3

Innovative Water Management and Access for All

Gestión innovadora y acceso del agua para todos

Taking into account all the uses of water, including the equity of water distribution

Considerando todos los usos del agua, incluyendo su distribución equitativa

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Water management and climate change in the rio Grande/Bravo basin

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November, 2017

Main impacts on water resources in this binational basin

- Change in precipitation rates, in both time and space, particularly in the area of watershed.
- Variability in streamflow regimes of rivers.
- Extreme phenomena in cycles of drought and flood.
- Deterioration of water quality in rivers by punctual contamination sources.
- Socioeconomic impacts to water shortages, and because of the continued, would have severe consequences in most sectors as agriculture, energy, drinking water, health and forestry.

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Common goal: What to do!

- **Mapping of existing infrastructures and information platforms** to share knowledge and successfully experiences on projects in the binational rio Grande/Bravo basin, proposing a common platform from where researchers and decision makers could get the latest information about climate change scenarios, climate data, vulnerability assessments, biodiversity legislation and adaptation measures proposed to diminish the negative effect of climate change on biodiversity, water resources and local & regional economies.

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Water dialogues in the binational basin: Recommendations

1. There are three "I" **(Institutions, Information and Infrastructure**), which must be taken into account in each and every one development plans as key elements.
2. The proper functioning of **watersheds and aquifers** to be incorporated in the **planning**, as natural infrastructure that increases resilience to potential impacts, as well as the **water recycling** as an alternative water source.
3. **Information needs** to be developed and **adapted** to the needs of users.

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INTEGRAL WATER MANAGEMENT IN THE RIO GRANDE/BRAVO BASIN CONSIDERING CLIMATE CHANGE SCENARIOS.

Project financed by CONACYT. Call focused on national issues.

General objective:

Establish scientifically based recommendations for the integral management of water in the Rio Grande basin, under scenarios of climate change, with a systemic and multidisciplinary analysis approach, implemented in a dynamic model of integrated water management in the basin.

Particular objectives:

1. Integration of a multidisciplinary methodology, with a systemic approach.
2. Develop a binational data model for the rio Grande/Bravo basin.
3. Study of the effects of climate change on water uses and compliance with the Mexico-United States Water Distribution Treaty of 1944, under different scenarios.
4. Achieving an analysis and proposals to improve water governance.
5. Experts Summit in water resources management in the rio Grande/Bravo basin.
6. Recommendations for integrated water management, including those necessary in terms of infrastructure management, water conservation, national and binational institutional arrangements, water governance, public policies and legal framework.

