CONAGUA
Comisión Nacional del Agua

National adaptation planning and practices on water resources from Mexican perspective

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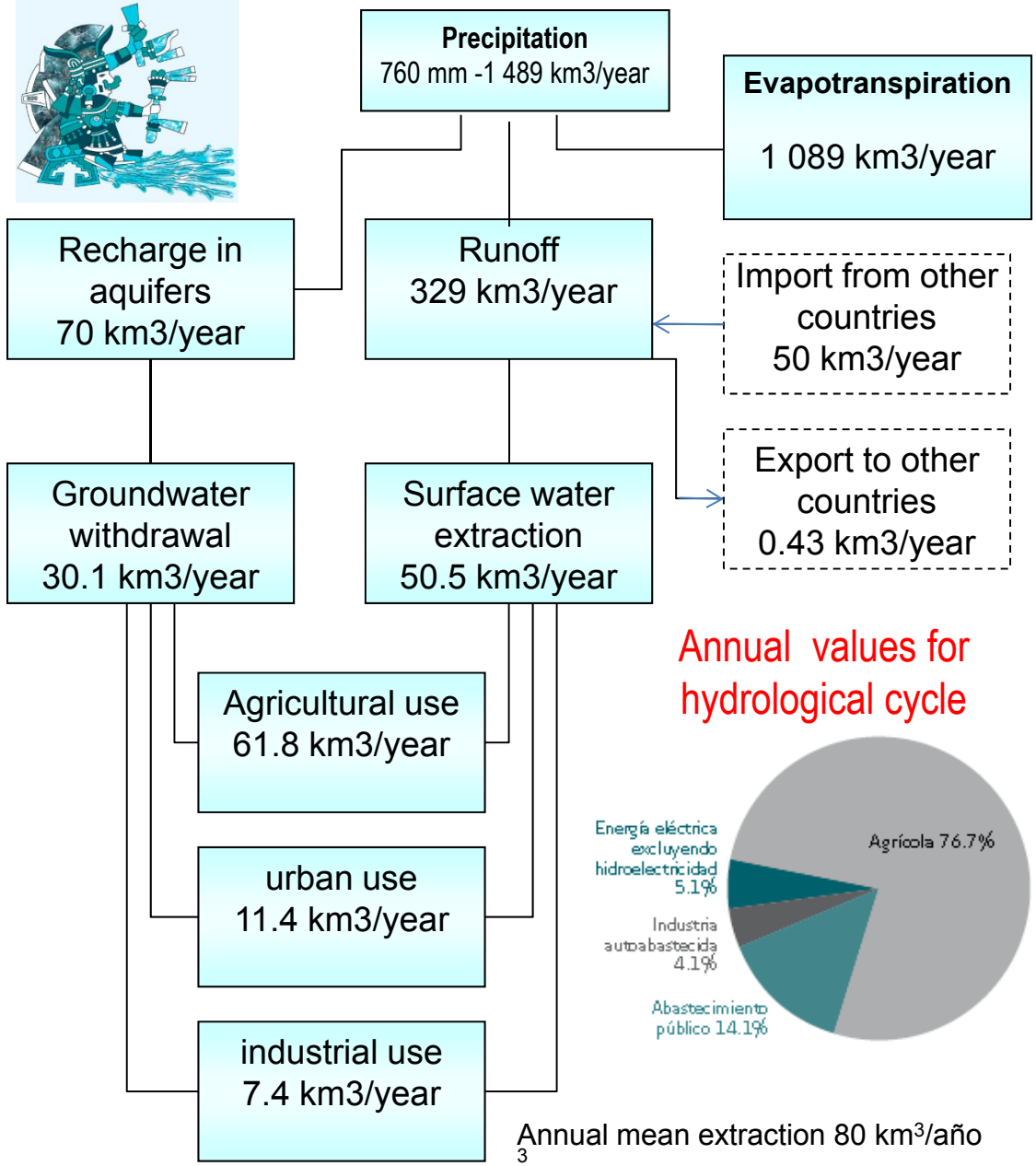
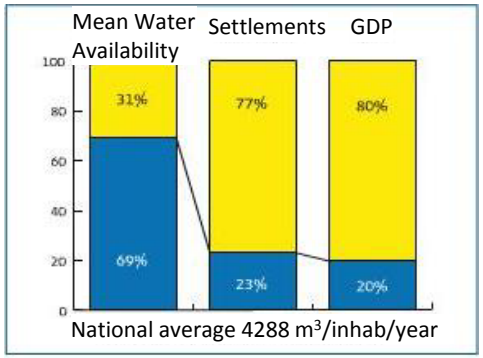
UNFCCC technical workshop on
water and climate change impacts and adaptation strategies
under the Nairobi work programme
on impacts, vulnerability and adaptation to climate change
18-20 July 2012, Mexico City, Mexico

Mexico and its hydrological cycle

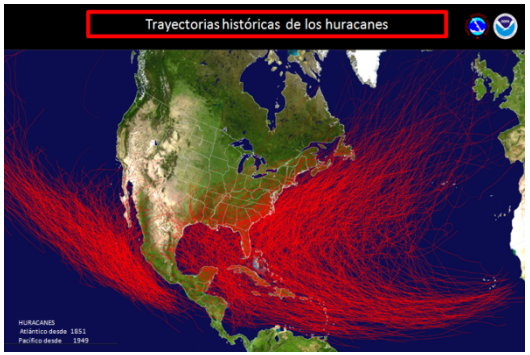
- **1.964 million of km²**
- **112.3 millons of inhab**
- **1.4 % annual growing rate**
- **78 % of inhabitants in urban localities**
- **187 938 localities with less than 2500 inhabitants**
- **Average natural availability: 4547 m³/inhab/year**



