

# IISD Research on Extremes



**iisd** International Institute for Sustainable Development  
Institut international du développement durable

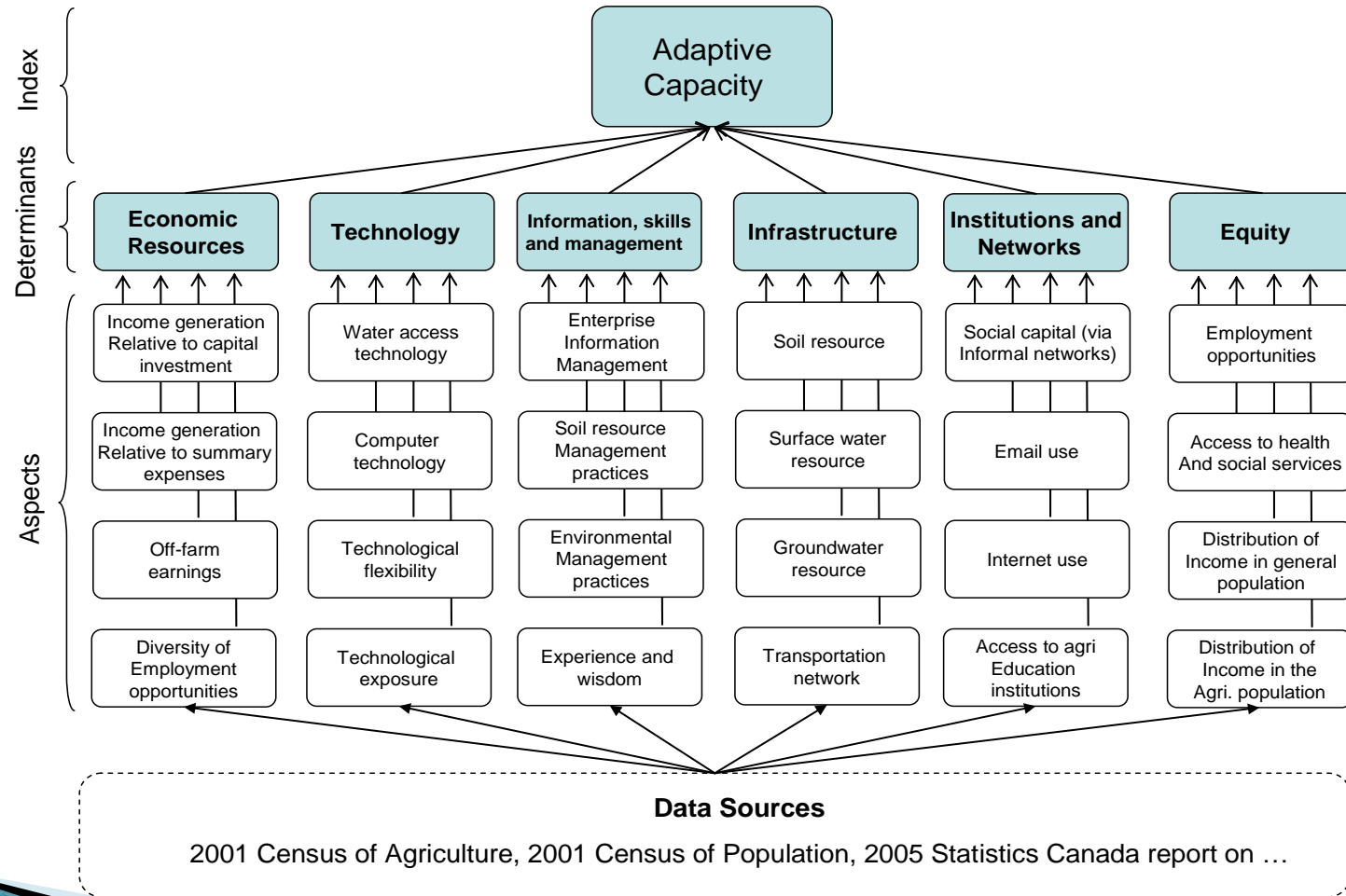
Better living for all—sustainably

# Prairie Climate Resilience Project

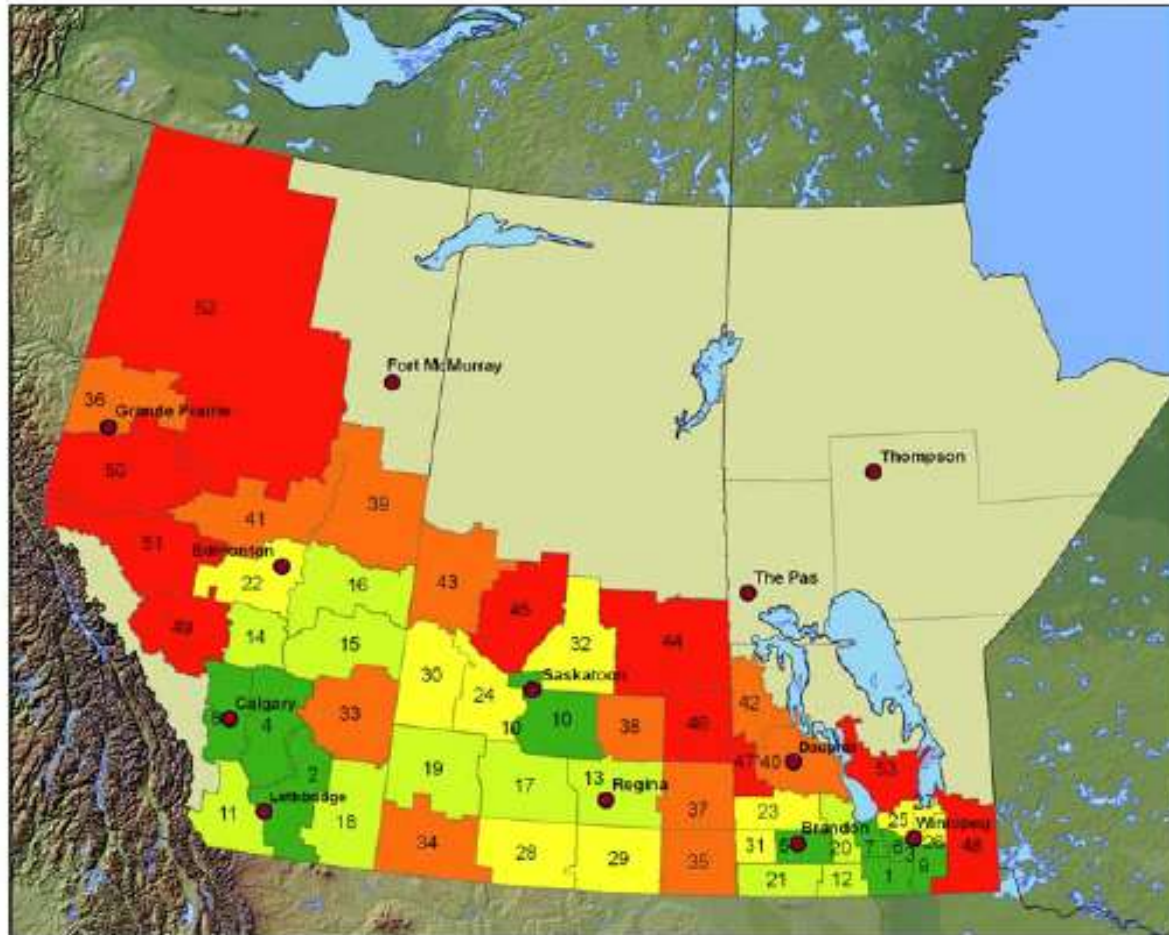
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- ▶ Examines the resilience of prairie communities to past climate stresses as a means of strengthening adaptation to future climate change.
  - why some prairie agroecosystems are resilient to existing climate stress;
  - which existing policies and management practices promote or impede resilience to existing climate stress;
  - how climate resilience can be increased by strengthening adaptive capacity through targeted policy intervention; and
  - which prairie agroecosystems may be highly vulnerable to future climate change, and which policy interventions are most important in these regions.

