set of studies on land and water resources. Even though the first PHN had an engineering orientation[28] (Buras, 1983), and such conception didn't disappear with subsequent revisions of the Plan, it ended up being broadened by the integration of foreign advisors, which included other perspectives.

The importance of this plan was manifold. Institutionally it led to the creation of new water policy ideas, especially in irrigation, and the reassurance that restoring institutional autonomy was necessary. Such conceptions, during the 80´s were to influence the hydro-bureaucrats perceptions and requirements. Furthermore, the Plan retook the focus on river basins and the national studies made followed such framework. It was in such studies of the National Hydraulic Plan (1975) were the origins of the river basin councils can be found (Castro et al 2004).
The first Plan was received well by both the president Echevarria and World Bank and two of its major recommendations were immediately implemented:

a) The institutionalization of the planning process with the creation of a permanent planning agency falling under the SRH in 1976 and still co-ordinated by Gonalez-Villareal, the *Commission for the National Hydraulic Plan*[29]. This team of water planners was in charge of writing, monitoring and actualizing plans and studies concerning water resource management. During this time the Commission gained sufficient technical authority to play an important role in policy formulation and decision-making at the highest levels of the government (Herrera-Toledo, 1996). On the long run, this team of water planners ended having a key role in the creation of the CNA in 1989.

b) A second recommendation was the creation of a Programme that could be implemented in the humid tropical lowlands of the gulf coast were traditional large-scale irrigation could not work. This programme was the PRODERITH (*Programa de Desarrollo Rural Integrado del Trópico Húmedo*), which was directly under the Commission NHP who executed the works. PRODERITH aimed to stimulate the social and productive development of traditionally marginalized villages[30]. What became relevant of this programme was the alternative approach to development projects that it

[28] it started as a super-project in hydraulic engineering were solutions to water availability were sought in the construction of inter-basin transfers and expansion of irrigation
[29] deconcentrated (administrative and technical autonomy)
[30] Those regions already had a conflictive history of authoritarian government intervention in terms of land development and forced resettlement schemes.

presented: "Social participation" instead of "Paternalistic approaches". The approach entailed negotiations with communities, were people could participate in developing a local development plan on the basis of their problems and priorities. According to water policy makers of that period[31] this was the first attempt to work with users and it was the "seed" of participatory processes in the hydraulic sector. Even though the perspective was very much on production it was an important experience in involving communities in policy-making and it would be essential to understand the policy ideas later applied in irrigation districts (the transfer of irrigation districts in the 80´s). The World Bank played an important role in preparing the programme and also, partially, financing it. By 1985, after the pilot projects have been successfully implemented, a second phase was executed, in which efforts were concentrated on transferring the development process and decision-making to organizations of beneficiaries (Herrera-Toledo 1997).

After the NHP was released, the Commission NHP suggested some internal reforms (decentralization, creation of regional offices, ..)[32] to President Echeverría and the Secretary of hydraulic resources. Even though the president received such suggestions positively, it was the end of the *sexenio*, and with the change of president not only the reforms didn't occur, but Lopez Portillo decided to merge the financially successful SRH the financially poorer SAG to create the SARH (1976). The creation of SARH dissolved and downgraded the existent SRH to a level of under ministry, were senior hydrocrats no longer had direct contact with the president. This lost in control, of both bureaucratic domains and resource flows, heavily "hit" the hydraulic bureaucracy. Furthermore it implied being subjected to the control of the agricultural bureaucracy. Such events marked the start of a new phase: the demand and lobbying of the *hyrocrats* to obtain a renewed autonomy. At that time the Commission NHP was trying to find "its place" in this new institutional structure. Part of such search took the Commission, "once the national vision / guideline until 2000 had been already developed"[33], to design Regional Plans (1981). The 1981 regional plans were an "interesting exercise in the sense that some things were assured and some numbers were updated…however the Commission NHP was conscious that planning was not an end *per se*, the guidelines were already there"[34].

2.2.3. Water Policy in a context of institutional change

At the end of Lopez-Portillo *sexenio,* 1982, during the election campaign of presidential candidate De la Madrid, influential groups of civil engineers started lobbying for a renewed bureaucratic autonomy. Such encounters were of particular importance, considering that De la Madrid's campaign manager, Carlos Salinas de Gortari (next Mexican president), was actively involved in this negotiation process. The similarity of policy ideas identified in that working group and those implemented in 1989 with the creation of the CNA are remarkable (Rap et al 2004). Developing a "new water culture" among users, increasing users active participation, suggestions to manage water at the level of river basins, organization of a financial system for water or reestablishing a unique water authority were some of those recognized policy ideas. That lobbying group, co-ordinated by Dr.González-Villareal, did not succeed in their pleads at this point.

De la Madrid's period is characterized by the financial crisis that hit the country from 1982, especially in the agricultural sector were the presidential support was minimal. The country's Agricultural

[31] (top planner for the Commission NHP at that time)
[32] "at that time the French financing agencies and the English regional authorities were in vogue, and we wanted more or less that…..in the centre the planning area will remain, normativity, a part of complex infrastructure construction (as they weren't constructing companies in each region) and the part of research" (top planner for the Commission NHP at that time)
[33] (top planner for the Commission NHP at that time)
[34] (top planner for the Commission NHP at that time)

strategic importance was lost[35]. This affected the SARH budget[36], and consequently the Commission NHP budget which suffered important annual cut offs that hindered infrastructural investment. Under such atmosphere of becoming more efficient, programmes for efficient use of water in cities, in agriculture, treatment technology and reuse of water, etc….were developed. The Commission NHP transformed into the *Mexican Institute for Water Technology* (IMTA), in August 1986[37], as it was "useless to keep a group of well prepared professionals in an exercise of constantly actualizing a document when the vision was already there. It was considered better to focus all that capacity in the creation of IMTA"[38].

Senior hydraucrats considered that withdrawing the hydraulic bureaucracy and sector of its worst crisis demanded exploring radically different policies scenarios. To concrete such changes, ex-SRH engineers started exerting political pressure by the end of De la Madrid term. In the arena: the Presidential candidate (Carlos Salinas de Gortari), the water resource Planners (Gonzalez-Villareal leading them) and, indirectly, the International lending agencies (which conditioned new loans to water reforms) negotiated on the possible reforms to be applied. This three actors made possible the reform package to come in January 1989 with the creation of the CNA (single water authority) and the reforms that came with it (irrigation districts transfer and water pricing policy; June 1989). Being Dr.Gonzalez-Villareal designated as its first director, the water planners that have worked with him in the NHP and later in the under-ministry of SARH were incorporated into his "team". Constituting a new institution and the reforms planned took most of the efforts of the newly created Commission . Furthermore, after the publication of the "National Law on Waters" (1992) several reforms (creation of river basin councils; *Public Register of Water rights*, REPDA; …) had to be concretized. As a senior Commission NHP member puts it, "the new Law was our long term policy document and I consider it long-term because many aspects of it has not yet been fully internalized and require years in order to consolidate".
A change of president (Gortari for Zedillo) in 1994 implied a modification of the Commissions chair. The new CNA´s director, González-Villalobos[39] compiled the water policy, for its term, in the "National Hydraulic Program" (1995-2000). It's important to remark that the governing water document was not a Plan any more but a Programme. This change in focus is explained by a senior member of the Commission NHP as: " by Law, there is a unique Plan, that is the National Development Plan[40] (NDP), all the rest are programmes. This removes the Vision connotation that previous Plans had, a programme is something very specific: how do you need to do things,….and a Plan gives you more freedom".

Rap et al (2004) mention, when referring to PRIst periods, that "relative rupture with the preceding administration typically characterizes the beginning of each *sexenio,* with changes in the leadership at all levels of the federal administration". If that was so during the PRIst period one wonders what has happened after the historic victory of the "government of change" in December 2000. Under such panorama, I consider analysis of water policies especially interesting at this point, after a more or less monopolized policy arena for more than 70 years. With the election of Vicente Fox, CNA´s leadership

[35] The share of GDP dropped from 11% in the 60´s to 6% at the beginning of the 80´s (Palacios, 1994)
[36] 44.5 billion invested in De la Madrid sexenio compared with the 89.8 billion invested in the previous sexenio (Palacios, 1994). Furthermore, the WB stopped lending to Mexico. Among other reasons the Bank wanted an "increase of the role of users in decision-making of irrigation systems" (WB, 1983).
[37] "De-concentrated organ of the SARH with the object of developing technology and capacitate the human resources to assure a rational and integral use and management of water resources" (from IMTA´s web page 16 Nov 04: http://www.imta.mx/imta-frames.phtml)
[38] (top planner for the Commission NHP at that time)
[39] Civil engineer and Previous co-ordinator of Carlos Salinas campaign meetings on water
[40] Note from the author: And the "Puebla-Panama Plan" in the Fox sexenio.

has changed[41], but has the long-term view been modified? Are hydrau-bureacrats exercising the influential role they have always had?. Such considerations added to the "direct participation of users in the policy-making process" that the actual policy assumes are some of the aspects that will be explored in the following chapters.

- *CONCLUSIONS ON THE CHAPTER*

Water policy making is not something new in Mexico. First national efforts occurred in 1975. The origin of such policy efforts was tightly linked with pressures from the international funding agencies and inter-institutional disputes. The first planning efforts were a unilateral institutional exercise. Participation of the relevant stakeholders was not aimed. Participatory approaches in CNA's frame didn't appear until the PRODERITH program. However, these efforts were very punctual as this program was only implemented in some regions of the country. Since the first National Hydraulic Plan (1975) there have been only two planning exercises published in the form of Plans or Programs: the National Hydraulic Program (1995-2000) and the National Hydraulic Program (2000-2006). The latest NHP is the first program to mention specifically the participation of several stakeholders through certain mechanisms. Being the first trial to include participation in water policy making one expects it to be limited. As mentioned in the theoretical framework Participatory-induced processes require time to become effective. The CNA did not have a previous participatory policy making experience other than the focalized PRODERITH. Furthermore, it is also important to remark that the CNA is strongly committed to society's participation, it is an institutional priority noted in the CNA's mission.

[41] At least the profile of the director has changed: Cristóbal Jaime Járquez, is an economist with an wide managerial experience: ex-manager of Coca-Cola (12 years) among others, and lately (previous 6 years) director of the LALA Industrial Group.

CHAPTER 3: "PARTICIPATION IN THE NATIONAL HYDRAULIC PROGRAM 2001-2006"

3.1/- Hydraulic Planning participation: its Legal Framework

The main objective of this research is not to understand clearly the legal concepts that will be presented or what they imply. Many times Laws are approved for political reasons, cannot be implemented or don't reflect the needs of the citizens,…etc. However, these Laws are the frame of reference hydraulic planners use to design the actual National and Regional hydraulic programs, and, as so, they are relevant.

The Legal framework defining planning and policy derives from firstly the Law on Planning (since January 1983, latest reform in June 2003): According to that Law, planning is aimed to improve the democratic regime of the country while transforming its reality. In order to do so, and within the first 6 months after the possession of the Federal executive, the Secretaries (coordinated by the SHCP) have to elaborate and get approval (from the Union Congress) of the "National Development Plan" (NDP[42]) and its sectorial Programs (which need to be appropriate with the NDP and the plans / programs at a state level). The Plan and Programs are the governing documents of the Federal Executive and, once approved, are compulsory (within the competences of each dependency). Its operation can't exceed the *sexenio,* however it can include considerations and projections for a longer term.
When elaborating both the NDP and its sectorial programs promotion of democratic participation from interested social / indigenous groups and communities in the planning process and execution must be assured. Federal and Statal proposals must also be considered.
"The category of Plan is reserved to the NDP" and the federal dependencies must plan and conduct their activities according to the objectives and priorities of the NDP, in order to fulfill the Federal commitment. The SHCP secretary will verify whether the annual programs from the different dependencies target the achievement of the Plan or Program objectives. Each March the permanent Commission on the Union Congress should be informed by the Executive about the actions and results from the execution of the Plan and programs.

It's important to remark that the *Law on Planning* and the more specific Law on the environment, the General Law on Ecological Balance and Environmental Protection (GLEPBEP,1997), both specify that "the federal government has to promote participation (*co-responsible participation* in the GLEBEP) and consultation of the several social groups in the elaboration, updating, execution, evaluation and surveillance of both the NDP and its programs (*environmental policy* in the GLEBEP)". The law on planning further expands the explanation and mentions that "social groups[43] will participate as organs of permanent consultation through popular consultation forums that will be convoked by the federal executive".

---

[42] "The NDP will describe the national objectives, strategies and priorities of the integral and sustainable development of the country. It will contain previsions on the resources that will be assigned to such aims; it will determine the instruments and people responsible for its execution, while establishing the general policy lines, sectorial and regional. Their previsions will refer to the economic and social, always taking into account the environmental variables that are related to these. Lastly it will govern the content of the programs that are generated in the national system of democratic planning"

[43] "representative labor organizations, farmers, communities, the academic institutions, professionals and enterprises; and of other social groups….and the indigenous communities will have to be consulted and will be able to participate in the definition of the federal programs that directly affect the development of their communities"

The latest reforms on the National Water Law (2004) have expanded the regulations describing water policy processes and its responsibles by Law. Part of such reforms could not be considered when designing the actual National Hydraulic Program. In the following explanation the Legal Framework: LAN (1992) and Regulation (RLAN; 1997) will be considered. However in some points we may also refer to the latest reforms.
The description of the objective of programming (LAN 1992) was: "to orientate sustainable river basin and water resource management by emitting policies and setting guidelines". Hydraulic programming was to include the "national, regional, local objectives of water policy; the priorities for exploitation and national waters use; the conservation in quality and quantity; the instruments for implementation of the programmed actions, the responsible for its execution and the origin and destiny of the resources required" (RLAN 1997)

Since the LAN 1992 the Federal Executive needs to approve the NHP. Other relevant regulations on hydraulic programming mention that: formulation, execution and evaluation of the hydraulic programming need to "promote consultation mechanisms, which enable users, organizations, federal, statal and municipal institutions to agree and participate both in the execution and financing of programs".

The Law (1992) defined which were the actors involved in *water management.* This was the first approach used to try to identify the stakeholders which might have been involved in water policy making. The Law includes the Federal Executive, the SARH (know such attributions under SEMARNAT), the CNA, the River basin councils and the Users as the main actors in water management. In the latest reforms these actors have been expanded with: River basin Organisms[44], Society (apart from users), Consultive Water Council, National Meteorological Service, IMTA and the PROFEPA (Federal Judicature for the environment). However not all this actors have attributions by Law on *Water policy issues*. According to LAN (1992) the actors that have specific attributions in water policy are: SEMARNAT (previously SARH; as "the institution proposing the national water policy to the Federal executive") and the CNA (in charge of "formulating the national hydraulic program and keeping its fulfillment"). The river basin councils and the Users are not mentioned specifically as having a role in water programming, however the Law refers to the need of: "considering the River basin council or, in its defect, the mechanisms that guarantee users participation in the formulation, monitoring, evaluation and modification of the hydraulic programming (in the terms previously mentioned in the Law of Planning)" (Art. 15;1992). The RLAN(1997) introduces the river basins direct attributions as for hydraulic programming. The River basin councils must "know and spread the general guidelines of the national and regional hydraulic policy and suggest those guidelines that reflect the reality of hydraulic development in the short, medium and long-term". Such councils are also responsible for "promoting the participation of statal and municipal authorities, users, interested societal groups in the formulation, approval, monitoring, updating and evaluation of the river basin hydraulic programming".

Even though the latest 2004 modifications to the Law will not be deeply analyzed, it's important to remark that it identifies the stakeholders which have to be involved in water policy, and they are basically the same as in previous Laws. The latest modifications, however, reinforce the idea of river basin council being the principal participatory structures.

[44] Not yet constituted (alter a year approximately will be functioning). The actual CNA regional offices will be reassigned to such organisms.

3.2/- Policy Design: Developing a National Hydraulic Program

Retaking the *Linear Model* perspective on policy processes will be useful at this point. According to such perspective, the following subchapter describes the Design or Agenda setting stage for the current National hydraulic program. Designing the NHP involved a completely new planning exercise. The actual NHP is not a redesigned product from previous hydraulic programs[45].
While presenting the Design stage in Mexican water policy the subchapter will introduce some of the main stakeholders involved in the elaboration of such policy documents. Chapter 3.4. will further elaborate on the participation of these stakeholders, not only during the design process, but also through the other stages of National water policy-making.

3.2.1 The preliminary policy documents

In the previous chapter the origins of water programming and planning were presented. Institutionally speaking, the Commission NHP disappeared in 1986 and the planners working there dispersed or ended forming part of the "CNA nucleus". After the creation of CNA in 1989, each area required to do some planning, but it wasn't until 1995 that the intention of creating a new "planning group" was retaken. The creation of such group, the Planning Management (under the General Programming Sub-Direction), enhanced the creation of the National Hydraulic Program (1995-2000). This document "was generally poor, didn't have updated information, the NHP 1975 was outdated,.."[46]. It has not been the same case with the NHP 2001-2006, this one "is a solid governing document were abundant information was compiled after a process that culminated with the NHP".

It is important to remark that all the planning process explained in the following paragraphs, from the Diagnosis to the Regional Hydraulic Plans (RHP), has been done by "consultant companies". CNA planners functioned as a normative body, supervising the process. The reason given by CNA officials for delegating the planning responsibilities was that "personnel is scarce and when consultants are involved, the quality improves, becoming less ambiguous and general"[47]. The funding required for the creation of the several planning documents was obtained from the "Program for Modernization of Water Management" (PROMMA). This program, funded with money obtained from a World Bank loan of 186.5 million Dollars, focuses in: water administration (institutional development) , technological and capacity aid, monitoring of water quality and quantity (superficial and subterranean); management and safety in dams; aquifer administration; water rights administration; information systems and hydraulic resource planning. Being funded by international agencies, one of the conditions for such policy design is that the consultant companies working for CNA need to be within a World Bank census.

To understand the origins of the National Hydraulic Program (2001-2006) one has to go back to the end of 1995, after the previous hydraulic program was presented. At that time, and as a first step in the formation of the future hydro-administrative regions and its river basin councils, the CNA, with its General Programming Sub-direction (GPS), started a process of regional DIAGNOSIS. This diagnosis was elaborated for each one of the 13 regions in which the country was to be divided in May 1998. However, before that could happen, an institutional restructuring had to take place, as, at a statal level, the GPS didn't exist as such. There was a small "Programming headship" (*jefaturas de programacion*) which was in charge of statistics rather than programming. In order to better coordinate the programming actions and the policy process that were going to take place "Programming Units"

[45] According to some theories policy-making is a constant cycling of stages: Design, Implementation, Monitor, Evaluate, Re-design, Implementation,….
[46] CNA actual senior planner
[47] Top regional planner

(*unidades de programacion*) were created in 1996[48]. Such institutional restructuring, catalyzed the "planning boom" that from then onwards was going to take place (programming was then more organized and followed hydro-administrative criteria).
The first step in the policy design process, the Diagnosis, started at the end of 1996 in the 6 supra-regional offices. For example, the Southeastern Supra-regional office was in charge of elaborating the diagnosis for Regions V, XI and XIII (with the aid of the different statal "Programming Units"). The Diagnosis consisted of regional studies containing basic information related to the physical and socio-economical conditions, the problems affecting the river basins / sub-regions and some possible actions / policy strategies that could be applied in the region. All the information compiled served as a guideline for the hydro-administrative regional offices. Other than the CNA, only "Consultant Companies"[49], which were contracted to make the studies, were involved in the diagnostic exercise.

After the Diagnosis, the CNA and its Regional management entered into the phase of identifying STRATEGIC GUIDELINES for the hydraulic development of each region. This occurred around mid-1998. The 13 Hydro-administrative Regional Managements were already constituted and had a "Programming Sub-Management", with a Project Leader (supported by 2-3 persons) in charge of planning. The objective of these strategic guidelines was to define reconciled objectives and lines of action to achieve sustainable development in the region and sub-regions. In Region XI, for example, the consultant company[50] made a synthesis of the regional problems (cause and effects) for discussion with users. This was, according to the Project Leader at that time, the most participatory activity of the whole planning process that ended in the RHP. Other than the river basin councils (that were of new creation at that time[51]), the CNA and the consultant company tried to involve other organizations such as farmers, fishermen ...etc. Those actors were characterized according to the CNA directory, complemented by the river basin council members (in the cases where the council was already constituted) and the other institutions (SEMARNAT, SAGARPA,). The participatory approach used to conduct the study was based in: a) Meetings and b) interviews. The aim of these studies was to prioritize the central problems and define lines of actions, however, "some of the participants had too specific problems for the actions that wanted to be defined".
The meetings took place in previously identified strategic areas for the region. After the characterization, user representatives were defined and its main leaders invited. Other than users, the federal, statal, even municipal[52] institutions were invited (See table 3.1).

[48] They weren't yet sub-managements, only Units. It wasn't until 1998, when the regional offices were created, then this "Unities" became sub-managements.
[49] In region XI, our case study area, IDDEC S.A. de C.V was the company in charge of doing such diagnosis. I ignore how much that consultancy cost, however another consultant "DESISA" charged 1 million for its Regional Diagnosis X (from Sept 96 to March 97).
[50] In Region XI such company was "Analisis y proyectos S.A. de C.V".
[51] See sub-chapter 4.3. for the details on the regional river basin councils and its installation dates (neither of the councils of region XI was installed, however, their future representatives were already identified).
[52] " we didn't aim to bring it to the lowest level due to the politicized atmosphere at the lower governmental levels...furthermore it was a too wide a process to include all the municipalities and its concrete problems"

DATE	20/08/99	9/10/98	10/11/99	9/12/98	22/01/99	12/02/99	5/03/99	5/03/99	15/03/99	22/04/99	7/05/99	24/06/99	25/06/99	19/07/99	13/07/99	
PLACE	Tapachula Cbs	Tuxtla Gutiérrez Cbs	Villahermosa Tab	Cárdenas Tab	Villahermosa Tab	Emiliano Zapata Tab	Chiapa de Corzo Cbs	Villa Hidalgo Cbs	Comitán Cbs	Tapachula Cbs	Cárdenas Tab	Chiapa de Corzo Cbs	Villa Hidalgo Cbs	Villahermosa Tab	Emiliano Zapata Tab	TOTAL
TYPE OF REPRESENTATION																
INSTITUTIONS																
FEDERAL GOV.	3	24	4	12	17	14	15	7	13	3	12	7	3	13	8	155
STATAL GOV.		20	2		5		4	3			1	3		5		43
MUNICIPAL GOV.		2			3	1	5	2	11			2	1		1	28
WATER UTILITIES		4	1	2					1		1	2		2		13
ACADEMIA		8		3	3						1			1		16
NGO'S		6												2		8
ESTUDIOS Y ASISTENCIA AGROPECUARIA	1	6	3	4	4	10	7	4	2	2	3	4	3	2	5	60
RIVER BASIN COUNCIL	10									15						25
PRODUCERS ASSOCIATIONS																
LIVESTOCK ASSOCIATIONS					16	13								4	9	42
AGRICULTURA ORG		6		13	1	22	6	5	11		3	1			2	70
"EJIDAL" LEADERS				1			19	2	3		1	14	2		1	43
PRIVATE OWNERS		4														4
OTHER USERS																
INDUSTRIAL				1	6	2					2					11
DOMESTIC USERS						3	10	3				5	7			28
PARTICIPANTS WITHOUT REPRESENTATION IN AN ORG.								30	19			12	16		7	84
FARMERS POLITICAL ORGANIZATIONS						2							1		2	5
TOTAL	14	80	10	36	55	67	66	56	60	20	24	50	33	29	35	635

Table 3.1 Summary of Assistance to the different Participatory Meetings in Region XI (CNA 1999)

In Table 3.1. it is important to remark the strong governmental presence in the meetings. It is also relevant to observe that from both regional river basin councils (even though not officially installed), only the Coast of Chiapas attended those meetings. During the meetings (Total 15) an employee of the Consultant Company was in charge of applying a participatory methodology[53] (similar to ZOPP methodology used by CNA, Participatory Planning objective-oriented) to discuss 4 pre-identified subjects[54]. The results from the workshops were presented in a series of 5 diagrams, one for each identified problem. Appendix A.3.1 contains more information on the meetings and its methodologies while A.3.2 presents the resulting diagrams.
Other than the meetings 22 interviews were made in areas were organizing a workshop was not possible (see Fig 3.2.). Further details on how were these interviews developed can be found in appendix A.3.3.

With the comments and the results from these participatory exercises, the document "Strategic guidelines" was integrated. Even though each Management bid it's own Strategic Guidelines with different consultant companies an approximate average cost was around 1,2 million Pesos per study[55].

[53] First have a group discussion and get their opinion; second hand out some cards in which problems have to be identified, which was the possible solution and possible projects)
[54] Water problems related with Agriculture, Ranching, River basin management and Potable water, sanitation and sewage services. These subjects were determined by the CNA.
[55] according to DESISA who did the Strategic Guidelines for Region XIII (August 98 to Dic 98)

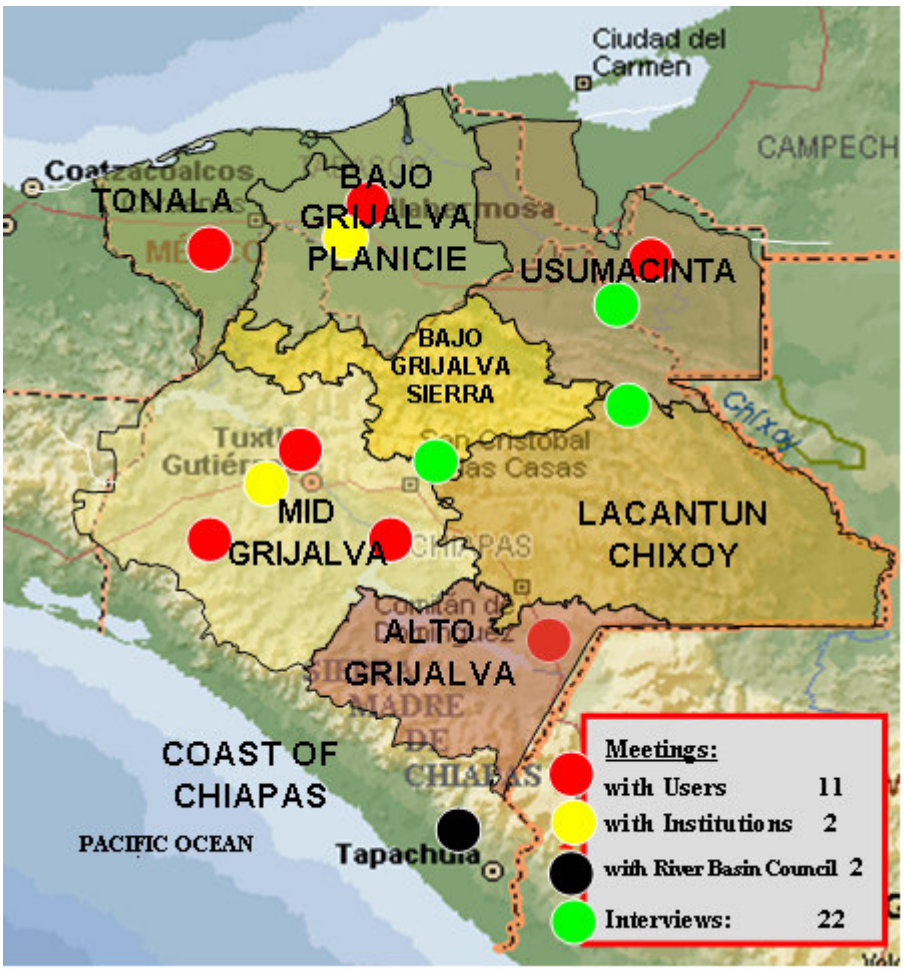


Figure 3.2 The territory of the regional management XI and the participatory process occurring during the "Strategic guideline" definition (CNA 1999)

Retaking the criteria previously presented in the theoretical framework one could evaluate the participatory process occurring during the strategic guideline development. The level of participation occurring at this stage was low. It was more a punctual exercise which didn't have any continuity than a participatory process. The participants, after attending a meeting or being interviewed weren't further involved in the planning process. Furthermore, the origin of the process was completely institutionally-determined (the CNA promoted the meetings, invited who they considered relevant and selected the subjects to be discussed). Independently of what could have been agreed on those meetings the composition of the stakeholders was not representative. They were not participants which have been elected through a democratic process (be it user assembly or similar), and most of them were there representing governmental perspectives not user worries.

Once the hydraulic problems were characterized and the possible alternative solutions agreed upon with the users, the next step was to design a "LONG-TERM VISION HYDRAULIC PROGRAM (2001-2025)"(PHGV) which included action programs at a mid-/long-term (CNA 2003). This program was developed for the 13 regions[56] and apart from summarizing the results of the previous two studies, it presented 3 possible scenarios for water demand growth (optimistic, conservative, actual) in the several uses. The possible projects that could help achieve a long run hydraulic development of the region were also presented. The long-term vision didn't include any participatory exercise for consultation with users or other institutions. It was mainly institutionally conducted. After the

[56] In Region XI "Planeación y Proyectos de Ingeniería S.C" did the program.

diagnosis of the region, the strategic guidelines and the long-term view introduced by the PHGV, the programming sub management was prepared for the "Regional Hydraulic Program". However, the National Development Plan (NDP) had to be considered and that was not in place until May 2001.

In this section we've presented the 3 main policy documents which were the basis for future regional planning. It's remarkable to observe how the creation of the 13 hydro-administrative regions speeded up the conduction of such studies. At the same time it enabled the CNA's Programming Sub-direction to strengthen its internal position regionally (with the creation of Programming units replacing the Programming headships). These allowed the development of a regional planning "capacity building" in the CNA. This step is important if locating it in a broader frame of decentralization and regional governmental capacity building. Notice that I mention governmental capacity building. As for the involvement of the different stakeholders and their interaction during the design of these 3 pre-policy documents, as it was presented, participation was very limited. Only in the case of the strategic guidelines was there a participatory approach used for its development. To which extent this participation is reflected in the Regional and National Hydraulic Program cannot be distinguished at this point. Understanding to which extent are these programs regionally based or nationally determined needs exploring further the National Hydraulic Program, its origin, design and contents.

3.2.2. Fitting the National Hydraulic program in the NDP

After the federal elections of the 3rd June 2000, which raised Vicente Fox to the presidency, the federal executive started developing the "National Development Plan"(NDP) for its *sexenio* (2001-2006). This was published in May 2001. The NDP, the "result of a wide process of citizen participation" (Poder Ejecutivo Federal,2001), includes the country's vision and the plans to develop it. In it the executive expresses "what the country wants and the way to achieve it".
As described in the previous section, the NDP is the origin of several sectorial programs such as the "National Program on Natural Resources and the Environment " (2001-2006). This is the governing document of the SEMARNAT, and the document under which the strategies for the hydraulic sector were designed. Under such sectorial program is where the "National Hydraulic Program (2001-2006)" founds its expression. The NHP has to be "necessarily framed under the NDP ...water planners have to see where it fits within the NDP". At the same time the NHP is product of a "planning process which started from the local level and integrated at a national level, with a wide participation of users, local authorities, NGO´s and citizens in general through diverse consulting organs, mainly, the River basin councils, the Water Consultive council, Forums with experts and several contributions received from the internet or the Mexican postal services" (CNA 2001). As mentioned in the NHP, the program integrates the "feeling of the Mexican people". This governing document was published in August 2001. In subchapter 3.4, after introducing the different stakeholders, their interaction during the NHP design process will be presented.

The NHP compiles the planning efforts of the 13 Regional Managements, describing the physical environment of the country, its problems and possible solutions. Under such context and considering the NDP principal guiding objectives (social and human development, quality growth and order + respect), the CNA's "Planning Management" unilaterally decided on 6 national objectives that would contribute to the guiding objectives. Furthermore, and, in order to measure the achievement of such objectives, 10 goals were set, and several strategies to achieve them were formulated (presented in subchapter 3.3). Monitoring how are the different public institutions achieving the goals set in the NDP 2001-2006 is a task done by the office for Strategic Planning and regional development (from the Republic's Presidency).

3.2.3. Regional water policy

Once the national hydraulic objectives and goals were delineated, "Regional Hydraulic Programs (RHP)" which present the regional realities and their objectives[57] were needed. These regional programs were to concretize and detail the specific actions each Regional Management would take to "partly contribute to the national goals while giving solutions to the main problems of the region" (RHP, Pag 63)". What's distinctive of the RHP, other than being an end product of compiling the 3 pre-planning documents, is that it includes a portfolio of entailed investments and projects planned for the period 2002-2006 under each of the 6 specific objectives (*"Prioritized Actions for 2002-2006"* [58]). The RHP was integrated with the projects, both investment and management, from all the dependencies investing in regional water management be it federal, statal[59] or municipal. These contributions "shaped the RHP which now reflects, not only the vision of the CNA´s regional management, but of the whole sector". Apart from the compiling effort and the "project portfolio", it was necessary to evaluate the dossiers and define the complementary actions required[60]. It is significant to mention that the projects included are those which Programmed for execution, this doesn't mean they will necessarily be executed in the mentioned period, if ever. This depends on several factors such as: a) Stage of completion they are in: some are ready to be executed (Executive Design Phase) while others are still in the identification phase (in Chapter 4 this will be explained more in detail)

b) Type of investment program under which it's executed (see subchapter 4.2.2.). Be it as it may, CNA regional planners agreed that "during the process of project identification participation was not very dynamic".

The RHP development was a direct responsibility of the regional office (central offices were more normative) where consultant companies were contracted for its integration. In the regional management XI the RHP was published in August 2003. In that region, the efforts to include users participation was not as intense as in the "Strategic Guidelines", "most efforts were done there.... at this point the efforts were aimed at reinforcing the previous processes, validating the document with the specialized River Basin Council Working Groups: *Monitoring of the Hydraulic Program* was targeted" (Regional CNA planner). It is interesting to remark that each RHP 2002-2006 was "officially" agreed upon by most of the River Basin Councils (through its GSE). This is expressed in the council's official minutes "the RHP is accepted as the governing document for hydraulic planning in the Region"[61].