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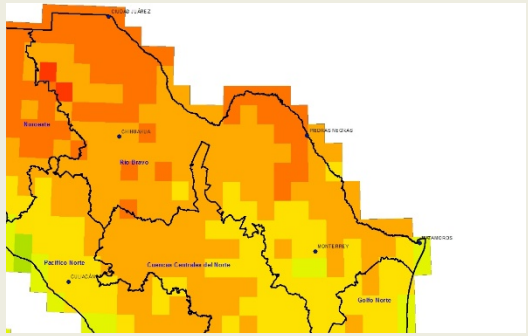
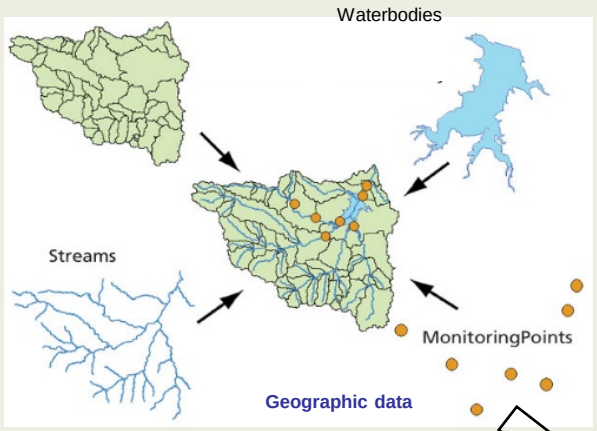
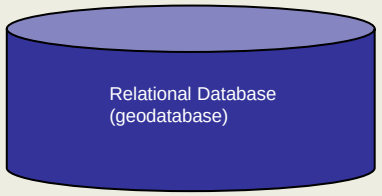
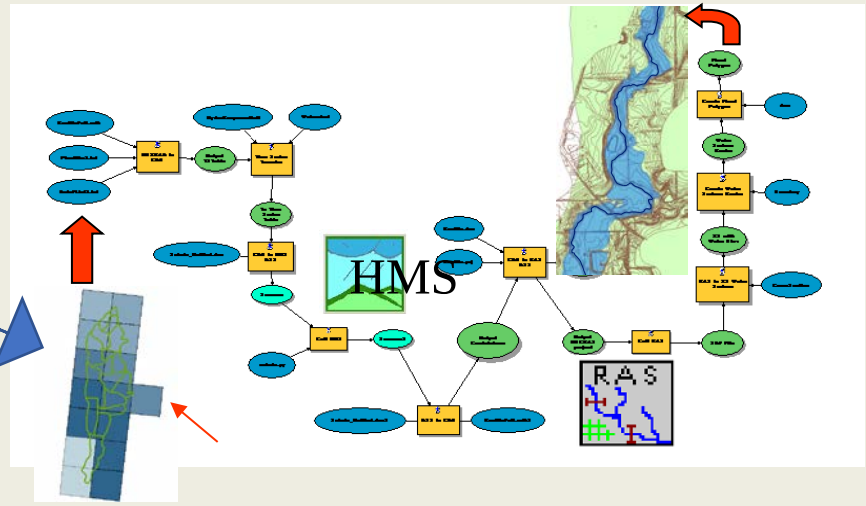
GIS & Climate Change Scenarios





