Findings on Adaptation Planning and Practices in the WG2 AR4 of Relevance to the Nairobi Work Programme

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Introduction

- Elements of the NWP cut across practically all chapters of the Working Group II AR4

Chapter 1: Assessment of Observed Changes and Responses

Chapter 2: New Assesment Methods and the Characterisation of Future Conditions

Chapter 3: Fresh Water Resources and their Management

Chapter 4: Ecosystems, their Properties, Goods and Services

Chapter 5: Food, Fibre, and Forest Products

Chapter 6: Coastal Systems and Low-Lying Areas

Chapter 7: Industry, Settlement and Society

Chapter 8: Human Health

Chapter 9 - 16: Regional Chapters (Africa, Asia, LA, NA, Polar Regions, Small Islands)

Chapter 17: Assessment of Adaptation Practices, Options, Constraints and Capacity

Chapter 18: Inter-Relationships Between Adaptation and Mitigation

Chapter 19: Assessing Key Vulnerabilities and the Risk from Climate Change

Chapter 20: Perspectives on Climate Change and Sustainability

Introduction

- Of particular relevance to the NWP is new information on adaptation practices, constraints and capacity in the WG2 AR4

Links to NWP elements on:

- Adaptation planning and practices
- Research
- [Technologies]
- [Diversification]

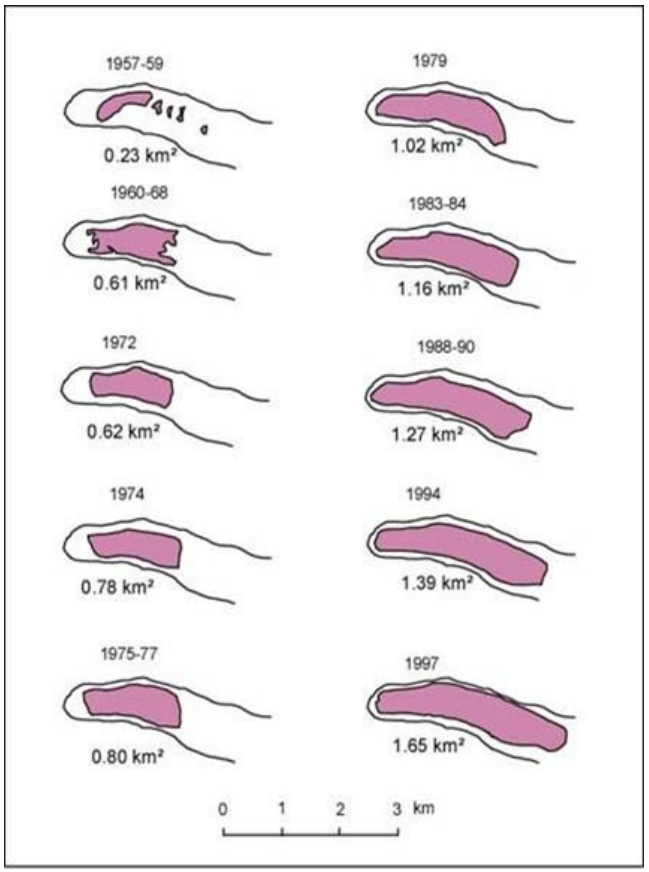
1. Adaptation to Climate Change is Already Underway

- In addition to climate variability, policies and measures are being implemented to adapt to observed and anticipated climate change

- Such measures are being put in place in both developed and developing countries

- They involve a range of actors, from national and local governments, to the private sector, individuals and communities

An Example: Tsho Rolpa glacial lake Nepal



- 7-fold growth from 1960 to 2000
- 100 million m^3 by 2000
- US$3 million to partially drain lake given scenarios of run-off and flood risk

Source: Shreshtha and Shreshtha (2004); Agrawala et al (2005)