After the RHP completion, and following petitions from several statal governments, the CNA coordinates the elaboration of "Statal Hydraulic Programs". However, "it's not a policy of this federal administration" to elaborate such programs. In regional management XI, the consultant companies conducting the Statal Program for Tabasco have already finished and handed it to the Statal Water Commission. In the case of Chiapas it is expected to be finished at the end of the year. Both planning exercises were "agreed and consulted, before launching them, with the River basin councils".

[57] "From the 6 national objectives, the "Planning Management elaborated a list of around 20-25 priorities per objective, that the different sub-management prioritized and selected according to their competence or their capacity to achieve the goals".

[58] "DESISA" consultants was contracted initially for the "Project prioritization portfolio" (Dic 01 – Sept 02), however, they ended up compiling the whole document. The cost of that consultancy was of around one million pesos.

[59] "status didn't participate intensively, they were informed accordingly though"

[60] From DESISA web page: www.desisa.net

[61] In region XI during the 10th session of the GSE of the River Basin Council "Coast of Chiapas": In G-U in its 9th session.

Designing "Statal Hydraulic Programs" [62] was previously done in 1996 by the CNA, during the time when the regional offices weren't installed yet.

The information presented has describes the process of policy-making (Design stage) in Mexico: from Plans (NDP) to programs (NHP) and from regional (3 pre-planning documents) policy to national (NHP). This can already be contradictory. Regional planning may be overlooked by the needs to achieve the national objective and complying with the national goals (which may not be the main priority for the regional needs).
In the following subchapters the results of national policy design, the National Hydraulic Program contents will be introduced (subchapter 3.3.). After having that in mind the stakeholders which were involved and that have influenced it will be discussed (subchapter 3.4.). Chapter 4 will expose the process at a regional level with the Regional Hydraulic Program in Region XI. How the post-design stage (implementation, monitoring, evaluation and re-design) evolved after the RHP was designed and which were the stakeholders who participated.

3.3/- The contents of the National Hydraulic Program (2001-2006)

In the following section a summary of the most relevant conclusions of the policy process deriving in the National Hydraulic Program will be summarized. In Table 3.3 the 6 national water policy Objectives for the period 2001-2006 are presented. These objectives are related with the priorities, objectives and strategies of the *National Development Plan* (see appendix section A.3.4.) and with the objectives of the *National Program on Natural Resources and the Environment* (see appendix section A.3.5.). Once the objectives have been set the next step was to define the path which could bring the hydraulic sector to their fulfillment. In order to do so the NHP defines Strategic guidelines for each of the 6 objectives. These are summarized in Table 3.3. The objectives and strategies were designed considering the water policy guidelines defined by the Administration. These are presented as follows:

-Relation Government-Water (not as a manager of users systems but more as a promoter of users participation in such management).

-Regulation Mechanisms (concession titles; discharge permits; public register of water rights, REPDA)

- Social participation Mechanisms (local participation is required in problem definition / solving, as users know better local problems and the most suitable solutions for such)

- Technological development Mechanisms (Available science and technology working for societal problems and demands.

-Economic and Financial Mechanisms (market-based mechanisms, tariff system and other economic incentives).

[62] Ex. CNA(1996) "Chiapas Statal Hydraulic Program"

OBJECTIVES	STRATEGIES / LINES OF ACTION
1. Promote efficient water use in agricultural production	1 Increase water use efficiency in Irrigation Districts and Units 2. Conclude projects in process to incorporate new irrigation zones. 3.Construct hydraulic infrastructure to extend the agricultural zones 4. Support the marginalized rural areas with hydraulic infrastructure (specially the south-Southeastern region). 5. Strengthen User organizations
2. Promote the enlargement of the coverage and quality of the services of potable water, sewage systems and waste water treatment.	1. Focus the attention on the poor coverage and quality services that the rural areas receive in potable water, sewage and waste water treatment services. 2. Keep the coverage expansion while promoting the improvement in the quality of services in urban centers (for potable water, sewage and wastewater) 3. Promote of waste water treatment and support water interchange (treated for first use water). 4. Foment efficiency in the utilities or other organisms in charge of delivering services of potable water, sewage and wastewater treatment. 5. Support Utility development.
3. Obtain an integrated and sustainable water management in river basin and aquifers	1. Achieve integrated natural resource management 2. Determine and Divulge water volumes available and their qualities in the different national river basins and aquifers. 3. Demand oriented water supply (according to the availability in river basin or aquifer) 4. Priority on actions that incise on water demand reduction 5.Reduce water pollution 6. Institutionalize the planning, programming and budgeting processes while applying a River basin and aquifer focus to it's programs. 7. Induce societal recognition of waters economic value.
4. Promote the technical, administrative and financial development of the hydraulic sector.	1. Increase resources assigned to the sector. 2. Consolidate the Federations role on matters of national waters. 3. Consolidate the process of decentralization (functions, programs and resources), from the Federation to the States, Municipalities and users in order to achieve a better water management. 4. Promote research and technological transfer programs. 5. Capacity building of the "human resources" in the hydraulic sector 6. Develop a program for CNA innovation and quality .
5. To consolidate user and organized society's participation in water management and to promote the culture of its good use.	1. Consolidate the organization and operation of River Basin Councils, Commissions and Committees. 2. Consolidate operability of Technical groundwater committees (COTAS) 3. Promote the consolidation of the Citizen Water Movement 4. Support the national crusade for forests and water. 5. Sensitize the population of water's strategic and economic value, so that responsibility and care for this natural resource is assumed.
6. Risk prevention and taking care of the effects of floods and droughts	1. Consolidate information systems and hydro meteorological phenomena alert. 2. Support the implementation of "Prevention and flood attention" plans at a river basin level. 3. Maintain, conserve and extend the federal hydraulic infrastructure for "avenue control" 4. Coordination with other governmental dependencies on the protection of inhabitants living in high risk flooding zones 5. Implement rational-use policies that allow facing, in better conditions, drought periods.

Table 3.3. National Hydraulic Program 2001-2006 Objectives and strategies

Achieving such ambitious objectives cannot be done without investment and a clearer delineation. The NHP partially describes how will the designed policy move into further stages of the policy making process (described in the *Linear Model*). In order to Implement the NHP, the NHP describes the available federal-CNA Programs (see Appendix; section A.3.6). These programs are financed both by

the CNA´s budget[63] (yearly approved by the national congress) and by external funding obtained from international loans[64] (World Bank 3 loans, Inter-American development Bank 2 loans and International Japanese cooperation Bank 2 loans). The CNA programs may or may not require support (financing or during its execution) from a counterpart, be it from statal or municipal governments. Such details will be included in the Programs Operational Norms. In chapter 4, when analyzing Project implementation I will retake this point.

At this point it is interesting to visualize the whole planning process (primarily an Executive's competence) and link it to other events such as the approval of the national yearly budget by the National congress. This process can be observed in the following Figure (Figure 3.4).

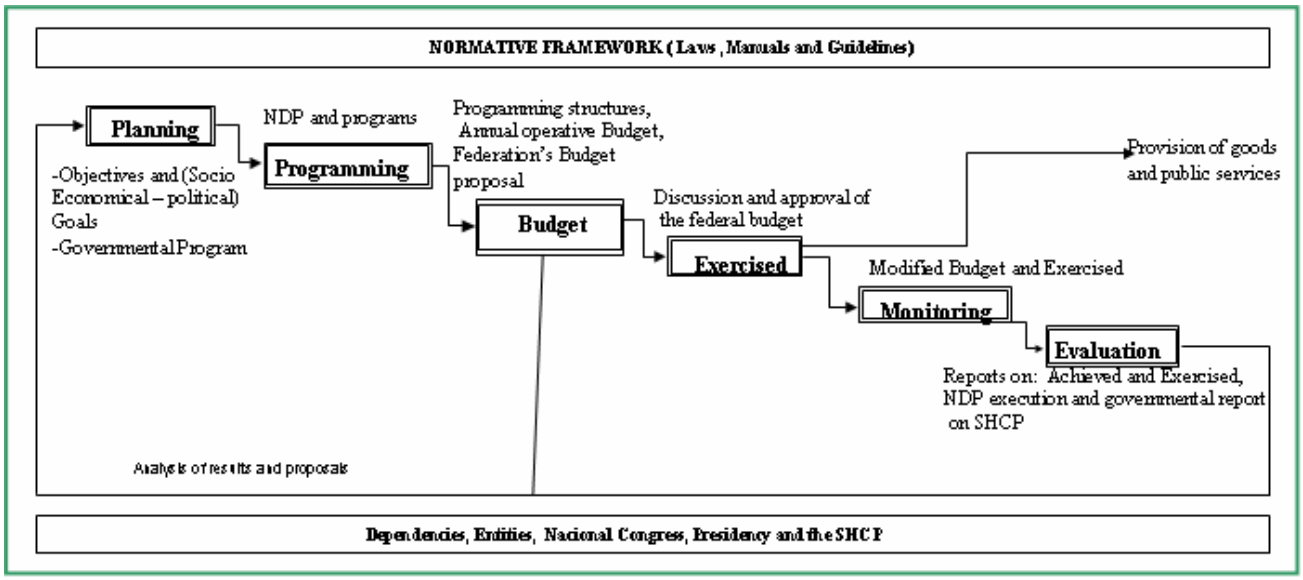


Figure 3.4. Policy processes seen from a wider perspective

The CNA's *Programming Sub-direction* is in charge of calculating the annual budget (by integrating the financial demands of the regional managements). It designs the "Annual's Operative Program for the Commission" which targets the NHP objective-completion. In order to quantify how the objectives are being achieved and to be able to monitor the whole process, the objectives and strategies included in the NHP are delineated into Indicators which measure Goal achievement (Table 3.5).

It is important to remark that both the indicators and the goals presented here are used in the regional and national level. That is: the regional management has to achieve part of the national goals (according to their possibilities and responsibilities assumed). In Chapter 4 the part of goal fulfillment assumed by region XI will be presented. According to the latest Monitoring (Sept 2003) the goal fulfillment is diverse depending on the goal (See Appendix section A.3.7). The Planning management at a central level (supported by the regional counterparts) is the only actor involved in monitoring the hydraulic and regional hydraulic programs.
The NHP does not mention anything about how does the water policy Evaluation takes place. The previous National Hydraulic Program 95-00 evaluation is not available. I assume it was the Programming sub-direction responsibility to evaluate the previous for water policy. The National Hydraulic Program 01-06 is being evaluated externally by a group of consultants contracted by the World Meteorological Organization (WMO) who are doing a "mid-term 01-03 evaluation of the

[63] CNA´s budget for 2003 was of 12443 million pesos or 858 million Euros (of those 3083 million are for the personal services, 17167 employees, and the rest for operative actions)
[64] Centrally administered by the Financing Management

NHP". Their conclusions, presented at the end of 2004, are not yet available and whether the information is made public or not is a matter yet to be seen[65].

OBJECTIVES	INDICATORS	GOALS					
		2001	2002	2003	2004	2005	2006
1. Promote efficient water use in agricultural production	1.1 Area efficient irrigation divided by total physical irrigation area (%)	14	16.4	17.1	19	21	23
2. Promote the enlargement of the coverage and quality of the services of potable water, sewage systems and waste water treatment.	2.1 % of inhabitants in the country with potable water service *	88	89	89	89	89	89
	2.2 % of inhabitants in the country with sewage *	76	76.9	77.1	77.3	77.5	77.7
	2.3 % of inhabitants of the rural areas with potable water service *	68	68.2	69	70	70	71
3. Obtain an integrated and sustainable water management in river basin and aquifers	3.1 Volume of treated wastewater divided by Volume of total collected wastewater (%)	23	27	29	31	34	41
4. Promote the technical, administrative and financial development of the hydraulic sector.	4.1 Check that the concessions for national water use and waste water discharges are indeed used or exploited, and that the maximum allowed limits for pollutant agents are fulfilled (public use in towns >50000 inhab, industry and services)	7.5	26	44.5	63	81.5	100
	4.2 Amount collected by concepts of rights, utilization, improvement contribution and taxes (millions of constant Pesos 2001)	6,150	7,038	7,203	7,417	7,643	7,878
5. To consolidate user and organized society's participation in water management and to promote the culture of its good use.	5.1 River basin councils functioning with it's own technical and administrative autonomy	1	6	12	17	22	25
	5.2 Technical groundwater Committees (COTAS) functioning with it's own technical and administrative autonomy	4	13	21	29	37	41
6. Risk prevention and taking care of the effects of floods and droughts	6.1 Number of inhabitants protected against floods by infrastructure construction (thousands accumulated from 2001); inhabitants who benefit from alert systems are not included	150	835.3	1,237	1,375	1,527	1,697

** Goals adjusted to the final results of the 2000 Census of Population and Housing*

Table 3.5. Objectives indicators and goals of the National Hydraulic Program 2001-2006 (CNA;2001)

Other than that, the Planning Management is doing an internal evaluation conceived as a "filling of tables by the regional planners…to observe the regional contribution to the national goal achievement." According to the central CNA planners "there hasn't been any specific meeting on NHP evaluation; information is exchanged through the internet or discussed once every three months in our Planning management meetings". Mechanisms for Policy Redesign, the last stage of the policy process, are not available in Mexican water policy. "We are now working on monitoring our efforts; the analysis and its possible revaluations will come later, if necessary" accepted a CNA senior official. When questioned about possible redesigning mechanisms, senior planners couldn't explain clearly how the process occurred. They mentioned that "if everything is fine and the goals are achieved, then

[65] There is a "Report of auto-evaluation of the general performance of the CNA" for each trimester which can be used more as monitoring tool. There is also the document of the Republic's presidency "How are we half-way through" which cannot be considered evaluative but more informative.

nothing should be changed; if these goals are not achieved then we should identify why that is and modify it".

3.4/- Participatory mechanisms in national water policy making

After having presented the process of designing the regional and national policy documents its time to summarize which were actually the spaces enabling participation during the process. It is important to reflect a bit more in detail on how are these platforms working and how can the different actors affect national policy making. It is not the objective of this subchapter to analyze in detail the stakeholder-interaction. This can be easier visualized at a regional level (Chapter 4).

On the previous subchapter (3.1), the actors that have legal attributions on water policy issues were described. Such stakeholders were enlarged (subchapter 3.2 and 3.3) when describing the process of NHP development, its implementation, evaluation and redesign. Be it as it may, it is difficult to measure, at a "macro-level" specially (national level), the stakeholder involvement and the level in which they were involved. Figure 3.6 presents the main stakeholders involved in Mexican water management and so those that should be involved in water policy making. The complexity of the figure reflects the challenge of making a "participatory water policy at a national level" which is, at the same time, integrated and all-inclusive.

What becomes clear, from what to this point has been exposed, is that the central water policy-making body is the CNA, and possibly the Programming sub-direction[66] (planning management). To see CNA's Planning Management structure see appendix, section A.3.8. This federal institution coordinates and is directly responsible for the national water policy. After what has been presented about the CNA, its origins and structure, I believe further expansion on what does the CNA represent is not necessary. It might be interesting to remark, that the CNA is internally diverse. There are several sub-directions in the CNA[24] involved in the NHP, coordinating one or another Objective of the NHP. These sub-directions and managements implement projects which are related with the identified objectives. However, as will be presented later, on Chapter 4, the execution or not of a project does not depend only on the Commission (on most cases) but also does on the level of co-partnership with states, municipalities and users.

What may be not so clear is who are the main actors representing the "social voice". According to both, water planners and to the NHP document itself, in "the integration of the NHP social participation occurred through 4 main mechanisms: 1) the River basin councils, 2) the Water consultive council, 3) forums with experts and 4) citizen consultation". It is important to remark that both CNA water planners and the NHP document stress that the main participatory processes occurred during the integration of the document not so much during the execution, evaluation, redesign,…or other stages of the process. "In those stages the participation is more informative". This is a crucial element for our research. It implies that, at a national level, the participatory mechanisms were only targeted during one of the stages of the policy process, the design or agenda setting stage. For the other stages of the policy making process their level of participation was inexistent or very low. Even though this conclusion is very important, analyzing how the participatory mechanisms (the 4 mechanisms previously mentioned) were involved in the design stage is still relevant.

[66] Both central and regional personnel

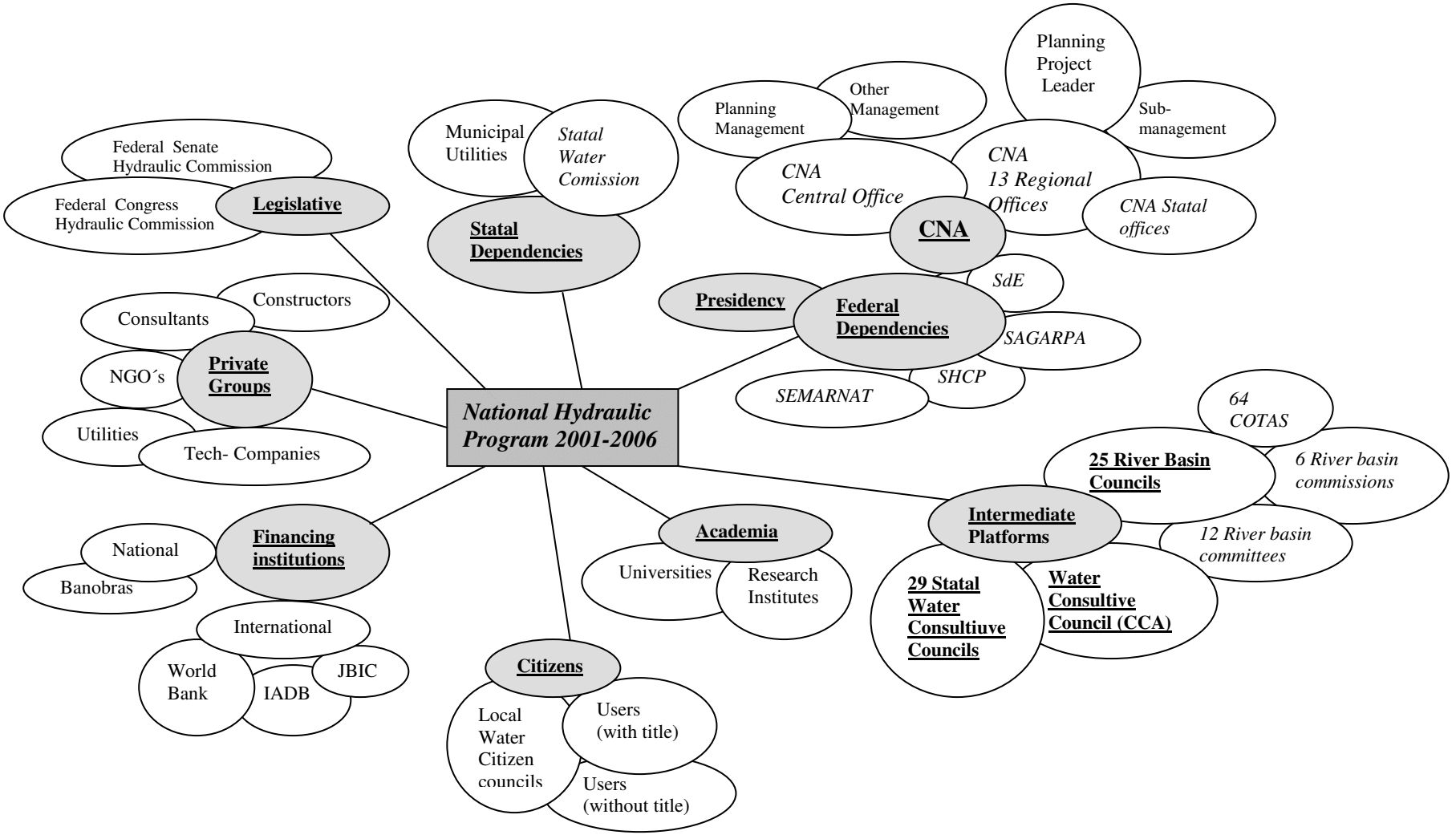


Figure 3.6. Main Stakeholders involved in Mexico's water management

- *Riverbasin Councils (CdC)*

River basin councils are multi-stakeholder platforms where the three levels of the government (federal, statal and municipal) and the users of a specific macro basin or group of basins can raise their voice, present their differences and solve them. The Law identifies several water uses, including: agricultural, industrial, livestock, aquaculture, environment, domestic, multiple, services and public urban. Representatives of such uses and users should be present in the river basin council. In Mexico the first efforts to constitute a river basin councils occurred in the Lerma-Chapala basin around 1989. Such efforts concretized in 1993 with the official installation of the Council. However it wasn't until the end of 1998 and mainly in the years 1999 and 2000 when most of the actual 25 river basin councils were officially installed[67]. The river basin councils, may o may not, have auxiliary organisms: River basin commissions (at a sub-basin level, nationally a total of 6), River basin committees (at a micro basin level, in total 12) or Technical Groundwater Committees (COTAS; at an aquifer level, total 64). These auxiliary organisms aim to represent multi-stakeholder participation at a more local level. In the appendix, section A.3.9., a map presenting the location of the different river basin councils and its auxiliary organisms is presented.

During the period 1998-June 2001, period previous to the NHP integration, the River basin council and its auxiliary organisms meet in total 1463 times (see appendix section A.3.10.). It is significant to remark that this meetings represent the total amount of meetings that took place, they don't represent the amount of meetings were the NHP was specifically discussed. In region XI for example, the NHP-design was never been discussed. In some River Basin councils there are specific working groups in charge of dealing with Hydraulic Programming. However most working groups were constituted after 2000 and unlikely dealt with the National Hydraulic Program. The River basin councils might have had an impact in regional hydraulic programming (I would discuss that in the next chapter) but have not been involved in the national hydraulic programming. The CNA water planners and the NHP stress that the information resulting from the 1463 meetings was "one of the main contributions in elaborating the NHP"[68] (CNA, 2001).
Bearing in mind the concepts previously introduced in the theoretical framework I would conclude that participation through river basin councils during the NHP design was inexistent. There isn't an existing platform including representatives of the different river basin councils at a national level. One cannot say that the river basin councils contributed to the NHP design. Maybe sporadically one or another council may have commented on some aspect of the NHP. Their comment however, would be particular not representative for the whole 25 councils. Interestingly enough, even in the CNA's frame, there is support for my statement and the contribution of the river basin councils. While most water planners from the *Planning Management* are very positive about the wide participation taking place through the river basin councils during the NHP design, others, like several top clerks of the *River basin council Management* agree that such contribution has been "very limited, they sign the RHP and that's it". In order to further understand how a River basin council does function and what could have been their impact in regional hydraulic programming, the next Chapter 4.3. will comment on those issues.

[67] However the process of installing a river basin council may take some time before its installation (in coast of Chiapas around 2 and half years)
[68] Furthermore in August 2001 all the GSE were called to gather to enrich the NHP (ignore if actually it took place, if the program was the main topic discussed and how was the dynamic during the meeting).

- *The Water Consultive Council (WCC)*

The Water Consultive Council is a civil association created in March 2000[69] "as a movement seeded by the CNA" (governmental origin). It is constituted by an "elite societal group" (the most important Mexican business men, university rectors, the CNA as a permanent member…) and has within its main objectives:
- Support the strategic change necessary in the sector
- Function as a government consultant / assessing in water issues
- Coordinating, promoting and focusing the society's efforts to achieve a "water culture" and a better water use.
The WCC has several working groups such as: water economy, education and communication and legal framework.

According to the NHP 2001-2006 one of the main participatory mechanisms during the hydraulic planning was through the WCC: "the working groups of the council emitted comments on a previous version of the document and such remarks were included in the final version". Considering, as the president of the WCC mentioned in October 2000[70], that the WCC was in a period of consolidation at that time, one can deduce that their role in the policy process was minimal and probably, as CNA clerk[71] puts it: " the WCC were informed when we did the NHP". That was possibly their role. It wasn't the aim of this study to analyze the structure of the WCC. If I had to preliminary evaluate the "participation" enabled through this so-called participatory mechanism my assessment would be that: the WCC represents the concern and interest of an elite group. When considering issues related to participation such as the origin (governmental), the time since its creation (4 years since its creation, one before publishing the NHP), the frequency of interactions within this organization (monthly or trimester), representiveness (only could talk of representing individual interests, not collective or users interest) I conclude that the level of participation through this organization is low. This does not mean that their importance is irrelevant also. This elite organization has direct contact with the federal government and as such might have an important influence in hydraulic decision making.

Other than the WCC, and following the same philosophy, the CNA promoted the constitution of 29 *Statal Citizen Councils*, "some of which send their proposals" (CNA, 2001).

- *Other mechanisms allowing "social participation"*

As part of the process of integrating the NDP and the NHP, during the early 2001´s (and until 15th March 2001) society was consulted. The objective of such approach was to capture the initiatives and proposals that would help "improve the nations consolidation even further". The societies consultation was done through 3 mechanisms:

* The internet (www.pnd.presidencia.gob.mx)
* NDP mailboxes, (in which the inhabitants deposit the fill in formats previously received by post)

In the case of the Internet and the mailboxes, around 100 subjects were enlisted and inhabitants openly had to present their opinion and comments (in total around 3500 letters were received).

* Consultation Forums: In the case of the specific forums for the hydraulic sector this included 6 meetings, in different cities of the Republic, with around 20 experts per meeting. In the meetings the experts presented their positions and these were analyzed by the group and later selected and agreed,

[69] when the policy integration process was well on it's way
[70] First National Meetings of River Basin councils (2000)
[71] CNA is responsible of promoting such Consultive Councils both nationally and at a statal level.

selecting those which they considered more relevant for the formulation of the NDP. Details on the forums and the results of internet /post can be found on the appendix (See Sections A.3.11, A.3.12 and A.3.13)

How was the information and worries presented in such consultation process is difficult to evaluate. The "raw data" is not available for its analysis and the involved CNA involved officials could not be interviewed. Considering the elements that can help us evaluate the participation level achieved through these mechanisms I can conclude that it was very low. The main element, the frequency is determinant. Such consultation process occurred only once; there is no continuity in the consultation process. Furthermore the individual sending a comment through the internet cannot be contextualized: does he/she represent a farmer organization or is he/she a municipal water utility director? If that was the case is internet or post the most appropriate mean of presenting their / their groups concerns?. Representiveness of an individual sending a sporadic comment cannot be assessed through the two first consultation mechanisms. In the case of forums with experts the frequency element is also present. This was a sporadic gathering without continuity and as such is validity is questionable. The selection procedure used to convoke the experts was determined by the CNA. That is, the origin of such participatory mechanism was regulated and controlled (as the subjects of discussion were) by a governmental institution.

- *CONCLUSIONS OF THE CHAPTER*

The information presented in this chapter introduced the main participatory processes during the design of both regional and national policy. The participatory mechanisms enabled by the CNA have been presented. This governmental institution invites and decides at which level the several participatory mechanisms can be involved in the policy process. The Water Consultive council and the other consultation mechanisms (post, internet or forums with experts) lack the necessary representitiveness advocated by the NHP. This element can be seen as the most critical factor enabling the inclusion of "the diverse societal perspectives". Without such representitiveness this participatory tools cannot express the diversity of Mexican society. Of those participatory mechanisms considered by the CNA and its NHP, the River basin councils stand up as the most relevant structures enabling diversity inclusion. At least in theory, the River basin councils have the richness of being constituted by several users, representing the different sectors. We now know that River basin councils, as a whole, were not involved in the national policy making. However, it is still relevant to study to which extent were this multi-stakeholder platforms involved in regional hydraulic programming. An analysis of such role can be found in the following chapter.

CHAPTER 4. "FROM NATIONAL TO REGIONAL"

In this chapter we will describe the area in which our case study object, the coast of Chiapas, is framed: Region XI "Southern border". This is one of the 13 hydro-administrative regions defined by the 1998 presidential decree, and, as such, has a regional water governing document, the "Regional Hydraulic Program". Subchapter 4.2 will examine the RHP and analyze its content while focusing on the participatory processes occurring during its implementation. Finally, the most relevant participatory mechanism, the river basin council will be assessed. The functioning and constitution of the river basin council Coast of Chiapas will help us understand its potential as a participatory structure which can influence water policy-making.

4.1/- The Region XI: Southern Border

Region XI comprises the totality of the southern states of Chiapas (118 municipalities) and Tabasco (17 municipalities), 3 municipalities from Oaxaca and one from Campeche[72]. In total 101813 km^2 (more than three times the Netherlands) holding a population of 5,94 million inhabitants, 52% of which live in the rural areas. The most populated (>50000 inhabitants) cities are Villahermosa and Cárdenas (Tabasco); Tapachula, San Cristóbal de las Casas, Tuxtla Gutiérrez and Comitán (Chiapas). Of those nearly 6 million inhabitants, at least 20% are indigenous[73] (specially located in Chiapas State). In January 1994, being tired of suffering from high regional marginality (53% of the regions population), a local indigenous group upraised against the "bad government". Since then they have gained support from the civil society and have constituted self-governed autonomous regions in the area, especially in Chiapas State (see subchapter 5.2.1 for further details)

The region is further characterized by its high ecological importance. The region stands in the first national place for the species it contains (64%), while, at the same time, is the first mammal extinction (or danger of doing so) region. Furthermore, in the region there are around 22 natural protected areas expanded in 11407 km^2. This diversity is favored by the great geographical variety of the region, from the lowlands to the "hights"(*altos*), and from the coast to the jungle.

Generally speaking, the weather in the region is defined as warm-humid, with an average temperature of 24 degrees and an average rainfall of 2300mm/year (90% between May-October). Such rainfall (165 km^3/year) flows through its more than a hundred rivers or accumulates in its 25 known aquifers. Five of those river basins, including the two most important (Grijalva and Usumacinta), are shared with Guatemala. Yearly 149 km^3 flow through one of the three hydraulic regions defined by the CNA in the region: the Grijalva-Usumacinta, the Coast of Chiapas and, partially, the Coatzalcoalcos region. It is important to bear in mind that the Grijalva and Usumacinta rivers are two of the most important rivers in Mexico, both for its length and the volume they hold[74].
Water use in the region, estimated according to the granted concessions[75], can be divided according to its source. Groundwater extraction[76] represents 0.526 km^3/year, surface consumption represents 1.3 km^3/year and non-consumptive uses add 49,34 km^3/year. Overall, consumptive water is used mainly in: Agriculture[77] (68.67%), public-urban use[78] (24.36%) and Industry[79] (5.18%); while non-

[72] Each one with it's own statal Water Law
[73] Estimates from data in INEGI (1995): According to the persons speaking at least one indigenous language.
[74] (for Grijalva-Usuamacinta) Average Natural superficial drainage: 115536 hm^3 /year and 1521 km long (CNA, 2004).
[75] Registered in REPDA (public register of water rights)
[76] of an estimated yearly recharge of 24km^3
[77] 4 Irrigation Districts (26410Ha) + 7 Temporal Technified Districts (470000Ha aprox.) + 718 Irrigation Units (71207Ha)

consumptive use includes hydroelectric generation[80] (99%). Even though the region is characterized by its enormous hydrological potential, as only about 1% of water is actually consumed, spatial and temporal availability may affect some zones availability. Furthermore, even when volumes are physically available, these cannot always be conceded as they correspond to downstream users that already have rights (ex. hydroelectric stations).

As for water quality, discharged non-treated waters from urban areas, agriculture and industries are increasingly disturbing water quality. Even though the dissolving capacity of the big rivers minimizes such impact, the river Grijalva (interval La Angostura-Chicoasén) presents a *Water Quality Index* of 71%[81], still one of the lowest pollution for the country at a macro level. Groundwater quality, in some aquifers, is starting to be affected by an increase in ionic concentration (CNA, 2003).

Apart from the regional or statal division, region XI is further divided, for planning purposes. Both the *8 planning sub regions* (as showed previously in Figure 4.1) or the 2 river basin councils: the Coast of Chiapas (1 planning sub region) and the Usumacinta-Grijalva (7 planning sub region), cover the whole regional territory.

Figure 4.1. Region XI: Planning sub-regions, main cities and river basins

[78] concentrated in big cities (mainly Villahermosa, Tuxtla Gutiérrez and San Cristóbal de las Casas)

[79] for Petrol (Low-Grijalva region and Tonala Coatzalcoalcos), Sugar (Coast of Chiapas and High Grijalva) or food processing (previous 4 mentioned regions) activities mainly

[80] 7 Hydroelectric stations, with an installed generating capacity of 3928 MW (39% of the hydroelectric plants capacity nationally installed)

[81] a greater ICA value indicates a better water quality.

4.2/- The contents of the Regional Hydraulic Program (2002-2006)

4.2.1. The regional threats and the Objectives, Indicators and Goals to overcome them

The participatory workshops that lead to the "Strategic guidelines" (1999; see previous section 3.2.1), identified, through two participatory techniques[82], a group of main problems affecting the region. This is a summary of the central problems identified in such meetings:

- Deficient potable water and sewage service in urban areas.
- Low efficiency and deterioration of hydro agricultural infrastructure in: Irrigation districts, irrigation units and *temporal* technified districts.
- Low water treatment coverage and deficient operation of the already existent plants.
- Negative impacts derived from the industrial activity.
- Lagging behind in potable water supply in rural areas.
- Numerous rural communities marginalized from rural development.
- Vulnerability against extreme meteorological phenomena.
- Socio-economical and environmental deterioration of the river basins.

The Regional Hydraulic Program (RHP) retakes this previous problem identification but classifies them according to the 8 planning sub-regions. The conclusion is that, "after the process of participatory planning, the 4 **central problems** of the region are" (CNA, 2003):
- Low utilization and deficient superficial water management
- Vulnerable to flooding events
- Pollution of the surface river basins
- Deficient or insufficient potable water service, sewage and wastewater treatment in both rural and urban areas.

Perceiving such problems as the most threatening to the region, the Regional Hydraulic Program defines the **Objectives** for the regional hydraulic sector (Table 4.2.). The objectives have correspondence with both, the 9 objectives (appendix section A.4.1.) previously identified during the *Strategic guideline* design process, and the national objectives, from the NHP. However not all of them coincide[83]. It is interesting to remark than from this point onwards the planning sub-regions are not retaken at any point, the objectives, goals, strategies, etc are the same for the whole region. Similar circumstances have framed the regional goals. The regional **Goals** are not particular *per se*, they are derivate from the national goals (Table 4.2.). The RHP mentions that "the fulfillment of these goals not only aims to impact on the national objectives, but also tries to give solutions to the main identified regional problems". The established contribution to the national goals was "agreed between the substantive areas of the CNA's Regional Management, (…) according to the technical, economic, social and financial possibilities existent regionally in the hydraulic sector" (CNA, 2003). Goal contribution of region XI was not discussed with any other relevant stakeholder (be it Statal Water Comissions, River basin councils,..)