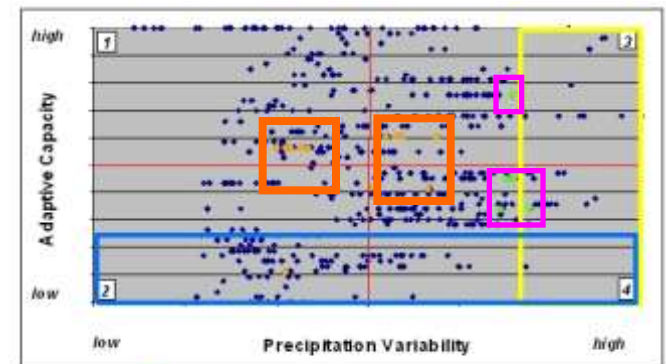
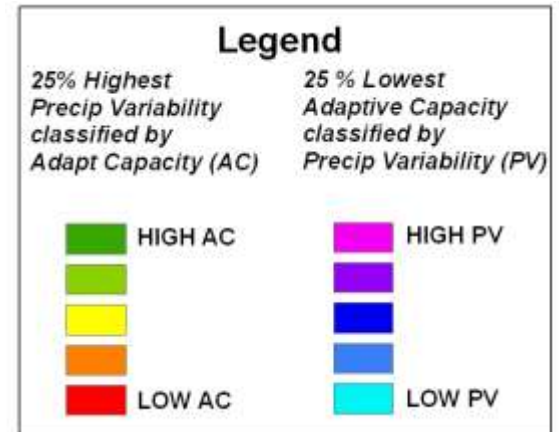
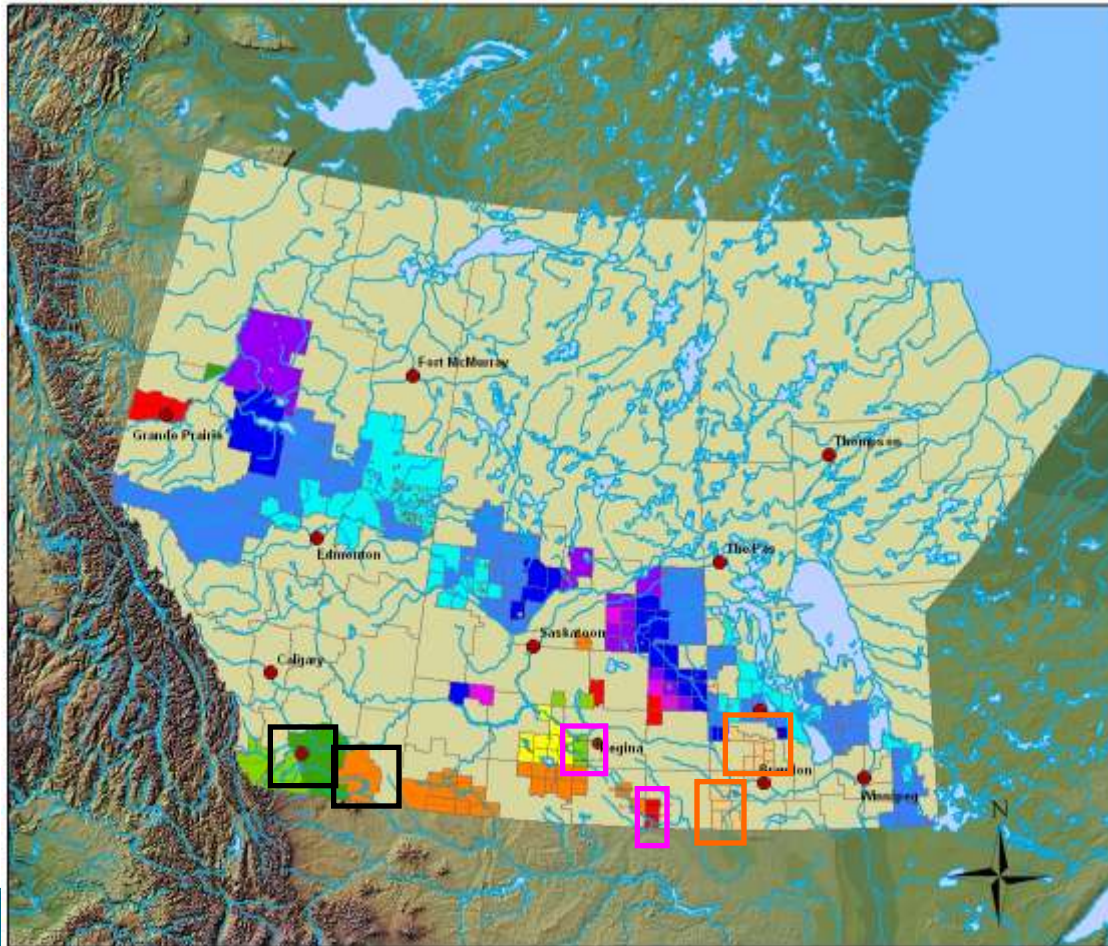
# Prairie Climate Resilience Project