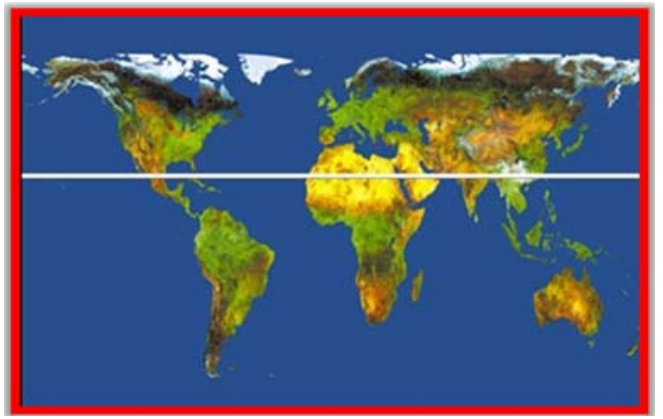
Climate Change Vulnerability of Mexico



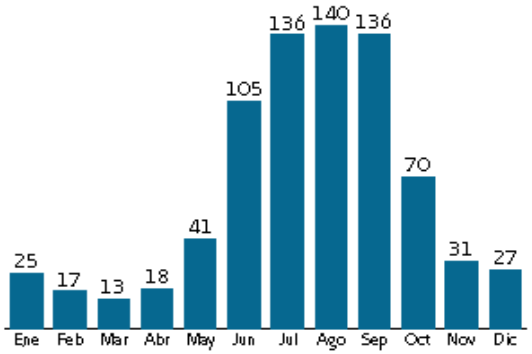
Water, population, GDP



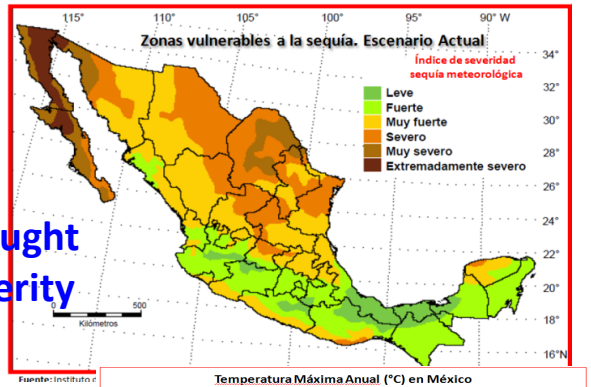
Coastal extension: 11,122 km



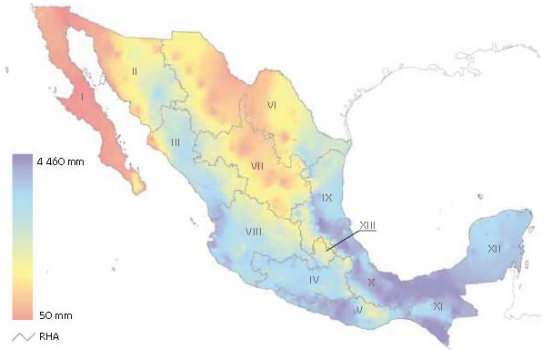
World Desserts between 25°-35°



Monthly rainfall distribution

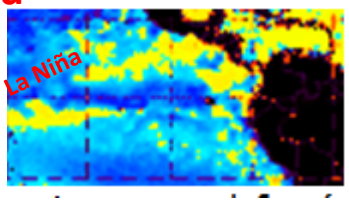


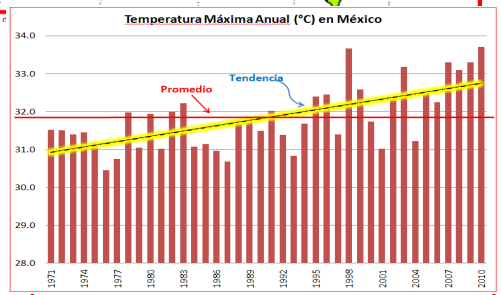
Drought severity



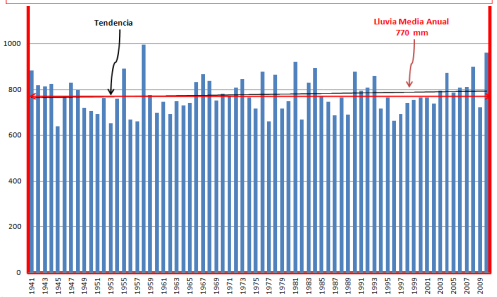
Spatial rainfall distribution

More frequent El Niño -La Niña phenomena



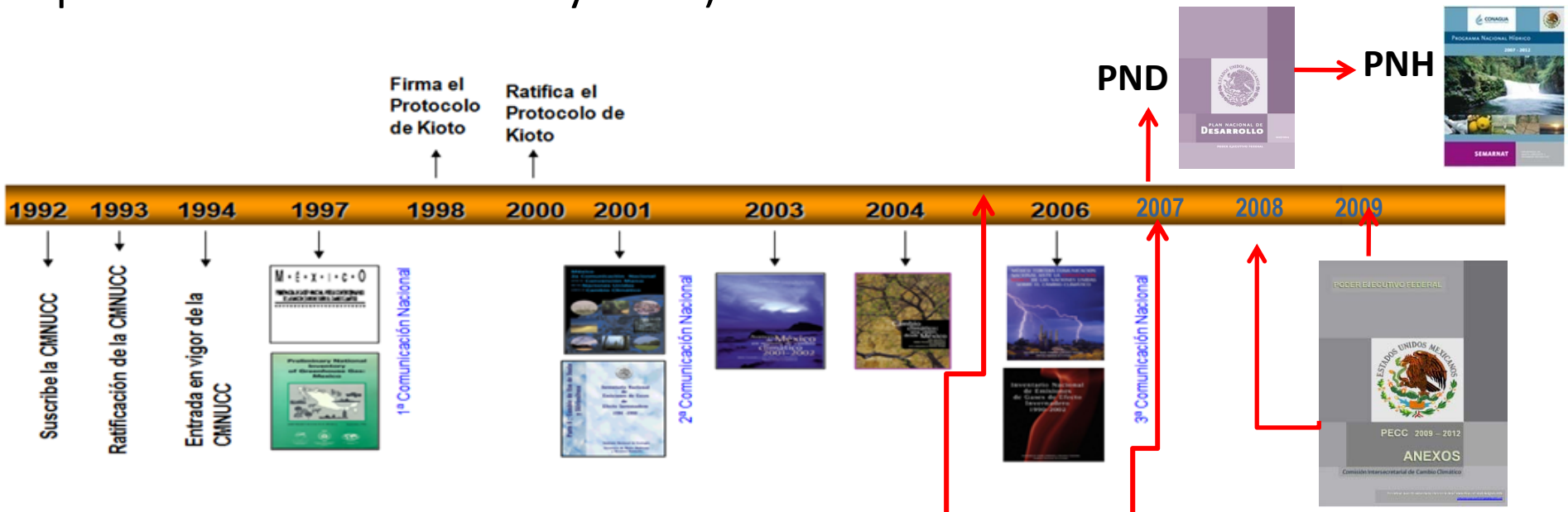


