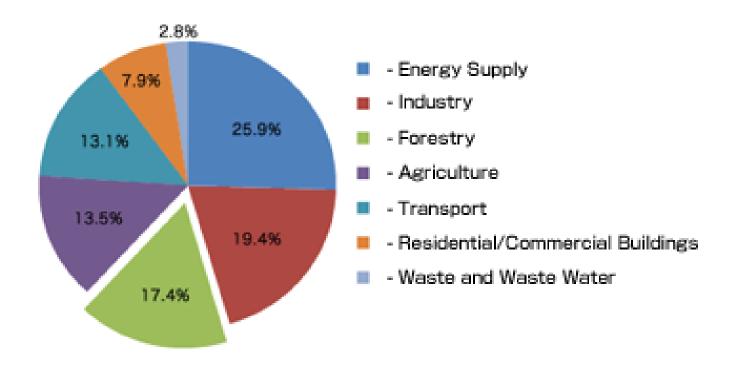


Tenure and Climate Change

Matt Sommerville, PhD
Chief of Party
Tenure and Global Climate Change (TGCC) Project
19 February 2014



Climate Change 101







Adaptation: Understanding Climate Impacts

Temperature:

- Annual/seasonal averages
- Changes in extreme highs and lows

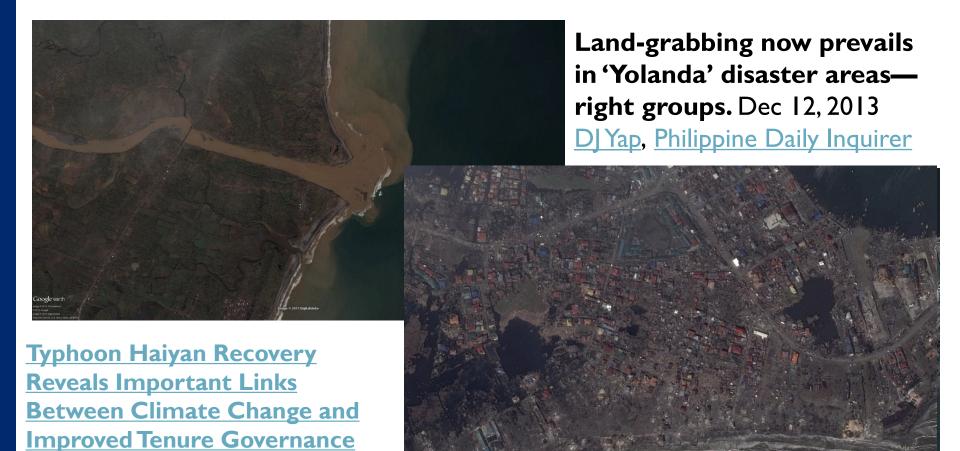
Water Changes:

- Decreased availability in semi-arid areas
- Contraction in snow coverage
- Increased heavy precipitation events
- Thermal expansion of seas



Tenure Impacts

Dec 16, 2013; Robert Oberndorf



http://www.usaidlandtenure.net/commentary#1692





Drying of Lake Chilwa, Malawi

- Drying of lake creates increased possibility of overfishing
- New rules around resource governance required to adapt to changing rainfall patterns

Livelihoods Drying Up on Malawi's Lake Chilwa



Malawi's Lake Chilwa could dry up completely by next year if the low rainfall in the area continued. Credit: Claire





- Extreme events vs slow onset
- National vs international
- Seasonal vs long-term
- Forced vs. voluntary



Werz & Conley, 2012

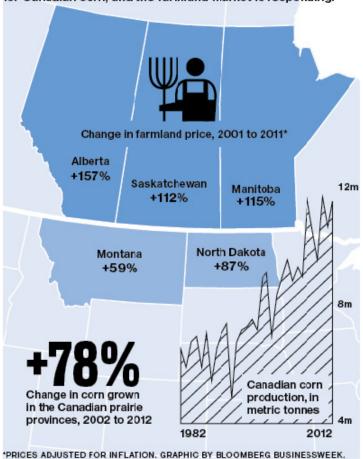


Planned Adaptation

- Vulnerability of poor
 - Urban adaptation plans
 - National climate strategies
- Changing Value of Land
 - Increasing
 - Decreasing

The Corn Diaspora

A warming climate means more hospitable growing conditions for Canadian corn, and the farmland market is responding.



*PRICES ADJUSTED FOR INFLATION. GRAPHIC BY BLOOMBERG BUSINESSWEEK. DATA: STATISTICS CANADA, USDA





Mitigation: Reducing Emissions

Low Emissions Development Strategies

- Clean Energy
 - Built Environment
 - Transport
 - Industry

- Sustainable Landscapes
 - Forests (REDD+)
 - Agriculture



Clean Energy & LEDS

- Built Environment
- Transport
- Industry

"In the early 1990s, the construction of 300 high dams (above 15 metres) each year had displaced four million people. Urban and transportation infrastructure projects accounted for six million more displaced each year."







Sustainable Landscapes

Unclear ownership, management, exclusion rights Forest Conversion and Security of Land Tenure **Increased Emissions** Actors seeking rents REDD+

New incentives to own/manage lands



Sustainable Landscapes

Carbon Credits

- Who owns trees?
- Who manages trees?
- Who bears the costs of leaving trees standing?
- What does it mean to sell a credit?
- Who decides?





Sustainable Landscapes

- REDD+ not going to solve decades old tenure challenges
 - Better definition of the challenges
 - Tenure lens necessary
 - Milestones
- Investment will flow to where tenure is clear