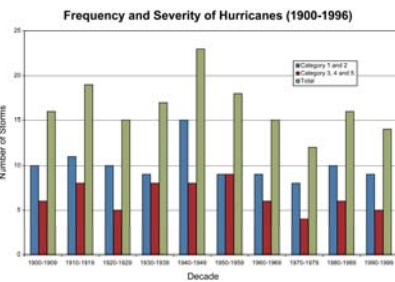
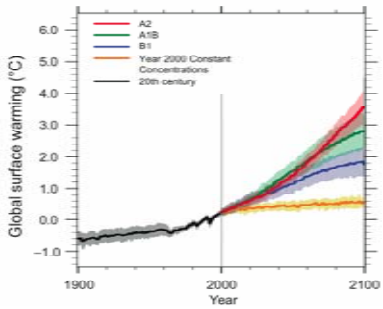


# Climate Change and Poverty: Towards an Integrated Framework

**Louise Cord, World Bank,**  
*Bank-Norway-Finland Sustainable Development Workshop,*  
*November 14, 2007*

# Uncertainty in predicting climate change and its effects



*Increasing uncertainty*

**Climate Change**

*(mean global  $T^0$ )*



**Manifestations of Climate Change**

*(e.g. extreme weather)*



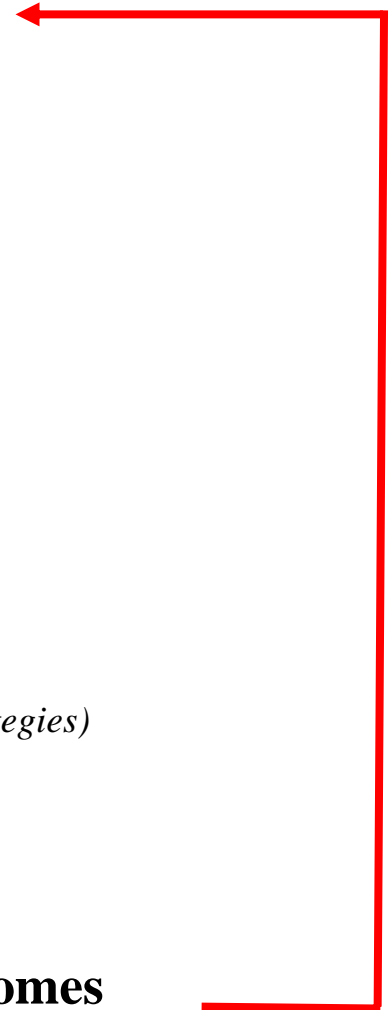
**Transmission Channels**

*(e.g. migration, changes in livelihood strategies)*

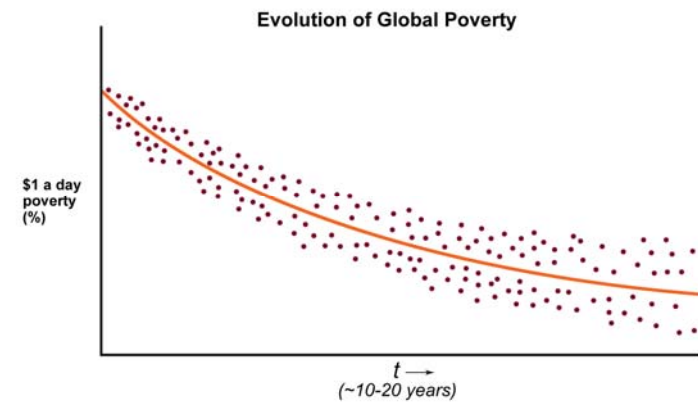
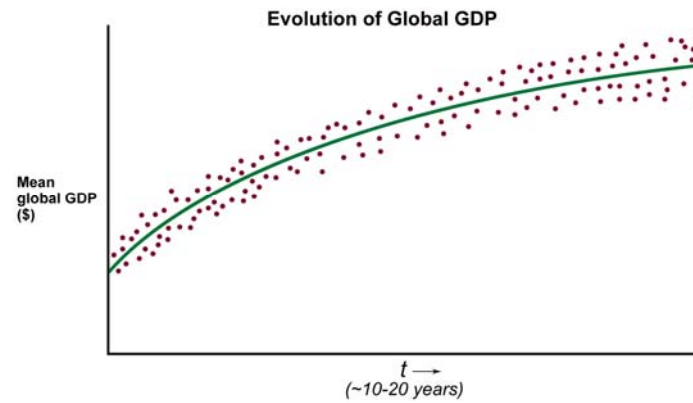
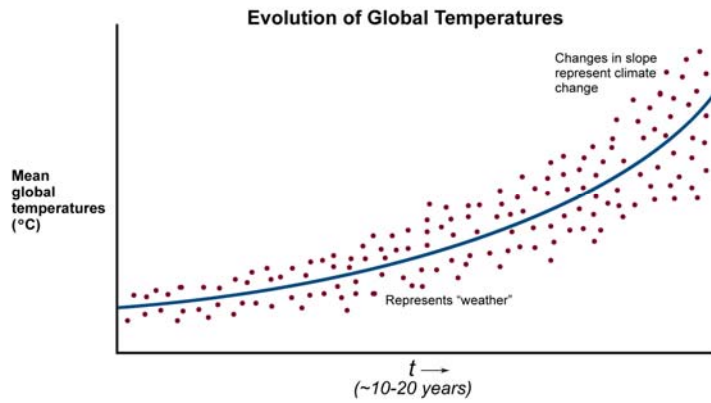