Partial Drainage of the Tsho Rolpa

2. Adaptation Practices are Diverse and Can be Implemented at Different Scales

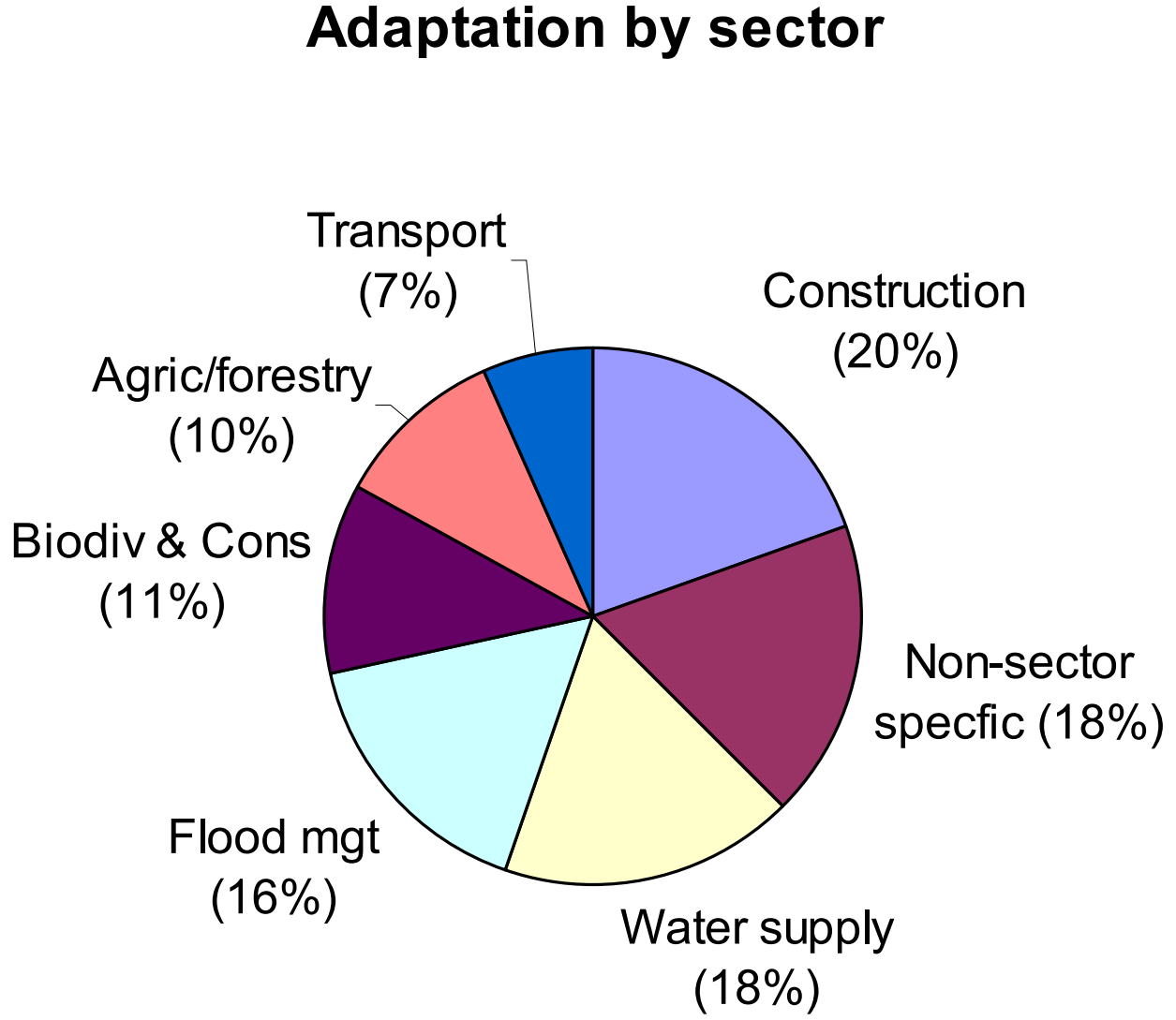
- Legislation: Consideration of climate change in the Flooding Defense Act (Netherlands); National Water Plan (Bangladesh)

- Livelihood Practices: Expanded use of traditional rainwater harvesting (Sudan); Changes in hunt location, diversification of species by the Inuit (Canada)

- Infrastructure: Copenhagen Metro (Denmark), Coastal highway (Micronesia); Deer Island Sewage Facility (US)

- Private Sector: Growth in artificial snowmaking (Europe, N. America, Australia/NZ)

Which sectors are adapting?



Source: Tompkins et al. (2005)