[82] 1st: Analysis of the problems identified in the diagnosis and formulation of "problem-objective trees" by applying the ZOPP method and 2nd: Identifying by consensus the, problems, strategic guidelines and actions, by applying a Participatory Planning methodology in sub-regional meetings

[83] The 2nd and 3rd , and partially the 1st coincide with objectives previously identified during the "Strategic guidelines"

NATIONAL OBJECTIVES	REGIONAL OBJECTIVES	REGIONAL INDICATORS	REGIONAL GOALS					
			2002	2003	2004	2005	2006	% national goals
1. Promote efficient water use in agricultural production	**1. Achieve an efficient water use in the agricultural area**	1.1 Area efficient irrigation divided by total physical irrigation area (%)	1.0	2.2	3.9	5.1	6.7[1]	*1-2%*
2. Promote the enlargement of the coverage and quality of the services of potable water, sewage systems and waste water treatment.		2.1 % of inhabitants in the region with potable water service *	75.5	75.5	75.5	75.5	75.5[2]	*5%*
		2.2 % of inhabitants in the region with sewage *	64.7	64.3	64.3	64.4	64.3[2]	*6-7%*
		2.3 % of inhabitants of the rural areas with potable water service *	66.7	66.7	68.4	68.4	69.1[4]	***27%***
3. Obtain an integrated and sustainable water management in river basin and aquifers	**2. Increase, in a short term, the levels of provided service to achieve national average**	3.1 Volume of treated wastewater divided by Volume of total collected wastewater (%)	26	35.6	53.5	53.5	53.5[5]	*1-2%*
4. Promote the technical, administrative and financial development of the hydraulic sector.		4.1 Check that the concessions for national water use and waste water discharges are indeed used or exploited, and that the maximum allowed limits for pollutant agents are fulfilled (public use in towns >50000 inhab, industry and services)	27.3	45.1	63.8	81.4	100[6]	*8%*
	3.Establish a solid fundament to assure socio-economical sustainable development of the Region	4.2 Amount collected by concepts of rights, utilization, improvement contribution and taxes (millions of constant Pesos 2001)	291	319	321	334	350[7]	*6%*
5. To consolidate user and organized society's participation in water management and to promote the culture of its good use.		5.1 River basin councils functioning with it's own technical and administrative autonomy	0	1	2	2	2	*8%*
		5.2 Technical groundwater Committees (COTAS) functioning with it's own technical and administrative autonomy	Not Applicable					
6. Risk prevention and taking care of the effects of floods and droughts	**4.Diminish the vulnerability versus flooding events**	6.1 Number of inhabitants protected against floods by infrastructure construction (thousands accumulated from 2001); inhabitants who benefit from alert systems are not included	47	82	118	259	412[9]	***21%***

** Doesn't mention according to which census*

[1]5847 Ha Chiapas + 1310 Ha Tabasco [2]155000inhab Ch + 84000 inhab Tab.[3] 85000 inhab Ch + 95000inhab Tab. [4] 145000 inhab Ch + 36000 inhab Tab. [5] 470 l/s Ch + 930 l/s Tab. [6] Regionally: 582 concessions [7] Regionally: 1615 million [9] 35000 inhab Ch + 377000 inhab Tab.

Table 4.2. National Vs. Regional Objective; indicators and regional contribution to the national goals (CNA;2003)

4.2.2. Achieving the regional commitments: Strategies, Actions, Programs and projects

After defining the priority problems to be tackled, and having set the regional objectives and goals, the RHP describes the process of how to achieve what has been planned. The first step was to define **Regional strategies** aimed to help fulfill the regional and national objective fulfillment. The regional strategies are the same as the national strategies. This characteristic reflects the strong central influence the regional offices have to bear. Even having their own strategies identified, they have to follow the central guidelines. The same will occur with the actions, goals, indicators and financing programs (further explained).

The instrumentation of these strategies will be carried out through a set of actions, programs and projects of regional execution. The set of necessary regional **Actions** exposed in the RHP are the same as those previously presented in Table 3.3. The RHP actions diverge from those presented in the *Strategic Guidelines* document (see appendix section A.4.2 and A.4.3.).

The main particularity and contribution of the Regional hydraulic Programs is its project identification. These **Projects** can be implemented with the support of certain financial programs that

will be later explained. Projects are divided in two types: Investment[84] (or structural) and Management[85] (or non-structural) projects. The process of project identification was described by the CNA's regional responsible. The process starts with a *proposal*, done by a group of organized users, a particular statal institution or, what's most common, by an internal CNA sub-management (ex. Irrigation). This proposal is received by a specific sub-management or it's directly sent to the regional manager. Once received, the responsible CNA sub-management *registers* the project proposal and identifies whether more studies are necessary or not. All projects should go through the process (which can be long and expensive) of: *long-term vision study* (with an economic analysis + Cost Benefit Analysis), to *pre-feasibility study* (with an economic analysis + CBA) and finally to a *feasibility study*. Once the feasibility studies are positive then the projects can be *programmed for its execution* and at some point *executed* (depending on the type of project the executor differs). The several necessary studies are normally bid to consultant companies. The participation and dynamism occurred during this stage "was minimal" according to the CNA regional responsible for the area. Only some statal agencies (IHNE, for example) presented proposals. Not a single project proposal, which was later include in the project portfolio (and so in the RHP), was canalized through the River basin councils or any other participatory mechanism.

All the received project proposals were compiled and classified according to their relation with the national (not the regional) policy objectives. Having done that, the investment required for both investment projects and management project was obtained (and summarized in Table 4.3.). To do such calculations all compiled projects were included, no matter at which level of study were they in (some are proposals others are in a long-term vision, others executive projects,..). It is relevant to remark that in Table 4.3 both the projects that have an impact in goal achievement as those that don't have such impact are presented.

According to CNA estimations (CNA,2003) executing all the identified projects (*ideal scenario*) will have a cost[86] of 6904 million pesos (476 million euros) in the 2002-2006 period, while achieving the goals (*goal achievement scenario*) established for region XI will have a cost of 3922 million pesos (270.5 million euros). In the *goal achievement scenario,* projects under Objective 2 and 6 should receive 98% of the financial support, while in the ideal scenario other projects related to Objective 1 (16,6%) and other management projects (Objectives 3,4,5: 3.4%) would have a bigger share. Such variation on the destination of the funds depending on the scenario, may give us interesting information related with the conflicts between aiming for a *goal achievement scenario* or acting on the regional needs (*ideal scenario).* This shows the limitation of having to achieve national goals when regional realities differ. It furthermore questions the effectiveness of automatically translating national objectives into regional ones.
It is important to clarify that those projects included in the RHP, and with which the finances were calculated, "are programmed projects, it doesn't mean they are going to be implemented in the period 2002-2006 or even that they will be implemented at any time"[87]. Some of the projects included were identified at the beginning of the 90's, for instance, and have never been implemented. Their implementation mainly depends on the federal financing programs available, or the agreements between the different stakeholders (federal, statal and users) to financially contribute or not to the project execution.

[84] for infrastructure creation
[85] focused on developing or improving institutional capacities, processes, generating information or other intangible actions
[86] this amount does not represent the total amount the CNA will contribute with (execution programs have mixed resources)
[87] Regional management "Planning leader"

	Total Investment 2002-2006 (million Pesos)
Objective 1. Promote efficient water use in agricultural production	
Relevant Investment projects for the region (without+ with) impact on the goals	1106.7 (990.5+ 115.9)
Relevant Management projects for the region without impact on the goals	39.6
Objective 2. Promote the enlargement of the coverage and quality of the services of potable water, sewage systems and waste water treatment.	
Relevant Investment projects for the region with impact on the goals	2391.4
Relevant Management projects for the region without impact on the goals	4.3
Objective 3. Obtain an integrated and sustainable water management in river basin and aquifers	
Relevant Investment projects for the region without impact on the goals	5.0
Relevant Management projects for the region without impact on the goals	144.23
Objective 4. Promote the technical, administrative and financial development of the hydraulic sector	
Relevant Management projects for the region without (with) impact on the goals	71.28 (8.30)
Objective 5. To consolidate user and organized society's participation in water management and to promote the culture of its good use.	
Relevant Management projects for the region without (with) impact on the goals	15.86 (1.25)
Objective 6. Risk prevention and taking care of the effects of floods and droughts	
Relevant Investment projects for the region (without+ with) impact on the goals	3050.7 (619.9+2430.8)
Relevant Management projects for the region without impact on the goals	73.36
Total Management Projects (impacting and not impacting) the goals	**349.98** (9.55 + 340.43)
Total Investment Projects (impacting and not impacting) the goals	**6555.3** (4938.1+ 1617.2)
TOTAL REQUIRED INVESMENT FOR REGION XI in Period 2002-2006	**6905.28**

Table 4.3.Summary of required investment related with each objective (both investment and management projects)

Making a general financial balance, I will compare the Regional management XI total budget[88] for 2001 of around 350 million pesos (24 million euros)[89] (PHR, 2003) with the 700 million pesos (48.3 million euros)[90] needed in the *goal achievement scenario*. When comparing both amount one can observe a financial gap which would restrict regional goal achievement. In order to overcome such limitations, the federal government has designed several **financing programs.** This programs help support feasible projects in mainly 2 areas: Hydro-agricultural infrastructure and Potable water, sewage and water treatment. Federal financing programs are presented in Table 4.4. These programs are the key available tools to achieve regional water policy objectives and to contribute to the national goals.

Each program has its specific *Operational Rules* which apply for all the Federation. Most of them were modified and published for the last time in April 2003 and are still valid. The origin of the programs is diverse; some of them are of recent design, while others have been operating for the last 5 years, even before the National Hydraulic Program (2001-2006) was designed. The rules and regulations detailed in the *Operational Rules* are very important for the project execution, and, consequently, for the Regional and National hydraulic programs. In this research the participation of the different stakeholders in the *Operational Rules* design was not studied. However, considering that these have a national validity, the participation of regional or even local stakeholders had probably been inexistent. For instance, by retaking the "Strategic guidelines" design (1999) one could observe an interesting exercise. In that document, the regional diagnosis and the identified regional priorities

[88] Operational costs and regional investments
[89] having contributed with 274,11 million in 2000 (from the regional tax collection; this was around 2% of the national collection) (CNA, regional management, November 2004, personal communication)
[90] Average 3922 million pesos in a 5 year period (2002-2006).

determined the actions to be developed. After that, the document presents 11 Programs which were considered adequate to be developed (see appendix section A.4.4. for details). A comparison of those 11 suggested programs and the federal programs existent at that time (1999) is presented in appendix section A.4.5.

PROGRAMS	Actors involved in mixing resources and max percentage supplied by the CNA	CNA's Max. Federal available amount[1] amount (for 2003; in million pesos)
***Programs executed by producers under the operation schemes of the Program "Alianza para el Campo":** (executed by users and state government with resources transferred from CNA)		
1/-Rehabilitation and maintenance of irrigation districts(*)	-CNA up to 50% (producers the rest) - some cases only up to 25% (*riego demanda*)	581
2/-Plot development (*)	-CNA up to 50% (producers, helped or not by the state, the rest)	0.5
3/-Efficient water and electricity use(*)	-CNA up to 50%	31.5
4/-Full hydro-agricultural infrastructure's use(*)	-CNA up to 50% (the rest users, statal government,..)	112.75
***Programs directly executed by the CNA:**	(executed by directly by CNA)	
Expansion of: *5/- Irrigation district*	-Mixed resources (with users and statal government min. 25%) according to particular agreements	223
6/- Irrigation units		164
Development of Infrastructure for *Temporal*: *7/- Enlargement of areas for temporal*	-Mixed resources (with users and statal government min. 25%) according to particular agreements	41
8/- Supplementary irrigation	-CNA only investment of up to 50% (rest by producers)	64
9/-Conservation and rehabilitation of temporal areas	-CNA up to 50% (the rest by users; highly marginalized CNA up to 90%)	49.67
	(executed by users and state government with resources transferred from CNA)	
10/-Potable water, sewer and treatment in urban areas (APAZU) for location of >2500 inhab. (*)	- Mix of federal + statal+ municipal + water utilities: *efficiency increase: CNA up to 40 or 45% *potable water: CNA up to 35% or 40% *treatment: CNA up to 42%	870 (Ch: 11,59 and Tab: 2,7) Sonora 110
11/- Potable water, sewer and treatment in rural areas (PROSSAPyS) for locations of <2500 inhab (*)	-CNA up to 50%	523 (Ch: 50,7 highest national; Tab: 9,8)
12/-"Clean Water" (*Agua Limpia*) (*)	-CNA from 30 to 50% depending on kind of project	29.7
***Other sources of finance or program:**		
13/-Devolution of rights paid by water utilities	- Those water utilities that having payed the federal rights for national water use or utilisation, in localities >2500 Inhab. ask for the devolution of rights and present an Action program where they engage to invest, with the returned water rights, the same amount	1429.5 (amount returned to the different states)
14/-PROMAGUA (Modernization program for water utilities); for localities of >50000 inhab	- Support to water utilities to increase their efficiencies and favor private participation. CNA supports with 20 to 49% of the resource (depending on the efficiency of the utility the type of venture,..).	n.a.

[1] for all the country not only for the regional management n.a.: Not available (*)Operating before NHP or RHP was designed

Table. 4.4. Main federal financing programs (Source: April 2003 Operational rules + internal documents + internet www.cna.gob.mx)

The execution of the regionally identified projects, through federal financing programs, is a key issue in hydraulic policy. At this point of the policy process, regional stakeholders, like state governments, user organizations or municipal water utilities start to have a more important role in the project execution. As presented in Table 4.4, in most cases projects can only be executed when there is a mix of resources. This mixed resources call for a certain negotiation and coordination between the actors

involved. On the one hand, programs have federal money[91], and on the other, there is a variable percetage contribution from States[92], municipalities or users (producers,..). A third major party is involved in project financing. International financing institutions, like the World Bank, the International Inter-American Bank or the Japanese Bank for International Cooperation, have supported the CNA with loans that are specifically used for program financing (for example PROSSAPyS, PROMAGUA,..). Even though the international agency may not always be directly present in the project implementation, the lending terms and conditions for implementation, which had been previously agreed with the CNA at a national level, may limit or favor certain kind of projects. Other than that, international lending agencies frequently function as monitoring bodies for the funds they have lend.
Once the amounts each stakeholder should contribute are determined, the projects are executed. Depending on the kind of program or type of agreement, the responsible for its execution will vary. Be it as it may, nor the federal government, nor the statal government is normally involved in the construction of the project itself. The standard process is bidding the construction among Construction companies who will execute the project. Meanwhile the responsible agency deals with the supervision and the normative aspects of the project. There are several kinds of bids depending on the cost and type of project: it can be a public bid, a restricted bid or projects can be directly assigned. The process to follow is determined by the *Law on Public Works*. Depending on the level of funds involved (statal, federal or international), the construction company will be selected from a (statal, national or international) census. During construction the federal institution may function as a monitoring partner. Once build, the construction is operated by the community itself, by the municipal utility service manager or by the users themselves. In some cases the CNA still operates some agricultural infrastructure like the "head dams".
In this subchapter, federal water policy and the existent financial programs for its implementation have been presented. On a statal level, however, local capacities are starting to be created and, with the transfer of power to the Statal Water Comissions, "*Statal hydraulic Programs*"[93] and statal financing programs are starting to originate. In the case of Chiapas, for instance, CEAS (Statal water commission) has its own statal programs[94] which do not respond to federal or international conditionings and may have their own rules of operation. Be it as it may, the CNA is still the leading institutional body in the area. After all, it has the more developed capacity and an experience of 70 years in water management.

4.2.3. Monitoring, Evaluation and redesign

Monitoring the actions related to the regional hydraulic program has not yet been systematized. CNA's *Programming sub-management* is limited by the amount of available personnel. The project portfolio list is available, but its level of execution, the resources spend, its contribution to the goals,… has not yet been actualized. Other than this regional sub-management any other stakeholder has an overview of the implementation level of the regional hydraulic program or the execution of its projects. I assume this is part of the CNA's Regional sub-management tasks. However, it is not clear who is responsible for monitoring, its frequency, repairing criteria,… Even though the process is not yet systematized, the elaboration of the statal hydraulic programs for Chiapas and Tabasco is being used by the regional CNA as a monitoring exercise. Information on the investment per state, the main projects that are being developed and actualized statistics are being compiled and "will help the

[91] be it from the CNA's federal budget (approved by the congress) or from the CNA's regional management
[92] States have their own statal budget and designate part of it to water-related projects (normally managed by a Statal water Comission)
[93] still coordinated by the CNA. Per example in the state of Chiapas the state asked the CNA to develop a Statal Hydraulic Plan that is now being developed by a consultant company. To be finished by the end of 2004.
[94] Most of the statal resources are destined to mixed-resources programs.

regional sub-management actualize its implementation data and monitor the regional hydraulic policy process"[95].

Attempting an **Evaluation** when you are already limited by the information at your disposal, is a prompt task for this regional sub-management. However, at a national level, a group of OMM consultants have been evaluating the National hydraulic Program. This group selected region XI as a relevant case study for their assessment. Their conclusions and suggestions, even though targeting a national planning level, may also be useful regionally.

4.3/- Multi-stakeholder platforms in regional water policy: In depth analysis of the River Basin councils

At this point of the research, the policy making process at a national and regional level has been described. It has become clear that the role of the CNA *Programming Sub-management* is key as the promoter and coordinator of water policy making. Other than the CNA, there are other actors involved: states, municipalities, users,…which have participated in diverse ways and at different levels in the policy making process. Most interviewees agree that river basin councils are possibly the better means of achieving the multi-stakeholder representation needed in integrated water management and water policy. That is probably why the CNA, in all regions, has aimed for the legitimization of the RHP by the relevant river basin councils[96]

From the results until know presented, one could preliminary conclude that participation through river basin councils has been limited. At least in region XI[97], participation was more present during the problem identification stage and the "Strategic guidelines" design. During the following stages of the process (implementation, evaluation or redesign) participation through river basin council was practically inexistent. However, these are still preliminary conclusions at this point. In order to complete the results and be able to have a more clear judgment on the river basins role in the policy process and its potential as a representative multi-stakeholder platform, a better understanding of its limitations and opportunities is necessary.

[95] Regional planning responsible

[96] See preliminary pages of all thirteen RHP. In those pages information on whether the RHP has been corroborated or not by the river basin councils, when and during which meeting is presented. Not all the river basin councils have validated the programs at this point.

[97] being this region "a national example for the participatory processes that in it take place"

4.3.1. The regional river basin councils: Grijalva-Usumacinta and Coast of Chiapas

In region XI, "Southern border" there are two constituted river basin councils that include the whole regional area. In Table 4.5. their main characteristics are presented.

	Coast of Chiapas	**Grijalva-Usumacinta**
States involved (and number of municipalities)	Chiapas (20) + Oaxaca (2)	Chiapas (98) + Tabasco (17) + Oaxaca (1) + Campeche (1)
Area (number of planning sub-regions)	11022 km^2 (1)	89595.44 km^2 (7)
Population	Around 899000 inhabitants	Around 5 million inhabitants
Identified river basins	Around 24	More than 100
Type of river basins	Several similar and minor rivers. Short (average 45km) but voluminous due to the slope. Main ones being: Suchiate, Novillero, Huehuetan, Huixtla and Coatán	Many long, voluminous rivers which include 2 of the main emxican rivers: Usumacinta and Grijalva
Urban centers (>50000)	Tapachula	Tuxtla Gutierrez, Villahermosa, Comitán, San Cristóbal de las Casas, Cárdenas
Climates and geographical features	Coastal	Jungle, plains, and from the "hights" (2000 m) to the sea level
Constitution	26 January 2000	11 August 2000
Number of meetings: *-whole river basin council* *-Monitoring and evaluation Group (GSE)*	 1 (constitution) 19 (last July 04)	 1 (constitution) 11 (last on Dic 04)
Auxiliary Organs	3 river basin committees (Zanatenco, Lagartero and Coapa)	2 river basin committees (Cuxtepeques and Sabinal)

Table 4.5. River Basin Councils in Region XI and their main characteristics

Observing this table one could conclude that the differences between councils make comparisons unfeasible. Both councils represent very different realities. However the homogeneity in their functioning[98] and organizational structure, as both of them originated from a CNA's promotion campaign, makes comparison in some points possible. It is interesting to remark that both councils were officially established after the regional Diagnosis (1996) and "Strategic Guidelines" (mid-1998) were completed. Regional water planners insist that it was during the "strategic guidelines" design when participation was more dynamic, even with the participation of the river basin councils (see section 3.2.1.). Possibly, such assertion could only be possible in the Coast of Chiapas. In that council, even though it wasn't officially installed at that time, representatives had already been elected and could be consulted. In the case of the Grijalva-Usumacinta that would have been more difficult. The reasons for choosing the River Basin Council Coast of Chiapas were previously discussed during the methodological section (subchapter 1.4.).

4.3.2. The River basin Coast of Chiapas (RBCCoCh)

- *Characterization of the area and its uses*

The region is characterized by the existence of the *Sierra Madre* mountain range (up to 2900 m) which runs parallel to the coastline and which is the origin of the 24 main hydrological basins (presented in Figure 4.6.). The average land width[99] of 30km determines that the rivers flow violently and shortly towards the Pacific Ocean. The average rainfall, concentrated between July to November, is of 2685 mm (three times the national average). Such rainfall drains down the surface waters with a calculated

[98] following the Rules published by the CNA "Operational and functioning rules for river basin councils"
[99] between the Sierra Madre mountain range and the river mouth in the pacific ocean

volume of 16114 hm^3 (85% during the rainy period). Other than the surface waters there are 3 identified aquifers[100] located in the coastal plains (Arriaga-Pijijiapan, Acapetahua and Soconusco aquifers).

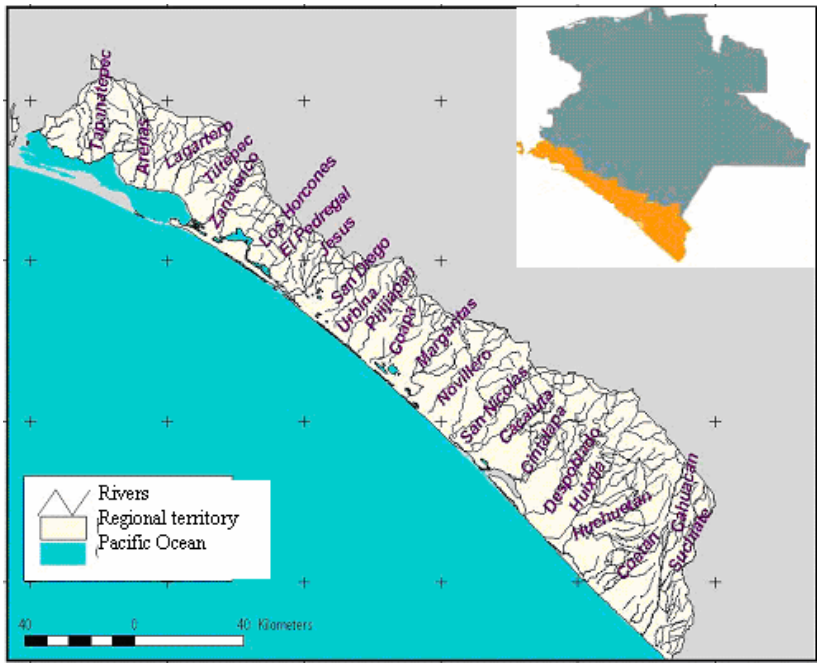


Figure 4.6 . Territory covered by the River Basin Council Coast of Chiapas and its main river basins.

There are 5 main water uses in the coastal region: Agriculture, public-urban, livestock, industry and aquaculture. Table 4.7 presents the relevant water use data for the area.

	Surface Water use (volume + registered uses in REPDA)	***Ground water Use*** (volume + registered uses in REPDA)	***Discharges*** (volume + registered uses in REPDA)	***Main users*** (in volume)
AGRICULTURAL[101]	449.95 hm^3 (374)	271.47 hm^3 (1243)	0.008 hm^3 (65)	Irrigation District 046 *Cacahuatan-Suchiate* (5185Ha; 141 hm^3 surface water), Irrigation units (*Huehuetan*, 30.6 hm^3 surface water)
LIVESTOCK[102]	0.215 hm^3 (13)	4.50 hm^3 (1049)	0 (0)	Small communal users, private producers
PUBLIC-URBAN	26.24 hm^3 (4473)	20.94 hm^3 (167)	0.027 hm^3 (26)	Water Utilities (*Tapachula and Motozintla*)
INDUSTRIAL	0 (0)	2.39 hm^3 (54)	0.0064 hm^3 (10)	Sugar cane industry, Soft-drinks companies
AQUACULTURE	5.64 hm^3 (3)	0.1 hm^3 (7)	0 (0)	Cooperatives
OTHERS: -Multiple -Domestic -Services -Hydroelectric	 0.94 hm3 (94) 0.0032 hm3 (9) 0.0159 hm3 (3) n.a.	 1.024 hm^3 (42) 0.1 hm^3 (831) 0.525 hm^3 (73) n.a.	 0.002 hm^3 (63) 0 (3) 0.0004 hm^3 (30) 0 (0)	 Private users Private users Private users CFE "Cecilio del Valle" hydroelectric station[103]
TOTAL	**483.0** hm^3 (4970)	**301.07** hm^3(3466)	**0.0453** hm^3 (197)	

Table.4.7. Estimated Water utilization in volume and sector of the region (Source: Registered titles in the REPDA, for around 2002)

[100] the Coast of Chiapas is considered a "*zona de libre alumbramiento*" for which no groundwater extraction restriction applies.
[101] Organized in several producers Associations: 6 for Corn, 17 Cocoa, 8 for coffee and 12 for others (fruits, palm,…)
[102] Organized in Local Livestock Producers Associations (18) and communal (*ejidal*) Livestock Producers Associations (at least 3)
[103] Situated near Tapachula. Volumes used are unknown, its electric production is of 97.35 GW/h.

Even when the values previously presented (in Table 4.7) can only be used as a guideline, one already observes that the main volumetric water use comes from agriculture, followed by public-urban use (especially in Tapachula which is the biggest city of the region). The amount of registered discharged water volumes is minimal compared with the total water consumption. Of those consumed 785 hm^3, only 0.0453 hm^3 are registered inn REPDA as being discharged.
Under the context just presented, the *Regional hydraulic program 2001-2006* identified the main problems threatening the planning sub-region Coast of Chiapas. The main problems affecting the region include low efficiency in the water utilities, low coverage in rural areas and absence of water treatment in practically the whole area. Other than that the irrigational districts and the *temporal* technified districts present a low infrastructural maintenance. Such situation is further worsened by the extreme meteorological weather that frequently hit the region and that affects all sectors and uses. Under such a scenario and with all this problems to revert the river basin council originated.

- *Origin/History of the River basin council*

The promotion and constitution of the river basin councils in Mexico has been a task of the federal government. The case of region XI river basin councils was no exception. First efforts started around 1996[104], with the identification of users and uses in the area. In most cases the main users (per volume) or association leaders (for instance, of the coffee producers) were targeted. The first official meeting took place on July 1997. In that meeting the CNA informed about the river basin councils, their use, functions, objectives,… "we as users went there to see what was it about, we didn't know anything about river basins,.."[105]. Initially users didn't know what to expect from the government. Until then any approach had been related with tax payments, title regulation,…."how could the CNA expect interest from the users?"[34]. According to some user representatives the CNA's first steps were too threatening and regulatory, "they asked us about our uses, discharges, to show our titles,…they were on top…and then they constituted the council"[34]. As any user who feels threatened, most of them decided not to get involved in this process "in theses experience has proven that remaining unknown is more beneficial"[34]. Some perceive that since "its birth, the council had everything against; it was seen by users as a federal structure, an organ of repression instead of a helpful one"[34].
In those first meetings a group of users and representatives[106] gathered and decided to appoint or elect their representatives by use. The user assembly was then constituted (7th October 1997). This group of users aimed to support the process of the river basin council integration. At the same time the user assembly tried to involve more users and non-users (for example universities,..) in the meetings taking place. The CNA coordinated all this process (it was a national policy objective to constitute river basin councils at a national level), and by the end of 1997 the CNA's technical council[107] had already approved its constitution. However, this governmental interest could not crystallize as planned, in 1998. The floods hitting the coast of Chiapas in September 1998 literally swept the reached achievements. The regional management focused on reconstruction actions: the region was devastated, the hydraulic infrastructure destroyed, water had to be delivered with tanks,… The CNA couldn't retake the river basin council pathway until 1999. That year only one meeting took place after nearly one and a half years of inactivity. Mostly the same representatives were still interested. The competency that had been built during the previous 3 years could be concretized in the river basin council Coast of Chiapas on the 26th January 2000 (official installation Act).

[104] "Characterization of users and it's regional context"
[105] Interview with RBCCoCh user representatives. In order to keep the source unknown I will not distiniguish user comments depending on the type of user (agricultural,..). The result is practically the same considering the type or research I developed.
[106] Representatives of associations (from the Local livestock, Banana or Coffee associations) or industrial companies (not the owner itself)
[107] by Law the CNA's Technical Council (governmental composition) has the faculty to approve the constitution or not of river basin council.

As presented in the theoretical framework participation requires interest from those that are targeted. I assume that in order to present a platform as interesting, the promoter itself needs to know what are the worth promoting (positive aspects) of such platform. My hypothesis is that the CNA officials were more concerned about installing the councils (and they attempted to do so in only one year) than about its actual functionality or its possible future (hypothesis shared by some CNA officials). Furthermore, they might have been un-experienced, as engineers, for this sort of approaches. Be it as it may, most users seem to have perceived the council or their participation in it as useless, and they lost interest. Consequently, they didn't attend the user meetings or got involved with the Council. Another interesting aspect to comment at this point is that there was a general ignorance about councils, participation, multi-stakeholder platforms,… information and knowledge (two key concepts for Participation) are required to achieve informed participation and to make decisions based on informed grounds. Such "capacity building" is not immediate; it's a process that takes more than just some preliminary meetings.

- *Objectives and functions of the river basin council*

The official installation act on the 26th January 2000 has been the only meeting of the complete council. On that first meeting, the object of the river basin council and its 5 specific objectives were agreed (see appendix section A.4.6. for details). The object of the river basin council and its 5 objectives were the same as those identified in the G-U river basin council. This confirms a strong CNA intervention still at this point of the process. Participation was being governmentally assisted. Counselors didn't actually reflect on their priorities, interests, goals, missions nor agreed on the common grounds they could work with. Such reflection exercise is very important to create a sense of organization. In the interviews with some user representatives this idea was reaffirmed. A user representative mentioned that "meetings are too dense, they deal with many presentations,…but what we need is to sit and talk, make a strategic planning together, what will the council be in 2,4,10 years time?…". I assume that organizational objective aren't permanent, they need to re-adapt and change constantly.
During the installation act the council was structured based (see Figure 4.8.) on the National water Law or the CNA's compiled "*Rules of organization and functioning of the River basin councils*"[108]. It is interesting to remark that the river basin council still doesn't have its own particular "Internal Regulation" but rather operates according to the CNA's rules.

- *Integration, Composition and Functioning*

The installation act described the structure that the *River basin Council Coast of Chiapas (RBCCoCh)* should have (see Figure 4.8 for the present river basin structure). The RBCCoCh is integrated by a president (federal government), a statal representative and the different user representatives. The same user representatives also integrate the users interest in the river basin council *Monitoring and Evaluation Group* (GSE). The objective of the GSE is to instrument, monitor, execute and periodically evaluate the actions and agreements taken by the RBCCoCh. In practice, as the river basin council has only met once, in 2000, the GSE is the decision-making body of the RBCCoCh. It has met, up to this point, 19 times while the complete RBCCoCh has only met once. Its integration doesn't differ much from the river basin council. Other than the user spokesmen there are also federal and statal representatives.
In both the council and the GSE there are, in total, 6 representatives: 2 for agriculture[109], and one for the rest of the most relevant uses: public-urban, industrial, livestock and aquaculture. User representative are elected through the general user assembly. Other than the initial assembly on the 7th

[108] Published by the CNA according to the terms described in the Law. As this changed after the latest legal modifications, the Rules of Operation will also have to be changed.
[109] "the CNA decided to give this use two representatives ,two votes, due to it's importance" (user representative)

October 1997 (and other installations of Regional committees for the different uses), there is little evidence that there has actually been further user assemblies. This pre-assumption was further confirmed by the interviewed user representatives. For example, in the case the agricultural or industrial users, these have not met since the committee installation (before 2000). As one of them mentioned, "regional user committees and general user assemblies are fictitious, non-existent, they only exist on paper, no one even remembers which were the users that constituted the user assembly"[110].

Other than that, several users are already questioning the representiveness that the industrial or public-urban spokesman may have. After all, they mention…. " they aren't users *per se*, they aren't owners, they are employees or municipal governmental officials with a completely different focus on all these issues".

The presented facts deeply question the representiveness spokesman can have under such structure. Of course they represent a certain interest (of a company, a producer association, a livestock union., an irrigation district,….), but that, doesn't imply they are representatives of whole sectors / uses. Especially when considering that the user assembly is non-functional. Even if the spokesman had been elected through a functional and representative user assembly, this will doubtfully represent the perspective and view of the sector / use for the whole Coast of Chiapas region. "In this sense there is still a long way to go"[39].

Not having a functional user assembly further limits the necessary rotation needed in the representant positions. Most spokesmen have been in that post since the river basin council installation. The agricultural, livestock[111] and industrial[112] representatives have not been replaced during these 4 years. The aquaculture representative has done so only once[113]. An interesting case to remark is that of the public-urban representative, which has changed 5 times in the last 4 years. This replacement in the representatives was done without specific approval from the regional user committee. The changes have been linked to the constant renewal of the Tapachula Water Utility direction (COAPATAP). The representatives from the public urban use are not a result of a democratical election process. The direction of COAPATAP automatically implies being user representative in the river basin council.

