Water conflicts and institutions

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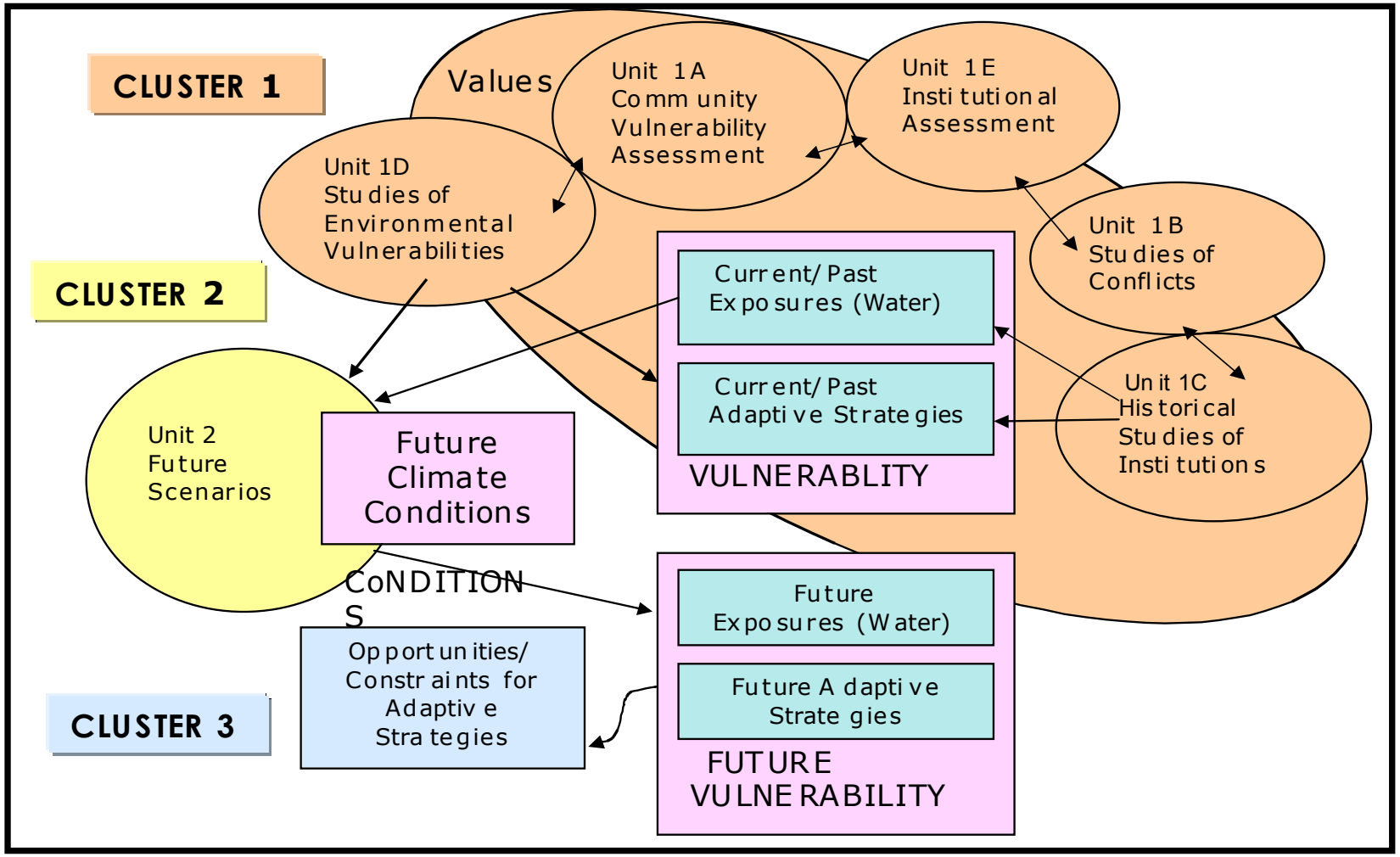
Unit B: Studies of conflicts

The Research Activities of the IACC Project



Exposures and adaptive capacity

- Climate change predicted impacts
  - 1- 6 ^{0}C annual average temperature increase
  - Drier summers due to increase evaporation rates
  - More rain rather than snow
  - Stream flows will reach maximum discharger earlier rather than during irrigation period

Exposures and adaptive capacity

- consequences
  - Increase demand, less supply
  - Human and ecological systems affected
  - Challenges for meeting agricultural, industrial and municipal needs
  - Inter-provincial apportionment agreements
  - International agreements

Exposures and adaptive capacity

- **Adaptive capacity**
  - ability of individuals and water governance institutions to access resources (financial, technical, human)
  - flexibility and legitimacy of existing institutional arrangements
  - Strength of networks among inter-sectoral institutions and individuals
  - Leadership and ability to resolve conflicts

Conflicts and potential conflicts

- Competition over water during drought events: of 1984-85, 1988-1990, and 2000-2001
- Oldman River Dam construction in the 1980s
- Dispute between Montana and Alberta over the Milk and St. Mary's river water sharing agreement
- Over allocation of water licenses
- Inter-provincial apportionment agreement