3. Overall, however, progress on Implementing Adaptation Remains Very Limited

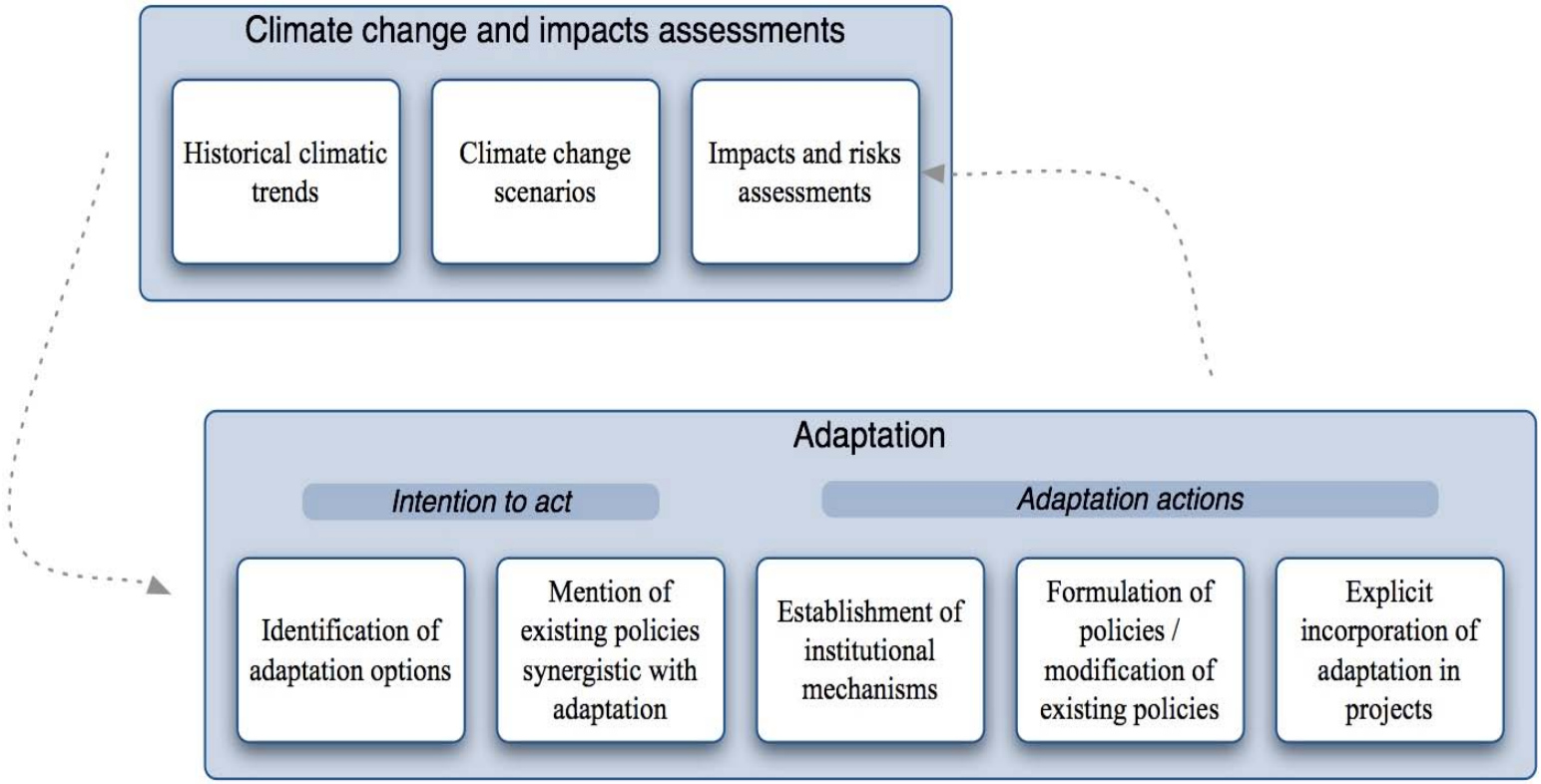
- Considerable progress has been made on addressing adaptation within climate change specific activities (assessments, action plans etc.) but such initiatives have generally not made the cross-over to "line Ministries" or national budgetary processes.

- Donors have also recognised adaptation in high level declarations, and have made progress on screening projects for climate risks.

- However, National Development Plans, Poverty Reduction Strategy Papers, Donor Country Assistance Strategies, and project documents generally do not pay attention to climate change, or often not even to current climate risks.

- The document examples of adaptation practices in the AR4 are at best " boutique cases" and Progress on implementing adaptation in development is still more Aspirational than Operational

.. Progress on “upstream” information more significant than “downstream” action, in both developing and OECD countries