Increases in Temperature and rainfall



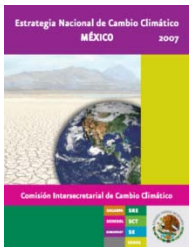
TIME LINE

Mexico has been participating to face CC challenges. Since **1992** when Mexico signed the United Nations Framework for Climate Change, we assumed the target for 2050: **reducing in 50%** the GHG emmisions (with respect to those emmited by 2000).



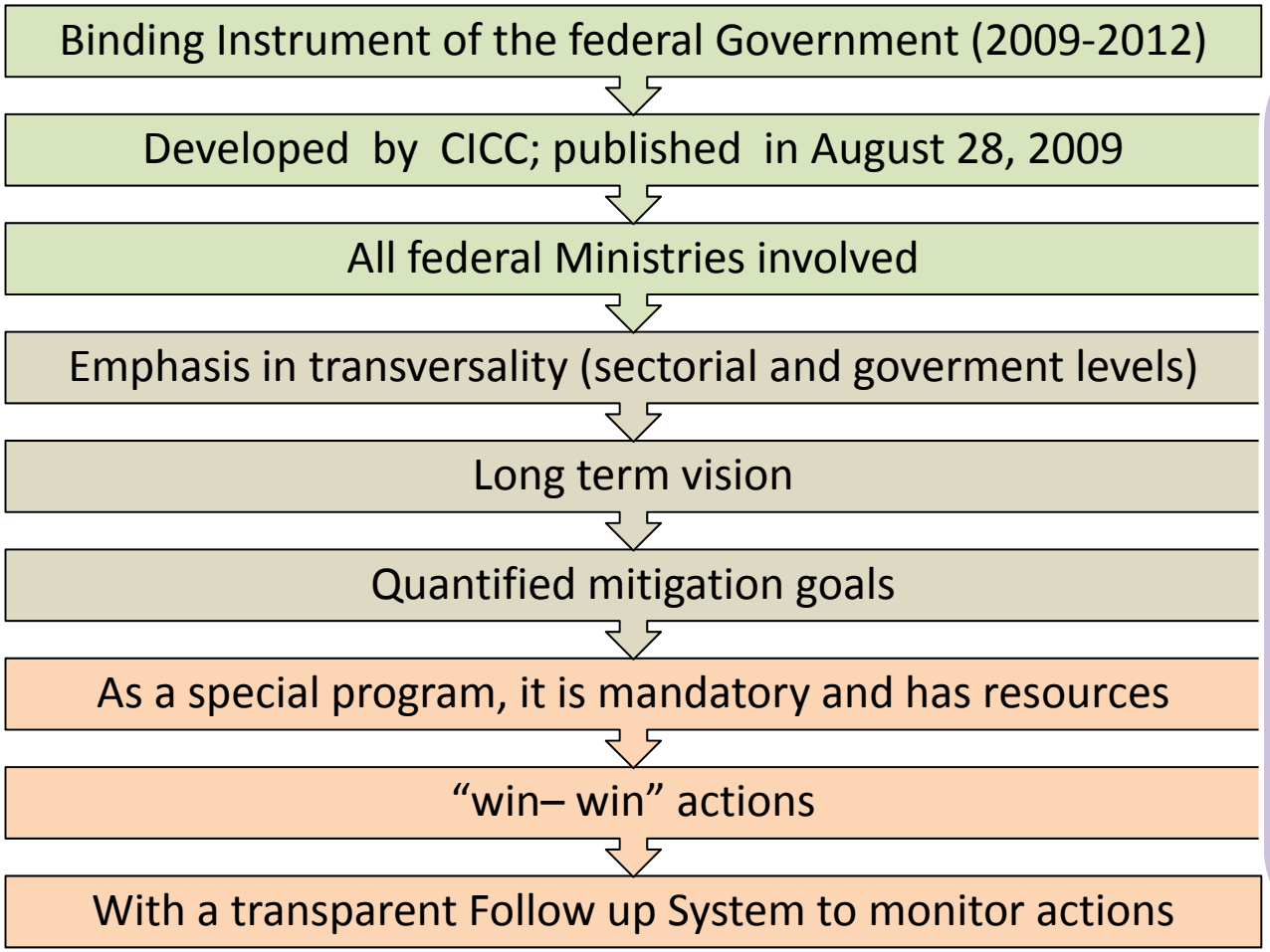
Mexico´s Official Gazette of the Federation published (April 25, 2005) the agreement establishing the permanent Interministerial Commission on Climate Change (CICC) of Mexico.