[110] Interview with RBCCoCh user representatives

[111] doesn't even have a replacement (in two occasions he personally designated another representative, a colleague of his)

[112] Rafael Cruz left his job in the sugar cane ranch, who will replace him is still unknown.

[113] Technically the "Regional Aquaculture users committee" was not installed until the 22 June 01 (minutes available). The previous existent representative was certainly not legitimized by this ommittee.

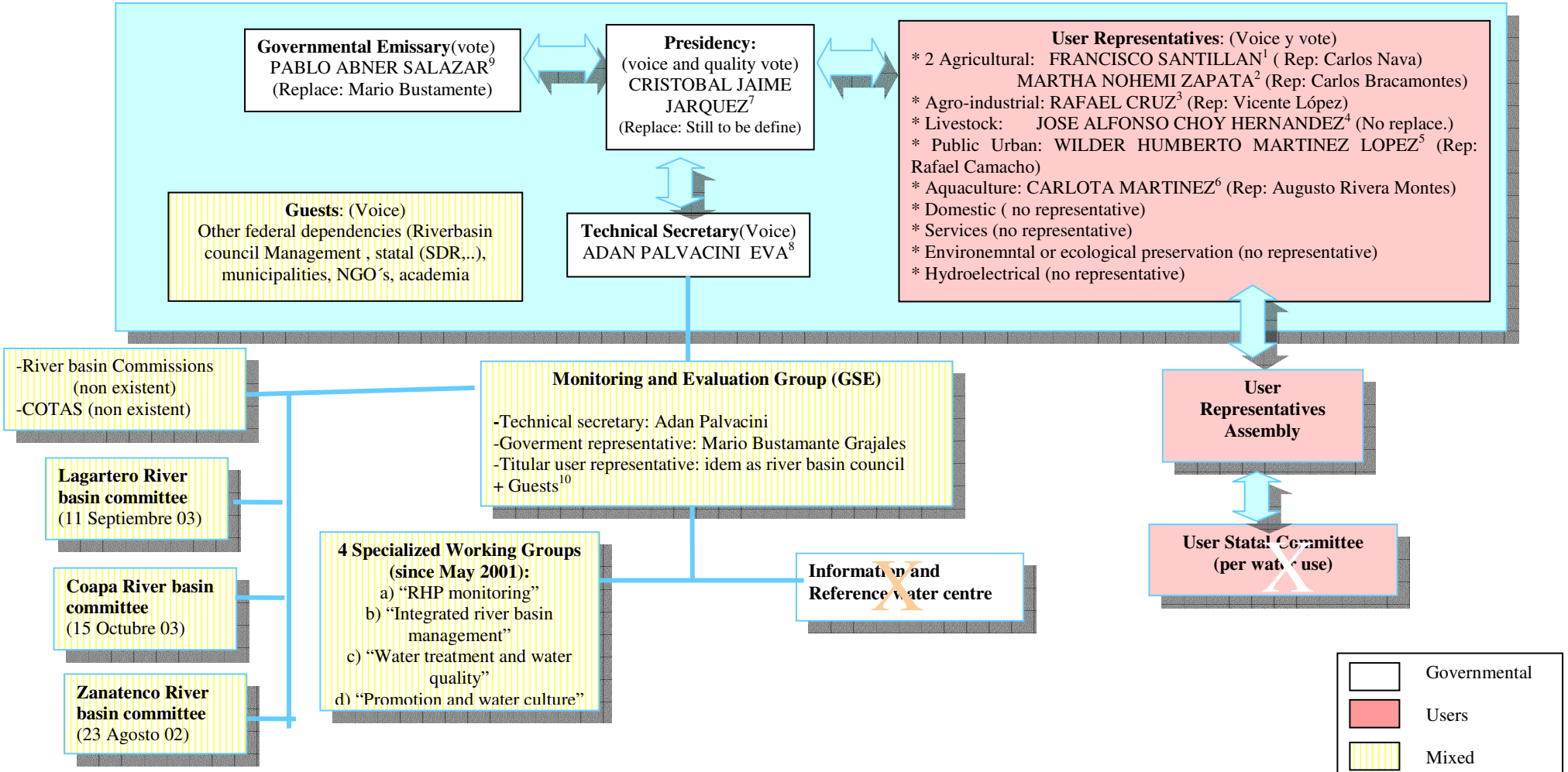


Figure 4.8.Strucutre and Representatives of the River Basin Council Coast of Chiapas (updated on September 04)

[1] Agricultural Association of Banana Producers – Member (Tapachula); Rep: User association of the 046 Suchiate Irrigation district-member of the presidium (Tapachula)
[2] Private Coffee Producer- San Antonio Chicharras Property (Tapachula); Rep: National Coffee confederation-President of the Chiapas Coffee producers (Tapachula).
[3] Huixtla Sugar cane ranch S.A. de C.V- Superintendent for Water treatment (Huixtla); Rep: Moscafrut Industrial plant- Environmental Engineering Manager (Metapa de Domìnguez)
[4] Livestock Regional Union of the Coast of Chiapas- member (Tapachula)
[5] Tapachula Water utility (COAPATAP)-Director General (Tapachula); Rep: COAPATAP-Commercial director (Tapachula)
[6] Small-scale Aquaculturists (Cantón Leoncillos-Tapachula);
[7] CAN - Director General (Mexico D.F.)
[8] CNA-Regional Manager (Tuxtla Gutiérrez)
[9] Chiapas State Government-Governor (Tuxtla Gutiérrez); Rep: Statal Water Commission, CEAS- Director General (Tuxtla Gutiérrez)
[10] have not always been present but have appeared once in a while: **Federal** (CNA Central: Eugenia Haro o Mario Lopez Mora; CNA Regional: emissaries from the Rural programs and Social Participation, Programming, Operation and Social Communication Sub-managements, DTT 017 leader; delegates from PROFEPA; National Forestry and agro-livestock Institute, INIFAP; CILA, SEMARNAT, SECTUR, SEDESOL, CONANP, CONAFOR, SAGARPA/FIRCO, SECH, SDE) , **Statal** (CEAS representatives: sanitation; INHE delegates,); **Municipal presidents** or their representatives (for Arriaga, Pijijiapan, Tonalá, Motozintla, Tapachula); **Academia** (Ecosur, Universidad autónoma de Chiapas), **NGO's** (Pronatura, UICN, PRODUCE foundation---producers organization working for productive project development), **Other** (Construction Montebello S.A, Huixtla Sugar cane ranch,)

The arbitrarity in the spokesman selection / replacement process is bringing along serious limitations to the council. On one hand, a constant renewal, not only in the user representatives, but also of the federal delegates, implies a constant process of training the new participants. This limits not only the council's functioning but also decreases the legitimacy of the decisions taken. As a user representative sees it: "Once they start to understand what the council is about they move out or are replaced by another one….sometimes a delegate never returns or does not have the power to make a certain commitments"[114]. On the theoretical framework I presented the importance of knowledge and preparation for grounded decision making. On the other hand, stagnation in the replacement of user representatives may create empowered elites, which are leaving out of the decision making the other users. A similar situation, of few empowered elites making decisions for the most, caused the armed zapatista upraising in 1994 (see Chapter 5.2.). A balance needs to be found between constant replacement and stagnated user representatives. Be it as it may modifications in the representatives need always to be consulted and determined by the respective legitimate user assembly.

Apart from the general GSE composition, Figure 4.8 presents several auxiliary structures supporting this group. On May 2001 the GSE decided to create *4 working groups* ("*RHP monitoring"* among others) to deal more specifically with relevant issues. These working groups are coordinated by a user representative[115] and meet independently from the GSE. During the first meetings the "participants worked intensely, met often and involved relevant actors". After some time, user involvement was minimal (most participants were governmental[116]), most of the user representatives actually never attended such meetings[117]. Even those that previously attended, ignore, at this point, if these working groups meetings are still taking place. Other than the working groups, it wasn't until after mid-2002 that the first *auxiliary organs* started to originate (at this point 3 river basin committees have been installed). A description and analysis of these committees, multi-stakeholder platforms at a more local level, will be dealt more in detail in Chapter 5.1.
This overview presented on Figure 4.8 on the RBCCoCh structure and its composition may transmit the idea that the council is actually static. This is not so. New auxiliary organs are originating and some specialized working groups seem to be not working very smoothly[118] and "might have been already dissolved"[119]. Furthermore, the latest LAN modifications will also create organizational changes in the river basin councils both in its structure as in its operational functioning. This raises the question of whether the national law should regulate specifically on river basin councils matters or not. If so, What makes then a river basin particular, adaptable to the local context?. In this research we will not go further into this reflections, however, they are important to bear in mind if wanting to understand the kind of participation possible through this platform.

- *Meetings and Agreements*

The installation act establishes that "the river basin council will session at least once a year, previously summoned by the president of the council", that is, the CNA's director general (which has other, at least, 25 river basin presidencies). As previously mentioned, this has not been attained up to this point. Frequency was previously introduced (theoretical framework) as a key necessary element to attain meaningful participation.

[114] Interview with RBCCoCh user representatives
[115] Ing. Santillán was designated to coordinate the "RHP monitoring" working group. In practice (in the available minute), the public-urban representative, a municipal governmental official working at COAPATAP, attended such meetings.
[116] From the analyzed working group minutes most of the meeting attendants were governmental officials. Minutes, however, are not always available for their analysis (not even in the CNA regional office).
[117] Livestock, Agricultural and Aquaculture representatives.
[118] Among the interviewed representatives, most of them ignored when were those meetings taking placer, even though some of them, were, in theory, their coordinators.
[119] or occur parallel to the user notice, they don't know about the details of such meeetings

The installation act further states that "the GSE will meet at least once every 4 months and extraordinarily as many times as required. The Technical secretary is the responsible of convoking[120] for the meetings. The GSE has met, up to the time of writing, nineteen times ordinarily, twice extraordinarily (see appendix section A.4.7.). Of those total 21 meetings, only 2 sessioned in a location other than Tapachula. The location were meetings have taken place determines the access participants may have. Meetings should take place alternatively in different locations of the Coast of Chiapas. Only then could the council include wider opinions and listen to other perspectives which are not listened at this point.

Appendix section A.4.7. presents the frequency of interactions within the GSE. Frequency has been low, specially during the last years. During the year 2000 the group was very active and met up to 9 times (on average every 6 weeks). In the last 3 years intensity, somehow, decreased, and the GSE has met 7 times[121] (on average every 6 months). The interviewed representatives had a possible explanation for this reduction in the number of meetings. Many relate such lost of interest in the events following the change in the federal presidency among other reasons. The change in the federal government implied changes in most of the CNA's top positions[122] and consequently in the Regional offices[123]. It is difficult to evaluate whether the cause of this lost in support was due to: a) the transitional period between governments or b) if it was something wider; a federal policy change, part of a re-directioning of priorities[124]. Be it as it may, the user representatives perceived that "there was a change" and that such changes are causing a "lost of interest" . A proven reason for this meeting reduction is that the technical secretary didn't convoke for the meetings[125], and so these didn't occur as often.

An analysis of 21 GSE minutes[126] (see appendix section A.4.8.) shows that user representatives are responding positively to CNA's assembling calls. In Appendix section A.4.8. attendance of the different actors is presented and the number of times they assisted a GSE meeting was counted. All user representatives have attended to at least 80% of the meetings (once they were representatives). The stated reasons for such interest are diverse and vary from "it's our responsibility as representatives" to "it keeps us informed, updated, we can share knowledge". Others believe they are "canals to present users problems". It is certainly difficult to evaluate a concept like interest based on numerical data. However, for the case of user representatives, which attend voluntarily and giving up their own time and resources, this figures can be indicative. At least they imply an interest in attending such meetings. To which extent this interest is political, social, economic, environmental or for any other reasons could not be assessed in this research. Interest in participation is key for participatory processes to take place and to assure that a participatory mechanism can function (not necessarily in a representative way).

On Table A.4.5 other actors attending the RBCCoCh meetings are presented. The results show that the CNA's *Programming* and *Rural programs and social participation* sub-managements have attended 95% of the meetings. It is also remarkable that the CNA's *River basin council* management (within the

[120] at least 7 days in advance

[121] both extraordinarily and ordinarily

[122] the director and seven of it's nine sub-directors (remarkably the programming sub-director, César Herrera, and the sub-director for hydro-agricultural infrastructure, César Ramos have remained in their positions for the last 10 years)

[123] not only the regional manager moved to a higher position in the central offices but only 4 regional sub-managers kept their position (among others the program sub-manager and the hydro-agricultural infrastructure sub-manager).

[124] This change of priorities may be observed in the disappearance of the *Sub-driection of rural programming and social participation* (at a central level, not at a regional yet) during this presidential term.

[125] At least for 2004 the explanation given by the CNA is that: "during this year, due to the modifications to the Law, they preferred to wait to convoke until the internal re-restructuring and the river basin reform took place".

[126] In each minute there is a list of assistant from the minutes

Rural Programs and social participation sub-direction, details see appendix Fig.A.2.1) has been present in practically all the meetings. However as a user representative remarked "the CNA is divided in several areas which are not necessarily related among them…this means that those proposals presented, for example, to the programming sub-management will hardly reach the construction sub-management"[127]

Other than these federal institutions the SEMARNAT's and SAGARPA's presence has been remarkable. At a statal level delegates from the *Statal water commission* (CEAS), the Secretary of environment (SERNyP or IHNE) and Secretary of agriculture (SAG or SDR) are usual attendants to the meetings. Many may argue that "it's finally their job to attend these platforms". However, not all the federal secretaries spend their resources (human and economic) in river basin council activities. This may imply that politically, or for any other reason, there is an institutional interest in attending those meetings. This interest is not observed in the municipal governance attendance to these 21 GSE meetings. Only during the last meetings, and after the river basin committees had been constituted, is that the municipal governors decided to "pay a visit to the council". Remarkably enough only once did a Oaxacan representative attend these meetings (it was a municipal president).

Apart from the governmental actors, Universities like ECOSUR and UNACh (that are located in Tapachula) or the PRODUCE foundation seem to be interested in attending these meetings (on average have attended around 50%). From the analysis of the minutes I cannot determine what is the position at stake (what they promote or support) that each user representative has. This is still not reflected in the meetings and should be emended.

Even though most of the user representatives still attend the meetings, many "have lost interest in participating in the GSE"[128]. Several interviewed user representatives questioned the continuity of the river council, "does it still exist?"[57]; or others wondered about their personal continuity as a counselor: "I have several positions as representative and I am selecting those which I consider to be more useful, this council is not one of them"[57]

- *Main Agreements and regional water policy.*

Having understood the dynamics occurring in the river basin council one can now better understand the legitimacy of the decisions taken during these meetings, and how these decisions or agreements can actually be implemented. In order to comprehend what kind of decisions and agreements has the RBCCoCh been taking, a summary of the accorded agreements (and which are available[129]) during the meetings of the GSE and its working groups is presented in Table A.4.8. Of those, the agreements directly related to the Regional or National Hydraulic Program, the most interesting for our research, are summarized in Table 4.8.

Session (Date)	**Agreement**
1st (26 Jan 00)	* the CNA, through it's technical management, will make available to the counsellors, both the studies and diagnosis that are available for the Coast of Chiapas, and the short-,mid-term programs fro the counsellors analyze them and give their comments on their contents and extent
3rd (24 March 00)	* The technical secretary will elaborate a leaflet with information about the Coast of Chiapas, specially about the investment programs for the sector. * In the month of June there will be an excursion with the members of the GSE to verify the extent of the programmed works for te region * The representatives of the other institutions participating in the GSE and the council will complement the information on the investment programs 2000 presented by the CAN.

[127] "CNA is divided in several areas which are not necessarily linked. When I present a problem, (for example: a problem responsability of the area of measurements and services) and the federal representative is part of the law management how can my petition be cannalized?"

[128] Interview with RBCCoCh user representatives

[129] There isn't a register as such compiling all the meeting minutes. The CNA regional office has some of the documents but many times "minutes are not taken during the meetings".

	* On the next GSE meeting issues related with the presentation an analysis of the " Regional Diagnosis and strategic guidelines" will take place. Furthermore a presentation and analysis of the guidelines for regional, national and by basin programming will be presented.
4rd (27 Abril 00)	* The GSE integrants presented their comments on the presentation "Diganosis and strategic guidelines" * The GSE integrants will comment and bring forward their ideas about the preliminary hydraulic program on the Coast of Chiapas * For the next ordinary GSE session the issues related with the guidelines for regional, national and by basin programming will be dealt with.
6xth (23 June 00)	* The user representatives will present, in the next GSE meeting, a relation of the specific hydraulic problems, that, according to their perception on the economic activities that their represented develop, are the ones with a higher incidence on the region Coast of Chiapas. * In the next GSE meeting the agreed decisions taken in the previous GSE meetings will be monitored, with the aim of defining, in the case of not fulfilment, the responsible for it's solution. * the representatives will organize meetings with their respective regional committees to summarize on their hydraulic problems
7th (28 july 00)	* It is approved that the regional meeting to analize the documents content "Frame of Reference, substantive problems and alternatives for their solution for the Coast of Chiapas" takes place on the 24th August 00, with the participation of all the integrants of the user regional committees integrants * The Can will send to the user representatives the "cards", problems by use, for it's comments and contributions for that they are analyzed in the meeting of the 24th August 00
8th (29 Sept 00)	* The observations on the preliminary document "Frame of Reference, substantive problems and alternatives for their solution for the Coast of Chiapas" will have to be delivered to the regional management, not later than the 13th October. This will be an official document of the RBCCoCh.
10th (23 Feb 01)	* The Technical Secretary will send the user representatives, during the first week of March, the executive summary of the "Long-term Hydraulic program (2001-2025)" and the "Strategic long-term development for the Coast of Chiapas'
11th (11 May 01)	* The CNA will send the presentations on "Water policy in Mexico" and the "Operative Hydraulic Program 2001" for that user representatives analyze it and make their comments on the next session * The 4 working groups, among others the "RHP monitoring"(coordinated by Ing. Francisco Santillán) are constituted
1st Meting RHP monitor (26 June 01)	* the regional public urban and agriculture committees will have a working group meeting to analyze the programming 2001 and to initiate it's participation in integrating the program 2002 * the regional management will support the working group in developing their activities
12th (13 July 01)	* the GSE approves the agreements presented from the different working groups meetings
2nd Meeting RHP monitor (10 August 01)	Issues dealt: (a.- Conclusions on the agricultural regional committee meeting and b.- prioritization of actions for the "southern border"2002-2006) *Agreements unknown.
3rd Meting RHP monitor (12 Sept 01) a)	* The programming sub-management will present the next 20th September the terms of reference of the study that the "Project Leader on Hydraulic Planning" is developing * The participants on the working group will bring, on the next meeting, a list of projects that they are developing in the region in order to integrate them in the presentation that the working group will present to the GSE.
4th Meting RHP monitor (5 Dic 01)	* The working grioup accorded that the Can should invite SAGARPA, SDR, SDE, SEPESCA, Procuraduría Agraria and the Planning Secretary, to the next meeting, in order for them to present the information on their regional projects. * The working group suggested that Ing. Víctor Hugo Ramírez Vargas, "Project Leader for Studies", explains about the projects that are contemplated in the regional management "southern border" * In the next meeting the program of activities, to be developed by a consultant agency, in the frame of the "Prioritization of detail actions 2002-2006. Regional Management "Southern border" will be presented
5th Meting RHP monitor (19 Feb 02)	* in the next meeting the Statal Secretary for planning will present their project portfolio. * All the members from institutions and governamental agencies of this working groups will function as links and will deliver the information on the existent projects for the Coast of Chiapas, in order to integrate the study *("Programación Hidráulica Regional. Priorización de Acciones Detalladas 2002-2006. XI Gerencia Regional Frontera Sur".)* *The statal Secretary for planning will handle , at the beginning of March, the sectorial projects that derived from the COPLADEM meetings * The statal secretary for planning will be the link to receive the proposals generated from the municipal governments.
15th (30 May 02)	* The Planning secretary handled the investment projects for 2002 in order to integrate them in the RHP 2002-2006

16th (15 May 03)	* In elaborating the "Management hydraulic plan for the Coast of Chiapas", all the institutions present will contribute in it's integration (and so they will receive the credits when published) * In the next GSE meeting the proposal "Hydraulic development program for the coast of chiapas, protection versus floods" will be presented. It's term of reference is being done by the CNA regional management.
17th (9th July 03)	* The information contained in the Regional Hydraulic Program 2002-2006 as governing document for the hydraulic planning in region XI is validated * The regional management in coordination with the working group on the "RHP monitoring" will periodically elaborate a report on the extent of the actions contained in the RHP 2002-2006 * The Coast of chiapas Hydraulic Plan will be done under the coordination of the public-urban user representative, which corresponds to the COAPATAP, with the aid of the RHP monitoring working group. Furthermore, with the aim of continuing with the evaluation of the plan, the group will meet monthly and will inform the GSE during the 2003 scheduled meetings for analysis ajnd consensus. * The following material was delivered: - A first index proposal that includes 10 points to develop. It includes the obtained CAN information on the first 4 chapters. This information needs to revised, modified and agreed. - The documents for analysis and revision by the working group: Actions for the integrated river basin plans of the rivers Zanatenco, Lagartero, Coapa and from the Coatan to the Suchiate (in the coast of Chiapas) * The COAPATAP will receive the documents containing the Integrated Management Plans of the river basins: Lagartero, Zanatenco, Coapa y from Coatán to Suchiate: while the rest of institutions and dependencies that want to contribute in the elaborating the plan should handle it to ECOSUR
Extraordinary Session (16 Dic 03)	* The GSE Coast of Chiapas approves the Hydraulic Management Plan for the coast of Chiapas, product of the workshop done by the user counsellors and coordinated by the "Science and Art University of Chiapas"; and considers it as it's instrument to give order and sequenciality in the actions that are developed, considering always the objective or restoring and conserving the main 24 hydraulic river basins of the Coast of Chiapas. The job, today approved by the GSE Coast of Chiapas, is part of the presidential goals, and, as such, it's considered achieved in 2003
19th (29 july 04)	* The integrants of the GSE will present investment projects for their integration in the project portfolio of the Statal Hydraulic Program, establishing as a deadline, the 13 August of 2004

Table 4.9. Agreements taken by the GSE related to the hydraulic programming

It is not the aim of this research to evaluate the types of agreements that have been accorded during the meetings. Preliminarily, when observing Table 4.8, one can observe that the type of agreements taken imply different levels of commitment and execution. Most of them are not even agreements but more "proves of attendance, prove that certain issue was dealt with…". Other "agreements" are more instructive or informative. Not many are actually executable. Even if such agreements were executable, the council will found itself limited by the absence of an executive body as such (nor the river basin council nor the GSE has it). The implications of the agreements taken by the council were further clarified by the interviewed. Most counselors consider that being an integrant of the RBCCoCh basically implies, "attending the meetings (which aren't enough), being informed about relevant (or not so relevant) issues,.." and even "when decisions are taken, it is unlikely that these are implemented by the council itself". The council not only is unable to put into practice an agreed action, but also, has no budget[130] of its own to do so.

In total, more than 35 agreements[131] related to regional hydraulic programming have been taken by the council. However, the general perception, if any[132], of the user representatives is that the impact of the council in the regional programming has been inexistent, "the CNA is unilaterally in charge of hydraulic programming"[133]. Of course "they present their programs, one reads them, we can make suggestions, you can remark errors,… but one does not intervene in them (hopefully in the future we can do so)"[62]. A CNA regional water planner remarked that not a single "project, of those included in the project portfolio (previously presented) was actually canalized through the council". When asked about the monitoring that the RBCCoCh does of the RHP (through, in theory, its working group), a

[130] A user representative remarked that this funding should specifically not come from "levies, taxes that the council should collect…as some governmental officials have suggested".
[131] according to the meeting minutes
[132] some still ignore precisely what is hydraulic programming or its consequence.
[133] Interview with RBCCoCh user representatives

user representative mentioned that the "actions that are in process, are presented, but that does not mean that the council is monitoring them..…we are informed about the monitoring, which is quite a different thing".
Some user representatives, refer to the hydraulic program as a "behind the drawer policy document" following "a top-down approach". These comments, which, after all, are particular views from several RBCCoCh user representatives, are, however, remarkable. At least they show a big gap between the perceptions that the counselors have about their role in the hydraulic planning, and those perceptions that the water policy makers in the CNA have.

- *The RBCCoCh: Opportunities and Constraints*

After reading on the main issues surrounding the RBCCoCh some ideas on which are the strengths and weaknesses of this particular council can be presented. The members of the council evaluated their river basin council during the research interviews. This has been compiled in the following paragraphs.
User representatives have plenty of suggestions related to the river basin councils. These are very diverse and cannot always be integrated. Be it as it may, this abundant and valuable opinions have not been officially presented in a meeting or even discussed among themselves. As some of them pointed out, the council needs "to internally make a reflection, to strategically plan on which are our priorities, were do we want to be in 1, 2, 5 years time and define the path to achieve that. This has not yet been done. Up to this point, the meetings included "a pre-defined and abundant agenda which didn't allow for this kind of discussions". Better organizational planning will help establish an "Annual Operational Plan for the RBCCoCh, with its programmed meetings and the actions to be taken". Of course the strong dependence on the federal government limits all this autonomous movements. Autonomy is further limited by the resources, which the council lacks.
Another point which many user representatives pick up is the need of "someone that can spend more time, that coordinates the council and with whom the users could have direct contact". This post, which in the river basin committees is called "river basin manager", will help the council be more operative, work more constantly and not so much "through peaks, depending on the moment". How would this manager be selected, who will pay for its salary, is an issue that users should decide on.
Other constraints are related with user representation issues, the validity the actual representatives have when considering that user assemblies are mainly inexistent. A very important "diffusion effort" that would "present the advantages that getting organized in a council brings to users" will be necessary once the council is structurally strengthened. "Users must be interested in participating". Once such interest is there, the council should be built up from an existent and functional Regional (!)[134] User Assembly[135]. This assembly can then choose its representatives[136] through a "valid and democratic process". A stronger union between users will also help overcome the transitional periods following the municipal, statal or federal election processes.
These are just some of the points the council should be working more on. Of course there are plenty of others which were not presented and that the council should find out in some of its meetings. Personally I consider the council to be on passing through a critical turning point. User representatives are loosing interest, feelings of "I am wasting my time" are starting to appear. Of course this is favored by the absence of meetings (the federal government doesn't convoke them) and possibly by the changes in the Law which make the people believe "they are yet through another transitional period". Be it with 20 or 50 limitations there are several strengths that the council should exploit to overcome

[134] "Not only for Tapachula and it's surrounding, an assembly that includes all the coast of Chiapas as it is supposed to be"
[135] where users are those that use water, not municipal, federal,… governmental officials
[136] Ideally one with several replacements: like this not only you prevent constant replacement of representatives but also you "build capacities" in several users.

the present situation and become a more functional user organization. The interviewed consider that any council reconstruction should rely on its strengths, and possibly one of its most important is “the capacities it has already built in the user representatives”. Another basic strength the council has is that “it is already there, people are attending the meetings, institutions start to know it,..”. There is certainly an interest that should be exploited.

- *CONCLUSIONS OF THE CHAPTER*

Under the current planning scheme, regional participation in water policy making is basically inoperative. Regional policy is determined by national, centralized policy making. The objectives, strategies, goals, indicators and programs are centrally determined. In the previous chapter I already presented how participation was inexistent during the process of national water policy design. Regional realities have to adapt to national guidelines and decisions. Local perspectives are hardly contemplated. Statal and municipal governments are not contemplated during the regional policy design other than through the presentation of project proposals.
It is interesting to observe, however, how the statal and municipal funds (sometimes irrigation districts or other users) need to be involved during the implementation phase. Other than through their statal or municipal governors, citizens can hardly express their voice. The river basin council however, aims to include those perspectives which cannot be expressed through any other channel. River basin councils are seen by users as a tightly controlled federal body. The CNA promotes its constitution and provides the guidelines that regulate its functioning and composition. It tightly controls the operatibility of the council. The CNA is more concerned about establishing councils than about developing the participatory potential this platform might have. After the presented analysis I can conclude that participation on water policy making through the River basin council occurs at a very low level. The council itself has met only once, the day of its installation. The frequency of interactions through their meetings is once every four years.
In practice, the River basin council has been replaced by one of its auxiliary bodies: the *Monitoring and Evaluation Group* (GSE). This group has shifted its objective, moving from a monitoring and evaluation body to a decision making one. Those spokesman involved in the GSE as user representatives were not elected through a representative user assembly. They do not represent the water users and were not democratically elected. Meaningful participation through non-representative spokesman cannot be achieved. Furthermore, the RBCCoCh is passing through a critical turning point linked to the lost in interest within the user representatives and the changes in the Law which have not yet been implemented.

CHAPTER 5. "LOCAL WATER POLICY"

During the theoretical framework, Ostrom's perspective on how to solve the *commons exploitation paradigm* was considered the most adequate. Its defense of managing collective issues in the closest range as possible to a certain individual (subsidiarity concept) was presented. This transition to democracy from authoritarian political system, should, at the same time, promote administrative and political decentralization while increasing local government capacity in administrative and political processes. Government capacity varies across policy areas depending on the local particular problems (Assetto et al. 2003). Environmental protection is thus regarded as one of local government´s core functions in modern democracies (Ben-Alia 1993).

In this Chapter, three main approaches to local participation will be presented. Subchapter 5.1 will present a more formal way of local participation were governmental actors are the promoters of this participation. This participation occurs through the installed institutionalized platforms, the so-called *River basin Committees*. Subchapter 5.2 presents an alternative mode of conceiving local participation, were citizens decide, autonomously, the role they want to have in water policy and through which strategy to achieve it. Under such conception two different participatory strategies, will be presented. The first case is the *Citizen water Council*, which uses the existent legal framework to find its space and participate in an existent decision making body. The second case refers to the *Zapatistas*, whose strategy is to *Resist* and reject the already existing platforms and construct their own decision making bodies.

5.1/- Tonalá and Arriaga: Efforts to bring water policy to a local level

5.1.1. Contextualization

Arriaga and Tonala are two neighboring municipalities located in the Coast of Chiapas. Part of their territory is covered by the Lagartero river basin (in the case of Arriaga) and the Zanatenco river basin (Tonala). The characteristics of these river basins are presented in Table 5.1. In both cases the rivers have their "catching area" in the Sierra Madre (part of the natural reserve, "la Sepultura") and flow down a sharp slope of mountains (from 2000 to sea level in 30 km width) and, through plains, reach the Pacific Ocean.

	ZANATENCO	**LAGARTERO**
Area covered (by the river basin and it's tributaries)	40764 Ha. (35% in "la Sepultura"reserve)	28530 Ha.
Municipalities involved	Villaflores, Villacorzo and Tonalá (>90% basins territory)	Cintalapa and Arriaga (>95% basins territory)
Communities/localities	Around 30	Around 25 main ones
Main urban areas	Tonalá, Paredón.	Arriaga
Population	Around 50000 inhabitants	> 35000 inhabitants.
Main sub-basins	21 micro-basins of which: San Isidro, Delicias, San Marcos and Tres Picos	Main basin: el arenal + Lagartero; (sub basins) El Arenas, Nicolás Bravo, Monte bonito, Poza Galana y Las Truchas
Main Registered Water Uses (% in volume) [137]	Public-urban (56%), Agricultural (33,3%), Livestock (6%) and others (services, aquaculture..) from a total of **7,97 hm^3**	Agricultural (83%), Public-urban (12%), Livestock (4%) from a total of **14,88 hm^3**
Main threats (as identified by the river basin managements)	Similar Threats including: Hydric Erosion causing processes soil lost (favored by human practices of intensive ranching, "*tumba-roza-quema*" or deforestation), absence of water treatment systems, and frequent impact of extreme meteorological phenomenon	

Table 5.1. Characteristics of the 2 river basins: Lagartero and Zanatenco

[137] *from REPDA* Estimations cannot be done precisely. The REPDA does not divide its source by specific river basins but more by territories or municipalities

What makes them relevant for this study is that in both municipalities, the renewal of the municipal president after the October 2001 elections, bring along the creation of *River basin managements* within the municipal structure. This was the first step to further install the river basin committees.

5.1.2. The Municipal River basin Management

In order to understand how were the presidential candidates interested in including a *River basin management* in their municipal government structure, one has to move back to mid-2001. At that time, FIRCO (an Agricultural Ministry, SAGARPA agency) was promoting, among future presidential candidates, their "National Program on Microbasins". In such program, the municipality in coordination with FIRCO, had to invest money (in principle 50/50) in developing PRPC (Governing Production and Conservation Plans) in certain microbasins. In total 6 PRPC were completed for Tonala[138] and 2 for Arriaga[139]. The PRPC studies were developed through a municipal office, the municipal *Program for river basins restoration* (Arriaga) and the *River Zanatenco basin Program* (Tonalá)[140]. The two municipal officials that were contracted for the elaboration of these plans and the execution of these programs would later become the river basin managers. The origin of the Management and the posterior creation of a local participatory platform, the river basin committee, were both municipal initiatives

It is important to bear in mind that the PRPC focus on concrete micro-basins, not on the whole Lagartero and Zanatenco river basin. Its approach to river basin management is strictly linked to rural development and extension practices. However, even though the approach was specific in its location and focus, the PRPC helped consolidate the *River basin management* (created in Tonala on 2002). Furthermore, the two river basin managers, when developing such PRPC were able, not only of expand their knowledge on the area[141], but also to identify and consolidate a very valuable network. This network mainly included the rural communities were the PRPC was developed.

Once the PRPC Plans were on place it was time to execute them. The elaboration of such plans allowed the identification of the most relevant actions which should be executed in the micro-basins. Such actions included: Filtrations dams, lombriculture, *Canavalia* culture, "*barreras vivas*" or organization of workshops / courses on soil and water conservation. Slowly the municipality saw how the river basin management could be very effective in obtaining available financial resources from the different agencies (FIRCO, SEDESO, PRODUCE foundation, SDR, …). For example the Tonala river basin program has canalized since its creation more than 15 million pesos (around 1 million euros; for operational costs and actions)[142]. It is relevant to remark that these municipal managements aim to have an "integrative view on the river basins", and, as such, search for projects and work closely not only with the CNA (which is not so present as a major investor in neither managements), but also with SAGARPA, FIRCO, SDR, CONANP (managing the natural reserve la Sepultura), CONAFOR, SEMARNAT, IHNE or even some NGO's (Pronatura, TNC,..).

