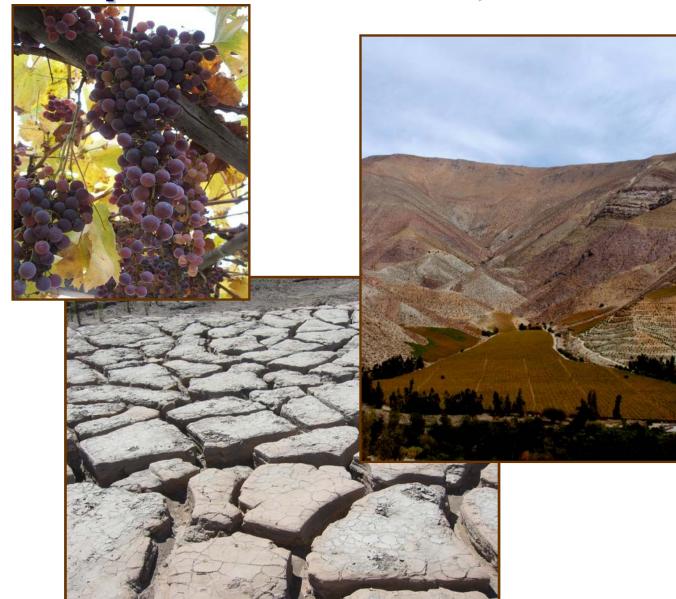
### Community Vulnerability in the Elqui River Basin, Chile



Gwen Young University of Guelph, Ontario

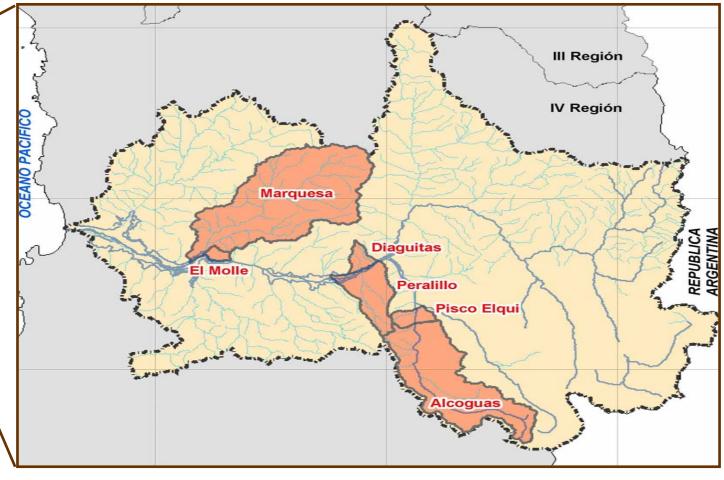
#### Isla Sala y Gomez **BOLIVIA** Iquique Antofagasta\* Nevado Ojos del Salado Huasco\_ SOUTH **PACIFIC OCEAN** Valparaíso, SANTIAGO San Antonio Rancagua San Vicente ARCHIPIÉLAGO JUAN FERNÁNDEZ **ARGENTINA** Talcahuano\_ Concepción Lebu Temuco Puerto Montt SOUTH **ATLANTIC OCEAN**

Elqui River Basin, Chile



# Elqui River **Basin**

#### **Community Case Studies**



## Water Source and Distribution System

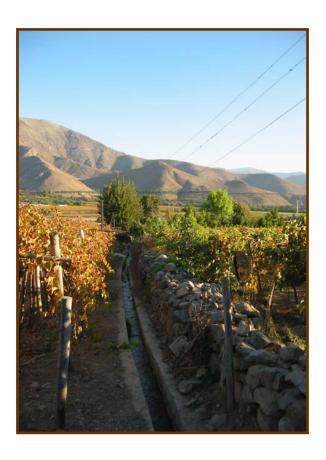








### Irrigation









**Community Exposures** 









**Community Exposures** 



### Community/Individual Adaptations

"Here in Chile we adapt to everything" – Resident of Diaguitas

- Take Precautions
  - Reinforce homes, buy extra food and batteries
  - Barrels full of potable water
- Migrate
- Women working for wages
- Technology
- Taking advantage of subsidies
- Neighbours help each other

#### **Institutional Adaptations**

- Protective Structures
- Education (radio announcements and bulletins)
- Subsidies
- Reduce Water Supply
- Water Delivery

#### **Institutional Adaptation**





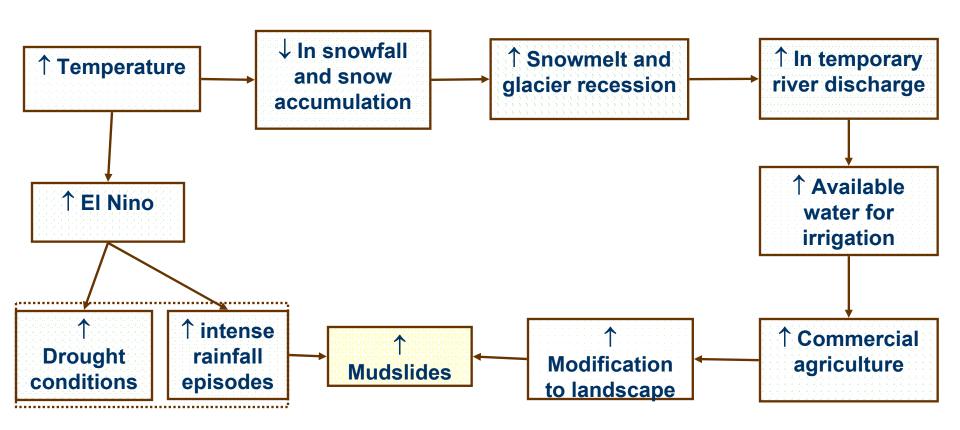
#### **Constraints of Adaptive Capacity**

- "There is no institutional capacity" employee of a water governance institution.
- Lack of institutional coordination
- Short-term planning
- Limited information and resources
- Little community organization
- Community segregation/tension

### Climate Change & Future Exposures

Climate-	Expected
Related Risk	Change in
	Future
El Nino	$\uparrow$
Drought	$\uparrow$
Average	
Precipitation	$\downarrow$
Temperature	<b>↑</b>
River	↑Short-Term
Discharge	↓Long-Term

## Climate Change & Future Exposures



#### **Summary of Research**

- Exposures stem from multiple scales and influences.
- Although Diaguitas is a dryland area, waterrelated exposures were not strongly identified.
- Vulnerability varies between communities and community members.
- The role of institutions with respect to adaptive strategies appeared weak at the community level.
- Future conditions are not a strong concern for the community, agri-business and institutions.

