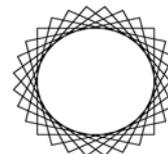




International
Institute for
Environment and
Development



**The RING alliance
of policy research
organisations**



Development Alternatives

Report of Adaptation Day at COP 8 Delhi, India 28 October 2002

Saleemul Huq and Hannah Reid



ENDA



ADAPTATION DAY AT COP 8

PREFACE

Adaptation Day at COP8 was held on Monday, 28 October 2002 at the India Habitat Centre, New Delhi, India during the eighth conference of parties (COP8) of the United Nations Framework Convention on Climate Change (UNFCCC). It was organised by the International Institute for Environment and Development (IIED) in collaboration with the RING (Regional and International Networking Group on Sustainable Development), The Bangladesh Centre for Advanced Studies (BCAS) and Environmental Development Action in the Third World (ENDA) and was hosted by Development Alternatives, India.

The purpose of the day-long meeting was to bring together scientists, experts, funders, practitioners and policy-makers working on adaptation to climate change from around the world to share the latest developments and activities of the respective groups. The meeting was broken into sessions on the science, funding, policy and actions and ended with a high level session on the future of adaptation in the climate change arena. Over a hundred people participated and held lively discussions with the presenters. No formal papers were invited from the presenters, although some made PowerPoint presentations.

This report of the meeting is an abridged one based on some of the PowerPoint presentations made by some presenters and notes of the presentations from others who did not have any formal presentation. It is not meant to be an exhaustive record of the meeting but to provide a flavour of the presentations.

We therefore apologise for the variable level of detail given in presentation summaries below.

ACKNOWLEDGEMENTS

IIED would like to thank all those who contributed to Adaptation Day at COP8 and all those who attended it. Special thanks go to Development Alternatives (DA) of India, who hosted the event, took minutes and helped with organisation on the day. Thanks are also due to the Shell Foundation, UK and the GTZ, Germany for their financial assistance for the meeting.

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ADAPTATION DAY AT COP 8

WELCOMES

Dr George Varughese, Vice-President , Development Alternatives, Delhi, India

Dr Varughese welcomed the participants on behalf of Development Alternatives (DA). He mentioned that DA had arranged a number of events revolving around the conference of parties (COP8) of the UNFCCC being held in Delhi. These included a just-concluded three-day workshop on climate change adaptation for development NGOs in the South Asian region as well as exhibitions by school children in Delhi and by self-help women's groups from around India. He welcomed the guests and invited them to attend the exhibitions that were taking place outside the meeting venue.

Dr Saleemul Huq, Director, Climate Change Programme, International Institute for Environment and Development

Dr Huq welcomed the participants in behalf of the International Institute for Environment and Development (IIED) as well as the Regional and International Networking Group (RING) on sustainable development. He mentioned that the purpose of the day-long, meeting was to bring together people from different communities including scientists, development funders and practitioners, policy makers and NGOs to discuss the latest developments and activities being done in the area of adaptation to climate change.

SESSION ONE: ADAPTATION SCIENCE

Main outcomes on Adaptation to Climate Change from the third assessment report of the IPCC

Dr Robert Watson, Former Chairman, Intergovernmental Panel on Climate Change (IPCC)

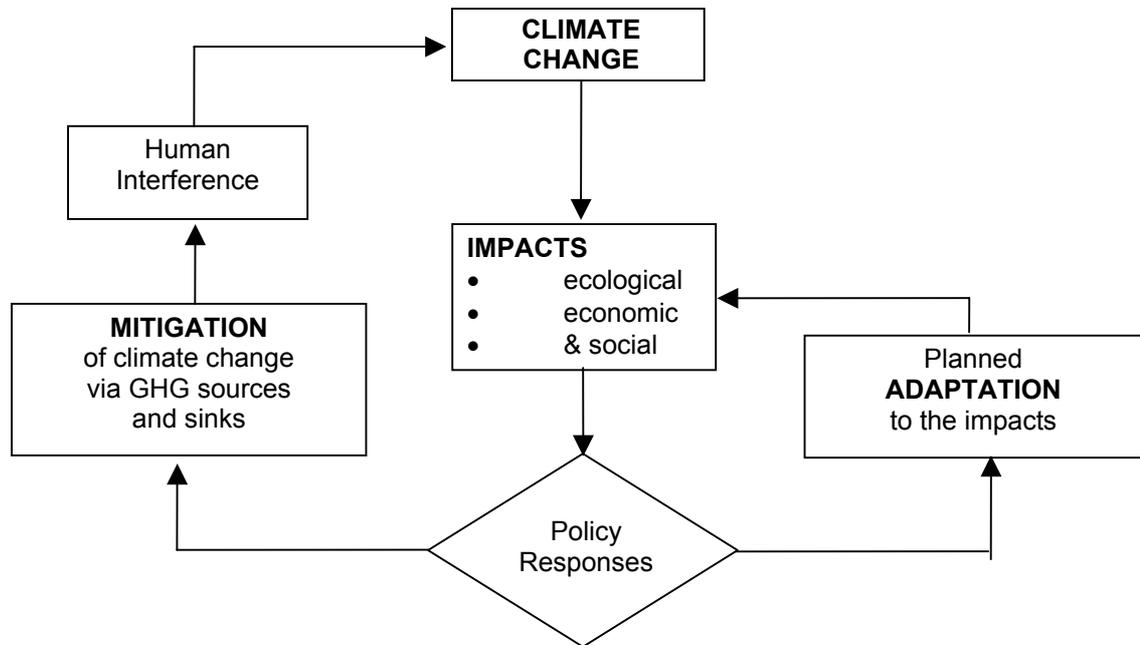
Dr Watson highlighted some of the major outcomes of the third assessment report of the IPCC with respect to adaptation to climate change. These included the following:

- The need for adaptation to climate change is one of the most important outcomes of the third assessment report of IPCC
- This is specially important for the developing countries who are most likely to be most adversely impacted by climate change
- Ecosystems will not be able to adapt
- Poor people in poor countries will be most adversely effected
- Adaptation to climate change needs to become part of the development agenda for developing countries and development funders

Adaptation Science

Dr Barry Smit, University of Guelph, Canada and coordinating lead author of the chapter on Adaptation in the third assessment report of IPCC

Dr Smit gave a presentation on the scientific aspects of adaptation to climate change.