Time Series





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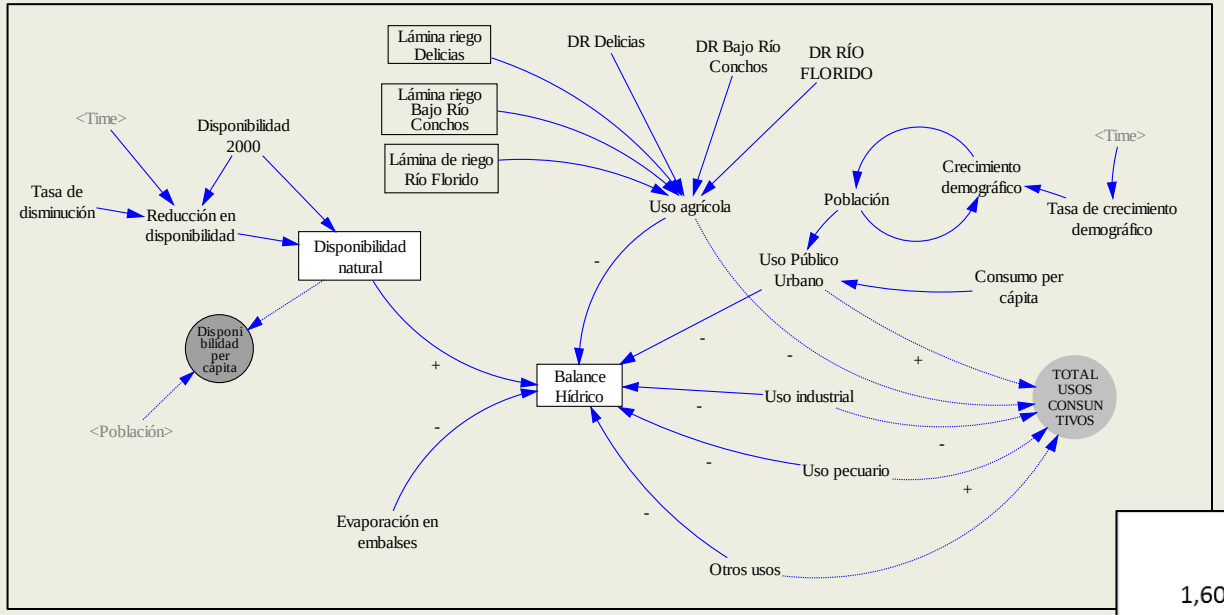
