



SWAN INTERNATIONAL CONFERENCE

**OPEN KNOWLEDGE: BRIDGING PERSPECTIVES
TO ADDRESS WATER CHALLENGES**

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The Water Energy Food nexus from a Mexican-Sonoran Desert perspective

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Preliminary considerations

Centralized institutional arrangement

- Mexico is a centralized country
 - Water management
 - National Water Commission
 - Water rights register and dams management
 - Energy management
 - Federal Electricity Commission (monopoly)
 - Mostly thermo electrical plants (oil)
 - Food
 - Market provision
 - Agriculture, ranching
- Question: Is the WEFS Nexus easier to approach in a centralized institutional arrangement?

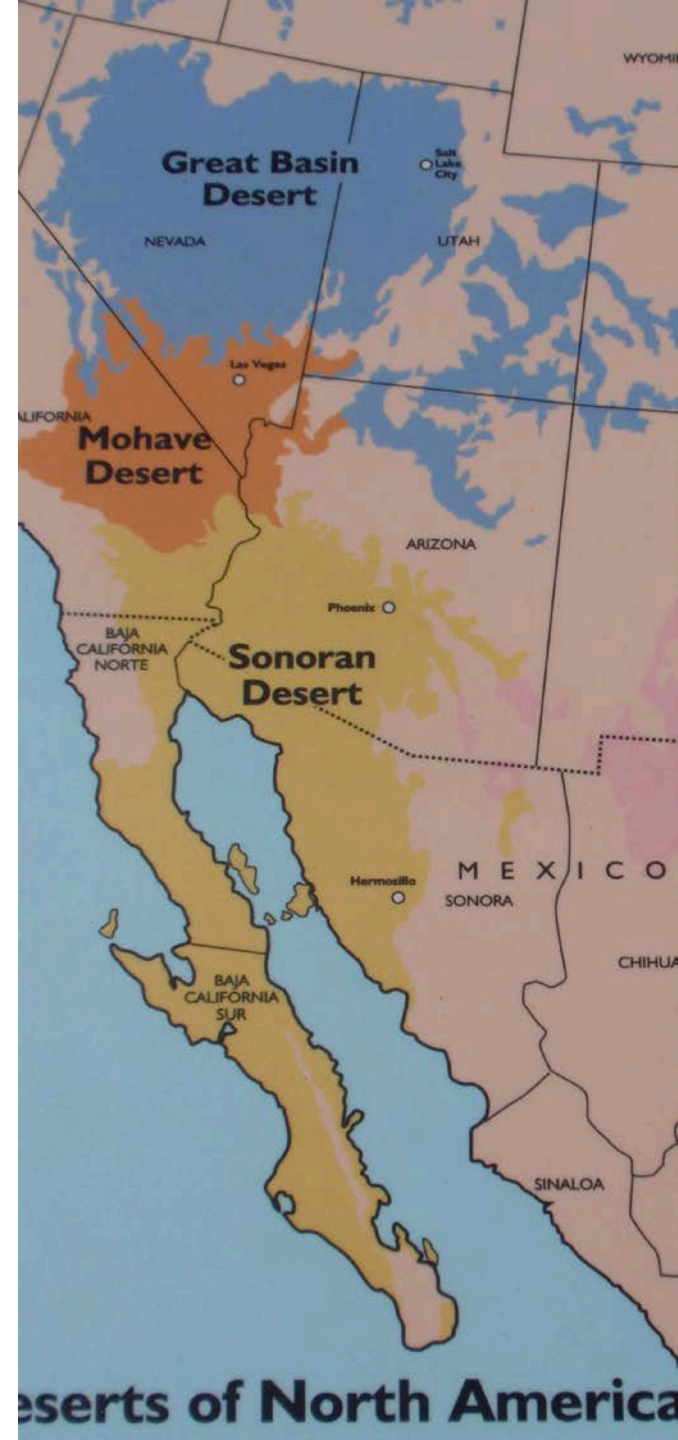


The Sonoran Desert and the Gulf of California

- Water scarcity
 - Aquifer depletion, river contamination
- Triple challenge:
 - Growth, immigration
 - Urbanization, Industrialization, globalization
 - Climate change, less water

Gulf of California, Baja California Peninsula

- Natural environmental reserve,
- Mostly undeveloped



Deserts of North America

Economic & Management Implications


Centralized arrangement has high transaction costs

- Time and place knowledge
- coordination
- opportunism

WEFS nexus demands:

- Bottom-up approach (decentralization, devolution, local empowerment, local integration)
- Take advantage of solar energy

The case for desalination



Desalination is seen as a means for water augmentation in the near future

- With oil or solar energy?
- What to do with brine, brackish water?
- Impact on fisheries?
- Impact on Gulf environment?

Development strategy

- Less agriculture and produce (food) production?
- More industrialization and tourism?
- What about mining?
- What about desalted water for export (sale)?

Conclusion

- The WEFS nexus approach helps to:
 - Entice Science-policy (trans disciplinary) dialogue
 - A better understanding of regional, economic-social conditions (geography)
 - To improve policy-making
 - To enhance development strategies