Climate Change Special Program 2009-2012



CICC created the National Strategy for Climate Change (ENACC) in May 2007, Influencing the National Development Plan PND and, hence the National Water Program PNH

Climate Change Special Program



SIAT-PECC

System v.01

- **Follow up system of the 297 goals:**

86 for mitigation;

142 for adaptation and 66 cross goals.

(35 correspond to CONAGUA).

National Strategy for Water Resources & Climate Change (**NSWR&CC**)

The **National Development Plan 2007-2012** set sustainability as a cross-cutting axis among public policies in México. Two highlighted objectives: mitigation and adaptation.

The Climate Change Special Program (**PECC**) was integrated on four components of a comprehensive policy:

1. Long-term
2. mitigation
3. Adaptation, and
4. Cross elements for policies.

The 2050 vision of PECC includes three stages:

1st (2008 to 2012): To assess vulnerability and costs of priority actions.

2nd (2013 to 2030): Strengthening adaptive capacities.

3rd (2031 to 2050): maturation of capacities.

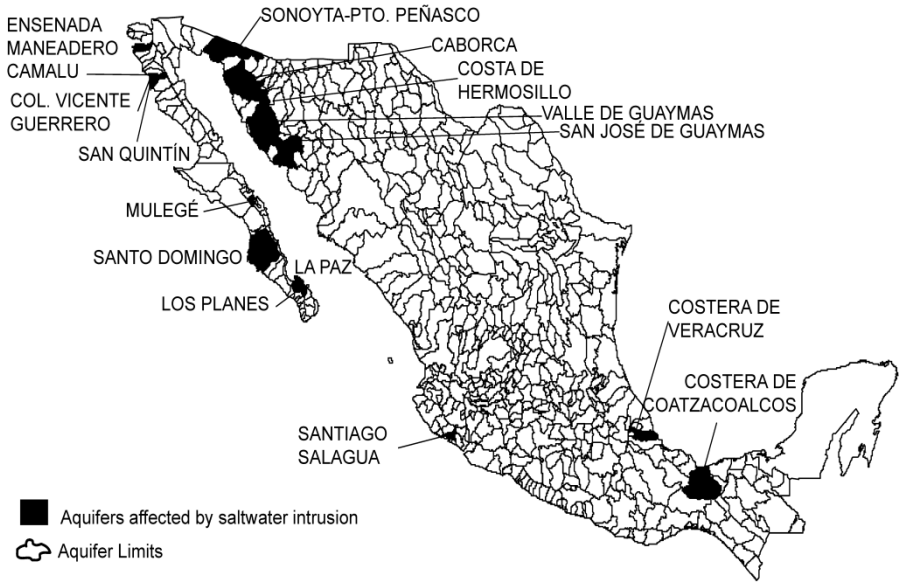
The strategies and goals of the new National Water Plan (**PNH 2013-2018)** should be consistent with the long-term purpose Water Agenda (**AA2030**).