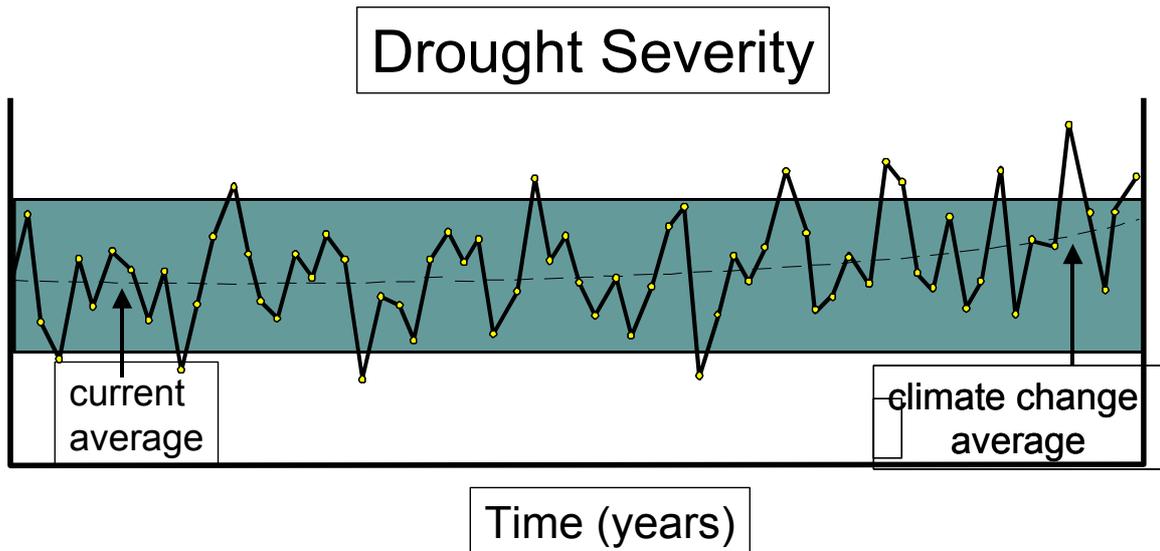


Adaptation Differences:

- Public - private
- Autonomous - planned
- Proactive - reactive
- Short term - long term
- Retreat - accommodate - protect - change
- Structural - regulatory - technological - financial - management

Lessons about Adaptation:

- Climate change includes extremes
- Adaptation to climate vulnerabilities
- Adaptations need to be mainstreamed
- Reducing vulnerability requires enhancement of adaptive capacity
- Development initiatives can strengthen adaptive capacity



Vulnerability Assessments and Adaptations in Practice:

- Engage real stakeholders
- Identify current vulnerabilities
- Assess adaptive strategies
- Estimate future vulnerabilities
- Mainstream capacity enhancement

Managing Climate Variability to Reduce Livelihood Vulnerability

Dr Shiv Shomeshwar, International Research Institute on Climate Change and Climate Variability, Columbia University, USA

Dr Shomeshwar gave presentation on the main differences between climate change and climate variability.

Climate Variability (CV) and Climate Change

Proactive management of CV **critical** for CC adaptation

○ ***Sustainable Livelihoods*** remit:

- Coping
- Long term growth prospects
- Equity between and within regions, within countries
- Millennium Development Goals
- Capacity building on experience of science-application-development continuum

Weather: day to day state of the atmosphere for a place:

- Daily precipitation, temperature, humidity
- No prediction beyond three to five days

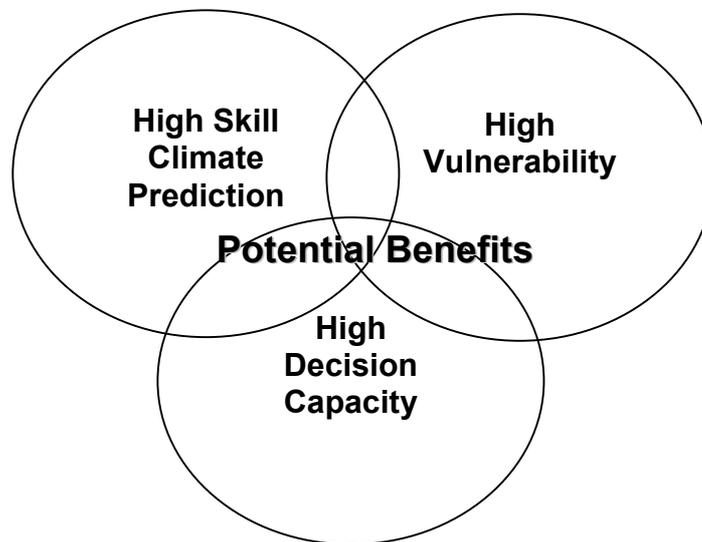
Climate: average statistics of temperature or precipitation over a region for a three-month period:

- Dynamic modeling atmosphere, oceans, and land coupling
- Prediction one to three seasons ahead, in some parts of the world

Impacts of Variability, 2000-2002, Southern Africa:

- 200,000 displaced and 9,000 cholera cases in Malawi
- 80,000 displaced and 3,000 cholera cases in Mozambique
- 300,000 affected in Zimbabwe
- 37,000 cases of cholera in South Africa
- 1.3 million in Zambia facing starvation
- 500,00 in Zimbabwe at risk of severe hunger
- Government of Malawi declares a national disaster and appeals for US\$26.1million
- SADC Food Security Network Ministerial Brief declares “humanitarian catastrophe”
- FAO declares potential famine impacting 10 million

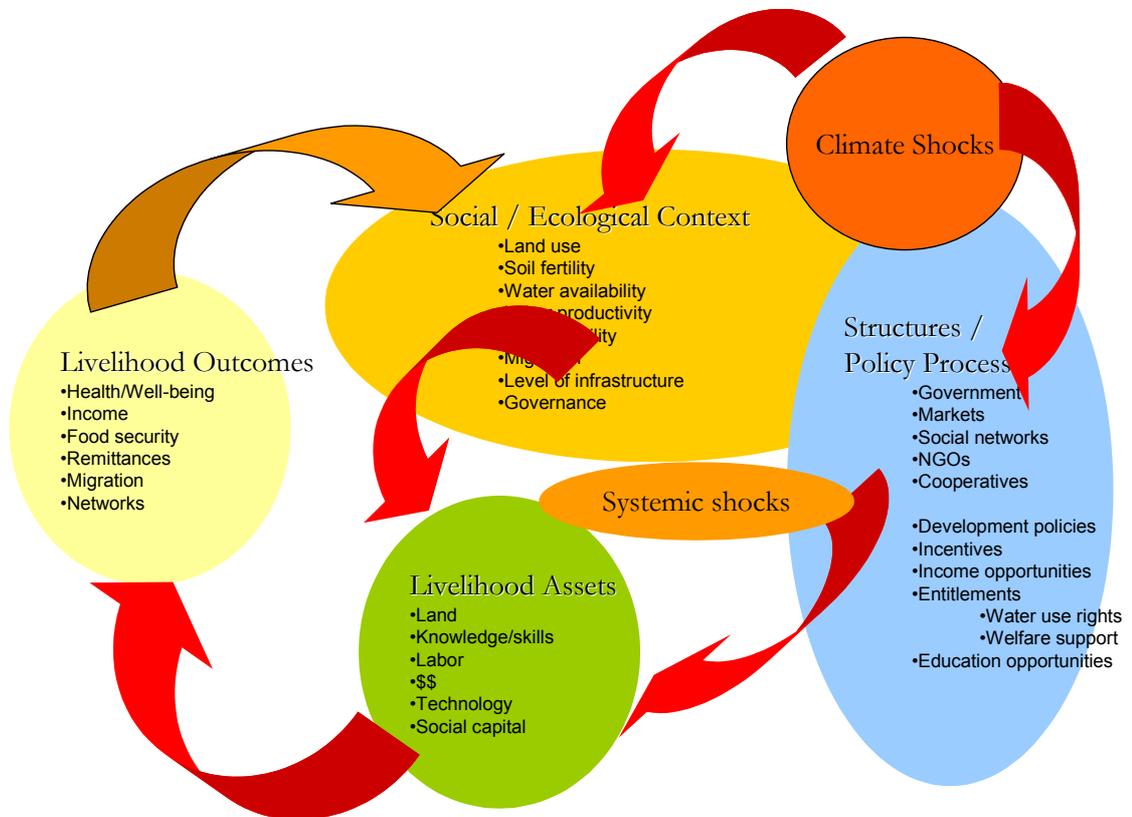
Applying Science to Reduce Vulnerability: the IRI End to End Model:



IRI – “End to End” Approach:

- Modeling, forecasting, monitoring, development applications
- Underpinning research
- Regional Programs – NE Brazil, GHA, Southern Africa, South and SE Asia.....
- Single sector approaches (Agriculture, Water...)
- Livelihood approaches

Investigating climate vulnerability of livelihoods - The Climate Vulnerability Relation:



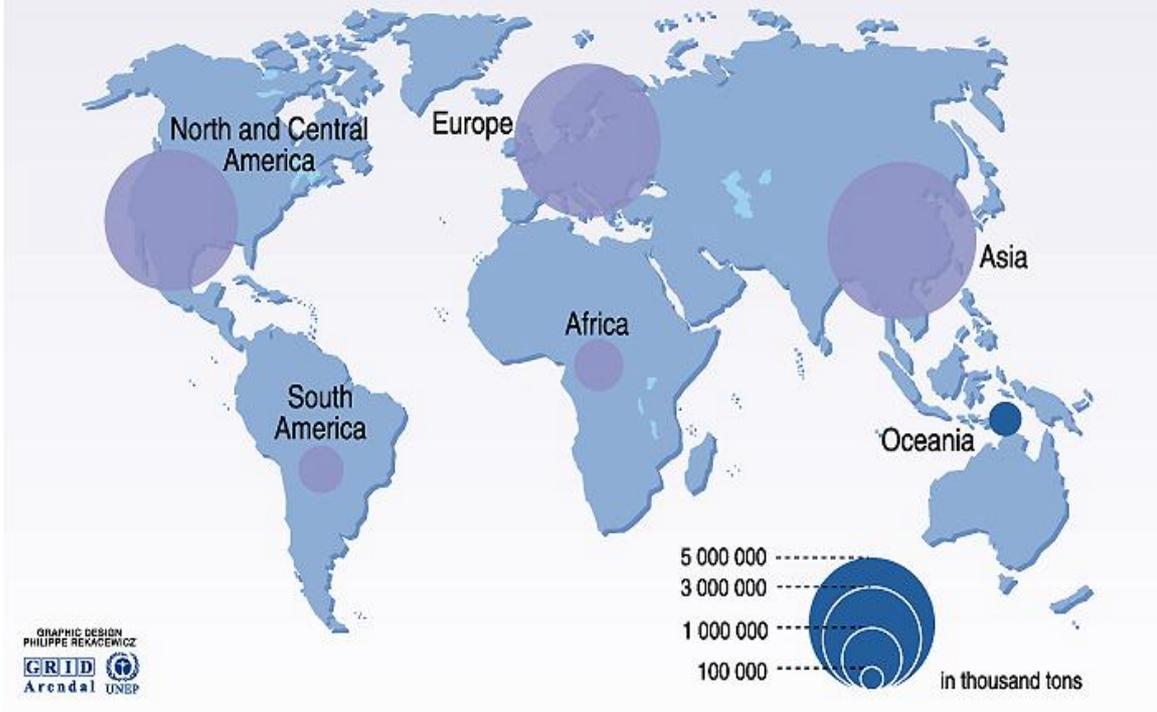
Beyond the Adaptation Mitigation Dichotomy

Dr John Drexhage, Director, Climate Change Programme, International Institute for Sustainable Development, Canada

Dr Drexhage gave a presentation trying to link adaptation to mitigation.

- Food production must increase to meet the needs of additional three billion people in the next 30 years.
- One third of the world's population is now subject to water scarcity. Populations facing water scarcity will double over the next 30 years.
- Wood fuel is the only source of fuel for one third of the world's population. Wood demand will double in the next 50 years. Biomass for primary energy will persist - how do we manage this?
- An estimated 10-15% of the world's species will be committed to extinction over next 30 years. Biodiversity provides 'goods' in its own right.

CO₂ emissions from industrial processes



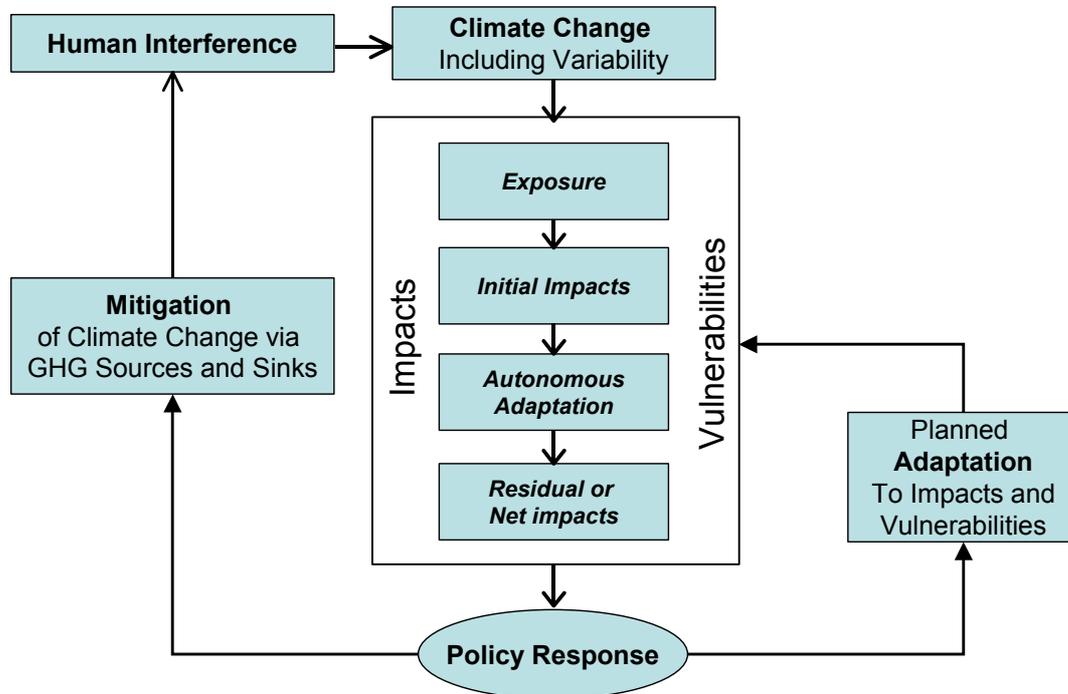
Source: United Nations framework convention on climate change (UNFCCC).

CO₂ emissions from land use change



Source: Climate Change Information kit, UNEP IUC, 1997.