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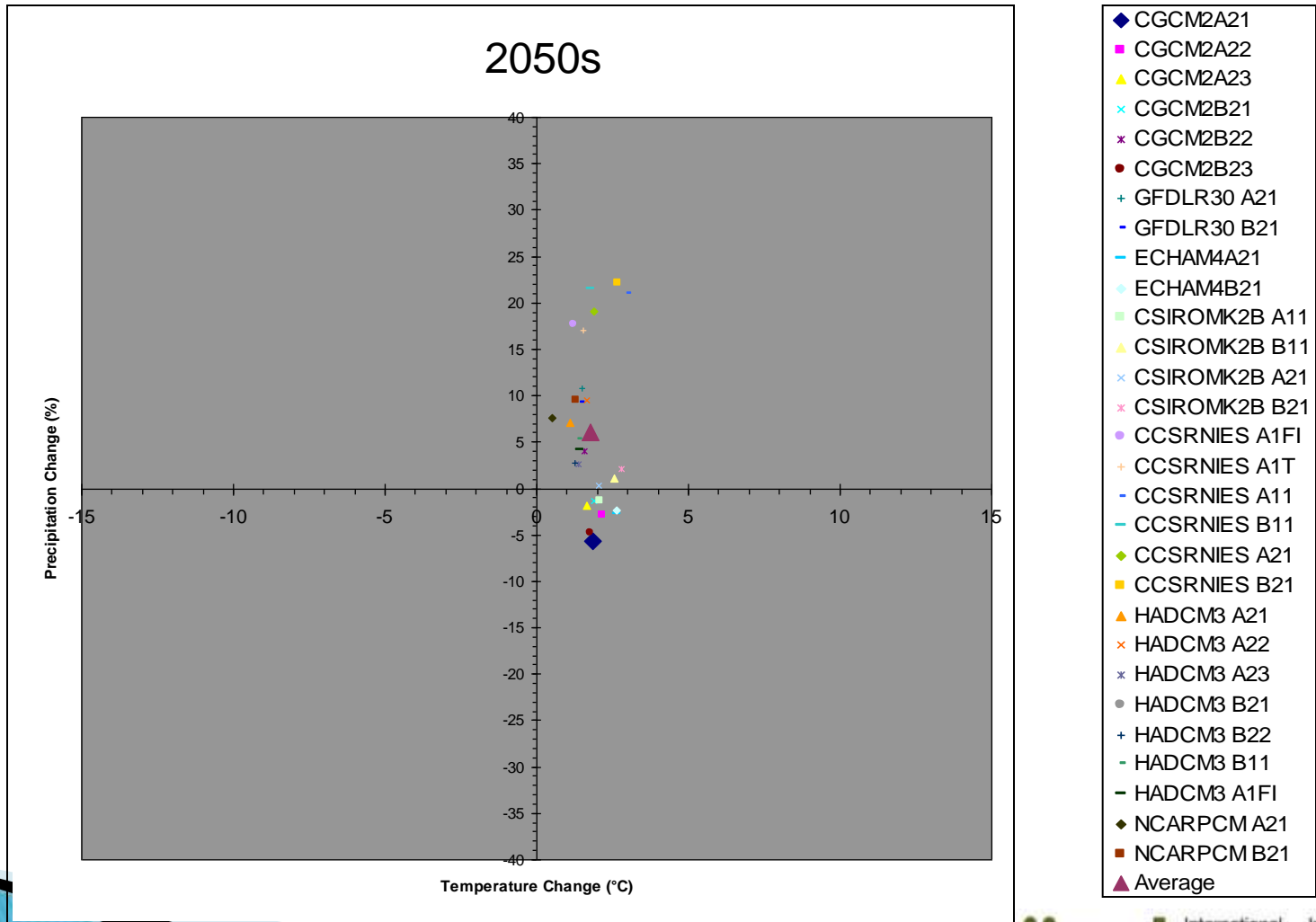
# Climate Change impacts on Manitoba Watersheds