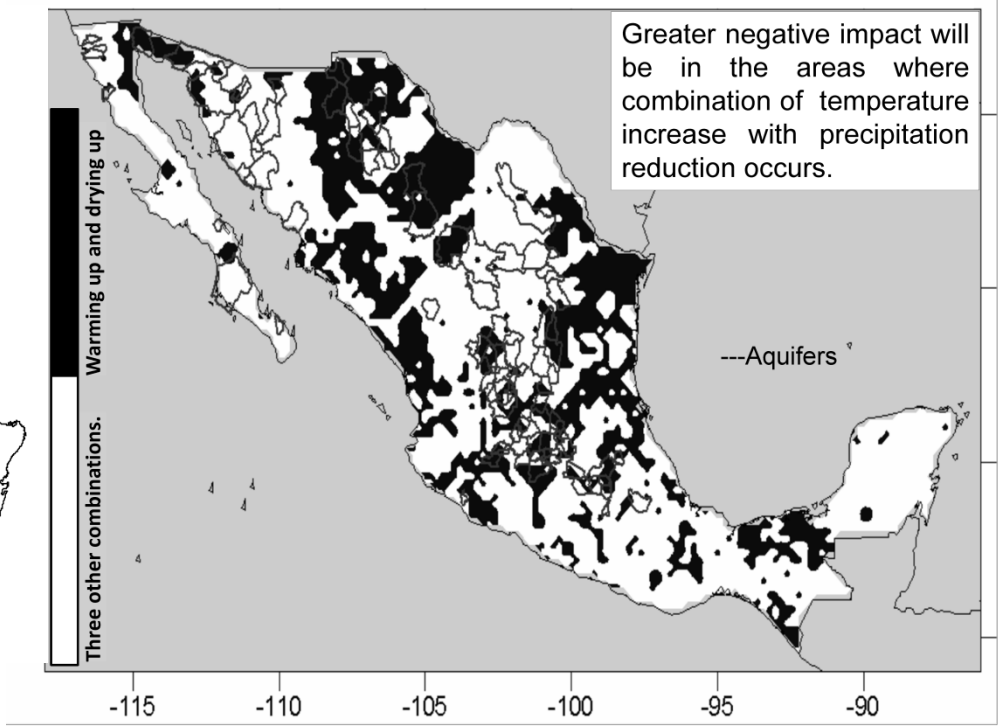
Emphasis of the NSWR&CC

1. To incorpore it into the Integrated Water Resources approach(IWRM).
2. Many of the Climate Change effects will show through the hydrological cycle.
3. Poverty groups are the most vulnerable to droughts, pollution, and floods.
4. Preventive action is less costly than late reaction.
5. To face common challenges as a (international) region.
6. To include adaptation into ongoing programs and actions of CONAGUA and other Water players.
7. To transform CONAGUA (structure, vision, objectives, procedures, programs, projects, actions) towards Climate Change and Water Agenda 2030 (AA2030).
8. There is urgency to address adaptation.

In a Climate Change Scenario water management in Mexico faces four major challenges for sustainability:

1. Aquifer overexploitation.
2. Surface water overallocation (water rights)
3. Pollution in rivers and aquifers.
4. Impacts of climate change, and how to adapt to them





The design and implementation of the NSWR&CC is based on **four conditions**:

1. prioritization,
2. information and knowledge,
3. capacity building and
4. Developing of projects

The NSWR&CC is defined in **three paths**:

1. To systematically improve the knowledge of CC and its impacts;
2. to reduce other non-climate stressors, especially humans, and
3. to strengthen the resilience of aquatic ecosystems and environmental services.

The development of Mexico will have to face **ten critical areas** for effective adaptation:

1. Regulatory Opportunities and Financing
2. Drinking water and sanitation
3. Sanitation and pollution control
4. irrigation
5. Water and Energy
6. Basin Management
7. Ecosystems and water for sustainable development
8. Vulnerability
9. Infrastructure for water distribution and risk reduction
10. Efficiency in water use

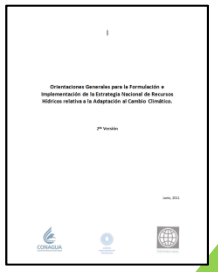
Route

Analysis and Diffusion

1

Project

of NSWR&CC



June 2011

2

Workshops

(CONAGUA headquarters and regions)

- presentation
- analysis
- debate

3

Debates

1ºSEMARNAT, INE

2ºOther institutions

3ºSocial organizations

Sharing in world summits

3 months

4

National launch

- President
- Ministries
- Governors
- Legislators
- Entrepeneurs
- NGOs
- Science&Technology

3 months

5

Diffusion

(comunication media)

continuously

instrumentation

6

Instruments creation

- Task Force
- Eval y Monit
- Fund
- Others

7

Organization

- Planning
- Programming
- Budget

(according with PND y PNH)

Begining of period

8

Resources allocation

- human
- material
- financial

9

Institutional framework

(Gradual transformation)

- cross sectoral arrangements
- states,municipalities

2013-2018

Implementation of the NSWR&CC

Short term (2012):

- PNH 2013-2018 development
- To prepare towards medium/long term:
  - improve knowledge,
  - update models,
  - basis for long term solutions (see below).
- To feedback the NSWR&CC
  - prepare the implementation plan

Medium term (2013-2018):

- Improve knowledge,
- Capacity building of water sector,
- Programs: efficiency and pollution reduction.

Long term (to 20-25 years) (starting now):

- Aquifer stabilization,
- coastal aquifers salinization control,
- Ecosystems restoration,
- Pollution control, and
- Protection against floods.

Hence the importance of prioritizing and allocating resources to plan action

Some ongoing adaptation practices

JOINT
INVESTMENTS PROGRAM MEX-USA
(East border, Bravo river)