In both municipalities however, the actions taken by the *River basin managements* have had an extensionist and rural community development approach. In order to achieve that both Managements have worked with community representatives (municipal agents, comisarios ejidales or municipal promotors[143]) and have even created, in the case of Zanatenco a "Surveillance Committee for the river

[138] For El Zapote, el Temeroso, la Danta, la Planta, San Isidro and Tres Picos.
[139] for La Mica and Poza Galana microbasins
[140] Tonalá's municipality approved 1 million pesos for the *River Zanatenco basin Program* (on April 2002).
[141] they already had experience in the area. Both managers have lived in the area for many years and had been working for a while in the natural reserve. Their
[142] Arriaga in three years has spend around 7 million pesos (approximately half million euros; between actions and operational costs)
[143] in the case of Tonala. These promoters receive a subsidy from the municipal government and function "as a monitoring arm of the river basin management at a community level".

Zanatenco"[144]. The creation of the river basin committees was a culmination of all this organizational steps.

5.1.3. The River Basin Committees: Lagartero (Arriaga) and Zanatenco (Tonalá)

- *Composition and structure*

In August 2002 (Zanatenco) and in September 2003 (Lagartero), two river basin committees were installed. For details on the installation act se appendix section A.5.1. Both committees originated from an interest[145] of the municipal *River basin management* to promote them. The River basin management contacted the CNA *Rural programs and Social participation management* (mid-2002) once they realized that the CNA was interested in establishing platforms at a sub-basin level. However, at that time there wasn't any functioning committee in Region XI, "it wasn't very clear how to proceed"[146]. The CNA gave some informative sessions (about the structure used in river basin committees, what were their functions,…) but the managers were actually in charge of organizing and structuring the committees. Not having a clear federal-standardized method to work with committees, the Managements designed its own framework and worked following different pathways:

- Zanatenco: In the case of Tonala, the manager identified the water users according to the CNA REPDA (Public water rights register). Like this only water users with title were targeted and participation was so restricted and exclusive. The manager analyzed the REPDA and selected its main users (per volume). The REPDA is not an appropriate method to select the users from a basin. It is, first of all, incomplete, and secondly it divides users according to political divisions (municipalities) not hydrological (were do they take the water from). The management convoked (through a municipal president letter) the water users to the first (and only) water users assembly (on the 22nd for livestock use, and 28th June 02, for services and agricultural uses). Like in the river basin council user assemblies are non-functional, user representatives cannot inform other water users through this assembly. Furthermore these representatives cannot be ratified or replaced through a functional assembly.

The user assembly took place and the representatives chosen for a 2 years[147] term. In the case of public-urban users the SAPAM (water municipal utility) director general was automatically designated as the representative for its use (same situation as previously presented in the river basin council). Once the representatives had been elected and the GSE had agreed on its installation (15th GSE session), the committee was officially installed on the 23rd August 2002. The structure of the committee was established as presented in Figure 5.2. It is based on the CNA's structure of river basin councils but it introduces other elements that aim to include a wider representation of water users (surveillance committee, municipal promoters).

[144] 13 March 02 46 localities living within the Zanatenco river basin decided to "recover the productive areas of their sub-basin and to rehabilitate its main water body"(Objective of the committee)

[145] the reasons for such interest are not clear but may be related with an expansion in the area of influence covered by the Management (not only micro-basins) and also to be able to access other kind of funds, like the CNA's. Some consider that Tonala's presidential interest in the committee promotion may be driven by its political interests: "the municipal president got great promotion with the committee installation, the first of the whole region!!!!".

[146] River basin manager

[147] they have actually never been renewed, not only that, but the assembly has never met again for any of it's uses.

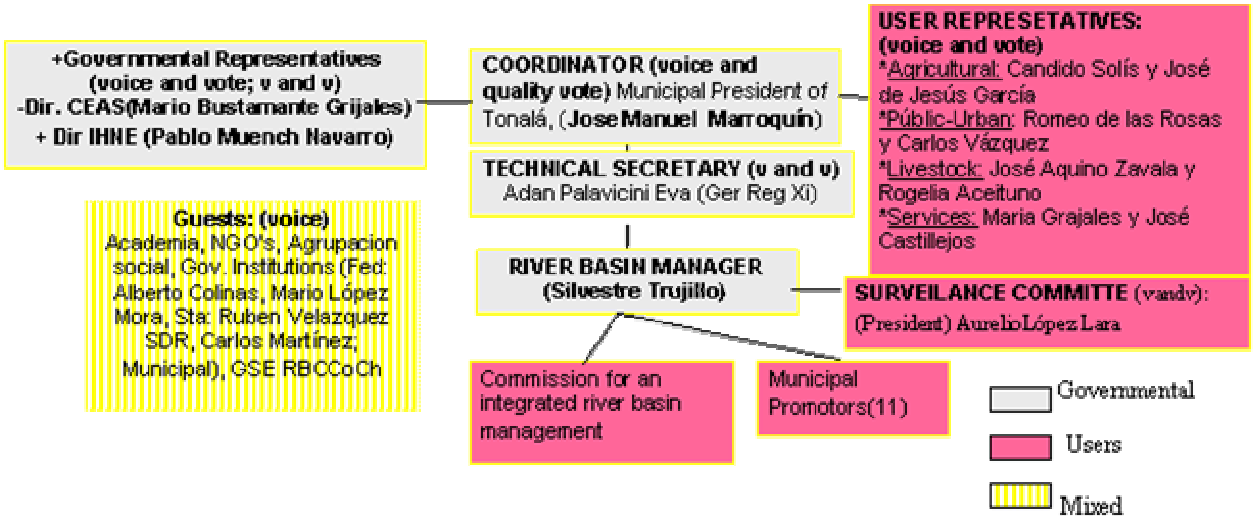


Figure 5.2.Zanatenco river basin committee structure (v and v: refer to voice and vote)

- Lagartero: In Arriaga, the river basin manager decided to wait for around one year before installing the committee even with "CNA pressures". He argues that he wanted the committee to be functional and representative and that is why he decided to take longer time before installing it. Furthermore, it was also an advantage to wait, as he could learn from the limitations / problems that its neighbouring colleague was facing. However, the user assembly is still "non functional at this point, but we will work for it" (Arriaga's manager). The user representatives were chosen through a User Assembly per use, on the 8th August 2003: agricultural users were selected among the *ejidal commissionates*, the public urban through the SAPAM (who asked two citizens within his census to be the representatives), the livestock users through the 3 livestock associations in Arriaga and the fishermen from the 2 fishing cooperatives of the river mouth. It was innovative to include fisherman as river basin users in the committee. These fishermen don't a federal water exploitation/use title. They aren't even aquaculturist, but are still considered important for the activities they develop. Another element of distinction from the typical CNA structure is the inclusion of an environmental perspective through the inclusion of a representative from " La Sepultura". Once the representatives had been elected and the GSE had agreed on its installation (17th GSE session), the committee was officially installed on the 11th September 2003. The structure of the committee was established as presented in Figure 5.3.

Figure 5.3. Lagartero river basin committee structure (v and v: refer to voice and vote)

If we compare these structures with the previously presented at a regional level, the RBCCoCh, there are several elements which differ, for instance, the existence of micro-basin committees / surveillance committee or the presence of municipal promoters. These elements are tools for supporting the *River basin management* and enabling the participation and inclusion of the rural communities. Another main difference is the existence of an executive body, the river basin management, which can operationalize the decisions taken by the committee. However, the Management has an important constraint. Being part of the municipal structure tightly links it to municipal politics. An example of such straight link was observed during the last municipal elections of October 2004, were both PAN presidents were replaced by PRI candidates. The elections in Tonalá, not only caused the dismissal of Zanatenco's river basin manager, but proofed to have affected deeply the already existing user structures. The surveillance committee[148], that had been the basis of the river basin committee, has been fractured. In Arriaga events were not as traumatic. The river basin manager has remained in position, but the support he receives from the municipality still remains to be seen. All-inclusive participatory mechanisms require an autonomous space to function. They cannot be dependant on party politics.

- *Meetings and Agreements*

As it has been presented, municipal politics strongly determine the development of existent local multi-stakeholder platforms. Their continuity is still uncertain. However, they have been in the "water arena" for several years, have met and already taken some decisions. In Figure 5.4 the agreements taken during the River basin committee meetings are presented.

It is difficult to evaluate the impact of these un-experienced platforms in local water management according to the agreements taken. It is even more difficult (studying the minutes) to determine the influence each user representative had in the committees decision making. However, when observing the results of Table 5.4. I can conclude that most agreements are informative and normally more related with governmental actions. Probably, that might explain the little interest most Zanatenco's user representatives expressed during the interviews. In Arriaga agreements have become more relevant, especially after the May 04' problem with the construction of a highway. This highway, that crosses the river basin area, has seriously affected the river Lagartero and Arriaga's water supply. Even though the statal and federal governments have timidly responded to the Committees demands, the committee has taken this issue seriously and "has canalized the citizen (and SAPAM) complaints to the highest possible levels".

The frequency of interaction in the Zanatenco river committee has decreased in the last year. Not a single meeting occurred in this period. These results let us know more about how the River basin management makes decisions. These have not been consulted for the last year and a half with the committee. In the case of Arriaga the frequency of meetings has been more dynamic.

[148] which included supporters from both parties

Zanatenco River Basin Committee *Installed:* ***23 August 2002***	
1st. (19th Nov. 02)	1. The GSE authorizes the integration of the *Zanatenco's River basin Management*, as an operative technical area for the actions that will be developed in the basin. 2. Develop an evaluative workshop on the proposal of Decree for OET in Zanatenco's sub-basin and the progress of the municipal studies (done by Chapingo university)
2nd (14th Jan. 03)	1. The Program-Budget 2003 presented by the Zanatenco River basin Committee coordinator and municipal President Municipal of Tonalá is approved. 2. The Biol. Carlos Pizaña, Director of the Biosphere Reserve "La Sepultura", that due to the dragging of sediments from the section Sierra Morena – La Providencia, this one is closed. This proposal was approved by the members of the Committee 3. Ing.. Carlos Thorny, in representation of the University of Chapingo, mentioned that the study on "Integral Management Plan for Zanatenco's river basin" will be delivered by next 15th of February 03.
3rd (7th May 03) (no user representatives present)	1. Carrying out a "Characterization study on the subterranean water quality in Zanatenco's river basin" was decided. The Autonomous Yucatan University and the CNA will sign an agreement to develop it. 2. A modification of the proposed *Mangement* actions was approved (those referring to desazolves, in charge of the CNA) 3. It is agreed that the Chapingo Autonomous university edits the final results from the "Integral Management Plan for Zanatenco's river basin" (including the: statal, municipal and Chapingo's university logos)
4th (24th Sept. 03; minutes not available)	1. 1. Promote exchange encounters among the Central American countries assisting to the 2003-2004 technical visit "integrated river basin management project"; and with the Federationl, States and committee, in the area of integrated river basin management.
Lagartero River Basin Committee *Installed:* ***13 September 2003***	
1st (9th Dec. 03)	1. The CNA will conduct the Study and Diagnosis of the lower parts of the basin, in order to prevent flood damages. In this study the information obtained from PRONATURA, A.C. about the Coast fo Chiapas should be integrated. 2. During the next session, the Management proposal to integrate a "Integrated river basin Management plan" will be presented and the statal institutions, Ngo's and INE will be invited. 3. Exchanging experiences and capacity building will be aimed for the integrants of the river basin committee.
2nd (5th March 04)	1. REBISE presented the methodology called "Site-Conservation Plan", included in the "Integral Management plan of Lagartero's basin". This methodology was approved for it's application and 10 social actors where incorporated for it's design. Such methodology will be applied by the Statal and Federal institutions, and also by NGO's, working in coordination with the results from IHNE OET 2. SEMARNAT mentioned that the National Ecology Institute will join this process during the last days of March. 3. That during the elaboration of the Management Plan the personnel from the institutions does not change, in order to give continuity to the activities developed.
3rd (18th June 04)	1. We demand an Immediate meeting at a secretary-level between the SEMARNAT, the CONANP, CNA, PROFEPA in order to give answers and attend the problems existent in the Lagartero River. 2. That the environmental impact assessment is revised and that the SCT attains it, in order to minimize the impact generated by the construction of the highway 3. That the S.C.T. accepts responsibility for the rehabilitation of Arriaga's water catchment system. 4.- The Lic. Omar Celín Komukai , from C.N.A.; committed to, not later than Monday 21st June, the meeting date will be set.

Table 5.4.Agreements and meetings that have taken place in the Lagartero and Zanatenco river basin committees

- *Local water policy*

After the information presented in Table 5.4 one may wonder about how were water management decisions taken before the installation of the Committee? Has it changed since its creation? How about the other 19 municipalities which don't have a committee or a *River basin management?* Considering that there was federal investment in both municipalities[149] in the period 2002-2004 it is interesting to question the process of hydraulic decisions making at a local level and the stakeholders involved. At a municipal level there isn't a unique water organism that makes decisions on all water ambits (like it happens federally with the CNA). More often than not, decisions are sectoral depending on the kind of project to be decided on.

- In the case of the urban water use, decisions were taken unilaterally by the municipality itself, through SAPAM (municipal water utility). An example of how does this process function was

[149] Through CNA's APAZU program: 1,3 million for Arriaga (rehabilitation of tubes) and 8,7 million for Tonala (water treatment plant) among several PROSSAPyS projects.

explained by the director general of SAPAM in Tonalá. SAPAM is nowadays coordinating the construction of a water treatment plant (mainly financed by CNA and CEAS). In order to obtain these projects, SAPAM directly lobbied with the *Statal Water commission*, and the CNA. After the necessary previous studies conducted by consultant companies the funds were obtained. The construction of this water treatment plant is executed by several construction companies and its still on process. For the future SAPAM's director general has plans of finding funds to construct a small dam in the Zanatenco (mainly for irrigation purposes). In this case decisions are taken according to personal technical experience without consulting the committee or any other citizen mechanism enabled at an urban level.

- In rural areas the communities can be partly involved in the decision making process, but this may only happen when inhabitants are aware of how does the Project-development-process function. Furthermore, they need an appropriate network that enables them to canalize their needs[150]. If not so, they have to wait for governmental initiatives or political pre-campaign promises to ask for the projects that they need.
- Most decisions related with other water policy areas, such as flood prevention or pollution control, are directly taken by the federal / statal institutions in charge (not always coordinated with the municipality). Other than the committees there aren't any participatory mechanisms that can deal with this kind of issues.

After the creation of a River basin management and the installation of River basin Committee the situation didn't change much and decisions are still sectorial: Arriaga didn't canalize a single CNA[151] peso through its river basin management or committee, while Tonalá could only canalize some investment through several Sediment-Dragging Projects[152] and a water quality study[153].

Municipal governments changes every 3 years and normally "do not continue with, or even obstruct, previous presidential actions"[154]. Therefore the continuity of an existent *River basin Management* is threatened (or changes its perspective) every three years. How to develop under such context, a local water policy? It is certainly difficult. The (previous) *River basin managements*, had been working with several governing documents that helped them guide their actions. Firstly they developed the PRPC (in coordination with FIRCO), but only in some of the upstream river micro-basins. It is interesting to see how one of *Zanatenco's River Management* first actions was to develop an "Integral River basin Management Plan" [155], "that enabled us to know more about how is our basin and which are the most adequate actions to implement on it". The *Lagartero River Management* has not yet developed this plan, it's manager commented that "I prefer to have a consolidated committee first and then aim for more integrated policy document for the river basin". Lately, the CONANP (through REBISE) has conducted several workshops in order to design the "Conservation-site plans" that will also be useful when considering the most adequate actions to be implemented.

As for the impact of *River basin managements* (only 3 in the whole coast) or river basin committees in the RHP or NHP this has been unexistent. First of all, timing does not coincide. Regional and national water policy formulation occurred previous to the managements or committees creation (the last policy document, the RHP was published in August 2002 and the committees were created on August 02 and September 03). Secondly, the committees have not yet dealt specifically with regional policy issues, as they are still dealing (or starting to deal) with their own local water plans. Finally, the other

[150] SAPAM, which is legally responsible for the communities within the municipality, not only of the "municipal head" normally cannot take care of these communities. Their needs may be canalized by a municipal agent, which functions as a delegate of the municipal president.

[151] Only some support to develop the committee meetings, not funding for specific actions.

[152] Approved in 2nd committee session (1st agreement on Program budget 2003). For 2004 this couldn't be done.

[153] Approved by the committee on it's 3rd meeting.

[154] river basin manager

[155] designed by Chapingo Autonomous University (Cost: nearly 1 million pesos; users partly contributed to its funding). Some interviewees commented that this plan is extremely narrow in its focus (too focused in soil conservation issues). I ignore the involvement of the different stakeholders during the development of this Plan.

existing participative platform that, in theory, represents Lagartero and Zanatenco users, the RBCCoCh, has proved to be unrepresentative of this northern-coastal region.
River basin committees follow similar dynamics as the river basin council. The political actors (in this case the municipal government instead of the federal) are dominating a space that should be occupied by users. River basin committees should be strongly user-based in order to avoid problems like those found in Tonala after the latest municipal elections. The future of the committee in that municipality is highly critical, considering that the committee itself has been completely dependant on a functioning Management[156]. In Arriaga the situation is a bit different, as the committee is somehow stronger. According to some interviewed user representatives "we will continue with municipal support or not, we are committed with our basin". Another important pillar to rely on, in that specific committee[157], is its water utility. SAPAM has supported and is very much interested in the actions taken by the Committee. SAPAM's support is unfortunately conditioned on the continuity or not of its director general, which has been personally involved in the committee formation process. At a municipal level I consider the coordination between SAPAM and the River basin management, the link between rural and urban, key for an integrated river basin management. If the committees are able to overcome these and other constraints (like representitiveness, frequency of meetings, type of agreements taken,..) the committee has potential of becoming a remarkable participatory mechanism. It has the capacity of dealing directly with the local actors and has the advantage of being functional, through the river basin management. Only when de-linking the river basin management from municipal party politics will the committees become more integrative.

5.2/- Grassroots platforms for citizen participation

Up to this point we've presented the participatory platforms, river basin council and river basin committees, that have been already recognized by the federal government as legitimate and which are specifically mentioned in water policy documents as participative. However, these platforms have constraints, limitations that leave out of the scope certain voices, certain perspectives. The following 2 cases, the Citizen Water Council (San Cristóbal de las Casas) and the Zapatistas insurgents, have in common their non-participation in the water policy making process. Water planners didn't identify them as relevant water policy stakeholders. Having been left out of the water policy process makes them interesting objects of study for this research. Even though the analysis was not done in depth (it wasn't my main research focus), there are several aspects in the dynamics that both cases bring along, that I consider valuable for the discussion of issues like participation and (water) policy making in Mexico.

5.2.1. San Cristóbal de las Casas: Citizen Water Council

The Citizen Water council of San Cristóbal de las Casas originated as a response to the municipal interest in subscribing an adhesion agreement with the CNA and its PROMAGUA program (previously presented in Table 4.4.). Subscribing to PROMAGUA (*Program for the water utilities modernization*) implied accepting its main objective: "…support statal and municipal governments in the fulfillment of its obligations as deliverers of quality public services, while promoting a public-private partnership in the development of basic infrastructure..". In order to fulfill the PROMAGUA's objective, the municipality has to commit to, among others: "make the necessary structural changes in the potable water, sanitation and drainage system" and "to promote the participation of the private sector, through public bids, in the administration, operation and maintenance of the system". Apart

[156] without a *River basin management* or with a change in its focus the committee will not session, the surveillance committee would not represent the rural communities any more,....
[157] in Tonalá such interest and coordination was not present

from that the municipality (through SAPAM[158]) had to contract a Diagnose study[159] and supply its financial resources to fulfill PROMAGUA's aims. The municipality signed[160] the agreement on the 30th April 03. However, after the citizen protest against PROMAGUA's signature (especially through the *Neighbor Participation Councils*) and the pressures that derived from such mobilizations, the agreement was revoked on the 26th May 03. Citizens believed that SAPAM's problems could be solved through other mechanisms[161] which enable to keep the water utility system under public (municipal) hands.

The mobilized society was not yet satisfied with the results obtained and worried about further privatization efforts that could be attempted by the municipality. They decided to continue their resistance and to find their space and, based on legal grounds, they demanded and obtained their representation in SAPAM's Governing board. The Governing board structure of a municipal water utility is regulated by the Chiapas Water Law (8 Dec. 2000). According to the law, the administration of a municipal water utility, should count with: a Governing board, a Consultive council, a Director general and a commissioner. The governing board, the decision making body of the water utility, is composed by the following representatives (with voice and vote): Municipal president (president of the board) + Municipal Council-person (in charge of water issues) + 1 Spokesman of both CEAS and CNA[162] + the president of the Consultive Council + (without vote) SAPAM's director general (acting as secretary of the board). The governing board should meet, ordinarily, at least 4 times a year.

The constitution of a new Consultive Council took place the 20th September 2003[163]. The council is an independent organ of organized and non-organized citizens which is composed by neighborhood or organizational representatives. Most representatives are designated, through popular assemblies, by the existing *Neighbor Participation Councils* (for approximately each of the 22 neighborhoods). In such councils there is normally a person in charge of the councils Water commission.

The Consultive Council has approved an internal regulation, but this is still in process of approval by the municipal water utility (which has the authority to regulate it). Other than that, the council is regulated by the Statal water Law itself, which defines, in its Articles 42 and 43, the structure and main objectives of the Council (see Appendix section A.5.2.). The Council's sub-president, a university researcher, mentioned that "it is difficult to support, guard and monitor SAPAM's activities and actions, when the council is regulated by the SAPAM itself ". He added that "the council is moving forward to become more independent and not subjected to SAPAM's desires".

Thoretically, Consultive Councils should be already constituted in the 36 municipalities with an existent municipal water utility. However, even the president of San Cristobal's Council ignored the existence of any other constituted Consultive Councils in Chiapas[164]. The San Cristobal Consultive council is completely independent from the *Statal Water Consultive Council*[165].

What becomes interesting of this Water Consultive Council is that other than being reactive to governmental positions, they bring forward proposals to improve their municipality. In San Cristóbal they have found their space and "have done the first steps to block a pro-privatization initiative". In the future, the Consultive Council members are trying to get further involved in their river basin. At the time of writing they were trying to organize themselves and constitute a river basin committee for San Cristobal's river basin. Other than that they want to open spaces for their participation in regional water governing bodies.

---

[158] Constituted since 18 February 1992 (in 2002 census of 25130 outlets)

[159] "*Diagnostico de plan integral*" (to determine it's degree of efficieny and from there, according to the % of efficiency receive financial support).

[160] Tuxtla, Comitán and Tapachula had signed this agreement.

[161] they presented 12 proposals and alternatives 14 July 03

[162] "they always send different representatives" (vice-president of the Citizen Water council)

[163] I ignore how the previous Council was conformed.

[164] If existent, who is constituting them, are citizens involved?

[165] The CNA nationally promoted and created these organs to deal with "building a water culture" (the first statal president of the council was a CNA official)

The members of San cristobal's Water Consultive Council found their limited space in the existent legal grounds. By knowing their legal rights, by accepting the Law and its platforms, they try to build alternative actions. Such example contrasts with the case that will be presented next. In the following case the citizens follow a different strategy: Resistance to governmental mandates and, in contrast, self-governance and autonomy.

5.2.2. *The Zapatistas and their Autonomous Regions*

According to Mexico's last population census (2000) in Mexico there are more than 10 million indigenous, which speak more than 62 languages and live all around the country. The states with a higher indigenous population are Oaxaca (aprox 1,5 million) and Chiapas (aprox 1,2 million) among other states like Veracruz, Yucatán, Mexico State and Puebla with around 900 thousand indigenous each. The presence of indigenous communities in the country is not another statistical number. They develop important social, economical and environmental roles in the country. Worth remarking is their participation natural resource management, especially forest, jungle and lake management (Nigh et al 1995 cited in Peña 2004). The majority of the national forest surface is legally owned or inhabited by indigenous communities, who have risen as important stakeholders in forest conservation (Merino 1997 cited in Peña 2004).
As for their relation with water, the situation is heterogeneous depending on the area they are living in. Those living, for example, in Chiapas (*tzeltales*, *tzotziles*, *tojolabales*..) receive abundant rainfall (>1500mm), while, in contrast, the *Seris* or *Otomíes* in the North receive an annual rainfall of 100 to 300 mm. The relation Water-indigenous communities is not only of simple usufructuaries, but it actually implies important roles for River basin conservation and other environmental services (Peña 2004).
The case study area of this research, the *Southern border*, is home to abundant indigenous communities (Figure 5.5) who live in highly important ecosystems (especially within the Lacandonian jungle and the Usumacinta river basin). Living in those areas has not granted them any particular right. Mexican Laws do not recognize indigenous-communities collective rights over the territory that they inhabit. Those scarce legal resources available, constraint their actions to detain the irreversible modifications[166] third parties are causing in their environment.

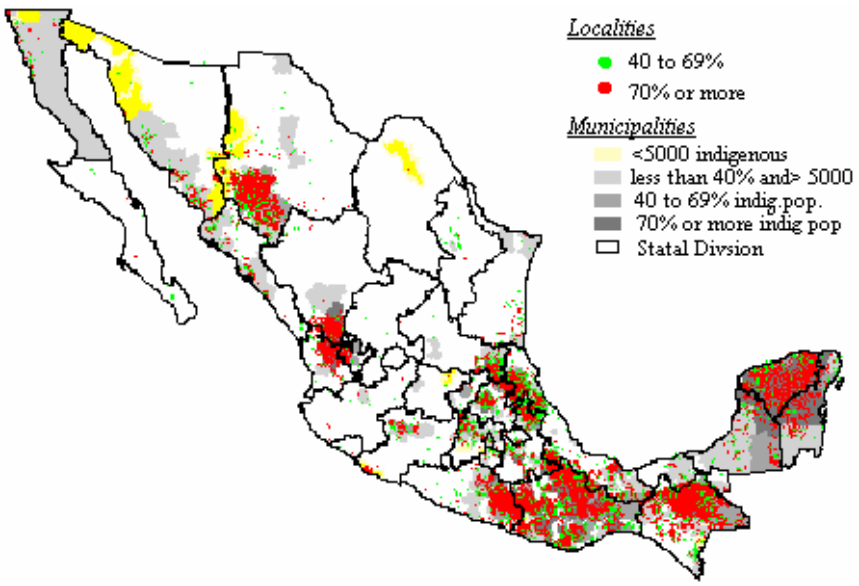


Figure 5.5. Localities with >40% of indigenous population and type of municipalities

[166] Such as: water transfers, dam construction, deforestation, or other…

Tired of being left behind, and witnessing how their resources were taken away while they remained in poverty (53%high marginality in the region), some of them decided to take action. "There was a need to be heard", to participate and decide on the issues that were affecting their livelihoods. The channel used to participate, to find their lobbying space and change this situation was civil resistance. In 1994 many indigenous citizens upraised against the "bad government". The 1st of January 1994, the EZLN (Zapatista's National Liberation Army) took control of 7 Chiapan cities (the most important being San Cristobal). There is abundant existing literature about the Zapatista upraising and their "*caminar*" (path) since the conformation of the EZLN (November 1983) until the creation of the governing zapatista organs: the "Juntas de Buen Gobierno"[167] *(Good governance board)* in August 2003.

Among the Zapatistas demands those related with the control over territory (many of which in *Southern border*), natural resources (water among others) and autonomy, not independence, are the most remarkable. The existing link between zapatistas demands and the issues that have been discussed in this research: Governance and water policies, needed to be remarked in this research. Furthermore, the strategy used by the Zapatistas to participate differs from those previously presented in this study. The "resistance strategy" chosen seeks to construct, based on the recognition of collective rights, their autonomy and self-governing space (Paré et al 2002). Zapatistas advocate for a counter proposal for Chiapas development that would replace[168] the existent national development paradigm which is based on economic liberalization. This alternative paradigm would be based on norms and principles of sustainability and respect for cultural / biological diversity. Including those *forgotten paradigms* and perspectives could be highly beneficial for the conservation of the wealth that the lands of the indigenous and peasant societies located in south-east Mexico possess.

- *CONCLUSIONS OF THE CHAPTER*

Participatory mechanisms at a local level follow different dynamics. Neither of them have been directly involved in regional nor national water policy making. However, these new mechanisms are interesting to analyze in order to forecast the possible influence they could have in future local water policy making. The importance of the two presented River basin committees, the Lagartero and Zanatenco, resides on the River basin managements that operate them. River basin managements, even though municipally funded, have followed an interesting strategy. Involving the local citizens, specially the ones living in the rural areas, they've constituted a valuable network. Even though it is premature to assess the level of participation enabled by the river basin committees (Zanatenco was constituted two years ago and Lagartero a year ago) I can already observe some constraints. Many of those weaknesses were inherited from the CNA's assistance, as it occurred in the river basin council Coast of Chiapas. The frequency of interactions within the committee, the type of agreements that have been taken during its meetings and specially the legitimacy of the user representatives (not elected through a democratical process) are, among other, elements that should be dealt with. The committees should draw the river basin managements out of the municipal sphere and its influence. River basin managements should still deal with municipal or local levels, but accomplish a true autonomy, independent from local party politics and its desire.

The other two participatory initiatives reviewed in this chapter have the particularity of not being directly controlled by the CNA. The strategies used by these groups can be an interesting alternative to government-controlled participatory mechanisms. Its importance resides in the origin of this groups and the representativeness of their spokesmen. They focus on building self-governance capacities in local decision making as a key element for participatory process achievement.

[167] 5 Boards existent at the moment: La Realidad, Oventik, Morelia, La Garrucha and Roberto Barrios.
[168] at least for those communities that choose to

CHAPTER 6: "DISCUSSION"

Having presented the most relevant data on water policy making and the participation occurring in its frame, it is time to retake the obtained information, and compare it with the research framework and the main research questions. When doing that, I can present which have been the most important findings of the research while raising some relevant points for discussion.
Something to keep present before starting with the discussion is the matter of representativity of the case study and of this research. The elements that will now be discussed are representative for all the country. River basin councils (and other participatory mechanisms: commissions, committees or COTAS) are installed in all the country and these follow the same rules, have the same origin, similar structure and therefore their role in water policy making process is similar. However, the CNA considers (see Chapter 1.4) other river basin councils not as representative, when looking at participatory processes, as the Coast of Chiapas is. Furthermore, water policy making process is centrally organized. As such the regional managements do not have much space to maneuver, to follow other approaches than the determined by the central headquarters. Under such context the panorama does not offer much variation. The stakeholders involved may vary, the statal government can be more or less empowered, and local context can vary but the basic processes involved are still the same.

- ***Water policy process occur at different levels, decisions at one***

The historical perspective (presented in Chapter 2) introduced the origins of water policy making in Mexico. Hydraulic planning has not been a continuous exercise for the last 30 years. Water policy in the form of plans and programs originated in 1975 (National Hydraulic Plan) and was not retaken until 1995 and, later on, in 2001. Hydraulic planning is not yet an institutionalized and continuous exercise in the CNA. The constant change in the legal and institutional framework of those federal institutions in charge of water policy making, has limited the continuity of the process. In this sense, the CNA is relatively inexperience in water policy making. Furthermore, the NHP 2001-2006 does not present the several stages presented in the *Linear Model* (see 1.3). Monitoring, evaluation and re-design of Mexican water policy have been punctual, if existent. I would say that at this point water policy process present two stages: Design and partial Implementation.

As for participatory policy-making, the latest water NHP has specifically remarked the institutional commitment to involve Mexican society in the water policy-making process. In this sense, it has been the first program to introduce, at least "on paper", the participatory, bottom-up approach on water planning. The participatory mechanisms now installed were not installed and available for developing the previous Plans/Programs. As a first experience it has encountered many limitations and difficulties. However, as it was previously mentioned in the theoretical framework, meaningful (representative, legitimate, democratic,..) participatory processes aren't immediate. They require time and learning, a process which needs to be reflected upon.
I consider the latest National hydraulic Program: A learning exercise, a step of a long process that will result in systematizing water policy making, and, will achieve (if there is a will to do so) meaningful participatory water policy making.

The National Hydraulic Program functions as a gulping document which sets national objectives, strategies, goals, programs, that are then rewritten in the regional plans and followed without molding. This centralism, this concentration of power, is disabling meaningful participation at a regional, statal and local level. Regional, statal or local hydraulic programming can only occur after a process of decentralization, a process of true autonomy for the states. Effective water policy design and implementation at a statal or local level, which may favor local stakeholder involvement, not federal

or national, requires both empowerment and training. Building capacities and training regional (federal dependencies), statal (water commissions) and local (municipal level) institutions on how to design and implement water policies is urgently required. Instead of bidding and delegating responsibilities to private companies or consultant experts, governments at the three levels need to coordinate efforts and learn about water policy making themselves.

I believe that all-inclusive participatory water policy making can only occur when starting from a local level (or regional) and then progressively raising it until a national level. Hydraulic Programs should be first made at a river basins or sub-basins level with the involvement of users and the local government. Structures like the river basin commission or committees may be helpful for this purpose. Considering the great diversity of a country like Mexico I would rather focus on creating stronger Regional hydraulic programs (built from river basin programs) than focusing on a centrally designed National Hydraulic Program. These would not necessarily be homogenous and could enhance stakeholder participation in a more direct way.

- ***Participatory mechanisms in the different steps of the policy process***

According to Long's conceptualization, participation always occurs in the social arena (2001). However, incisive participation in water policy making is not always present. Even though several governmental participatory platforms have been promoted, their effectiveness is far from desired. In chapter 3, 4 and 5 I have presented the main participatory mechanisms that, according to the water policy documents were involved in the process. River basin councils (and its auxiliary organs: commissions, committees and COTAS), Water Consultive Councils, Forum with experts and social consultation were those mainly pointed out. It is surprising to observe how those mechanisms are put at the same level of legitimacy. The opinions of the River basin councils (which are supported by user assemblies, at least according to the CNA) are considered as valuable as those send by an individual through an internet consultation. In chapter 3 I presented arguments that reproved Water Consultive councils, Forum with experts and society's consultation as legitimate participatory mechanisms. Only in the case of river basin council and its auxiliary organisms, was this legitimacy studied further.