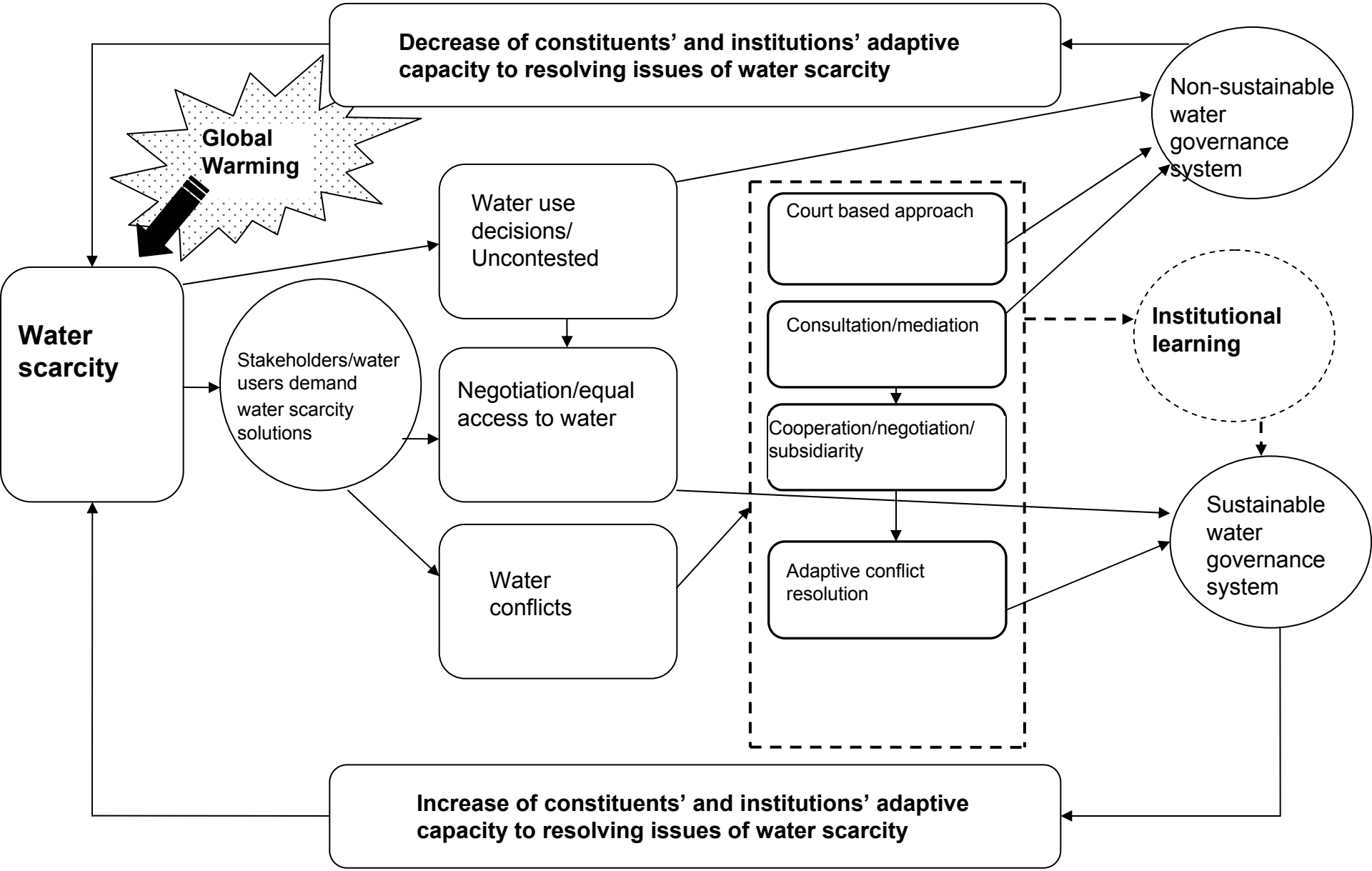
water management approach

Management approach		Management content
• Supply management	more water	Engineering efforts
• Demand management I	more use per drop	End use efficiency
• Demand management II	more value per drop	Allocative efficiency

Why study conflict

- Important lessons can be learned that could lead to a more desirable outcome
- Adaptive resolution: “process of resolution that recognizes and addresses power asymmetries, differences in knowledge systems, values, ideas, and voices of those involved in the conflict, including First Nation communities, environmentalist and local communities” (Rojas et al. 2002).

Capacity to resolve issues of water scarcity



Identification of cases

Canada

- Oldman River Dam conflict

Chile

- Puclaro Dam conflict

Highlights of findings

- Policy on water security: dam construction in response to climatic variability and water availability
- Lack of adequate regulatory framework for socio-environmental asessment
- Power asymmetry in access to information and decision making
- Difference of opinion among stakeholders about the resolution of issues concerning the dam
  - Benefited farmers
  - Displaced farmers
  - Local residents
- The Peigan see themselves as the most affected and party

Highlights of findings

- Need for meaningful stakeholders consultation is a key learning
- Benefited farmers recognize/aware of the value that water has for others
- 2000-2001 drought, water users reached voluntary water sharing agreement
- Irrigation districts: upgrade infrastructure, more efficient irrigation system
- This cross-sectoral representation in Watershed Councils council, inclusiveness of perspectives and values in management of the water supply at the local level
- Strengthening of democratic institutions?

Highlights of findings

- Recognition of the need for sharing of information among stakeholders
- Oldman River Dam case, key decisions that Supreme Court has ruled on for environmental protection
- SSRBP moratorium on water licenses allocation and 10% conservation holdback

Conclusion

- Water conflicts provide opportunity to learn important lessons for adaptation to water scarcity conditions
- The ability of institutions to resolve conflicts key institutional adaptive capacity
- Role of institutions in managing or resolving water conflicts key factor in the adaptive capacity of communities
- Need of enabling public policy orientated to the creation of appropriate scenarios for water conflict resolution