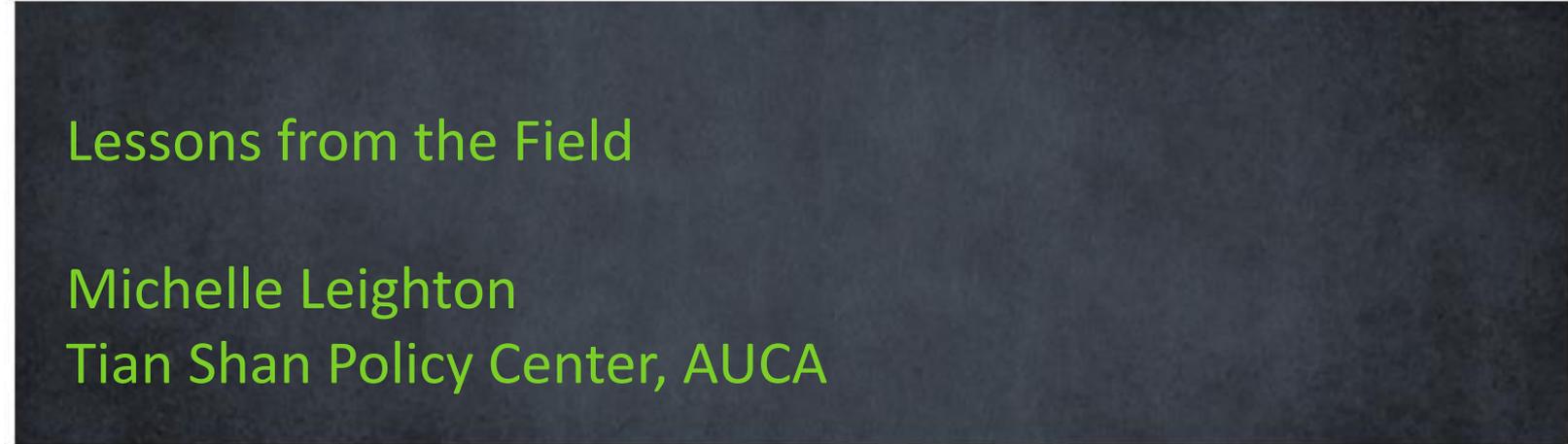


Impact of Land degradation to Community Livelihoods in a Climate-Changed World

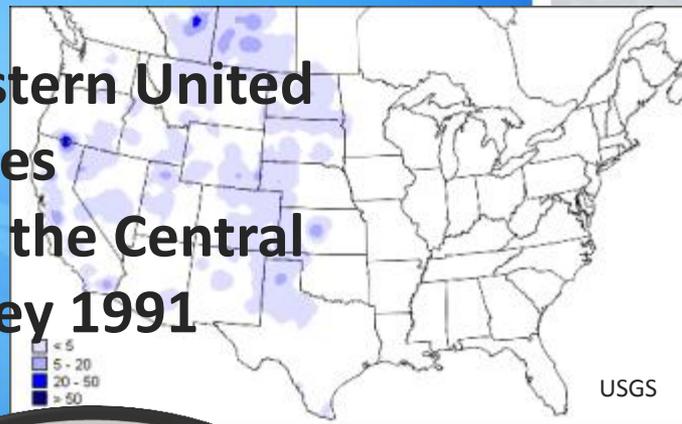


Lessons from the Field

Michelle Leighton
Tian Shan Policy Center, AUCA



Western United States and the Central Valley 1991



Evaluated Case studies Sahel, Africa 2009



Sahel Region, Africa

U.S.-Mexico Case Study (1992-1998) Environmental Degradation and Migration



Case Studies Research

Central Asia



Biodiversity, Socio-Economic Change
Chile, Mexico, Brazil (1999-2003)

Environment and Human Security

Kyrgyzstan Natural Disasters:

Significant incidence of weather-related disasters

- 3-4 extreme meteorological events yearly
 - 7-10 high impact mudflows
 - 3100 basins subject to floods
 - 2008 \$65 million USD lost agriculture sector
- 5,000 active landslide sites
 - 20% of population live in susceptible areas
 - 60,000 affected by landslides since 1990





- ▶ Soil Erosion and Low Agriculture Productivity:
 - ▶ Salinization, deforestation, overuse
 - ▶ 750,000 hectares of farmlands affected or 65% of arable lands
 - ▶ Less grasses for pastures and grazing lands

Food Security: Kyrgyz Rep imports
43% of wheat needs
44% of vegetable oil
66% of sugar

Land Degradation

Climate change impacts in Kyrgyzstan

Increased Vulnerability and Migration



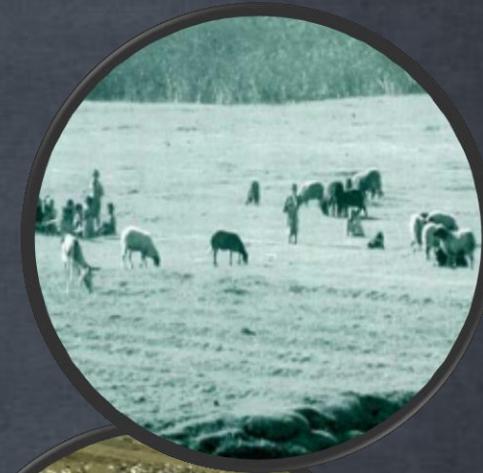
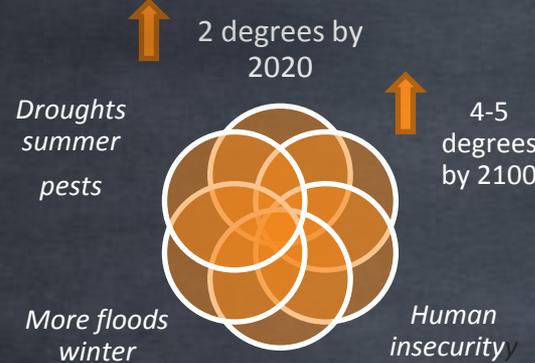
- ❑ 65% pop. have work related to agriculture.
- ❑ 500,000-1,000,000 migrate yearly, for jobs— 50% working age population

Remittances: 32% GDP



0.8 degrees change last century
1/3 Kyrgyz glaciers lost since 1930

Central Asia



CLIMATE ADAPTATION: BUILDING RESILIENCE, INVESTING IN COMMUNITIES

- Sustainable **environmental training**, capacity building, **agricultural extension** for land, livestock, water management
- Consider new methods—**ecosystem services** to help communities account
- Pilot testing of **micro-projects, micro-climates**





THANK YOU!

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