Other than these participatory mechanisms, enabled and mainly controlled by the government, Mexican citizenship is building its own structures to influence water policy making. Even though they have not been directly involved in the actual water policy making process, the alternative strategies used by both the Citizen Water Council (San Cristobal de las Casas) and the Zapatistas are worthy to be remarked. Both auto-organizational processes are the result of non- inclusive policy making. The aperture of interaction spaces were this initiatives are included will, not only reduce the existent tension with the marginalized, but also, enhance its integration in the resulting inclusive participatory platform.

- ***Impact of participatory mechanisms in water policy making***

In the theoretical framework, I presented an element which can be useful to evaluate what could have been the impact of participation. By analyzing the level of participation:
a) Of the Participatory mechanisms themselves (river basin councils, commissions, committees, COTAS, Consultive Council,..) and,
b) During the Different steps of the policy process we can have a clearer vision of what could have been the impact of such participation. In order to determine such level of participation in Mexican water policy, during the theoretical framework (introduced in Figure 1.2) I presented the ladder of participation.

The “ladder of participation” can help us visualize, in a non-absolute way what the level of participation is. Evaluating the level of participation throughout the complete water policy making process as a whole, cannot be done in absolute terms. One can only partially evaluate the level of participation through the several participatory mechanisms. Participation occurs at different levels and times. When observing the level of participation in Mexican water policy making I analyzed, both the processes occurring internally, in the platform itself, and those occurring externally (in the interaction with other actors and the government). The description and analysis introduced in Chapter 3, 4 and 5 on the several actors involved in water policy helped us distinguish the river basin council as the main participatory mechanism enabled by the CNA to impact on water policy. The other available mechanisms cannot enable meaningful participation (the case of the forum with experts, comments by internet or post, water consultive council) or its creation is too recent to evaluate at this point (river basin committees).

After the information presented one can conclude that river basin councils are not functioning as participatory platforms. The elements defined in the theoretical framework helped us reach such conclusion. Frequencies of interactions, type of agreements, interest, time, representiveness were some of the critical factors limiting inclusive participation through this platform. Independently from the legitimacy or relevance of participation through the river basin council, the platform itself has been only involved in some stages of the policy process and its participation has been partial. Only during the design phase, and partially during the implementation, one could say that the council had a certain role. If I had to determine which had been that role by looking at Figure 1.2, I would determine that the river basin council functioned as “target group of information” in both stages. The council didn’t have any role in the other stages of the process (monitoring, evaluation, re-design).

The “ladder of participation”, described in the theoretical framework, can be useful, but only partially. The information that it offers cannot be considered as an absolute value at all. It is not a measurement tool. It can help visualize, in a non-absolute way, the stage of participation in a punctual process. However this tool does not contemplate the internal dynamics that a participatory mechanism may have. Participation occurs at different levels at different times, and the ladder of participation gives the impression that participation can be categorized. It cannot value, for example, important issues such as representitiveness of the “participant”, frequency of interaction, legitimization, general functioning of the mechanism, etc.

Considering that the level of participation throughout the water policy process has been scarce and that the actual participatory mechanisms in place enable a very limited participation, the impact of this mechanism is considered low. The only relevant impact achieved by the CNA through this governmentally-assisted-participation has been the validation of its policy documents. This corroboration becomes less significant when comprehending how the council functions and the scarce representitiveness they have. Another interesting result of the governmentally assisted participation has probably been the creation of specific working group within the river basin councils: “*The Hydraulic Program Monitoring and Evaluation*” working group. From the details presented in Chapter 4 we know that the group has not yet been functional. Be it as it may, the structure is there. Strengthening this group, involving the relevant actors and empowering the council itself may trigger some interesting participatory results.

Even though the results presented might not be very encouraging I personally believe that the consequence of such non meaningful participation is very valuable if one thinks over it. An analysis of such non-impact gives us relevant information on how to improve participatory mechanism in water policy making.

- ***Considerations for improvement***

A first step for improving participatory processes in water policy making would entail changes in the governmental institution that promotes such participatory mechanisms, the CNA. Before starting the promotion of any participatory mechanism the Commission should deeply question what is the purpose of such promotion and which is the most effective way to achieve it. Considering that its part of the CNA's mission to involve "the participation of society", this participation cannot just imply, as it has been conceived up until now, installing a platform and informing its members. Meaningful participation platforms require investing resources (time, human resources, money) into an already solid foundation (strong user assemblies, complete user identification etc.). Another important aspect to be improved within the CNA itself is the great existent division between sub-directions. If participation of society has been identified as a key element within the CNA mission, then the whole institution should retake it at all times. The *River basin council management* is not the only institutional area within the CNA that should work with such perspective.

Participatory mechanisms (as river basin councils) aiming to be inclusive and representatives of several voices have to be flexible, autonomous and not tightly controlled by a single actor. The paternalistic approach taken by the CNA should be avoided. However, their experience and perspective is valuable and should be exploited by the other groups. The Commission could work as a consultant body of the participatory mechanisms (for example, of the river basin council). I personally foresee the role of the CNA as a capacity building institution: offering information and training on river basin management /organization.

River Basin councils, the most relevant participatory mechanism, have still to walk through a long re-organizational path. Building the council from a strong representative user assembly, achieving independence from governmental institutions in order to become a true user platform or increasing operatibility are some of the urgent amendment required. Users need to reform this platform and make it theirs. However, at the same time, user empowerment through the river basin council cannot occur without a federal consent. I personally question the relevance of a council when this lacks the subsidiarity network of commissions and committees in place to support it. Without such local grassroots, the council is yet another regional platform far from being inclusive. Focusing on building from the committee level and further developing the necessary regional platforms will help constitute this user network while eliminating the gap between the decision making bodies and the citizenship needs.

Efforts have concentrated in building regional platforms while forgetting the local roots. The strategy followed, top-down centrally promoted regional structures (councils) that can then develop local networks (commission or committees), has clearly determined the outcome. Nation-wide inoperative councils have been installed, but river basin Commissions and Committees are not nationally extended. Those that have been installed are far from being functional. Committees are too dependant on municipal short term politics, which hinders the necessary continuity required to develop a participatory platform. Similar constraints as those found in the council can also be found at this level. Inability to build a true water user assembly were representatives are democratically chosen, frequency of interactions too short or incapability of making executable agreements are examples of the Committee's weaknesses.

The paternalistic relation government-citizenship which has affected and is still affecting Mexican society will not disappear overnight. Both citizens and institutions are unexperienced in interacting through participatory platforms. Even though participatory mechanisms are not being too effective at the moment, the structures have been already installed and are there to be occupied. It is not a

governmental task to tell the citizens when and how to participate. Civil society should pro-actively occupy the available spaces, modify them or create new ones if necessary.

CHAPTER 7: "CONCLUSIONS"

Water policy making is not something new in Mexico. However, since the first National Hydraulic Plan (1975) there have only been two policy exercises published in the form of Plans or Programs. The NHP 2001-2006 does not present the several stages presented in the theoretical *Linear Model.* In this sense it is not yet a complete planning exercise. Monitoring, evaluation and re-design of Mexican water policy have been punctual, if existent. I would conclude that, at this point, water policy processes present two stages: Design and partial Implementation.

The latest National and Regional hydraulic programs have been the first hydraulic program to mention specifically the participation of several stakeholders through diverse participatory mechanisms. The federal government has promoted specific mechanisms to enable participatory water policy making at a National (Forums with experts, Water Consultive Council and Societal consultation), Regional (River basin councils and commissions, COTAS or Statal water consultation councils) and sometimes local level (River basin committees). The participatory mechanisms now installed were not available in developing the previous Plans/Programs.

The *National Water Commission* (CNA) invites and decides at which level the several participatory mechanisms can be involved in the policy process. This federal institution focused on involving the water users only during the design of both regional and national policy.

The participatory mechanisms facilitated at the different levels (national, regional and local) were analyzed. In National water policy making, the CNA-promoted mechanisms, Water Consultive council and Society's consultation mechanisms (through post, internet or forums with experts), lack the necessary representitiveness for the inclusion of "the diverse societal perspectives". Of those available participatory instruments, the River basin councils stand up as the most relevant structures facilitating diversity inclusion. However, this opportunity was lost. River basin councils, as a whole, were not involved in the national policy making. There is no existent platform that can represent the 26 River basin council's perspectives at a national level.
At a regional level, under the current planning scheme, participation in water policy making has been basically inoperative. The National Hydraulic Program functions as a gulping document which sets national objectives, strategies, goals, programs, that are then regionally followed without molding. Regional realities have to adapt to such guidelines and decisions. Local perspectives are hardly considered. Statal and municipal governments are not contemplated during the regional policy design other than through the presentation of project proposals. It is interesting to observe, however, how the statal and municipal funds (sometimes irrigation districts or other users) need to be involved during the implementation phase.
The regional participatory mechanism in place, basically the River basin councils, cannot enable a representative, inclusive participation of the relevant stakeholders. River basin councils are tightly controlled federal platforms. The CNA promotes its constitution, provides the guidelines that regulate its functioning and composition and determines its day to day functioning. Furthermore, the CNA is more concerned with establishing councils than worried about the participatory potential this platform may have. Participation in regional water policy making of the river basin council, more specifically the *Monitoring and Evaluation Group* (GSE), has occurred punctually and at a very low level. The GSE functioned as a target group of information in the design and implementation phase of the policy making process. Even when participating, the council cannot represent the river basin water users as its members were not democratically elected. Meaningful participation through non-representative spokesman cannot be achieved.

Participatory mechanisms at a local level, River basin committees mainly, have not been directly involved in regional nor national water policy making. These new mechanisms are interesting to analyze in order to forecast the possible influence they could have in a future as facilitators of local citizen representation in local water policy making. Premature evaluations can be dangerous. However, constraints are already there. Many of those weaknesses were inherited from the CNA's assistance, as it occurred in the river basin council. River basin committees are not only hindered by federal institutions, but also by local-municipal politics. Other than River basin committees, at a local level, grassroot initiatives are being left aside and have not been involved in water policy making. These initiatives have the particularity of not being directly controlled by the CNA and are focusing on self-governance capacity building in local decision making.

Under the current structure and functioning of the available participatory mechanisms, the level of participation throughout the water policy process has been scarce. The paternalistic relation government-citizenship has affected the process. Both citizens and institutions are inexperienced in interacting through participatory platforms. It is not a governmental task to tell the citizens when and how to participate.

Participatory-induced processes require time to become effective. The current water policy process has to be considered a valuable learning exercise, the first trial to include participation in water policy making. It could be the first step of a process that will result in systematizing water policy making, and, can achieve, if there is a will to do so, meaningful participatory water policy making.

- *Recommendations*

Meaningful water policy making requires continuity and systematization. Mexican water policy processes need to be internalized and completed. While completing the planning exercise, the federal executive has to involve users, citizens, organizations,.. through the available, be it federally promoted or not, participatory mechanisms. The CNA should reflect upon the representativity of the participatory mechanism now in place. The federal government should not control the participatory structures but rather work with and for them. Governments should support a variety of participatory mechanisms and be receptive to the user and citizenship diverse initiatives coming from them.
At a national level there aren't relevant participatory mechanisms in place. Rather than creating national platforms which are unlikely representative and inclusive I would rather focus on creating regional and local capacities. By first empowering the CNA's regional managements and the statal counterparts, hydraulic planning should be built from the local level up to the regional one. Inclusive National hydraulic programs are inoperative. All-inclusive participatory water policy making can only occur when starting from a local level. Hydraulic Programs should be made at a river basin or sub-basin level with the involvement of users and the local government and then progressively raising it to a regional level. This process will not occur immediately and will require important human capacity building and economic resources.

Regional hydraulic policy making will only be relevant when involving the regional water actors. The River Basin Councils could be one of the participatory mechanisms to involve those actors. However, the councils need to be operative and representative. User representatives have to be elected from a functional user assembly. The council needs to promote inclusion and should be an independent useful and meaningful platform for users, rather than a federal controlling body.
Participatory Regional planning is meaningless without a strong local and municipal involvement. River basin committees could be one of the mechanisms to build up this strong local basis. While keeping its operative *River basin managements* and its local focus, River basin committees should be

built from a true autonomy, independent from local party politics and its wishes. At the same time, grassroot initiatives should be empowered and integrated in these local participatory processes.

Empowerment does not necessarily mean "being given the power". Users and Civil society should pro-actively occupy the available spaces, modify them or create new ones if necessary. Their involvement would enrich the process and function as a key element for participatory process achievement.

- *Theoretical reflections and further research*

The 3 most important elements of my Theoretical framework were Policy processes, Stakeholders and Participation. The results from this research may shed light on the theoretical discussion.

As it was observed from the Mexican context water policy is not necessarily a result of a process including all the stages of the Linear Model. A policy process can include only the design and implementation stages and it will still be considered a governing water policy document. The Linear model presents reality as something linear, which follows different steps. Reality, however, is not linear but rather a dynamic process of interaction at all times and at all levels of the policy process. A theory that could help assess the interactions during this constant non-linear process would be relevant in further research on this field. Moreover, the immature process taking place in Mexican water policy making only fit with the initial steps of the Linear model. Another tool or theory working more specifically with initiating policy processes could have been more helpful to further analyze our situation.

The concept of stakeholder, as it was defined in the theoretical framework[169] is too general and confusing. During the research it was difficult to distinguish it from a concept like actor. The concept of stakeholder homogenizes groups or actors that are heterogenous and dynamic. Being able to assess their diversity is relevant for this kind of study. Specially when comparing stakeholders at several levels (national, regional and local) and then their interactions, the concept was misleading. An example was found with the CNA that not only functions as a stakeholder at the different levels but it's also the decision making body. The capacities and roles in each case were not always clear. I would rather work with concepts that enable the researcher to observe the stakeholder in its context and diversity. Working with a concept / theory which considers the capacity/ knowledge and the representativeness each stakeholder has to participate in a concrete platform would be helpful for further research. This will help comparing, for example, the River Basin Council, which may be representing thousands of users, with the Forums with experts, which might be the opinion of an expert.

The complexity of measuring or exploring a concept like participation was experienced during the thesis. In order to be meaningful, the concept needs to be deeply conceptualized by the different actors that use it. If not the concept cannot be used comparatively. The ladder of participation is not an ideal tool to evaluate the level of participation during a step-like policy process. It tends to generalize and consider all the elements of a process as one. Moreover, the presented ladder evaluates the participation of government-other stakeholder relationship limiting the relevance of other kind of participatory interactions (e.g. NGO's, zapatistas,..).

Trying to assess participation in an absolute way is not possible. A flexible perspective that allows detailed qualitative analysis is necessary in this kind of analysis. Trying to evaluate the level of

[169] see section 1.3. for the whole definition of stakeholder

participation per se is not as valuable as observing the process and elements of the participatory processes. A key element for this kind of assessments is Representativeness. Further research should focus on this key concept while working with a theory / tool that can help the researcher analyze and evaluate it.

The research sub-questions established have been helpful in learning more about the research objective. The research however, did not bring much light into the current discussion on the benefits of participatory policy making. Until not having an adequate and functional participatory space or mechanisms I cannot comment on that. However, this research presented the importance of building regional and local capacities while organizing participatory mechanisms. It questioned the feasibility of achieving participatory national policy making. Participatory policy making and implementation is unlikely possible at a national level in a country as diverse as Mexico. In order to promote participation and user involvement in water policy making, local and regional programs that fit local polity styles are to be developed.

Interesting further research can focus on regional or local alternatives to *National Hydraulic Programs* and the possible strategies for water policy capacity building at a statal and local level. Considering the importance of the national legal framework regulating all this processes, further research could consider analyzing the participation occurring during the National Water Law design. Other possible research could have a more institutional perspective. Studying the federal institution, the CNA, could tell us more about its capacity to delegate responsibilities and better understand decentralization processes. This research could evaluate more in detail the CNA's capacity (human, knowledge and economic resources) to promote participatory mechanisms

REFERENCES

Assetto, V. J., E. Hajba, et al. (2003), Democratization, decentralization, and local environmental policy capacity: Hungary and Mexico, *The Social Science Journal* 40, pp. 249-268.

Ben-Elia, N. (1993). Introduction. *Policy Studies Journal*, 21, pp. 74–81.

Biswas, A. K. (2001), Missing and neglected links in water management, *Water Science and Technology* 43 (4), pp. 45-50.

Bovaird et al (2002) as refered in OMM/PROMMA (see further)

Buras, N (1983) Water resource planning in Mexico: The first national water plan; paper presented at the Second US-Mexico conference on Regional Impacts of US- Mexico economic relations:Challenges and opportunities. Tucson, Arizona, May 23-27,1983.

Camp, R.A. (1999) *Politics in Mexico.The Decline of Authoritarism*. New York and Oxford: Oxford University Press.

Castro, E., K. Kloster, et al. (2004), Ciudadania y gobernabilidad en la cuenca del río Bravo-Grande in: B. Jimenez and L. Marin.(ed) *El Agua en Mexico vista desde la Academia*, Mexico: Academia Mexicana de Ciencias.

Cleaver, F. (1999), Paradoxes of participation: Questioning participatory approaches to development, *Journal of international development* 11, pp. 597-612.

CNA (1999). *Lineaminetos estrategicos para el Desarrollo Hidraulico de las Región XI: Frontera Sur*. Mexico: CNA.

CNA (2001). *Programa Nacional Hidráulico 2001-2006*. Mexico: CNA.175 pp.

CNA (2002). *Compendio Básico del Agua en México*. México.

CNA (2003). *Programa Regional Hidráulico, Región XI: Frontera Sur (2002-2006)*. Mexico**:** 134 pp.

CNA (2004). *Estadísticas del Agua en México*. Mexico D.F: Comision Nacional del Agua.

CONAPO (2000). as quoted in: CNA; *Programa Nacional Hidráulico 2001-2006*.(2001).

Cornwall, A. (2003), Whose Voices? Whose Choices? Reflections on Gender and Participatory Development, *World Development* 31(8), pp. 1325-1342.

Gonzalez-Villareal, F. and H. Garduño (1994). Water resources planning and management in Mexico, *Water Resources development* 10(3), pp. 239-255.

Green.Cross.International (2004). Dialogues on water for life and security. FORUM Barcelona 2004, Barcelona.

Greenberg, M.H. (1970) *Bureaucracy and development: A Mexican case study*. Lexington, Massachusets: Heath Lexington Books.

Hardin, G. (1968), The Tragedy of the Commons, *Science*, 162, pp. 1243-1248.

Ham, C. and M. Hill (1984). *The policy process in the modern capitalistic state*, Harverster Wheatsheaf.

Hemmati, M. (2002). *Multi-stakeholder processes for governance and sustainability*. London: Earthscan publications.

Herrera-Toledo, C. (1997). National Water Master Planning in Mexico, in A. Biswas (ed), *National Water Master Plans for Developing Countries*. New Delhi: Oxford University Press.

Hill, M. (1993*). The policy process:a reader,* Harvester Hempstead.

Holland, J. and J. Blacckburn (1998). *Whose voice? Participatory research and policy change*, Intermediate technology publications.

INEGI (1995) *Estadísticas de población*, Mexico, 1995. Aguascalientes: INEGI.

Inter-Amercian-Development-Bank and R. S. da Motta (2003), Regional Review of Water Charge Instruments for Water Management in Latin America and the Caribbean (Case Studies of Brazil, México and France). Regional Policy dialogue: Env.Network II (The application of economic instruments in water and solid waste management)".

Janicke, M. and H. Weidner (1997). *National environmental policies: A comparative study of capacity building*. Berlin: Springer.

Keeley, J. and Scoones, I. (2003). *Understanding environmental policy processes (Cases from Africa).*London: Earthscan publishers

Long, N (2001), *Development sociology: Actor Perspectives*, London and New York: Routledge

Martinez-Lagunes, R. and J. Rodríguez-Tirado (1998). Water policies in Mexico. *Water Policy* **1**(1), pp. 103-114.

OMM/PROMMA No. 171 (2003) Evaluación del Sistema Mexicano de Gestión del Agua; Axel Dourojeanni (Chile), Salvador Parrado (Spain), Tomás Sancho (Spain), Benjamín Cárdenas (Mexico) y Manuel González (Mexico).

Ostrom, E. (1990) *Governing the Commons: The Evolution of Institutions for Collective Action*. New York: Cambridge University Press.

Palacios, E. (1994) *La Agricultura de Riego en Mexico*. Mexico city: FAO/CNA.

Pare, L., C. Robles, et al. (2002), Participation of Indigenous and Rural People in the Construction of Developmental and Environmental Public Policies in Mexico, *IDS Bulletin* 33(2).

Peña, F. (2004). Gestion local y control estatal del agua en regiones indígenas de México in: *Los pueblos indigenas y el agua: desafios del siglo XXI*. Mexico: Colegio de San Luis (in press).

Poder Ejecutivo Federal (2001) *Plan Nacional de Desaarollo 2001-2006*. Mexico : Poder Ejecutivo Federal

Rap, E., P. Wester, et al. (2004). The politics of creating commitment: Irrigation reforms and the reconstitution of the hydraulic bureaucracy in Mexico, in J. A. Bolding and P. P. Mollinga (ed), *The politics of irrigation reforms*. In press.

Rodriguez, V. E. (1997). *Decentralization in Mexico*. Boulder: Westview Press.

SHCP and FCE (2000). *Plan Nacional Hidarulico (1975*). Mexico: IEPSA.

Van Ast, J. A. and S. P. Boot (2003), Participation in European water policy*., Physics and Chemistry of the Earth* 28, pp. 555-562.

Weiss, G. (2001), Mountain Forest Policy in Austria: A Historical Policy Analysis on Regulating a Natural Resource. *Environment and History* 7(3), pp. 335.

Wester, P. (2003). Boundaries of Consent: Stakeholder Representation in River Basin Management in Mexico and South Africa. *World Development* 31(5), pp. 797-812.

Wester, P. and J. Bron (1998), *Coping with water: water management in flood control and drainage systems in Bangladesh*. Wageningen: Wageningen Univeristy and ILRI.

World Bank (1983) *Mexico Irrigation sub-sector survey-First Stage. Improvement of operating efficiencies in existing irrigation systems. Volume I-Main Findings*. Report no. 4516-ME. Washington D.C.: World Bank.

Interviews:

- Enrique Aguilar (Consultant for the World Metereological Organisation and the CNA); Mexico City, 20th July 2004
- Eduardo Vázquez (Executive Director, Water Consultive Council); Mexico City, 16th August 2004.
- Roberto Rodríguez (Planning Manager CNA); Mexico City. Several interviews: August 2004
- Tomás Lara López (Hydraulic planning Management), Mexico city, 30 July 2004.
- Isaías López (Programming submanager in region XI); Tuxtla Gutiérrez, 15 October 2004.
- Victor Hugo Ramírez (Gerencia Regional Frontera Sur, Jefe de Proyecto Planning Submanagement), Tuxtla Gutiérrez, Mexico. Several meetings: September / October 2004
- Jose Pablos Hach (River Basin Council Management); Mexico City, 23 July 2004
- Mario López Mora (River Basin Council Management, responsible for Coast of Chiapas); Mexico City, 30 Julio 2004.
- Juan Carlos Burguete (region XI, Jefe de Proyecto River Basin Council). 14 September 2004.

- Jose Luis Arellano (CNA oficial and ex-president of the Consultive Water council for Chiapas) 14 September 2004.
- Augusto Rivera Montes (aquaculture user representative, RBCCoCh) 8 October 2004. Tapachula, Chiapas
- Carlos Nava (agriculture user representative, RBCCoCh) 10 October 2004, Tapachula, Chiapas
- Francisco Santillán (agriculture user representative, RBCCoCh) 6 October 2004, Tapachula, Chiapas
- José Alfonso Choy (livestock user representative, RBCCoCh) 6 October 2004 Tapachula, Chiapas
- Martha Zapata (agriculture user representative, RBCCoCh) 12 October 2004 Tapachula, Chiapas
- Vicente López (industrial user representative, RBCCoCh) 9 October 2004 Tapachula, Chiapas
- Wilder Humberto (public-urban representative, RBCCoCh), 9 October 2004 Tapachula, Chiapas
- Silvestre Trujillo (Zanatenco river basin manager), Several October 2004. Tonala, Chiapas
- José Aquino de Zavala (Livestock representiative in the Zanatenco's river Basin Committee), 11 October 2004. Tonalá, Chiapas
- José Eber de los Santos (President of the Surveillance Committee of Zanatenco's river Basin Committee), 12 October 2004. Tonalá, Chiapas
- María Grajales (services representiative in the Zanatenco's river Basin Committee), Not able to talk with her personally, only by phone. 10 October 2004. Tonalá, Chiapas
- Romeo de las Rosas (public-urban representiative in the Zanatenco's river Basin Committee), 12 October 2004. Tonalá, Chiapas.
- Carolina Zapata (livestock representiative in the Lagartero's river Basin Committee), 17 October 2004. Arriaga, Chiapas
- Javier de la Cruz (public-urban representiative in the Lagartero's river Basin Committee), 18 October 2004. Arriaga, Chiapas
- Julio César Laurián (Director General SAPAM-Arriaga), 16 October 2004. Arriaga, Chiapas.
- Martín Rodríguez (River basin manager for arriaga). 19 October 2004. Arriaga, Chiapas.
- Roque Pérez (livestock representiative in the Lagartero's river Basin Committee), 17 October 2004. Arriaga, Chiapas

ANNEXES *(PARTLY IN SPANISH)*

- **CHAPTER 2**

A.2.1. Central Offices Structure and its Main actions /attributions (as for 2004):

- Support the Regional and State Offices in the accomplishment of the actions necessary to obtain a sustainable water use in all regions of the country,
- Establish the national policy and hydraulic strategies,
- Integrate the institution's budget and watch its application,
- Arrange with the national and international financial organisms the credits that the Hydraulic Sector requires,
- Establish the programs to support the municipalities in the provision of potable water and sanitation in both rural and urban communities,
- Promote the efficient use of the water in the irrigation and the industry,
- Establish the policy of collection and control for water rights and discharge permissions,
- Coordinates, when required, the modifications to the National Water Law and supports its application in the country,
- Elaborating the hydraulic norms,
- Operates the national meteorological service,

and, furthermore, it maintains a solid and fruitful relation with the H. Congress of the Union, it takes care of national mass media and works with other federal dependencies to work towards actions that benefit to the Hydraulic Sector.

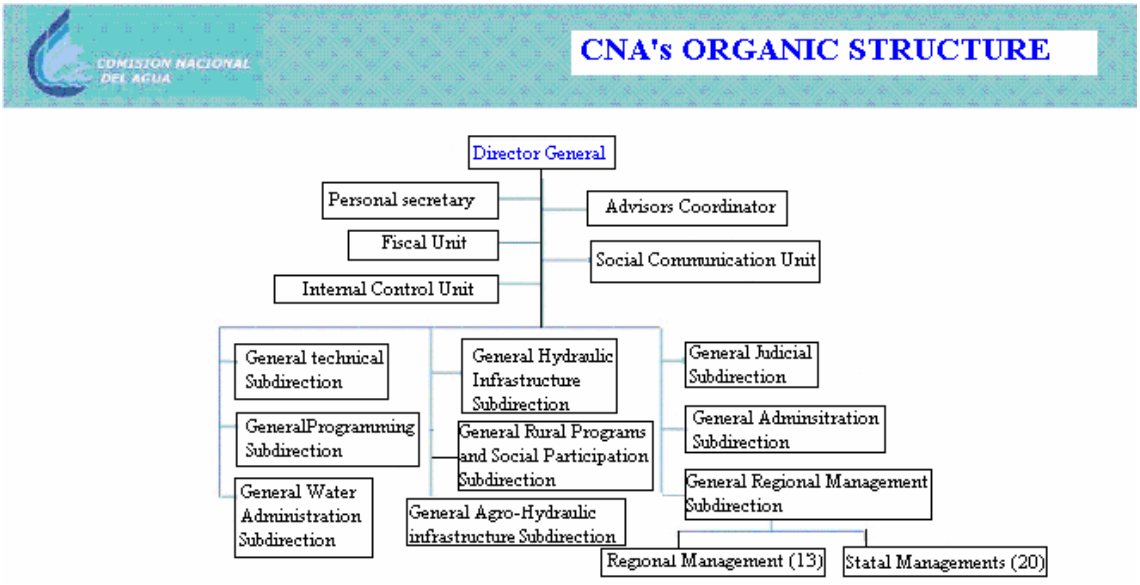


Figure A.2.1. National Waters Commission Organic Structure (CNA)

A.2.2. Regional Managements, their attributions and its structure (as for 2004):

Region Managements and their office location:

I. Baja California Peninsula (Mexicali, Baja California). II. Northwest (Hermosillo, Sonora).
III. Northern Pacific (Culiacán, Sinaloa). IV. Balsas (Cuernavaca, Morelos).
V. Southern Pacific (Oaxaca, Oaxaca): VI. River Bravo (Monterrey, Nuevo León).
VII. Central river basins of the North (Torreón, Coahuila).
VIII. Lerma Santiago Pacific (Guadalajara, Jalisco). IX. North Gulf (City Victory, Tamaulipas).
X. Gulf Center (Jalapa, Veracruz). **XI. South Border (Tuxtla Gutiérrez, Chiapas).**
XII. Yucatan Peninsula (Mérida, Yucatán).
XIII. Valley of Mexico and Sistema Cutzamala (Mexico, Federal District).

The performance of the Regional Managements is also very important, as they develop the following basic tasks:
1. Determine the regional water availability.
2. Orient the new poles of development.
3. Obtain a sustainable water use.
4. Assure aquifer preservation.
5. Guarantee superficial water quality.
6. Carry out the collection *national waters and their goods* taxes.
7. Solve water related conflicts.
8. Grant concessions, allocations and permissions.
9. Promote a culture for a good water use and its preservation.
10. Risk prevention and dealing with damages caused by floods.
11. Risk prevention and dealing with the effects of severe water shortages.
12. Operate strategic infrastructure.
In addition, Regional Managements are the bonds with the Governors in the states were their offices are located.

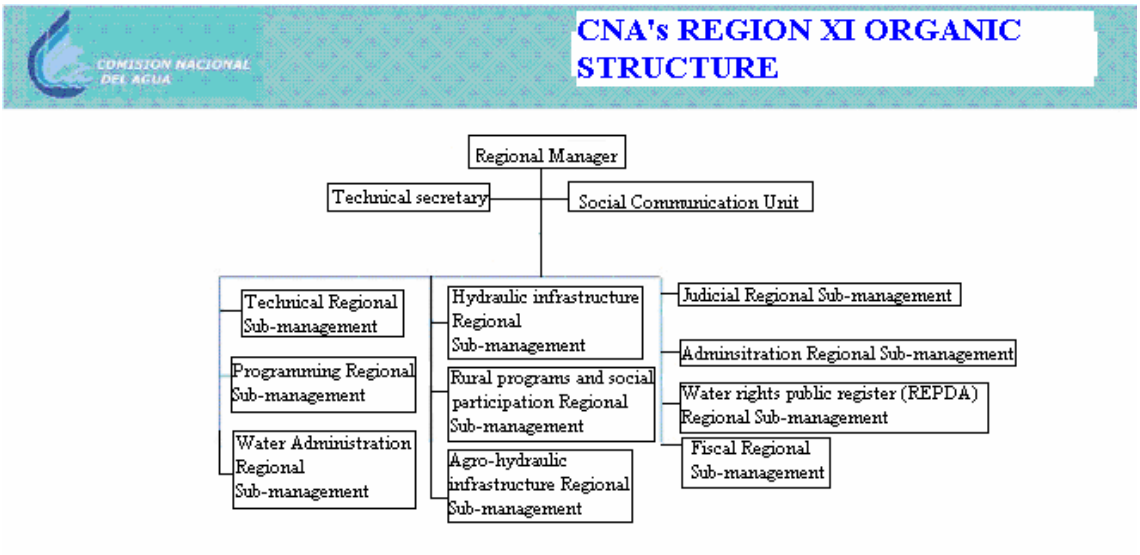


Figure A.2.2.Region XI "Southern Border" Regional Organic Structure (CNA, 2004; Administration Regional sub-management)

- **CHAPTER 3**

A.3.1. Workshops for participatory planning in region XI, Southern border: (in Spanish)

Para la formulación de los Lineamientos Estratégicos para el Desarrollo Hidráulico de la Región XI, Frontera Sur, uno de los objetivos de trabajo más importante fue lograr integrar la visión de los usuarios en torno a la producción agropecuaria, pesquera, industrial, el agua potable y alcantarillado, la contaminación, el manejo de cuencas y el desarrollo sustentable a partir de la identificación de los principales problemas y sus alternativas de solución,.

Este esfuerzo se orientó a que los usuarios y las instituciones públicas, de investigación y académicas participaran en la definición de los diagnósticos y propuestas de desarrollo a nivel subregional. De los resultados obtenidos en los talleres, y de otras fuentes, como fue el caso de las entrevistas realizadas en las subregiones donde no se realizaron reuniones de trabajo, se contó con los elementos suficientes para formular los lineamientos estratégicos con un enfoque participativo.

Esta intención se dio, desde el principio del proceso con la identificación de los principales usuarios del recurso, a los que se les convocó a talleres de planeación participativa.
La planeación participativa plantea entre sus objetivos el fortalecer la capacidad de organización social, civil y pública para planear conjuntamente el desarrollo de las regiones a partir de las "prioridades identificadas".

Para lograr un proceso de planeación completo, es necesario el transformar las "prioridades identificadas" en programas y presupuestos con las acciones de obras y servicios específicos en cada subregión. Estos deberán consensarse nuevamente, identificando claramente los compromisos y responsabilidades para la etapa de ejecución, de cada uno de los organismos participantes. La evaluación conjunta de los programas acordados servirá de soporte para iniciar una siguiente etapa de planeación, que se irá perfeccionando en cada nueva experiencia.