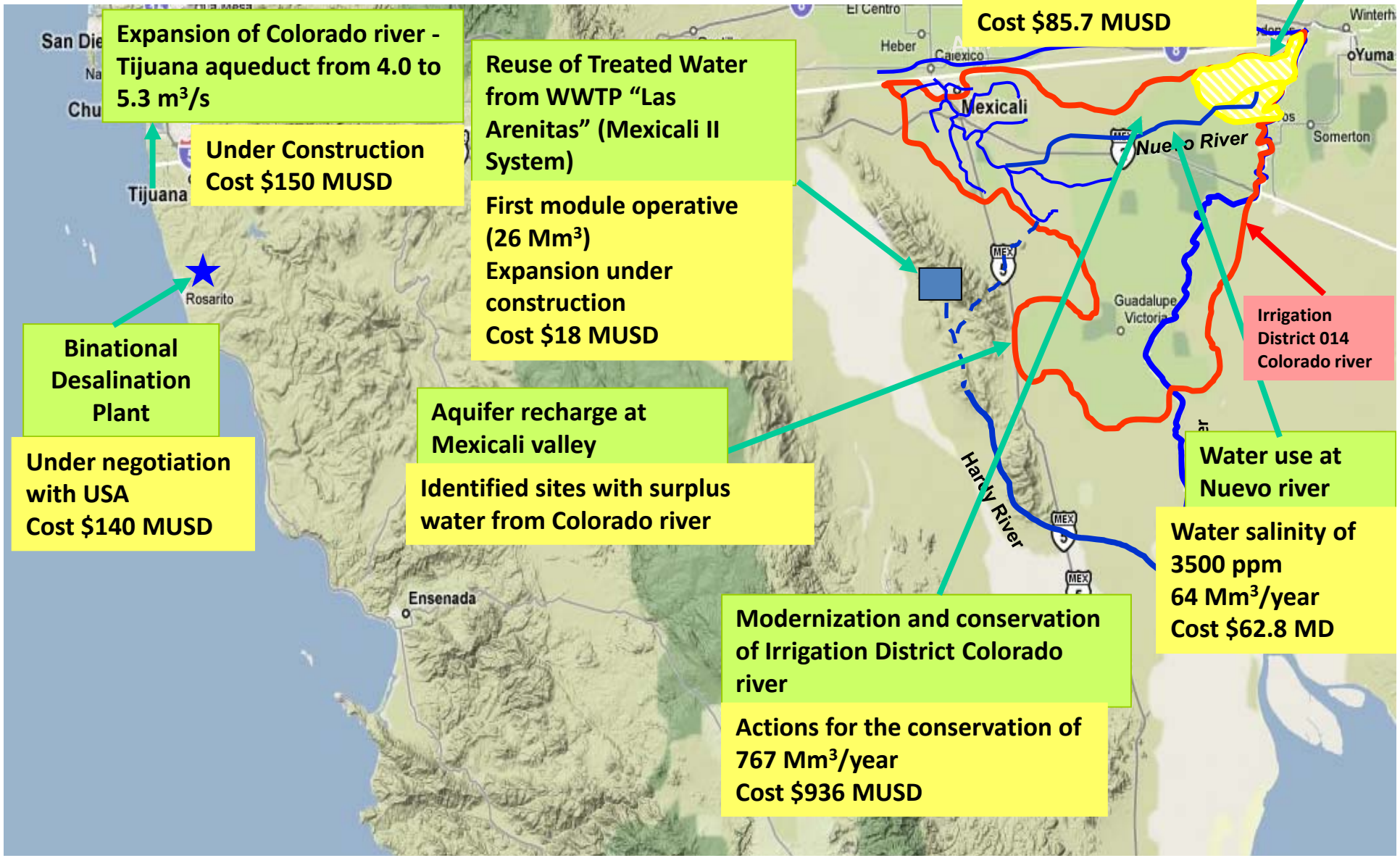
	Fresh Water	Sewage	Treatment
2010	94	92	81
Méx	90	86	42

WWTP Juárez North and South
Anapra
WWTP South and collector
WWTP South Extension
Col. Esperanza
El Millón, TJ y JC
AP Col. Esperanza
Palomas Port
Ojinaga
Loma Blanca
AP Práxedis
San Agustín
Piedras Negras
Guadalupe
Práxedis
El Porvenir
Porfirio Parra
San Isidro
Barreales, JyR
Acuña city
Camargo
Guar. y Ranch.
Nuevo Laredo
Nuevo Laredo
Miguel Alemán
Miguel Alemán
Mier
Reynosa
Reynosa (3)
Bravo river
Matamoros
Matam. (3)

Fresh water, Sewage and Treatment
Fresh water and Sewage
Sewage and Treatment
Treatment

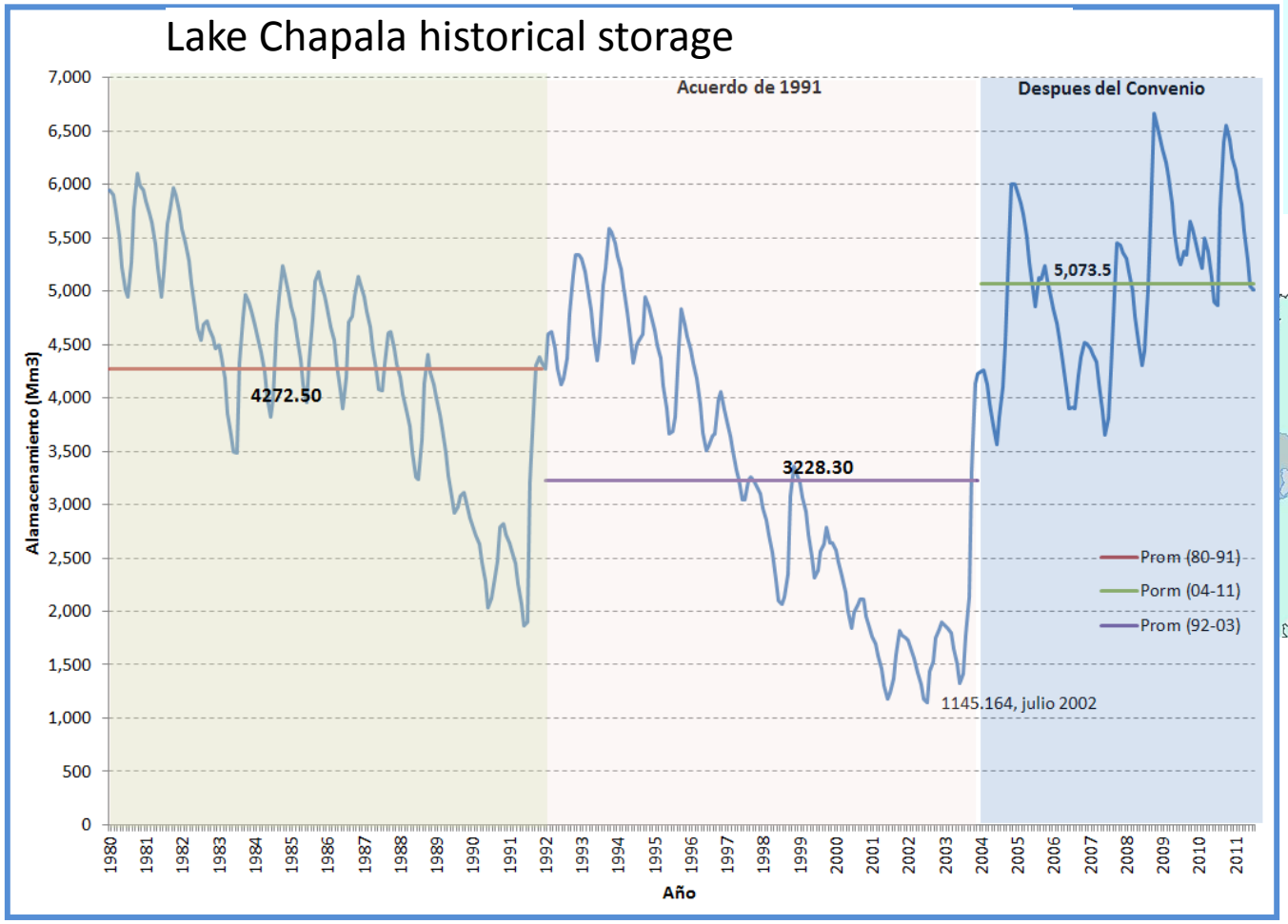
Concluded (20)
Under construction (4)
In Certification (12)