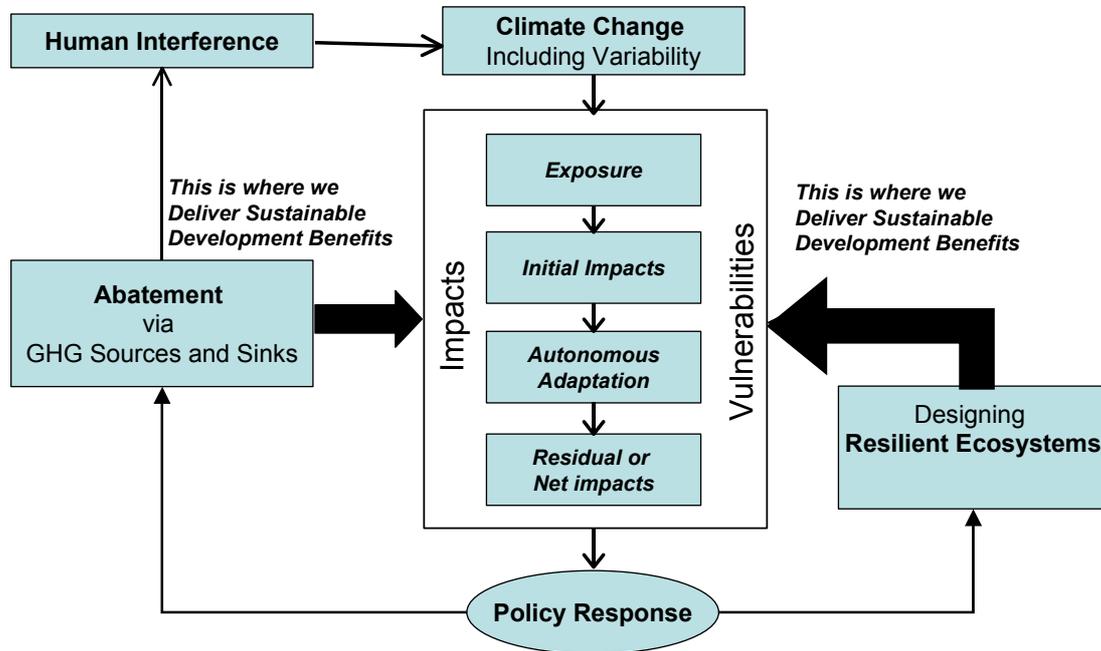
Impacts, Adaptation and Vulnerability (IPCC, 2001)



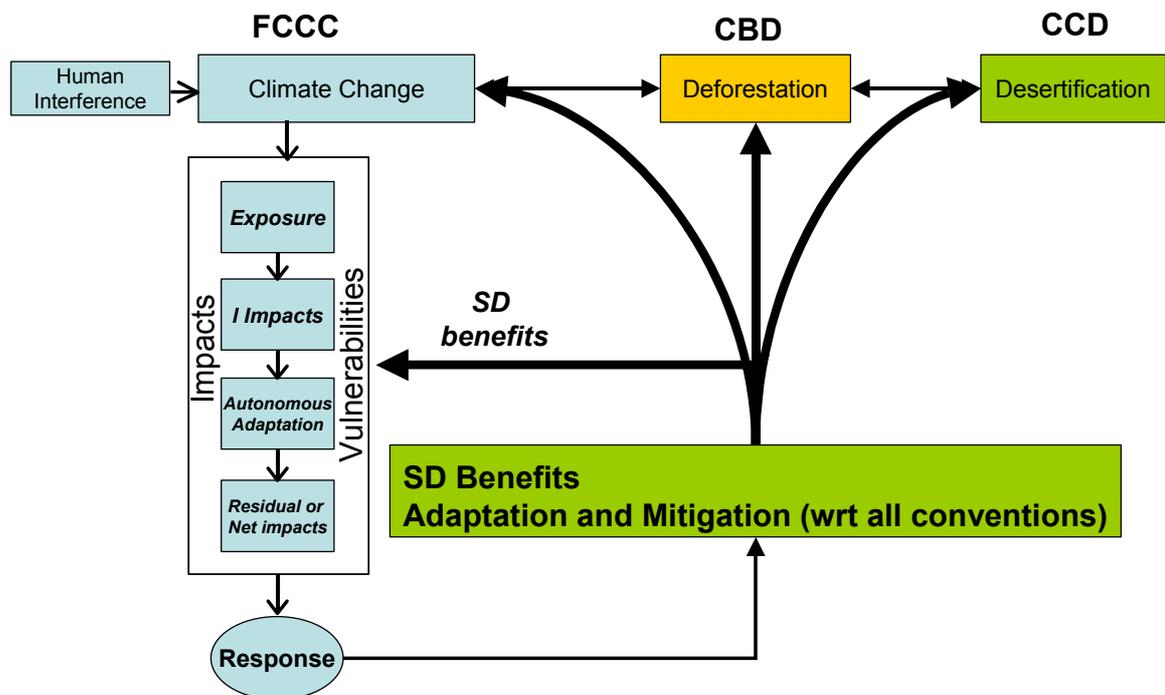
An Integrated Approach:

- It cannot be a case of adaptation *or* mitigation, or adaptation versus mitigation.
- Must develop a solution that is complementary: blends adaptation and mitigation to effectively address the threat of climate change.
- Meaningful global emission reductions are required to avoid dangerous interference with the global climate system.
- Adaptation is already required in vulnerable communities and will become even more a priority as climate change impacts increase.
- In addition, many actions address both sides of the climate change solution.
- The global regime question – how can this model be usefully reflected in the post-Kyoto world?