Las etapas realizadas de la metodología de la planeación participativa, para aportar a la formulación de los lineamientos son: la de caracterización de los usuarios, la realización de los talleres de planeación participativa para la formulación de los diagnósticos y propuestas de desarrollo regional, las reuniones para consensar los lineamientos estratégicos y las entrevistas realizadas en las subregiones donde no se llevaron reuniones. Este trabajo se puede considerar un avance importante en la desconcentración de las políticas hidráulicas y base para la promoción de los consejos de cuenca.

***Caracterization and Assembling**

Para elaborar la convocatoria a nivel de subregión se realizó una primera caracterización e identificación de usuarios, e instituciones gubernamentales con presencia regional, con el fin de contar con elementos para una selección adecuada de los invitados a participar en los talleres. Se tomaron en cuenta los siguientes criterios: que fuesen organizaciones sociales representativas de la sociedad local y regional involucradas directamente en el manejo del agua para las actividades productivas agropecuarias, pesqueras o industriales; organismos operadores del agua potable e instituciones gubernamentales y no gubernamentales involucradas en el desarrollo sustentable de las subregiones.
Para cada reunión se giraron invitaciones a través de la Gerencia Estatal de la C.N.A. en Tabasco y la Gerencia Regional XI en Chiapas. La respuesta a esta convocatoria fue muy positiva, asistiendo a los talleres la mayoría de los invitados, en total se realizaron 15 talleres con una asistencia de 635 participantes.

** Agenda during a specific session:*

1.-Presentación de objetivos y temario (Plenaria)

2.-Mecánica de trabajo en mesas: **Subjects** that were dealt with in the working groups (selected according to the profile of the participants):

- Problemática del agua en la agricultura.
- Problemática del agua en la ganadería.
- Problemática del agua en el manejo de cuencas.
- Problemática de los servicios de agua potable, alcantarillado y saneamiento.

3.-Identificación de la problemática. (Por mesa).

4.-Análisis de causas y consecuencias (Por mesa)

5.-Alternativas de Solución y acciones propuestas (Por mesas).

6.-Presentación de trabajos a la plenaria.

7.-Acuerdos y clausuras.

***Results from the workshops.**

A continuación se presentan los resultados de los 15 talleres, ordenados a partir de los problemas que presentaron mayor incidencia en el conjunto de talleres, para cada problema se mencionaron sus causas, sus efectos y las posibles alternativas de solución.

A.- Sector Agropecuario.

1.-Falta de sistemas de riego en la región.
2.-Falta de cultura de agua por parte de los productores.
3.-Falta de mercados adecuados.
4.-Pérdida de productividad de los suelos.
5.-Escasa participación de los productores en los programas institucionales de apoyo.
6.-Leyes inadecuadas a la realidad de la planicie Tabasqueña constituida por zonas inundables.

B.-Agua Potable, alcantarillado y saneamiento.

1.-Falta de agua potable y drenaje en poblados pequeños y en cabeceras municipales.
2.-Inconsciencia y dispendio en el uso del agua.
3.-Falta un censo integral de infraestructura.
4.-Deficiente servicio de alcantarillado y saneamiento en zonas urbanas y rurales.
5.-Falta de planeación a largo plazo.

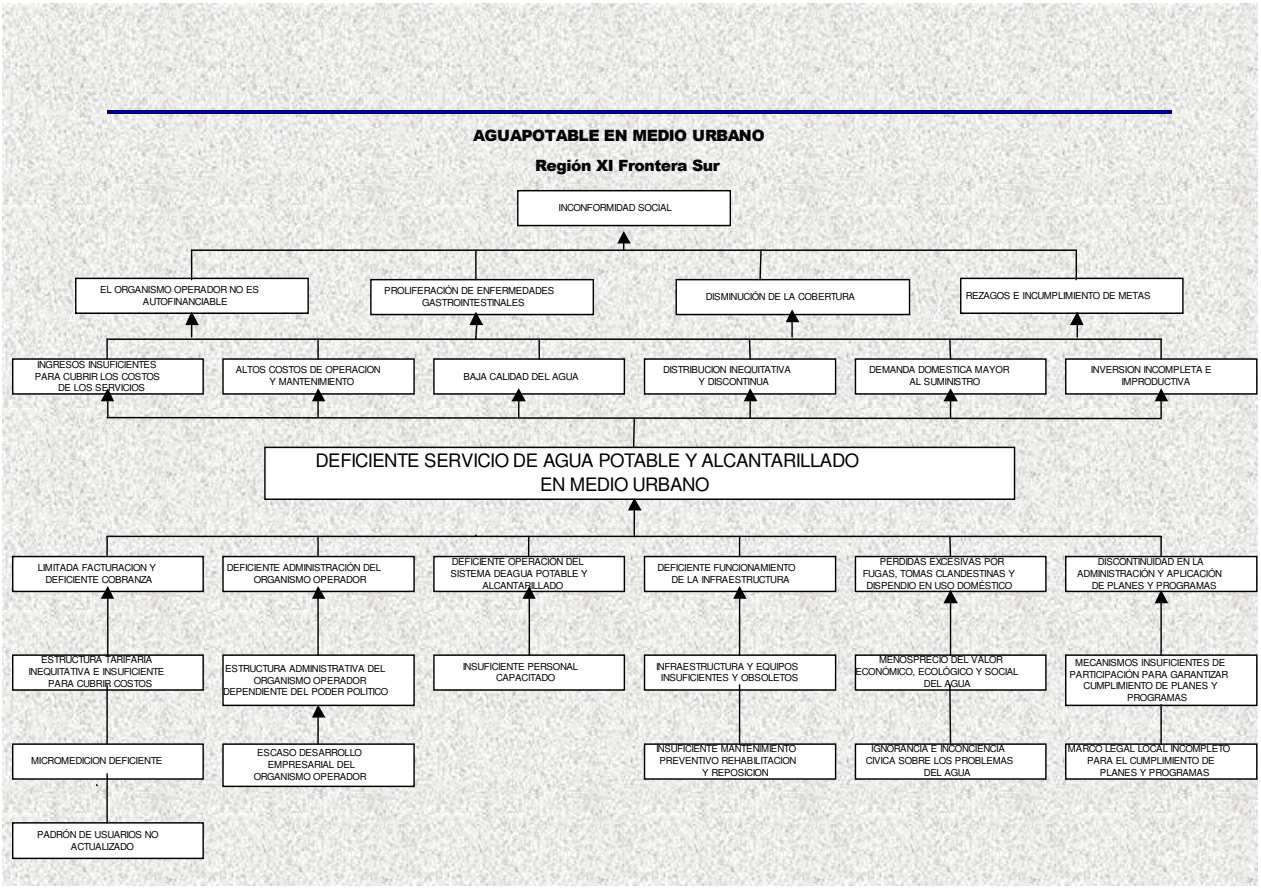
C.-Manejo de Cuencas.

1.-Impacto ambiental por contaminación de aguas, azolves, suelos erosionados y deforestación.
2.-Insuficiente administración integral de los recursos hidráulicos.
3.-Escasa cultura ecológica, planeación y participación de la sociedad en el manejo de los recursos.

Durante la realización de los talleres, se formaron, de acuerdo al método "ZOPP", los árboles de problemas que resultaron del análisis de determinada problemática, sus causas y sus consecuencias.Se analizó la problemática a nivel de subregión, a continuación, se muestran los 6 árboles considerados como generales para toda la región, así como los lineamientos y acciones sugeridas dentro de los propios talleres.

A.3.2.Results of the workshops: Diagrams *(in Spanish)*

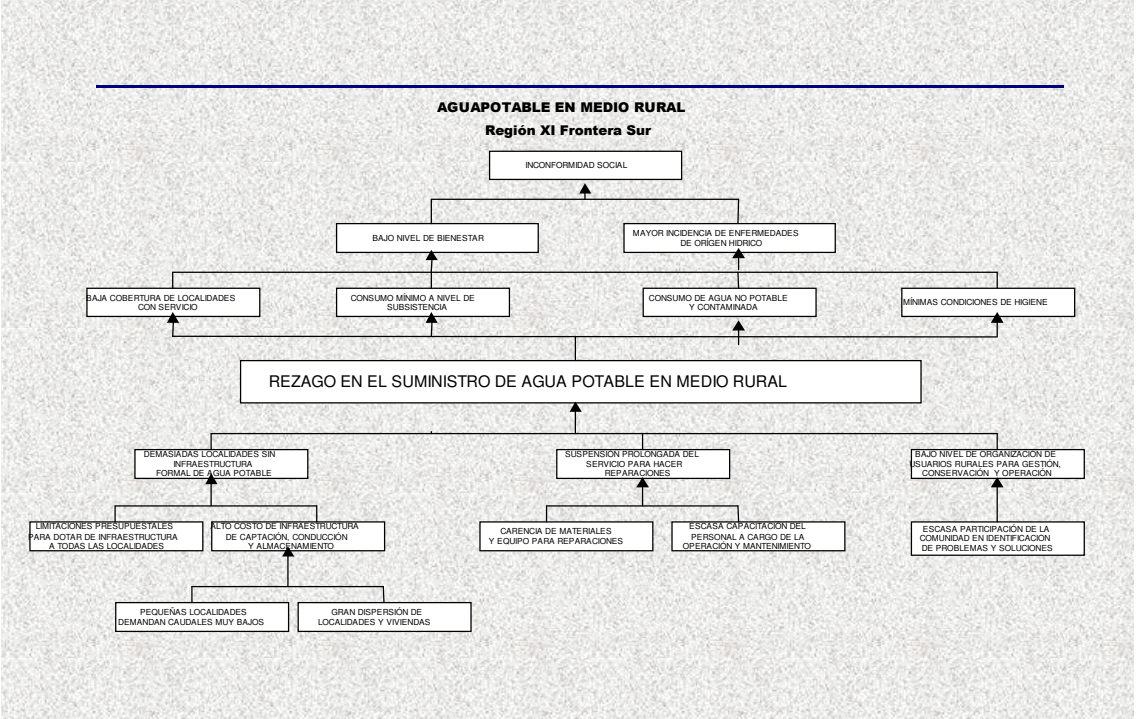
1/-AGUA POTABLE Y ALCANTARILLADO EN EL MEDIO URBANO.



OBJETIVO: LOGRAR UN EFICIENTE SERVICIO DEL AGUA POTABLE Y ALCANTARILLADO.

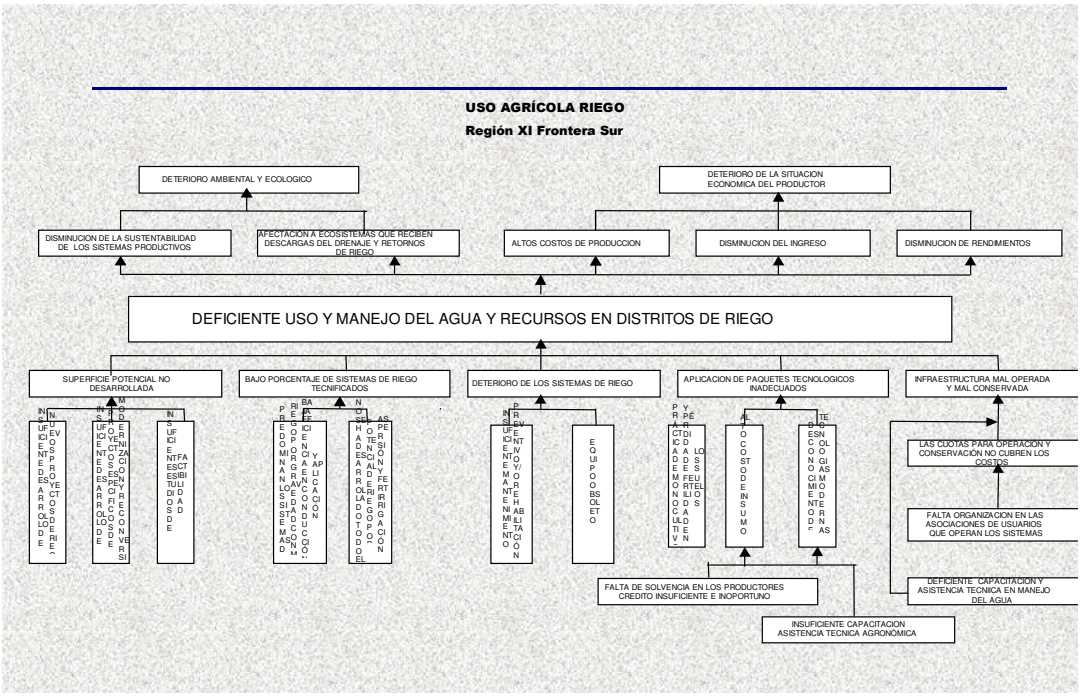
LINEAMIENTOS	ACCIONES	ORGANISMOS PARTICIPANTES	FORMAS DE PARTICIPACION
LOGRAR LA AUTOSUFICIENCIA ECONOMICA PARA CUBRIR COSTOS DE OPERACIÓN Y MANTENIMIENTO.	DINAMIZAR Y CONSOLIDAR LOS ORGANOS OPERADORES. PROMOCION Y CONSTITUCION DE CONSEJOS DE ADMINISTRACION DE LOS ORGANOS OPERADORES. * DESARROLLAR SISTEMAS ADMINISTRATIVOS Y DE PLANEACION EFICIENTES.	C.N.A. JUNTAS MUNICIPALES LOCALES U ORGANISMOS OPERADORES SIMILARES CON AMPLIA REPRESENTATIVIDAD DE LA SOCIEDAD. (GOBIERNO-SOCIEDAD)	ECONOMICA * SOCIAL
LOGRAR UN EFICIENTE FUNCIONAMIENTO DE LA INFRAESTRUCTURA Y DE OPERACION EN LOS SISTEMAS DE AGUA POTABLE.	PROMOVER E INTEGRAR ORGANOS ALTERNATIVOS CON AMPLIA REPRESENTATIVIDAD DE LA SOCIEDAD. CONSERVACION, REHABILITACIÓN DE LA INFRAESTRUCTURA HIDRAULICA. MODERNIZACION DE EQUIPO. * IMPLEMENTACION DE PROGRAMAS DE MANTENIMIENTO, PREVENTIVO, REHABILITACION Y REPOSICION DE EQUIPO.	C.N.A. ORGANOS OPERADORES. REPRESENTANTES DE LA SOCIEDAD CIVIL. INICIATIVA PRIVADA (EMPRESARIOS-INDUSTRIALES)	BENEFICIO SOCIAL ECONOMICA * GESTION

2/- AGUA POTABLE EN EL MEDIO RURAL.



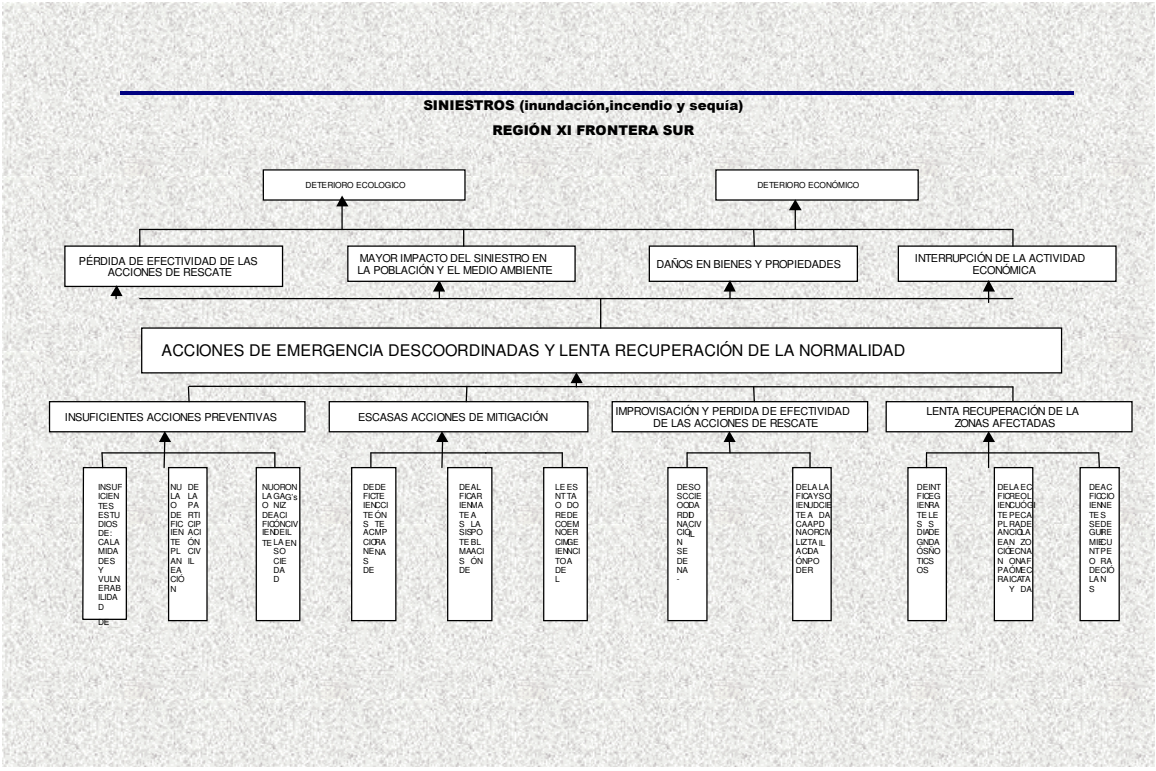
LINEMIENTOS	ACCIONES	ORGANISMOS PARTICIPANTES	FORMAS DE PARTICIPACION
OPTIMIZANDO LA INFRAESTRUCTURA EXISTENTE	DOTACION DOMICILIARIA A COMUNIDADES GRANDES Y COMPACTAS. DOTACION DE HIDRANTES PUBLICOS A COMUNIDADES PEQUEÑAS Y DISPERSAS.	ORGANISMO DESCENTRALIZADO MUNICIPAL. * ORGANIZACION COMUNITARIA	DE GESTION Y ECONOMICA. * DE BENEFICIO
MEJORAR ORGANIZACION PARA OPERAR EL SISTEMA.	CAPACITACION DEL PERSONAL A CARGO DE LA OPERACION Y MANTENIMIENTO. DOTACION DE MATERIAL Y EQUIPÒ PARA REPARACION Y MANTENIMIENTO.	* ORGANISMO DESCENTRALIZADO MUNICIPAL.	* DE EJECUCION Y DESARROLLO INSTITUCIONAL.
ORGANIZACION COMUNITARIA PARA LA OPERACION Y CONSERVACION DE LOS SISTEMAS.	PARTICIPACION EFECTIVA DE LA COMUNIDAD EN LA OPERACION Y CONSERVACION DE LOS SISTEMAS. CAPACITACION A MIEMBROS DE LA COMUNIDAD PARA EL MANEJO DE LOS SISTEMAS. * FIJACION Y COBRO DE CUOTAS SUFICIENTES PARA EL MANEJO DE LOS SISTEMAS POR COMUNIDADES.	* ORGANIZACION COMUNITARIA.	* DE BENEFICIO Y PARTICIPACION ECONOMICA.

3/- USO DE AGUA EN UNIDADES Y DISTRITOS DE RIEGO



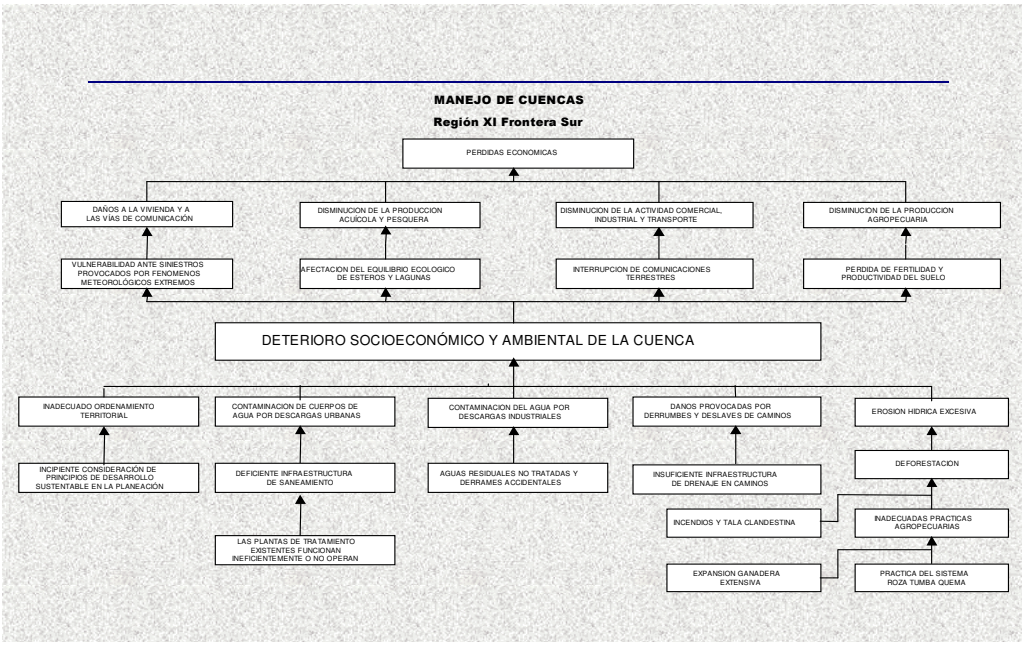
LINEAMIENTOS	ACCIONES	ORGANISMOS PARTICIPANTES	FORMAS DE PARTICIPACION
MEJORAR LA EFICIENCIA DE APROVECHAMIENTO. INCORPORACION AL RIEGO DE SUPERFICIE POTENCIAL NO DESARROLLADA.	CONSERVAR, REHABILITAR Y AMPLIAR LA INFRAESTRUCTURA HIDRAULICA. REVESTIMIENTO DE CANALES. DETENER Y REVERTIR EL DETERIORO DE LOS SISTEMAS DE RIEGO. DESARROLLAR LA CAPACITACION Y ASISTENCIA TECNICA EN MANEJO DEL AGUA. IMPULSAR EL DESARROLLO SUSTENTABLE DEL DISTRITO. DESARROLLAR INFRAESTRUCTURA EN AREAS DOMINADAS DEL DISTRITO. PROMOVER E IMPLEMENTAR ESTUDIOS Y PROYECTOS DE REHABILITACION, MODERNIZACION Y RECONVERSION DE SISTEMAS DE RIEGO. PROMOVER Y DESARROLLAR TECNOLOGIAS ALTERNATIVAS. * PROMOVER Y DESARROLLAR SISTEMAS DE RIEGO ACORDE A LA REGION PARA EFICIENTAR EL USO DEL AGUA.	DISTRITO DE RIEGO. ASOCIACIONES DE USUARIOS. INICIATIVA PRIVADA. PRODUCTORES. DEPENDENCIAS DEL SECTOR. DISTRITO DE RIEGO. SAGAR. ASOCIACIONES DE USUARIOS. * PRODUCTORES	SOCIAL. ECONOMICA. GESTION. BENEFICIO. PARTICIPACION. SOCIAL. GESTION. BENEFICIO.

4/- INUNDACIONES



LINEAMIENTOS	ACCIONES	ORGANISMOS PARTICIPANTES	FORMAS DE PARTICIPACION
REDUCIR IMPACTOS POR DESBORDAMIENTO DE RIOS E INUNDACIONES EN LA ZONA URBANA.	REALIZAR ESTUDIOS PARA DELIMITAR ZONAS FEDERALES Y DE ALTO RIESGO. REUBICACION DE ASENTAMIENTOS IRREGULARES Y EN ZONAS DE ALTO RIESGO	C.N.A. Y/O CONSEJO DE CUENCA AUTORIDADES FEDERALES ESTATALES Y/O MUNICIPALES. * POBLACION CIVIL.	GESTION. BENEFICIO. * SOCIAL.
REDUCIR IMPACTOS POR DESBORDAMIENTO DE RIOS E INUNDACIONES EN LA ZONA RURAL.	CONSTRUCCION DE BORDOS DE ENCAUSAMIENTO. RECTIFICACION DE CAUCES Y OBRAS DE PROTECCION. CONSTRUCCION DE DRENAJE EN CAMINOS.	C.N.A. Y/O CONSEJO DE CUENCA AUTORIDADES FEDERALES, ESTATALE Y MUNICIPALES. DISTRITOS DE DRENAJE Y TEMPORAL TECNIFICADO. USUARIOS.	GESTION. BENEFICIO SOCIAL. * ECONOMICA.
REDUCIR IMPACTOS POR DESBORDAMIENTO DE RIOS E INUNDACIONES EN ZONAS AGRICOLAS.	REHABILITACION DE DRENES Y CAMINOS. AMPLIACION DE LA INFRAESTRUCTURA DE DRENAJE.	C.N.A. Y/O CONSEJO DE CUENCA DISTRITOS DE DRENAJE Y TEMPORAL TECNIFICADO. AUTORIDADES FEDERALES ESTATALES Y MUNICIPALES. USUARIOS.	GESTION ECONOMICA * BENEFICIO

5/- MANEJO DE CUENCAS



LINEAMIENTOS	ACCIONES	ORGANISMOS PARTICIPANTES	FORMAS DE PARTICIPACION
DISMINUCION DE LA CONTAMINACION DE CUENCAS DE AGUA POR DESCARGAS DOMESTICAS, INDUSTRIALES Y POR AGROQUIMICOS.	CONSTRUCCION Y OPERACION EFICIENTE DE PLANTAS DE TRATAMIENTO DE AGUAS RESIDUALES, DOMESTICOS E INDUSTRIALES. ASISTENCIA TECNICA Y CAPACITACION A PRODUCTORES AGROPECUARIOS EN EL USO DE AGROQUIMICOS. SUPERVISION EN EL USO DE AGROQUIMICOS DE ACUERDO A LA NORMATIVIDAD.	ORGANISMO OPERADORES INDUSTRIALES. SAGAR. PRODUCTORES. * PROFEPA.	EJECUCION. SOCIAL. EJECUCION. BENEFICIO. EJECUCION.
CONTAR CON ADECUADO ORDENAMIENTO TERRITORIAL.	APLICACION DE LOS PRINCIPIOS DE DESARROLLO SUSTENTABLE EN LA PLANEACION DEL DESARROLLO DE LAS CUENCAS.	SEMARNAP. * USUARIOS DE LA CUENCA Y ONG'S.	EJECUCION. * GESTION.
DISMINUCION DE LA EROSION HIDRICA.	APOYO A LAS ACTIVIDADES DE REFORESTACION. ASISTENCIA TECNICA EN PRACTICAS AGROPECUARIAS DE CONSERVACION DEL SUELO. * PROMOCION DE PROGRAMAS DE OBRAS PARA CONSERVACION DEL SUELO Y AGUA.	SEMARNAP. COMUNIDADES RURALES. SAGAR. * SAGAR.	EJECUCIÓN SOCIAL. EJECUCION. * EJECUCION.

A.3.3. INTERVIEWS (Spanish)

Para completar los diagnósticos en zonas donde se tuvieron problemas para convocar a los talleres, caso concreto de las subregiones Bajo Grijalva Sierra y Lacantún – Chixoy, el proceso se apoyó en la aplicación de entrevistas a productores agropecuarios, usuarios de agua potable y representantes de las instituciones publicas en dichas subregiones. Se realizaron 10 entrevistas en la subregión Bajo Grijalva Sierra y 12 en la subregión Lacantún – Chixoy.

***Results**.- La ficha de las entrevistas se conformó con tres apartados, (manejo y uso del agua en el sector agropecuario; agua potable y saneamiento rural y manejo de cuencas), con 12 preguntas sobre los principales temas.

De los resultados para ambas regiones, se seleccionaron los **ASPECTS** mas importantes y son los siguientes:

A.- Sector Agropecuario

1.-Bajo uso del potencial de riego.

2.-Falta de fomento de productos estratégicos para el mercado nacional y regional.

3.-Falta de capacitación y asistencia técnica para el manejo de sistemas de riego por parte de los productores.

B.-Agua Potable (Rural y urbana)

1.-Baja cobertura de agua potable en el área rural.

2.-Rehabilitación y mantenimiento de los sistemas.

3.-Falta de potabilización.

C.-Manejo de Cuenca

1.-Perdida del bosque existente.

2.-Perdida del suelo productivo.

3.-Contaminación por agua residual a ríos y acuíferos.

RESULTADO DE LAS ENTREVISTAS REALIZADAS EN APOYO A LOS DIAGNÓSTICOS
SUBREGIONES BAJO GRIJALVA SIERRA Y LACANTÚN CHIXOY

	ALTOS DE CHIAPAS										LACANTÚN CHIXOY												TOTAL	PRIORIDAD
TIPO	I	I	P	P	Ì	P	P	P	I	P	I	I	P	P	P	P	I	I	I	P	P	P		
ficha	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	11	12		
PROBLEMAS USO AGROPECUARIO																								
1. Falta infraestructura para riego	X		X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	18	1
2. Falta conservación y deficiente utilización del agua		X		X				X			X	X					X			X			7	
3. Falta capacitación y asistencia técnica en riego		X	X	X		X	X			X			X	X	X	X		X	X	X	X		14	4
4. Escasa cultura de riego por parte de los productores	X				X		X	X	X		X	X											7	
5. Falta de mercados y canales de comercialización	X		X	X		X				X			X	X	X	X	X	X	X		X	X	14	4
6. Escaso impacto de los programas gubernamentales		X																		X		X	3	
7. Suelos erosionados y pérdida de productividad					X				X								X						3	
PROBLEMAS USO PARA AGUA POTABLE																								
1. Baja cobertura en programas rurales	X	X	X	X		X		X		X	X	X	X	X	X	X	X			X	X	X	17	2
2. Nulo o deficiente sistema de potabilización							X	X	X	X	X		X	X	X	X	X	X		X	X	X	14	4
3. Excesivas pérdidas y desperdicio por parte de los usuarios	X				X													X	X				4	
4. Asentamientos irregulares urbanos y rurales con problemas de servicios	X		X		X	X	X					X							X				7	
5. Deficiente mantenimiento de sistemas rurales por escasa participación social		X	X	X		X	X	X	X	X	X					X	X	X	X	X	X	X	16	3
6. Mal funcionamiento de los sistemas de a.p. y saneamiento por descapitalización		X		X	X				X			X	X	X	X								8	
PROBLEMAS DE MANEJO DE CUENCA																								
1. Deforestación excesiva	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			X		X	18	1
2. Erosión y pérdida de suelos productivos	X	X		X			X			X		X	X	X	X	X		X	X		X	X	14	4
3. Contaminación por residuos humanos, agroquímicos	X			X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			16	3
4. Falta de conciencia en manejo sustentable de recursos naturales		X	X		X	X			X		X						X	X	X		X		10	
5. Pérdida de biodiversidad em la región (flora y fauna)			X		X			X									X			X	X	X	7	

I: FUNCIONARIO O TÉCNICO DE UNA INSTITUCIÓN
P: PRODUCTOR

A.3.4. Linkage between the NHP and NDP (National development Plan)

National Hydraulic Program 2001-2006		**National Development Plan 2001-2006**			
General Objective	*Priority*	*Guiding Objective*		*Strategy*	
1 Promote efficient water use in agricultural production	2 Quality growth	2.5	Create conditions for sustainable development	2.5a	Promote sustainable natural resource use, specially the efficiency in water and energy use. .
2 Promote the enlargement of the coverage and quality of the services of potable water, sewage systems and waste water treatment.		2.2	Increase and expand the country's competitivity	2.2b	Crete infrastructure and quality public services.
3 Obtain an integrated and sustainable water management in river basin and aquifers	2 Quality growth	2.5	Create conditions for sustainable development	2.5a	Promote sustainable natural resource use, specially the efficiency in water and energy use.
4 Promote the technical, administrative and financial development of the hydraulic sector.	2 Quality growth	2.2	Increase and expand the country's competitivity	2.2b	Crete infrastructure and quality public services.
5 To consolidate user and organized society's participation in water management and to promote the culture of its good use.	1 Human and social developme nt	1.4	Stregthen the cohesion and the social capital	1.4c	Promote the participation of the social and civil organizations in the development of public policies.
6 Risk prevention and taking care of the effects of floods and droughts	3 Respect and order	3.5	Promote the statal capacityin conduting and regulating the phenomena that affect their population (according to their size, dynamics, structure and territorial distribution)	3.5c	Moving from a reactive civil protection system to a preventive one, with the corresponsibility and participation and the three governmental levels, citizenship and social and private sector.