- ▶ Monthly water budgets calculated for 94 sub-watersheds

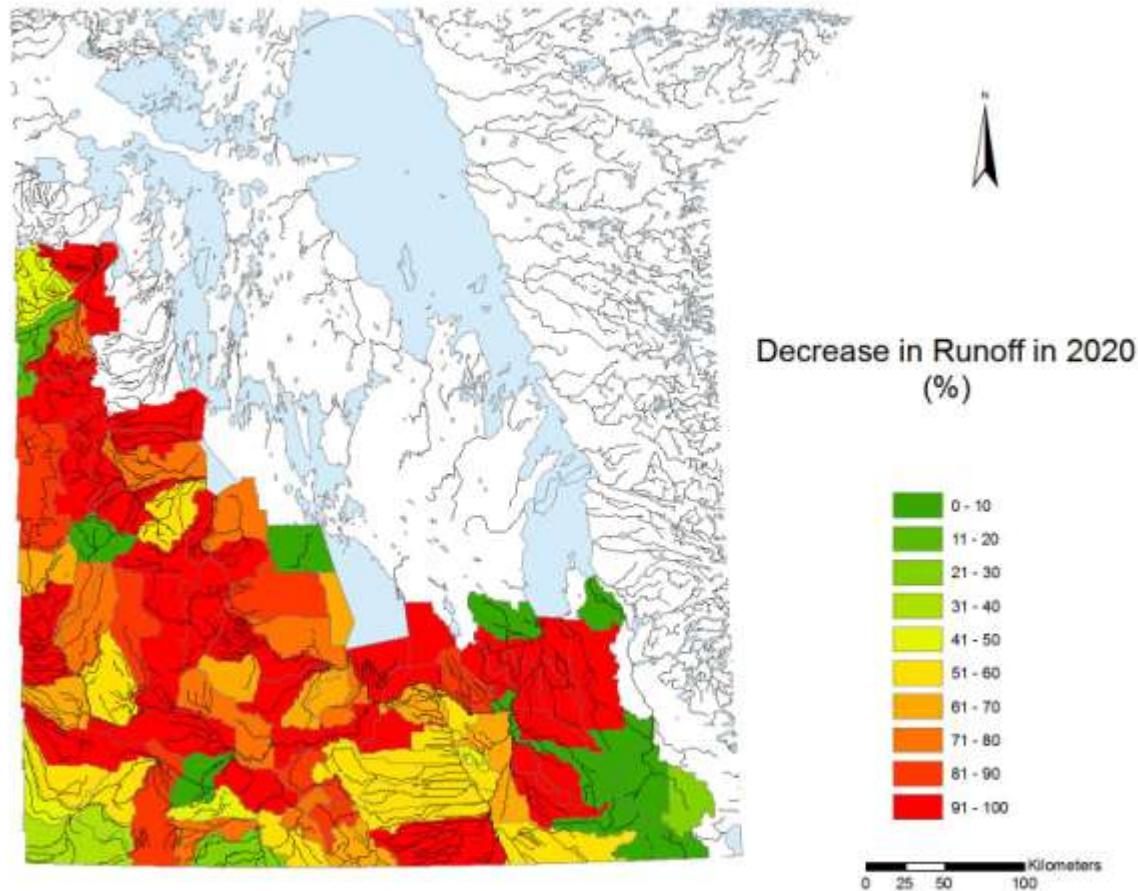


<u>Inputs</u>	<u>Outputs</u>
Temperature	Soil water storage
Precipitation	Water surplus
Snow accumulation	Water deficit
Land use (including specific crops)	Runoff
Soil texture	Domestic consumption
Population	Livestock water requirements
Livestock herd	Irrigation requirements
Irrigated area	