**Poverty & Economic Outcomes**

*(e.g. GDP/Capita, % below poverty line)*

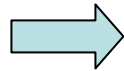


# Climate Change and Poverty: A Simulated Partial Equilibrium Analysis



# Climate Change and Poverty – An Integrated View

## Climate Change



## Transmission Channels



## Economic, Equity and Poverty Outcomes

- Increased severity and frequency of weather events
- Gradual changes in temperature, sea level and climate zones, and fresh water

- Effects on livelihoods
- Changes in capital stock and productivity
- Increases in mortality and morbidity rates
- Changes in settlement patterns
- Political tensions and conflict
- Changes in relative prices
- Macro and fiscal effects

- Growth and its distributional pattern will be affected
- Increased variability. Poverty traps (country, region and household)



- Increased risk and vulnerability to climate change

- LIC countries and poorer regions in MICS will be most affected:
  - Share of GDP of climate-sensitive sectors (Madagascar vs. Brazil)
  - Capacity to respond (GDP/capita)
  - Factor mobility and market efficiency (China)
- Fragile LIC states most at risk:
  - Weak institutions, poorly integrated markets and higher risk of conflicts (Sudan)

# Policy Options and Trade-offs

	Increased short-term variability	Gradual changes in mean
<b>Protection</b>	- <u>Protective infrastructure</u> (dams, flood walls, levees)	-Same as short-term, although multiplies risk and overtime become prohibitive
<b>Adaptation</b>	- <u>Drought resistant agriculture</u> - <u>Adaptive infrastructure</u> (houses on stilts, schools and health centers in boats) - <u>Vaccination campaigns</u> , improved services - <u>Building code regulations</u>	- <b><u>Land taxes and resettlement initiatives for vulnerable areas</u></b> - ----- <b><u>Subsidies and incentives to promote less climate sensitive activities.</u></b> - <b><u>Improved water management and pricing policies</u></b>
<b>Response</b>	- <u>Emergency response plans</u> (national and community levels) (water, housing, resettlement, etc.) -Improved and rebuilding of <u>services and infrastructure</u> in vulnerable areas - <u>Disaster Insurance</u> (public/private)	- <u>Targeted safety net programs</u> - <u>Disaster and meteorological monitoring systems.</u>

# How To Integrate Climate Change into PRSs?

## Priorities moving forward

- **Multi-sectoral diagnostic work:**
  - Quantify vulnerability to identify priority areas and assess impacts on growth, poverty and equity
  - Quantify the benefits of reducing vulnerability through response, adaptation and protection
- **Institutional coalitions:**
  - Build on existing institutions, with strong core leadership and a champion in MOF
- **Identify and cost specific investments/policies for protection, adaptation and response**
- **Multi-dimensional national and community based monitoring systems linked to PRS.**
- **Be realistic**