



New Insights from IPCC on Climate Adaptation

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“Adaptation is fundamentally an ethical issue because the aim of adaptation is to protect that which we value” (Hartzell-Nichols, 2011)

Four IPCC Adaptation Chapters

- Ch 14: Adaptation Needs and Options (15 pgs of refs)
- Ch 15: Adaptation Planning and Implementation (16 pgs of refs)
- Ch 16: Adaptation Opportunities, Constraints and Limits (34 pgs of refs)
- Ch 17: Economics of Adaptation (20 pgs of refs)

Adaptation Approaches

- Infrastructure and asset development
- Technological process optimization
- Institutional and behavioral change or reinforcement
- Integrated natural resources management (eg watersheds, coastal zones)
- Financial services, including risk transfer
- Information systems to support early warning and proactive planning

Some familiar themes

- Risk based approaches provide a useful foundation
- Importance of participatory processes, traditional knowledge
- Need for combined top down and bottom up approaches
- Tech transfer requires strengthening policy and regulatory environments, capacity building
- Currently have more focus on constraints than opportunities

News?

- Understanding of how the adaptive capacity of societal actors and natural systems influences the potential for managing risk has improved since AR4
 - Adaptive capacity unevenly distributed
 - Greater recognition of role of private businesses and insurance
- Adaptation guidance, information and tools are increasingly available
- Significant discussion of transformational adaptation

News?

- Expanding role of private sector – 3 components:
 - Internal risk management to protect assets and ensure continuity of supply and markets
 - Business as a stakeholder participating public sector and civil society initiatives
 - A range of new opportunities...healthcare, waste and water management, sanitation, housing, energy, information, public-private partnerships
- Phased capacity expansion strategies for engineered projects...facilitating incremental project construction

Uses of Metrics

1. Vulnerability metrics – measure the need for adaptation (people, communities and regions)
 2. Measuring and tracking the process of implementation
 3. Measuring the effectiveness of adaptation such as in monitoring and evaluation
 - Assessment of outcomes is less objective, subject to whether appropriate circumstances occur over time
 - Evaluation of processes may be a more robust approach
- “No-regrets” strategies are in the eye of the beholder – reconciling trade-offs may necessitate deliberation regarding objectives

Dimensions of Maladaptation

- Actions that
 - Increase emissions of greenhouse gases
 - Disproportionately burden the most vulnerable
 - Have high opportunity costs
 - Reduce incentives and capacity to adapt
 - Set paths that limit future choices
- Cause inequities
 - Inter-country; inter-generational; inter-species; intra-country

Ethical Implications

- Distribution of costs and benefits of adaptation options generates ethical questions
- Awareness that climate change may exceed the capacity of actors to adapt has implications for decisions about mitigation
- National and international actors are affected by resource availability and a wide array of other considerations – eg international negotiations, etc.

Actors

- Adaptation limits are strongly influenced by relationships among public and private actors and institutions across different spatial, temporal and jurisdictional scales
- Actors who focus on sustainable development may pursue different options than those who frame adaptation as ‘responding to climate change impacts’
- Perceptions of vulnerability (as well as actual vulnerability) differ by gender, race, economic conditions, age

Economics of Adaptation

- Characteristics that should be included:
 - Broad representation of relevant climate stressors
 - Consideration of multiple adaptation options or approaches
 - Rigorous analysis of costs and benefits across both market and non-market
 - Strong focus on support of practical decision-making incorporating sources of uncertainty
- Few current studies include all of these

Ancillary benefits of Adaptation

- Stimulating adaptation to current climate variability
- Generation of climate adaptation goods and services
- Advancement of sustainable development

CCASS Themes/Grand Challenges



- *Bridging the gap between science and decision making*
- *Managing risk in a complex, interdisciplinary and multi-sectoral context*
- *Supporting transformational adaptation and preparing for extreme climate and weather events*
- *Finding synergies among adaptation and mitigation strategies to promote sustainability*