# Climate Change impacts on Manitoba Watersheds



# Climate Change impacts on Manitoba Watersheds





# Prairie Regional Adaptation Collaborative

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- ▶ Water theme
  - Policy synthesis of water demand and hydrologic studies
  
- ▶ DEM theme
  - Working on creation of framework to assess degree to which policies are adaptive and contribute to adaptive capacity
  - Developing a manual for municipalities on increasing adaptive capacity

# ACCESA

## Mozambique

- ▶ Community based fire management



## Rwanda

- ▶ Watershed ecosystem restoration
- ▶ Reducing vulnerability of hydroelectric sector

# ACCESA

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- ▶ *Enhancing Resiliency to Drought in Kenya's Arid and Semi-Arid Regions*
  - Better forecasting
  - Crop switching
  - Enhancing access to water
  - Policy engagement



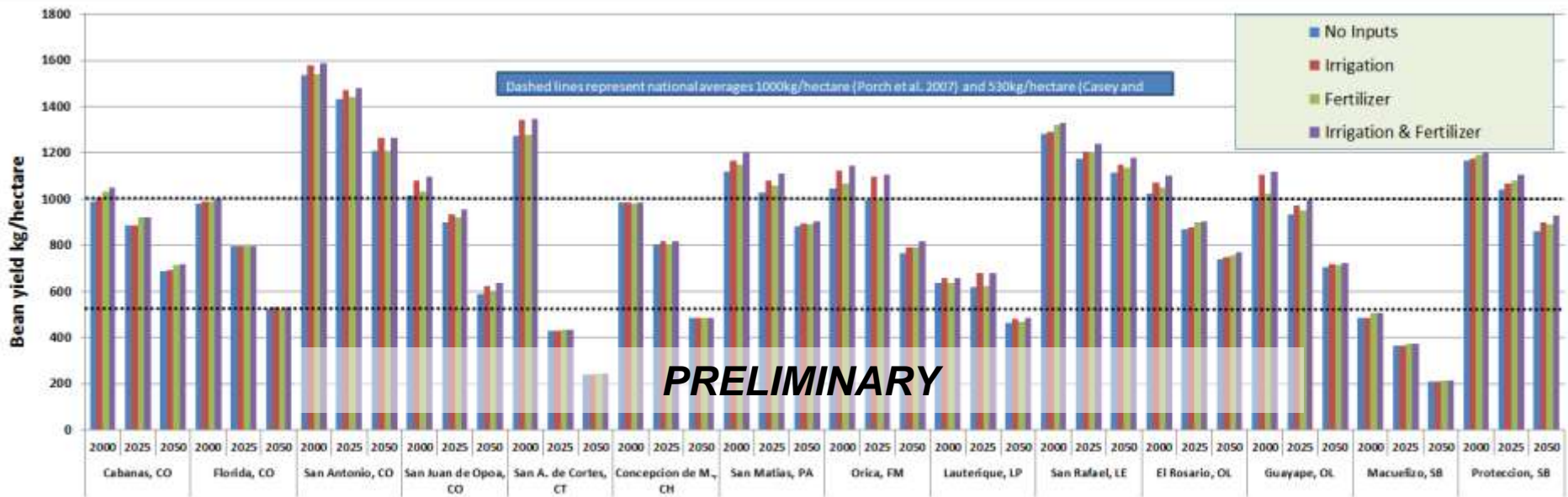
# Climate Risk Management

- ▶ Climate Risk Management Technical Assistance Project
  - Climate risk = f (vulnerability, adaptive capacity)
    - Priority locations and sectors

Country	Sector
Dominican Rep.	Watershed
Honduras	Agriculture
Guatemala	???
Nicaragua	???
Peru	Watershed???

Country	Sector
Kenya	Urban water???
Niger	Wetlands
Tanzania	????
Uganda	Agriculture

# Climate Risk Management



# Climate Risk Management

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