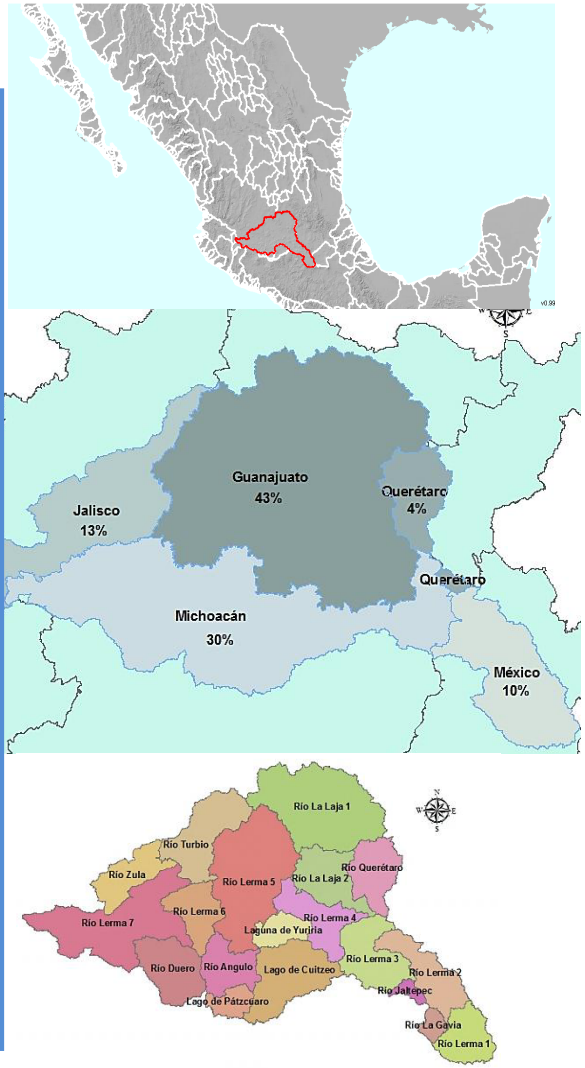
Colorado river joint cooperation projects to face water scarcity due to climate change



Lerma Chapala surface water allocation agreement

Since the implementation of the Agreement (ratified in January 2005 by the Governors of the states of Mexico, Queretaro, Guanajuato, Michoacan and Jalisco and water stakeholders) Lake Chapala levels have shown **remarkable recovery**. With the prior agreement (1991), partially good levels were maintained for about 6 years.





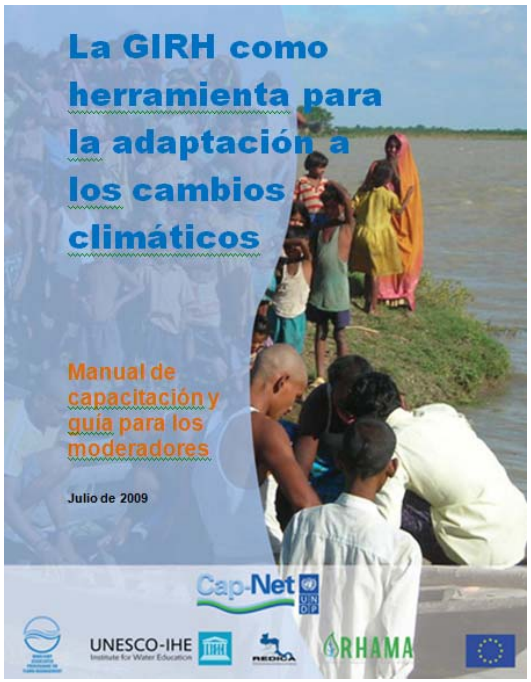
Institutional Development: capacity building in CONAGUA related to Climate Change adaptation