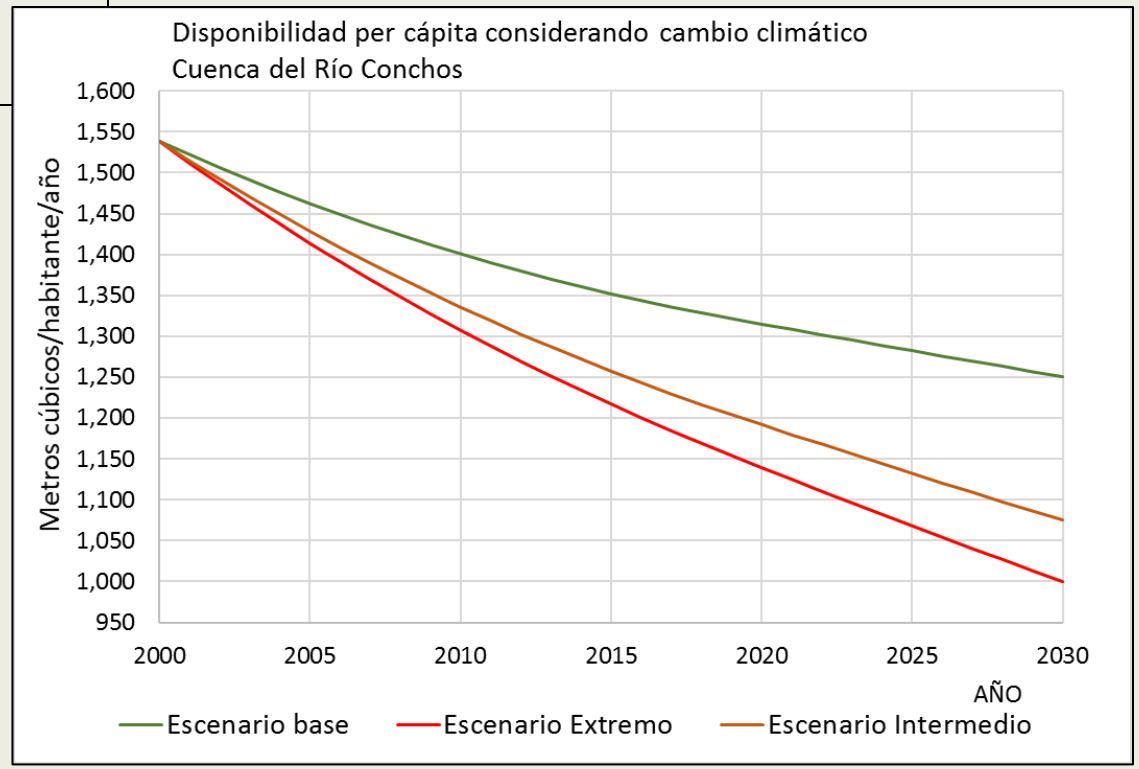
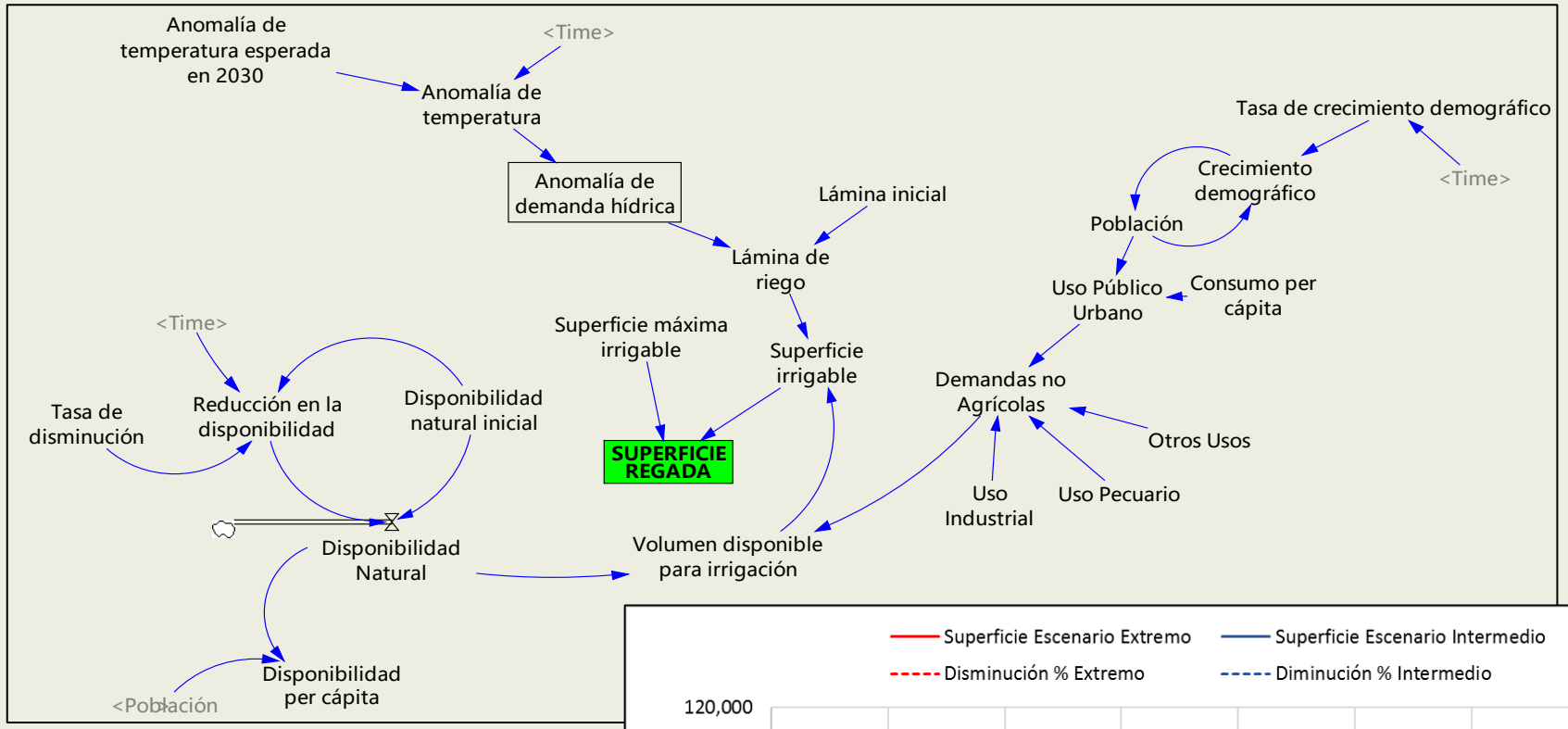
Dynamic simulation