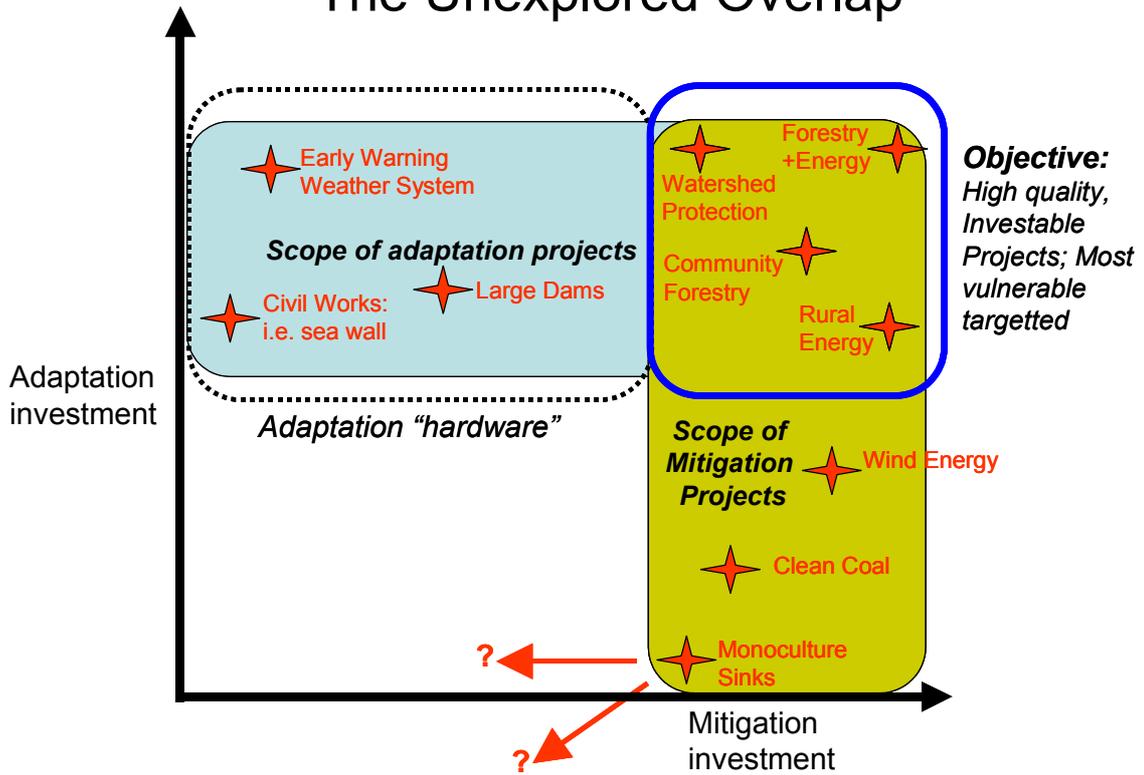
An Alternative Model



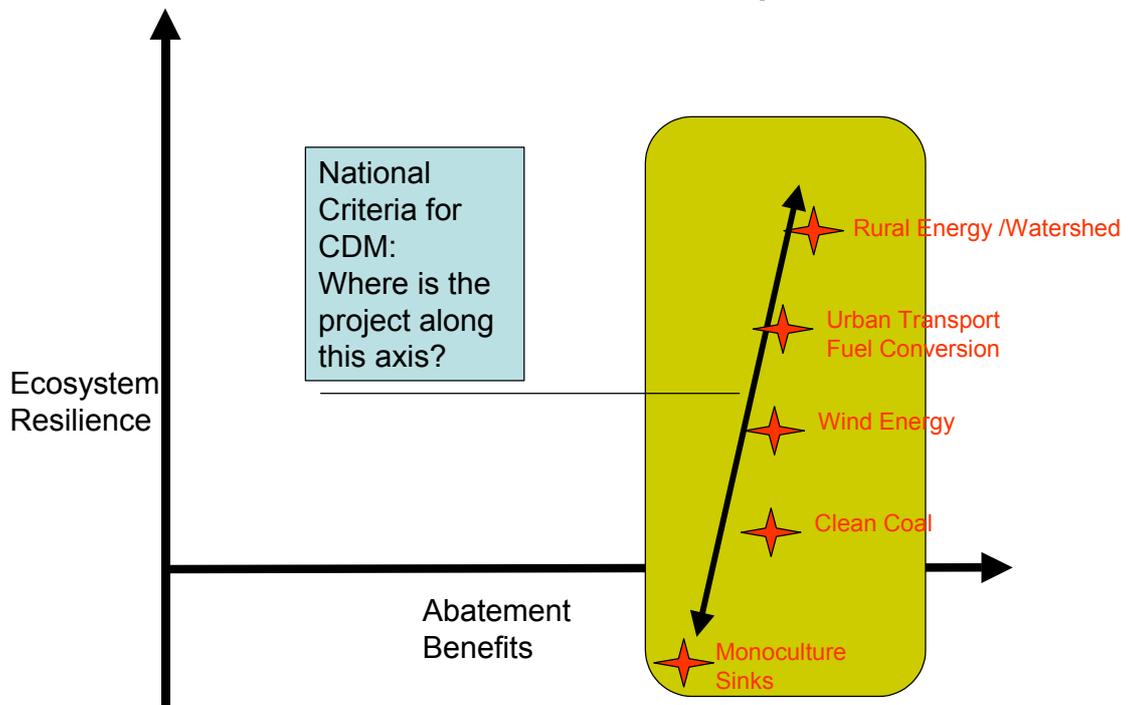
A "Rio perspective":



The Unexplored Overlap



The Sustainable Development Lens



How the IPCC is looking at adaptation for the fourth assessment

Professor Martin Parry, University of East Anglia, UK and Co-Chair, Working Group II, IPCC

Professor Parry described the progress of the fourth assessment report of IPCC and how the issue of adaptation is likely to be dealt with.