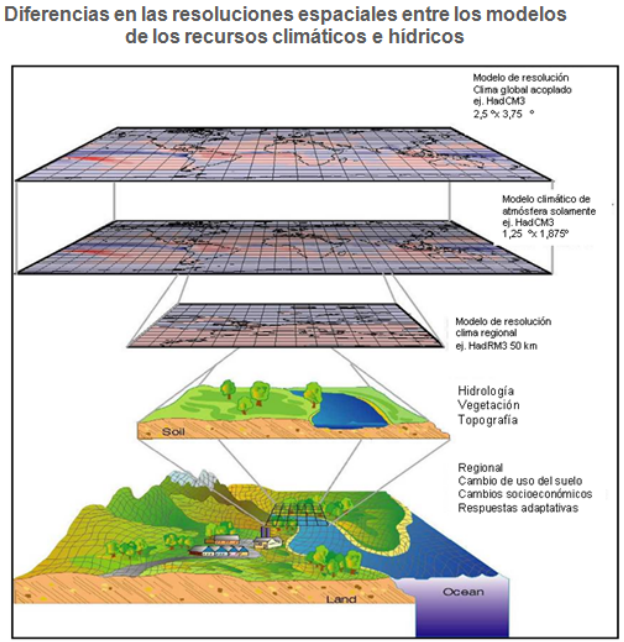
At present, CONAGUA lacks:

- What is CC in terms of water and its daily institutional labours relationship
- How are the adaptation and mitigation measures related with federal programs, their resources and annual budget.

(2011) A workshop with national experts enriched a **training course** on adaptation to climate change (original from UNDP and CAP-NET). It includes Mexican cases and exercises.

(2012) With the technical support of Metropolitan Autonomous University to conduct on-line training course for CONAGUA´s staff within the Public Servants Service System.





Fuente: Programa Climático Mundial, 2007

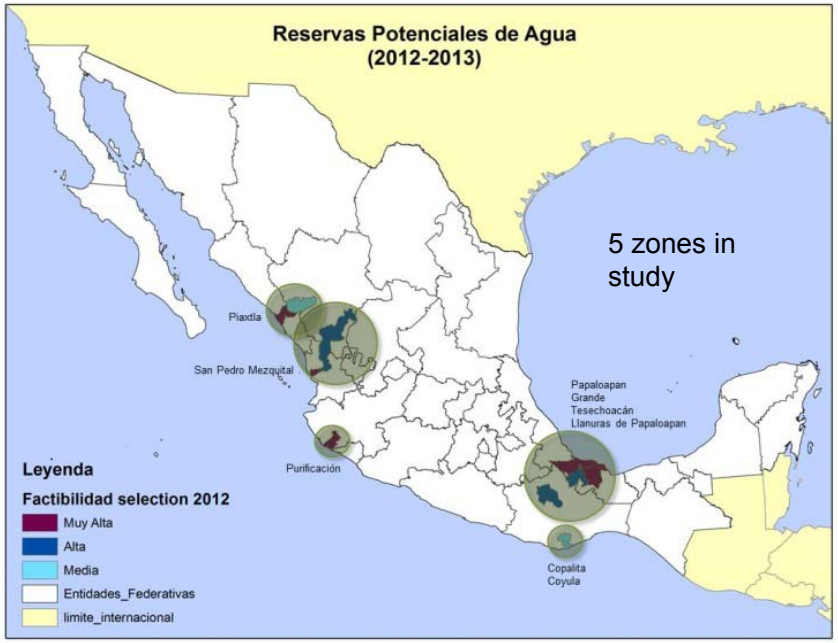
(2012) Technical Handbooks and operation manuals with Climate Change input

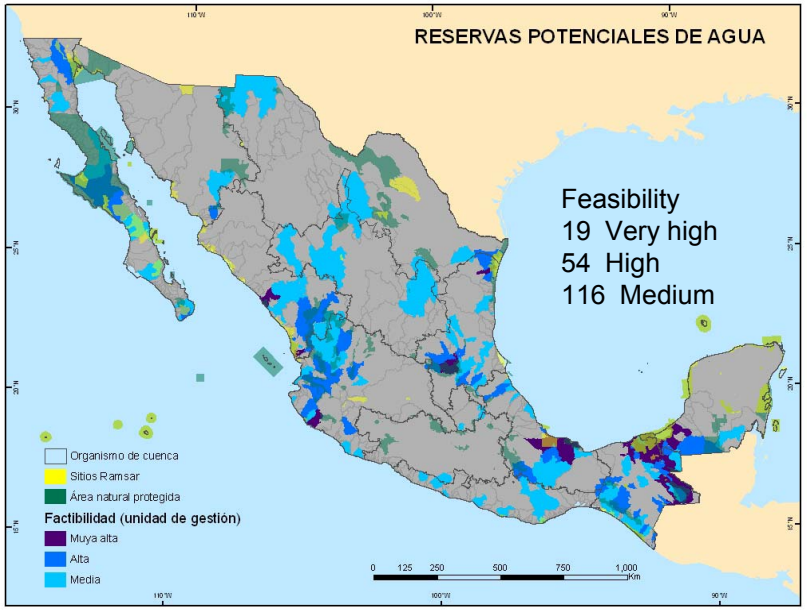
To increase our understanding of climate change and to show what we can do now by using IWRM processes to adapt us.

Potential Water Reserves for the Environment

189 basins with certain level of feasibility for water reserves.

- Public Polícy of long term to assure water for people and the environment.
- A strategy for adaptation, resilience and connectivity of Water and biodiversity,
- 97 Protected Natural Areas, 55 Ramsar sites and 78,500 km^2 with hydrological protection.
- Sustainable limits to water supply.
- It is the best evidence of sound management of water resource





2012

By June the WWF-IDB agreement (for funding) was signed to develop technical studies at pilot basins.

I. Piaxtla 1 and 2 at Sinaloa,
II. Purificación in Jalisco,
III. Papaloapan, Grande, Tesechoacán, San Juan and Llanuras de Papaloapan in Oaxaca and Veracruz,
IV. San Pedro Mezquital at Durango and Nayarit,
V. Copalita y Coyula in Oaxaca.

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Muchas gracias,

Wellcome to Mexico

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