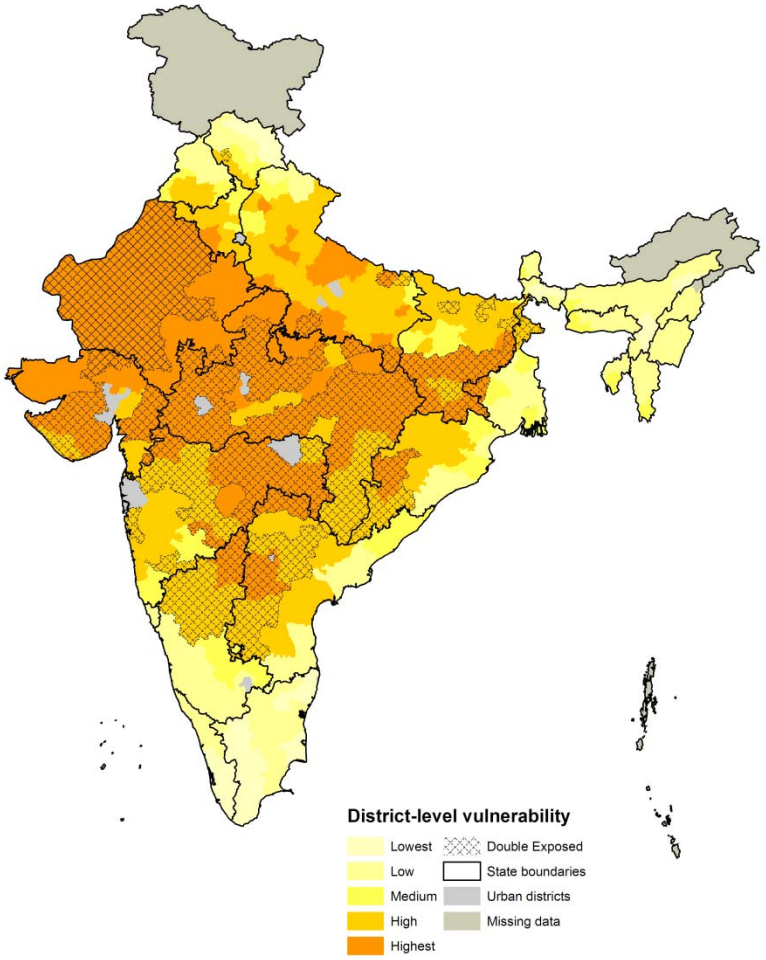
Source: Gagnon-Lebrun and Agrawala 2008

4. Adaptive capacity highly uneven

Sections of ***all*** societies have insufficient capacity to adapt:

- *'In all regions there are certain areas, sectors and communities which are particularly vulnerable, for example the poor, young children and the elderly'.*
- Multiple stresses such as HIV/AIDS, violent conflict and land degradation adversely affect the capacity to adapt

Example: Lowest adaptive capacity in India where:



- Highly exposed to future climate stress PLUS
- Sensitive to change in agricultural prices
- Some areas are doubly exposed

Source: O'Brien et al. 2004

5. Many adaptations are low cost, but comprehensive estimates of adaptation costs are lacking

- Available sectoral costing studies identify a number of adaptations that can be implemented at low cost, or with high benefit-cost ratios:

  - small adjustments in agricultural practices
  - coastal protection (high absolute cost, but benefits generally exceed unprotected damages)
  - private sector adaptations such as snow-making

However:

- even small adjustments may require changes in enabling environment (information, institutions, infrastructure)

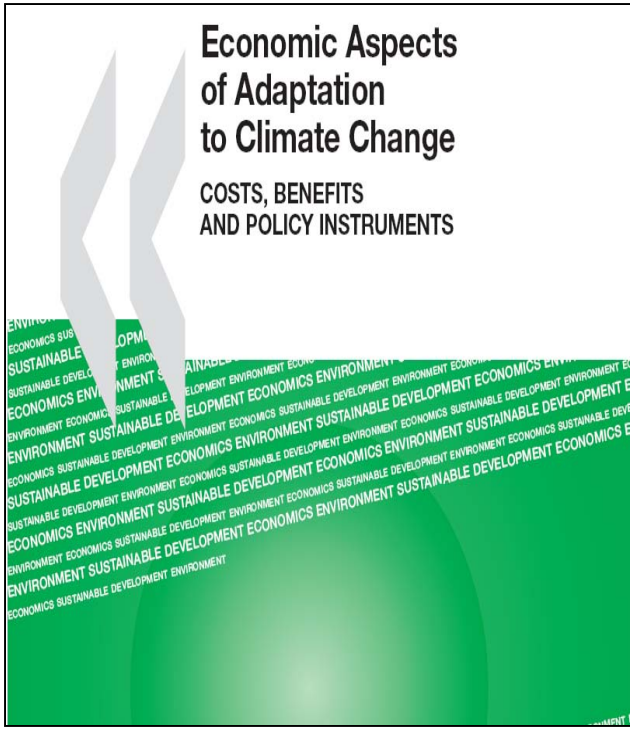
- low normalised costs can still be high in absolute terms

- low private costs might mask significant social and environmental externalities

5... Comprehensive estimates of adaptation costs are currently lacking

Broad conclusion of AR4 on costs still holds, but several new developments:

- new global estimates
(e.g. UNFCCC, UNDP)
- costs of priority adaptations (NAPA)
- Systematic assessment of adaptation costs and benefits by OECD



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