- The fourth IPCC Assessment will be completed in 2007.
- A working group will be set up on adaptation. Adaptation will be one of the key issues discussed during the plenary planned for February 2003.
- By end of 2003, the position and profile of adaptation will be worked out.
- There are several issues that need to be researched. These include:
 - o Assessment of adaptive capacity.
 - o Limits of adaptive capacity.
 - o Enhancing adaptive capacity.
 - o Variation in adaptive capacity with respect to different local and regional scenarios.
 - o Costs of adaptation. The need to understand the ‘costs’ of adaptation was emphasised. Such costs include those of losses/damage and those relating to mitigation. Judgements are needed on the optimal economic and social compromise between these two types of costs. No research has been done to date on the cost of damages avoided.
- IPCC is only an assessment. It does not direct research.

SESSION TWO: ADAPTATION POLICY AND FUNDING

The Adaptation Policy Framework (APF)

Dr Bo Lim, UNDP-GEF, New York

Dr Lim described the adaptation policy framework (APF) being developed by UNDP.

The APF builds on earlier work such as:

- National Communications
- Previous methodologies
- The IPCC Third Assessment Report, 2001
- The UNFCCC/UNDP workshop, 2001

The APF responds to countries’ issues, such as:

- Uncertainty of climate scenarios
- Lack of integration across sectors
- Lack of socio-economic analysis
- Difficulty in developing policy options

The APF aims to:

- Develop national strategies to cope with climate change, including variability
- Assess adaptation measures within the context of sustainable development
- Strengthen adaptive capacity

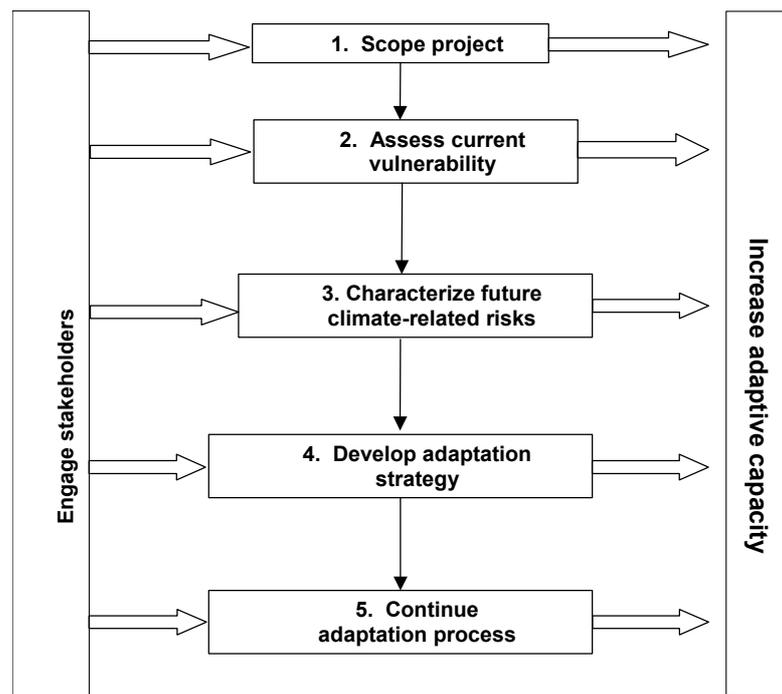
Target audience for APF:

- Primary audience:
 - o Climate change teams in developing countries
 - o GEF regional project in Central America, Mexico and Cuba
 - o Other projects
- Secondary audience:
 - o Experts, including developed countries
 - o Multilateral and bilateral agencies

Guiding principles for the APF:

- Adaptation assessed in a developmental context
- Adaptation occurs at different levels in society, including at the local level
- Both adaptation strategy and policy process are equally important
- Build adaptive capacity to cope with future climate

Example of an APF:



Structure of the APF (currently draft papers. Soon to be available in French and Spanish):

- Summary for policy makers (three pages)
- Users' overview (10 pages)
- Nine technical papers (10 pages)
- Supporting methods and resources

APF technical papers:

- Project scope and design
- Stakeholders
- Vulnerability assessment
- Current climate risks
- Future climate risks
- Socio-economic conditions
- Adaptive capacity
- Formulation of adaptation strategy
- Evaluate, monitor, and review

APF Authors:

- Co-ordinators are Ian Burton, Saleemul Huq and Bo Lim
- Lead authors: 25 authors + from 15 countries (including nine southern countries)
- Contributors and reviewers include 150 experts from 150 countries

Questions to be addressed:

- What kind of policy instruments will reduce vulnerability to climate change?
- What kind of policy decisions might be influenced by the project?
- How might project results be introduced onto the local, or national policy agenda?

Possible project outcomes:

- Strategies
 - o Re-examine national sustainable development goals
 - o Re-align poverty reduction programmes
- Policies
 - o Develop a portfolio of adaptations
 - o Implement guidelines for adaptation in national and local planning
- Measures
 - o Overcome barriers to adaptation
 - o Enhance adaptive capacity
 - o Alter investment plans
 - o Identify adaptation projects

Next steps:

- Three lead author meetings, 2002
- Zeroth draft, 15 July
- First draft, 7 October
- Wide external review, 2002-2003
- Second draft, March
- Revise, translate and disseminate, 2003
- On-going improvements, 2003 and beyond

Challenges:

- Make sure that the APF is practical
- Involve more stakeholders
- Add more case studies
- Provide technical support for its application

Advancing Science and Building Capacity to Support Adaptation. The AIACC Project

Dr Neil Leary, Science Director, Assessments of Impacts and Adaptation to Climate Change (AIACC), Washington, USA

Dr Leary described the objectives and activities of the GEF funded project on assessment of impacts and adaptation to climate change (AIACC).