A.3.5. Linking the NHP to the NPNRE (National program for natural resources and the environment)

	OBJECTIVES OF THE NATIONAL PROGRAMME FOR NATURAL RESOURCES AND THE ENVIRONMENT						
	1. Promote sustainable development, assuring the incorporation of an environmental variable in Statal policy; and the participation of the society in the attention of environmental subjects	2. To integrally lead the environmental and natural resources policy.	3. To stop and to revert the loss of natural capital.	4. To conserve the most representative ecosystems of the country and its biodiversity, specially the species subject to some category of protection, with the coresponsible participation of all the social sectors.	5. To stop and revert the contamination affecting those systems which maintain life (water, air and soil), with the coresponsible participation of all the social sectors.	6. To promote the citizen participation and to assure the accountability with effectiveness, efficiency and transparency..	7. To administer effective and efficiently the human resources, materials and financies assigned to the Secretariat
OBJECTIVES OF THE NATIONAL HYDRAULIC PROGRAMME							
1. Promote efficient water use in agricultural production				**X**	**X**		
2. Promote the enlargement of the coverage and quality of the services of potable water, sewage systems and waste water treatment.					**X**		
3. Obtain an integrated and sustainable water management in river basin and aquifers	**X**	**X**			**X**		
4. Promote the technical, administrative and financial development of the hydraulic sector.	**X**				**X**	**X**	**X**
5. To consolidate user and organized society's participation in water management and to promote the culture of its good use.	**X**		**X**	1.1.1.1.1.1.	**X**	**X**	
6. Risk prevention and taking care of the effects of floods and droughts			**X**		**X**		

A.3.6. CNA's Programs

OBJECTIVES	PROGRAMS
1. Promote efficient water use in agricultural production	1.1 - Conservation and operation of Irrigation districts 1.2 - Rehabilitation and modernization of irrigation districts 1.3 - Plot development in irrigation districts 1.4 - Irrigation District Enlargement 1.5 - Efficient infrastructural use in irrigation units 1.6 - Efficient water and electricity use in irrigation units 1.7 - Irrigation unit enlargement 1.8 - Operation and Conservation of dams and "head structures" 1.9 - Rehabilitation and modernization of dams and "head structures" 1.10 - Conservation and rehabilitation of temporal areas 1.11- Development of infrastructural for temporal 1.12- Organization, consolidation and technical development of the irrigation districts and technified temporal user associations
2. Promote the enlargement of the coverage and quality of the services of potable water, sewage systems and waste water treatment.	2.1- Rehabilitation of potable water, sewage and wastewater treatment systems 2.2- Disinfection of water for human consumption *(Clear Water Program*) 2.3- Infrastructure development for potable water, sewage and wastewater treatment in rural areas 2.4- Infrastructure development for potable water and wastewater treatment in urban areas 2.5- Infrastructure development for potable water and wastewater treatment in the northern border 2.6- Infrastructure development for potable water and wastewater treatment in the metropolitan area Valley of Mexico 2.7- Pesoneel Capacity-building in water utilities 2.8- Development and technology transfer for potable water, sewage and reuse supply
3. Obtain an integrated and sustainable water management in river basin and aquifers	3.1- Water Management Modernization (PROMMA) 3.2- Modernization of data monitoring systems (water quality and quantity) 3.3- Surface and groundwater availability determination 3.4- Sustainable groundwater use 3.5- Formulate national, regional, statal and sectorial hydraulic programs. 3.6- Development of Information systems of the hydraulic sector 3.7- Water Use Administration 3.8- Public Register of Water rights (Repda) 3.9- Inspection and verification
4. Promote the technical, administrative and financial development of the hydraulic sector.	4.1- Private initiatve promotion in the financing, construction and operation of hydraulic infrastructure 4.2- Collection 4.3- Loan Management and other national and international financing mechanisms 4.4- Condone previous debts (*"Cuenta nueva y borrón")* 4.5- Modernizing the legal and fiscal framework 4.6- Decentralization of federal Programs 4.7- Creation and consolidation of Statal Water Comissions 4.8- Technological Development and transfer 4.9- Personeel Capacity building *(Sicafo)* 4.10- CNA´s Integrated Information System 4.11- Innovation and quality in the CNA 4.12- Civil service *("Servicio Civil de Carrera")*
5. To consolidate user and organized society's participation in water management and to promote the culture of its good use.	5.1- Planning, integration and consolidation of River Basin Councils 5.2- Planning, integration and consolidation of Technical groundwater committees (COTAS) 5.3- Citizen Water Movement *("Movimiento Ciudadano por el Agua")* 5.4- National crusade for forests and water 5.5- Social Communication
6. Risk prevention and taking care of the effects of floods and droughts	6.1- Redesign,operation and maintenance of the metereological, hydroclimatological, geohydrological and water quality systems 6.2- Diffusion of press releases, meteorological alerts and climatological information 6.3- Installing regional forecasting centers 6.4- Formulation of prevention and flood attention plans in risky zones 6.5- infrastructure development for the protection of inhabited and productive areas 6.6- Drought Management

A.3.7. Monitoring: Goal achievement of the NHP 2001-2006 *(until 30th September 2003)*

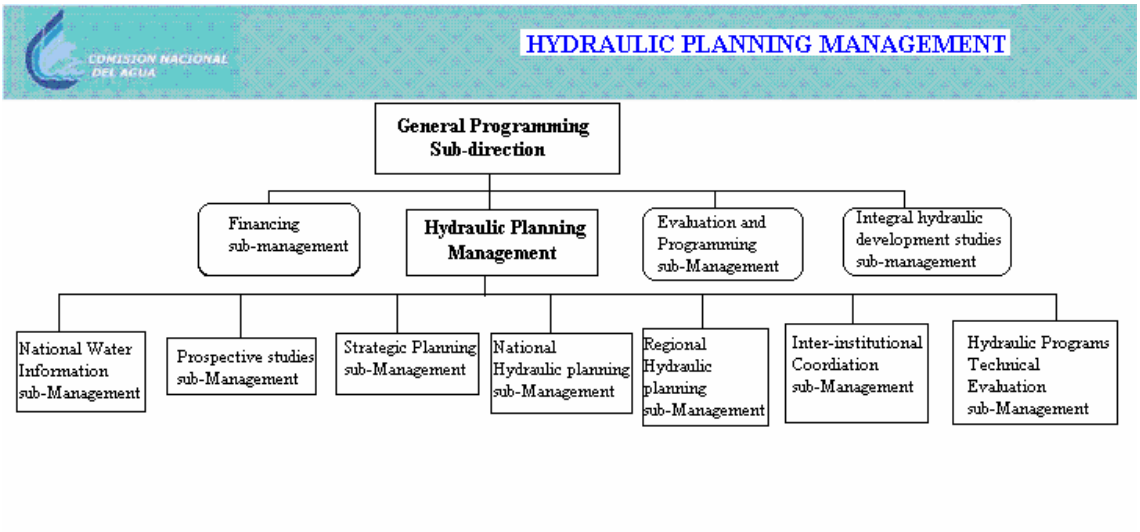
OBJECTIVES	INDICATORS	2002				2003			
		Original Goal	Modified Goal	Achieve-ment	% Achieved	Original Goal	Modified Goal	Achievement	% Achieved
1. Promote efficient water use in agricultural production	1.1 Area efficient irrigation divided by total physical irrigation area (%)[1/]	15.00	16.44	16.64	*101.22*	17.0	19.30	17.65	*91.45*
2. Promote the enlargement of the coverage and quality of the services of potable water, sewage systems and waste water treatment.	2.1 % of inhabitants in the country with potable water [1/ 2/]	88.00	89.00	89.00	*100.00*	88.0	89.30	89.00	*99.66*
	2.2 % of inhabitants in the country with sewage [1/ 2/]	77.00	76.80	76.90	*100.13*	77.00	77.00	76.90	*99.87*
	2.3 % of inhabitants of the rural areas with potable water service [1/ 2/]	69.00	69.90	69.90	*100.00*	69.00	71.00	70.60	*99.44*
3. Obtain an integrated and sustainable water management in river basin and aquifers	3.1 Volume of treated wastewater divided by Volume of total collected wastewater (%)[1/]	28.00	27.00	27.00	*100.00*	31.00	30.00	28.50	*95.00*
4. Promote the technical, administrative and financial development of the hydraulic sector.	4.1 Check that the concessions for national water use and waste water discharges are indeed used or exploited, and that the maximum allowed limits for pollutant agents are fulfilled (public use in towns >50000 inhab, industry and services)	26.00	28.00	50.16	*176.00*	44.00	78.04	69.02	*88.45*
	4.2 Amount collected by concepts of rights, aporovechaminetos, improvement contribution and taxes (millions of constant Pesos 2001)[3/]	6337.00	7354.20	7026.50	*95.54*	6,486.00	7,203.00	5,885.60	*81.71*
5. To consolidate user and organized society's participation in water management and to promote the culture of its good use.	5.1 River basin councils functioning with it's own technical and administrative autonomy	6.00	6.00	3.95	*65.83*	11.00	12.00	6.70	*55.83*
	5.2 Technical groundwater Comitees (COTAS) functioning with it's own technical and administrative autonomy	13.00	13.00	6.55	*50.38*	21.00	21.00	8.00	*38.10*
6. Risk prevention and taking care of the effects of floods and droughts	6.1 Number of inhabitants protected against floods by infrastructure construction (thousands accumulated from 2001); inhabitants who benefit from alert systems are not included[2/]	607.00	1199.30	1571.40	*131.03*	887.00	2,118.77	1,571.40	*74.17*

1/ Meta ajustada con base en los indicadores comprometidos con la Presidencia de la República en el Sistema de Evaluación y Compensación de Resultados

2/ No muestra avance respecto al trimestre anterior, sin embargo se espera cumplir con la meta al término del ejercicio.

3/ Cifras preliminares, no incluye la recaudación por concepto de distritos de riego y acueductos. El avance se reporta en precios corrientes del año en curso.

A.3.8. CNA's Planning Management



A.3.9.Mexican River basin councils, commissions and committees

Consejo de Cuenca		Región Administrativa	
Clave	Nombre	No.	Nombre
1	Baja California Sur	I	Península de Baja California
2	Baja California	I	Península de Baja California
3	Alto Noroeste	II	Noroeste
4	Ríos Yaqui y Mátape	II	Noroeste
5	Río Mayo	II	Noroeste
6	Ríos Fuerte y Sinaloa	III	Pacífico Norte
7	Ríos Mocorito al Quelite	III	Pacífico Norte
8	Ríos Presidio al San Pedro	III	Pacífico Norte
9	Río Balsas	IV	Balsas
10	Costa de Guerrero	V	Pacífico Sur
11	Costa de Oaxaca	V	Pacífico Sur
12	Río Bravo	VI	Río Bravo
13	Nazas - Aguanaval	VII	Cuencas Centrales del Norte
14	Del Altiplano	VII	Cuencas Centrales del Norte
15	Lerma - Chapala	VIII	Lerma-Santiago-Pacífico
16	Río Santiago	VIII	Lerma-Santiago-Pacífico
17	Costa Pacífico Centro	VIII	Lerma-Santiago-Pacífico
18	Ríos San Fernando-Soto la Marina	IX	Golfo Norte
19	Río Pánuco	IX	Golfo Norte
20	Ríos Tuxpan al Jamapa	X	Golfo Centro
21	Río Papaloapan	X	Golfo Centro
22	Río Coatzacoalcos	X	Golfo Centro
23	Costa de Chiapas	XI	Frontera Sur
24	Ríos Grijalva y Usumacinta	XI	Frontera Sur
25	Península de Yucatán	XII	Península de Yucatán
26	Valle de México	XIII	Aguas del Valle de México

Comisiones de Cuenca		Región Administrativa	
Clave	Nombre	No.	Nombre
02A	Río Colorado	I	Península de Baja California
12A	Río San Juan (Bravo)	VI	Río Bravo
12B	Río Conchos	VI	Río Bravo
15A	Cuenca Propia del Lago de Chapala	VIII	Lerma-Santiago-Pacífico
15B	Río Turbio	VIII	Lerma-Santiago-Pacífico
17A	Ayuquila - Armería	VIII	Lerma-Santiago-Pacífico
19A	Río San Juan (Pánuco)	IX	Golfo Norte

A.3.10. River basin council and its auxiliary organisms meetings during the period 1998-June 2001 (NHP, 2001)

Type Of Meeting	1998-2000	2001 a/	Total
River basin Council	27	0	27
User Assemblies	25	0	25
Monitoring and Evaluation Groups (GSE)	157	63	220
Specialized working groups	99	37	136
River Basin Commissions	14	10	24
River Basin Committees	3	6	9
Technical Underground Water Councils (COTAS)	43	52	95
Subtotal	368	168	536
Regional User Committees	139	34	173
Statal User Committees	740	14	754
Subtotal	879	48	927
TOTAL	1 247	216	1 463

a/ Information up to July 2001

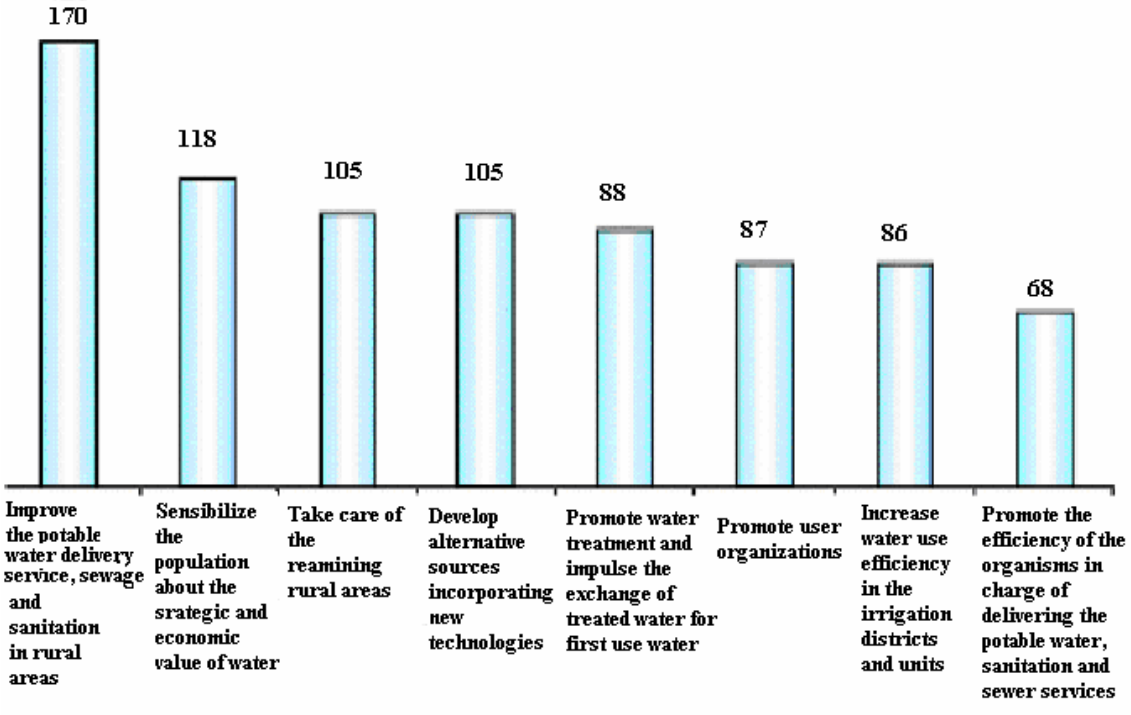
A.3.11. Forums with experts during the elaboration of the NDP and its sectorail programs (NHP, 2001)

Subject	Location	Date	Number of participant experts
1. Necessary actions to create a true good use and preservation water culture within the population	México, D.F.	13 February	26
2. Frames and actions to increase the technical and administrative efficiency of Irrigation districts and irrigation units	Mazatlán, Sinaloa	15 February	20
3. Frames and incentives to treat residual waters and impulse the exchange of treated water for first use water	Guadalajara, Jalisco	21 February	37
4. Policies and actions to confront, with better conditions, the periods of drought	Zacatecas, Zacatecas	23 February	33
5. River basin councils and COTAS consolidation	Torreón, Coahuila	27 February	29
6. Orienting economic development towards the areas with water availability	Acapulco, Guerrero	27 February	29

A.3.12. Contributions through the internet or post (NHP,2001)

Subject Number	SUBJECTS	Number of contributions
35	Potable water, sewer, electricity and pavement	413
41	Urban Development	435
51	Public Services	545
61	Agrarian Development	180
87	Agriculture	541
91	Fisheries	191
98	Water Care	791
100	Water Sources	210
101	Irrigation water administration	171

A.3.13. Main subjects identified through the **societal consultation process** (NHP,2001)



- **CHAPTER 4**

A.4.1. The OBJECTIVES for hydraulic development of the of the areas pertaining to Administrative Region XI, South border (in accordance with PND 1995-2000, PNH 1995-2000 and the Strategies of the Hydraulic Sector):

-Increase the levels of water provision to reach the average national *(idem Obj 2 of the RHP)*

- Contribute to reduce to the drawbacks and limitations in the availability of the water that unprotected social groups affect.

- To contribute to the Establishment of a solid foundation that assures sustainable socioeconomic development in the region.

- To advance in the integral sanitation of the river basins.

- To grant legal security in the right to the use of national waters and its inherent goods.

- To contribute to the transitional process towards sustainable development by means of the rationalization of the prices of the water, with economic and environmental criteria.

- To extend the channels of societal participation in the planning and water use.

- To administer the resource in an efficient way through the progressive decentralization progressive of programs and local functions to the users and authorities within the frame of the New Federalism.

- To induce patterns of efficient water in irrigation, domestic and industrial use, in order to preserve the future availability and quality of the resource.

A.4.2. STRATEGIC REGIONAL GUIDELINES: The Strategic guidelines were defined with base in the regional diagnose elaborated by the CNA in 1987-1998, enriched and agreed through participative planning workshops (with the contributions of users of the river basins).

A) Improve hydraulic resource utilization:

To obtain an efficient service of potable water and sewage system in urban means.

To reduce I leave behind in the benefit of the services of potable water and cleaning in rural means.

To obtain a use and efficient handling of the water and the resources in the irrigation districts.

To obtain a use and efficient handling of the water and resource in irrigation units.

To obtain a use and efficient handling of the water and resource in the drainage districts and technified weather.

To support to the development of marginalized rural areas.

To reduce the vulnerability of the region before extreme meteorological events.

B) Efficient water administration:

To that the residual water discharges fulfill the quality norms.

To diminish the socioeconomic and environmental deterioration of the river basins.

To reduce the negative impacts derived from the industrial activity.

To regularize the use of national waters.

To develop a system of measurement of the availability.

To watch the fulfillment of the Federal Law of Rights in the matter of water.

To develop markets of the water in subregions where there is competition by the use.

To improve the quality of the water.

To reorganize the Regional Meteorological system.

C) Modernize the organizational structure of the sector.

To disperse functions of the Administrative Regions.

To decentralize operational functions of construction

To foment the participation of the users in the hydraulic development of the river basins.

Establishment of River basin councils.

A.4.3. ACTIONS that must be executed to obtain the hydraulic development of the Region. The problems faced by the hydraulic sector, identified through the study of documentary information + institutional contributions + enriched by the contribution of users during the participation and consensus meetings lead to the identification of the actions

ACTIONS	STRATEGIC GUIDELINE		
	1	2	3
Financieras y económicas	*		
Uso eficiente del agua	*		
Prevención y protección frente a condiciones climatológicas extremas	*	*	
Acciones y obras de infraestructura	*	*	
Sistemas de medición e información	*	*	
Calidad y conservación de los recursos hidráulicos		*	
Conservación de ecosistemas		*	
Sociales			*
Capacitación y tecnología			*
Legales e institucionales		*	*

1*:Mejorar el aprovechamiento de los recursos hidráulicos. 2: Administrar el agua en forma eficiente*
3: Modernizar la estructura organizativa del sector

Table A.4.3.Actions to be executed to attain regional hydraulic development (CNA 1998,Strategic guidelines)

A.4.4. Identified programs during the strategic guidelines *(Source: Strategic guidlines,1999)*

A.4.5. Relation between the CNA programs and those suggested for region XI (Source: Strategic guidelines 1999)

		PROGRAMAS PROPUESTOS PARA LA REGION XI, FRONTERA SUR										
		1	2	3	4	5	6	7	8	9	10	11
PROGRAMAS CNA		Planeación	Administra-ción del agua	Concientiza-ción pública y participa-ción ciudadana	Investiga-ción y desarrollo tecnológico	Sistema integral de medición e información	Agua potable y alcantarillado en el medio urbano	Agua potable y saneamien-to en zonas rurales	Uso y manejo eficiente del agua en la agricultura y ganadería	Abastecimi-ento de agua para actividades productivas en areas marginadas	Detención del deterioro en cuencas hidrológicas	Reducción de la vulnerabilidad ante fenómenos meteorologi-cos extremos
1	Agua potable, alcantarillado y saneamiento en zonas urbanas						●				●	
2	Suministro de agua y saneamiento a comunidades rurales				●			●				
3	Rehabilitación y modernización de distritos de riego								●			
4	Uso eficiente del agua y la energía								●			
5	Uso pleno de la infraestructura hidráulica								●			
6	Incremento de superficies de Riego yTemporal tecnificado								●			
7	Control de inundaciones											●
8	Sequías											●
9	Seguridad de presas											●
10	Programa de administración del agua		●									
11	Programas de modernización del manejo del agua (PROMMA)	●			●	●			●			
12	Desconcentración		●	●								
13	Descentralización		●	●								
14	Participación del usuario			●								
15	Capacitación		●									

Programas no contemplados específicamenmte en la estructura programática actual
Programas cuyo alcance rebasa a las responsabilidades y atribuciones de la CNA

A.4.6. OBJECT of the river basin Coast of Chiapas: "Formulate and execute programs and actions that improve national water's administration, the development of hydraulic infrastructure and the preservation of the river basin resources, according to the norms, principles and objectives that the Law on National Waters and it's Regulation establish"
5 SPECIFIC OBJECTIVES of the river basin council Coast of Chiapas: (see installation act)

A.4.7. Chronological Summary of the **meetings that have taken place within the River basin council** "Coast of Chiapas" (including location)

River Basin Council	Installation	Tapachula, Chiapas	26 Enero 2000
Monitoring and Evlaution Group (GSE)	Installation and 1st	Tapachula, Chiapas	26th January **2000**
	2nd		23rd February 2000
	3rd		24th March 2000
	4th		27th April 2000
	5th		26th May 2000
	6th		23rd June 2000
	7th		28th July 2000
	8th		29th September 2000
	9th		24th November 2000
	10th		23rd de February **2001**
	11th		11th May 2001
	12th		13th July 2001
	13th		21st September 2001
	14th		11th December 2001
	15th	Tonalá, Chipas	30th May **2002**
	16th	Tapachula, Chiapas	15th May **2003**
	17th		9th July 2003
	Extraordinary Session	Arriaga, Chiapas.	11th September 2003
	18th	Tapachula, Chiapas.	(Minutes not available)22nd September 2003
	Extraordinary Session		16th December 2003
	19th		29th July **2004**
Specialized working groups			
1. Sanitation and water quality.	1st	Sala de Juntas de COAPATAP, Tapachula,	25th June 01
	2nd		9th August 01
	3rd		12th September 01
	4th		05 December 01
	5th		20th February 02
2. Regional hydraulic Program.	1st	Tapachula, Chis.	26th June 01
	2nd		10th August 01
	3rd		12th September 01
	4th		05th December 01
	5th		19th February 02
3. River basin conservation	1st	Tapachula, Chiapas	25th June 01
	2nd		06th July 01
	3rd		9th August 01
	4th		12th September 01
	5th		05th December 01
	6th		19th February 02
	Workshop (Fase campo)	Tapachula, Huehuetán, Pijijiapan, Tonalá, Chiapas.	18-19 August 03
	7th	Arriaga, Chiapas.	29 August 03
	Course	Tapachula, Chiapas.	20-24 October 03.
4. Promotion, computer systems and water culture	1st	Tapachula, Chiapas	26th June 01
	2nd		10th August 01
	3rd		11th September 01
	4th		19th February 02

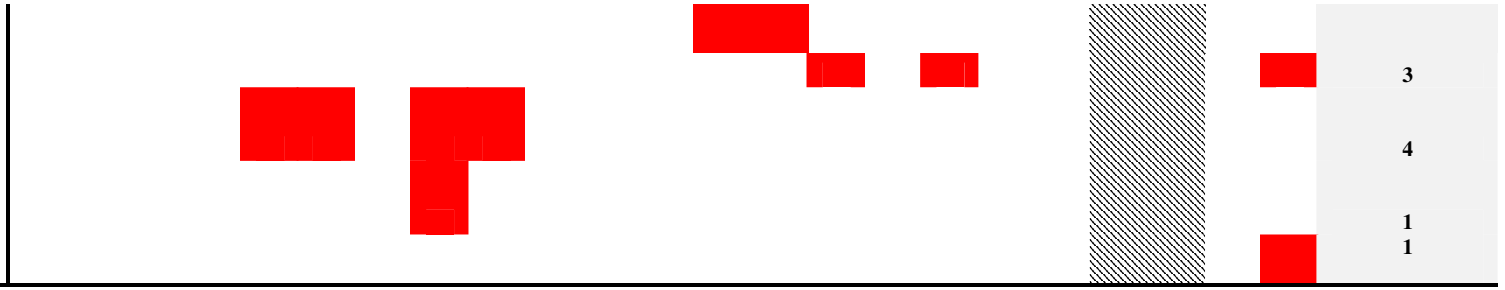
A.4.8. Table presenting the GSE meeting assistance by the different user representatives and governmental institutions (federal, statal and municipal) (Source: Analysis of the 18th of the 19th minutes, assistance was not double-checked with the signatures, we assume the minutes are precise and contain the true information on the participants attending certain meetings.)

* = Extraordinary Session + = Working Session - = Minutes not available	Tapachulla, Chiapas															To	Tapchula Chiapas		Ar	Tapachul a, Chiapas.				TOTAL ATTENDANCE (outof 21: 18 ordinary, 1 extra and 2 working sess)
	1st	2nd	3rd	4th	5th	6th	7th	+	8th	9th	10th	11th	12th	13th	14th	15th	16th	17th	*	18th	*	+	19th	
PARTICIPANTS:	26/1/00	23/2/00	24/3/00	27/4/00	26/5/00	23/6/00	28/7/00	24/8/00	29/9/00	24/11/00	23/02/01	11/5/01	13/7/01	21/9/01	11/12/01	30/05/**02**	15/05/03	9/7/03	11/9/03	22/09/03	16/12/03	20/02/04	29/07/04	
*USERS																								
AGRICULTURE																								
Martha Zapata (Users Representative)																								**19**
Carlos Nava (Replacement)																								**3**
Francisco Santillán (Users Representative)																								**18**
? (Replacement)																								
OTHER Participants																								
Agro-silvicultural Association of Chiapas																								**1**
Coatancito Irrigation Users																								**1**
COMCAFE																								**2**
Union Los Olivos de Mapastepec																								**1**
INDUSTRIAL																								
Rafael Aguirre (Users Representative)																								**15**
Vicente Lopez (Replacement)																								**19**
OTHER Participants																								
Moscamed																								**1**
Sugar Cane Ranch																								**1**
PUBLIC-URBAN																								
Natanael Ramirez (1st Users Representative)																								**2**
Luis Arturo Arévalo (Replacement)																								**2**
Edmundo de Jesús (Replacement)																								**13**
Gil Lázaro (2nd Users																								**6**

	Representative)	
Didier Vázquez	(3rd Users Representative)	**4**
José Jesús Domínguez	(4th Users Representative)	**2**
Rafael Camacho	(Replacement)	**6**
Isaac Alberto Rojas	(5th Users Representative)	**2**
Wilder Humberto	(6th User Representative)	**1**
OTHER Participants		
SAPAM Tuxtla Chico		**2**
SAPAM Cacahoatán		**1**
SAPAM Mapastepec		**2**
SAPAM Tonalá		**2**
SAPAM Huixtla		**1**
SAPAM Pijijiapan		**1**
LIVESTOCK		
José Alfonso Choy	(Users Representative)	**20**
?		
OTHER Participants		
José Lázaro	(substituting José Alonso)	**2**
AQUACULTURE		
Mario Ramón Becerra	(1st Users Representative)	**10**
?	(Replacement)	
Carlota Martínez	(2nd Users Representative)	**9**
Augusto Rivera Montes	(Replacement)	**4**
OTHER Participants		
Lisandro Fuentes		**1**
Abel Miranda		**1**
<u>TECHNICAL SECRETARY</u>		
Jose Adame de León		**9**
Jorge Malagón Díaz		**6**
Adán Palavicini		**5**
<u>PRESIDENT RIVER BASIN</u>		


COUNCIL
Guillermo Villalobos (president)
Santiago Pinzón (presidential replacement)
1
FEDERAL DEPENDENCIES
(Central level) CNA
River basin council (management)-mostly Mario Lopez Mora
20
Programming or planning (Sub direction or Management)
3
Other
(regional level) CNA
Rural programs and social participation (sub-maangement)
21
Programming (sub management)
19
Other
16
DTT 017 responsible
8
SAGAR (afterwards) SAGARPA
18
FIRCO
SEMARNAT
Personeel from the Nature reserves
11
Other delegates
15
CONAFOR
6
PROFEPA
5
SSA
4
SECTUR
3
STATAL DEPENDENCIES
Governamental representatives:
CEAS
16
SERNy P (after IHNE)
16
Other Statal Institutions
SAG (after SDR)
14
SEDESOL
1
SD Pesca
6
Splaneación
3
SEOP
1

	SDEconomía	**2**
	SECH Comsion Caminos	**2**
		2
MUNICIPAL GOVERMENT	(president or representative)	
Tonala		**4**
Arriaga		**5**
Pijijiapan		**5**
Tapachula		**4**
Huehuetan		**2**
Motozintla		**1**
Escuintla		**1**
Mapastepec		**1**
San Pedro Tapanatepec (Oaxaca)		**1**
GUESTS		
Universities		
	ECOSUR	**12**
	UNACh	**11**
	Colegio Ingenioros Civiles	**1**
	Instituto de Estudios de Postgrado	**1**
	TEC de Tapachula	
	INIFAP	**1**
	UNICACh	**1**
	Chapingo	**1**
Organizations	PRODUCE Foundation (Carlos Renovales)	**12**
	Statal Water Consultive Council (NGO)	**1**
	CILA	**9**
	PRONATURA (NGO)	**5**
	Asociacion	**2**

	egresados del IPN		
	UICN		3
	Asociación civil "el ciguenyo"		4
	Sociedad de historia naural del Soconusco		1
Constructora Montebello			1

CHAPTER 5

A.5.1. Details on the installation acts of the 2 studied River basin committees in the Coast of Chiapas

	ZANATENCO	**LAGARTERO**
Installation agreed by the RBCCoCh	30 May 2002 (GES XV)	9 July 03 (GSE XVII)
Designation of representatives	July 2002	January- August 2003
Installation Act	**23 August 2002**	**11 September 2003**
Object	The three committees have the same object, to constitute forums for the integral management of the hydraulic resource and objective coordination and concertation of: Input, policies, programs, projects and specific actions in hydraulic issues, in its territorial scope in accordance with the norms and principles of the LAN and their regulation, in everything which is not of exclusive competence of the CNA, having like specific objectives the following ones: a) To promote: - the improvement of the quality of the water in the river basin causing its cleaning - the ordering and regulation of the uses of the water - the handling and integral management of the river basin and preservation of its natural resources b) Improve efficiency of the present water uses c) Contribute to the improvement of the education and the culture of the society in relation to the importance of the water and natural resources d) Participate in the conflict resolution associated to the competition between uses and inherent users of the water and their goods.	
Session	- Minimum every two months (summoned by the Technical Secretary) - They will consider, analyze and define general guidelines and specific measures for the river basin issues. - Agreements are approved by majority - The technical secretary will write the act of agreements for each meeting. This needs to be subscribed by all the members that are properly credited by the CNA.	
Agreements	In the constitution act it was agreed that: a) To constitute and to install the respective committees and committing its members to promote and to execute the programs and actions that emanate of the same one. b) Formulate a general program of activities (the instrumentation and pursuit will be responsibility of the Committee). c) Promote and to watch the application of *Ordenamiento Territorial Ecologico* (OET) d) Inform the GSE e) (only in Lagartero) To define the operation of the *River basin Management* for the Lagartero river (as a technical space helping the development and consolidation of the Committee...,in order to fulfill the objectives, functions and attributions indicated in the present act and the known normativity)	

A.5.2. Articles in the Chiapas Statal Law regulating the Consultive Council. (in Spanish)

ARTICULO 42.-

EL ORGANISMO OPERADOR CONTARA CON UN CONSEJO CONSULTIVO
COMO ORGANO COLEGIADO DE APOYO Y AUXILIO PARA LA REALIZACION DE SUS OBJETIVOS.

EL CONSEJO CONSULTIVO SE INTEGRARA Y SESIONARA CON EL NUMERO DE MIEMBROS Y EN LA FORMA QUE SE SEÑALE EN EL REGLAMENTO INTERIOR DEL ORGANISMO OPERADOR, DEBIENDO EN TODO CASO ESTAR LAS PRINCIPALES ORGANIZACIONES REPRESENTATIVAS DE LOS SECTORES SOCIAL Y PRIVADO DE LOS USUARIOS DE LOS SERVICIOS DE AGUA POTABLE Y ALCANTARILLADO DEL MUNICIPIO.

EL ORGANISMO OPERADOR PROPORCIONARA LOS ELEMENTOS NECESARIOS PARA QUE SE INTEGRE EL CONSEJO CONSULTIVO Y CUIDARA QUE SESIONE EN LA FORMA Y TERMINOS QUE INDIQUE EL MENCIONADO REGLAMENTO INTERIOR.
NO PODRAN FORMAR PARTE DEL CONSEJO CONSULTIVO, FUNCIONARIOS O EMPLEADOS DEL ORGANISMO OPERADOR, O SERVIDORES PUBLICOS DEL ESTADO O DE LOS MUNICIPIOS.

LOS MIEMBROS DEL CONSEJO CONSULTIVO DESIGNARAN DEMOCRATICAMENTE ENTRE ELLOS A UN PRESIDENTE QUIEN REPRESENTARA AL CONSEJO CONSULTIVO Y A LOS USUARIOS EN LA JUNTA DE GOBIERNO DEL ORGANISMO OPERADOR, ASI TAMBIEN SE DESIGNARA A UN VICEPRESIDENTE QUIEN LO PODRA SUPLIR.

EL PRESIDENTE Y EL VICEPRESIDENTE DURARAN UN AÑO EN SUS CARGOS, SIN POSIBILIDAD DE REELECCION INMEDIATA.

ARTICULO 43 .-

EL CONSEJO CONSULTIVO TENDRA POR OBJETO:

I.- HACER PARTICIPE A LOS USUARIOS EN LA OPERACION DEL ORGANISMO OPERADOR, HACIENDO LAS OBSERVACIONES Y RECOMENDACIONES PARA SU FUNCIONAMIENTO EFICIENTE, EFICAZ Y ECONOMICO;

II.- CONOCER LAS TARIFAS O CUOTAS Y SUS MODIFICACIONES HACIENDO LAS PROPUESTAS, OBSERVACIONES Y SUGERENCIAS DEL CASO;

III.- OPINAR SOBRE LOS RESULTADOS DEL ORGANISMO OPERADOR;

IV.- PROPONER MECANISMOS FINANCIEROS O CREDITICIOS;

V.- COADYUVAR PARA MEJORAR LA SITUACION FINANCIERA DEL ORGANISMO OPERADOR;

VI.- PROMOVER ENTRE LOS USUARIOS EL USO EFICIENTE DEL AGUA Y EL CUMPLIMIENTO DE SUS OBLIGACIONES; Y

VII.- LAS DEMAS QUE SEÑALE ESTA LEY Y SU REGLAMENTO, ASI COMO EL REGLAMENTO INTERNO DEL ORGANISMO.