A dynamic simulation model of the Conchos river basin was developed. This basin is the main source of water from Mexico for the Treaty.

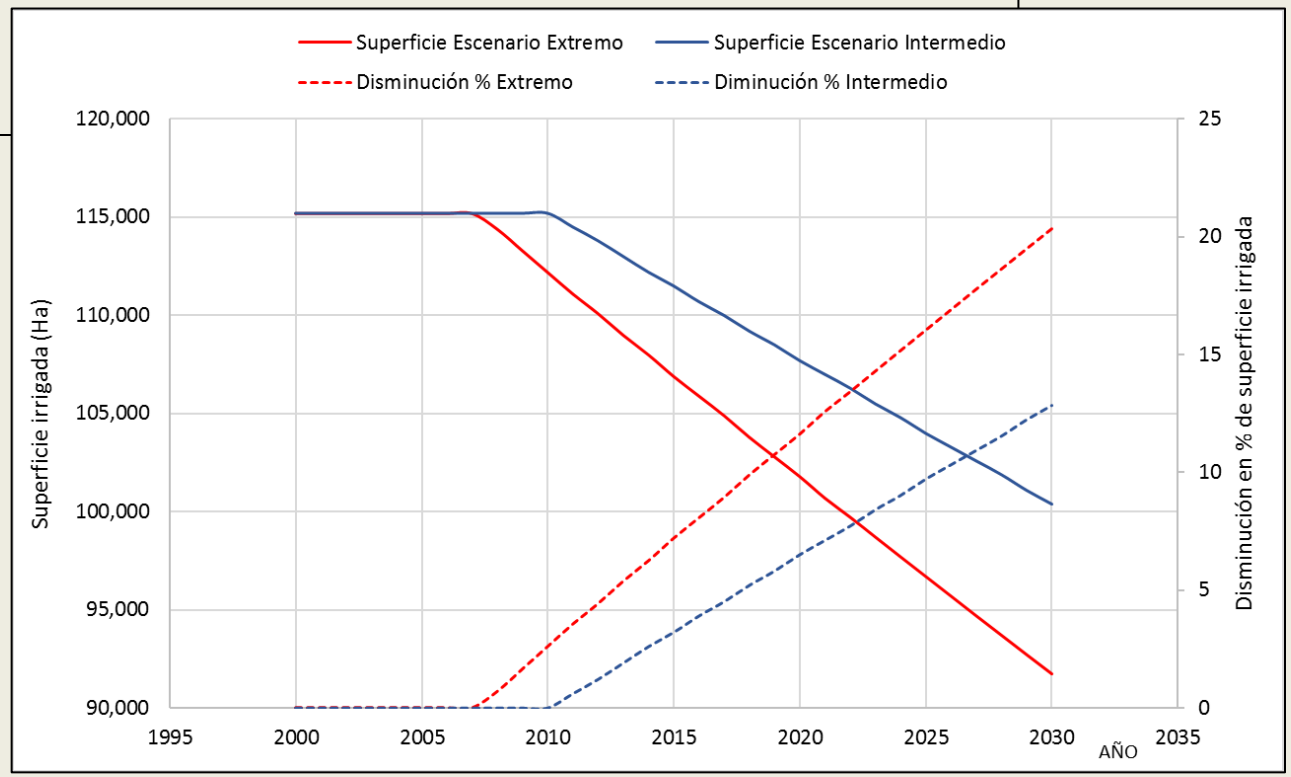
Under climate change conditions, water availability per capita will change significantly.





With the adaptive model, irrigation areas and adaptation measures can be proposed and tested.

Maximum irrigation area under two climate change scenarios.



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Questions?
¿Preguntas?
2017 Rio Grande / Río Bravo Binational Forum | Foro Binacional

- Assign someone to take notes and to watch time.
  - Use computer, flip chart, etc.
- During break, upload answers from questions that start with “RECORD” to **http://bit.ly/RGRB2017**.
  - Not transcript but main ideas.

- Asigne a alguien para tomar notas y mirar el tiempo.
  - Use computadora, rotafolio, etc.
- Durante el descanso, suba las respuestas de las preguntas que comienzan con “GRABE" a **http://bit.ly/RGRB2017**.
  - No transcripción sino ideas principales.

- What is the most challenging obstacle to water management where you work?
- RECORD (bit.ly/RGRB2017): As a group, prioritize the top 3 obstacles.

- ¿Cuál es el obstáculo más desafiante para la gestión del agua donde trabaja?
- GRABE (bit.ly/RGRB2017): como grupo, priorice los 3 obstáculos principales.