Developing sound adaptation strategies requires good science

- Scientific investigation is needed to answer:
 - o Who are most vulnerable?
 - o To what are they vulnerable?
 - o What are the causes of their vulnerability?
 - o What are their options for adaptation and what are the consequences and costs of adaptation?
- Answering these questions can help to identify effective adaptation strategies
- But scientific understanding is incomplete
 - o Though sufficient to begin acting,
 - o Must continually add to knowledge and adjust policies accordingly
- Scientific and technical capacity is generally deficient in developing countries
 - o There is a need to advance scientific understanding and build capacity to support adaptation actions in developing countries

AIACC is a project developed to address these needs:

- Advance scientific understanding
- Build and enhance scientific and technical capacities in developing countries
- Engage with stakeholders to produce information useful for adaptation planning
- Contribute to National Communications and National Adaptation Plans of Action (NAPA)

AIACC partners:

- Proposal for this global, four-year initiative developed in collaboration with IPCC, UNEP, START, and TWAS
- Global Environment Facility (GEF) provided primary funding (7.5 million US\$)
- USAID, USEPA and World Bank have provided supplemental funding
- Participating institutions in developing countries have provided collateral funding

Twenty-four regional studies funded:

- 150+ proposals submitted in 2001 for regional studies of climate change impacts, adaptation and vulnerability
- Proposals were peer reviewed
- Awards made in 2002 based on
 - o Scientific merit
 - o Regional significance

AIACC studies active in 46 developing countries:

- Each study involves a team of scientists from multiple disciplines
 - o 235+ scientists from developing countries participating as lead investigators

- 60+ graduate and undergraduate students
- 40+ scientists from developed countries collaborating

Support provided to each study:

- Three years of research funding (100k to 225k US\$)
- Participation in
 - Training
 - Mentoring
 - Scientific network

Activities in 2002:

- 24 regional studies launched
- Three workshops held to
 - Assist with refining study designs and implementation
 - Provide training in methods for constructing climate change scenarios and assessment of impacts, adaptation and vulnerability
- Mentoring activities initiated

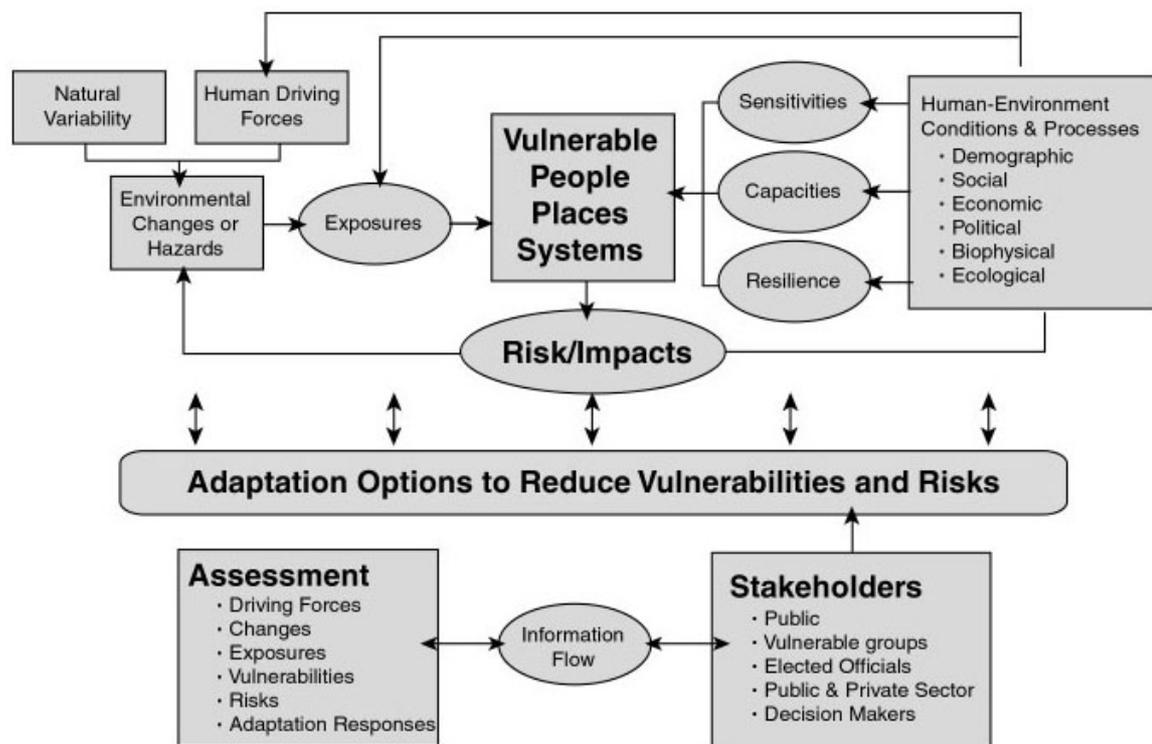
Activities in 2003:

- 24 studies will continue their research
- Workshops in Africa, Asia and Latin America
 - Present and discuss preliminary results
 - Share expertise, collaborate to solve problems
- Capacity building activities
 - Visiting scientist programs, training courses, etc
- Stakeholder engagement activities
- Development of web-based information network

Second Generation Assessments:

- Emphasize understanding vulnerabilities
 - Who is vulnerable to harm? From what? Why?
- Explore multiple, interacting stresses
 - Climate change, extreme weather, population growth, land use change, urbanization
- Evaluate responses, adaptations
 - Focus responses on causes of vulnerability
- Engage stakeholders
 - Enhance relevance, utility, credibility

Framework for second generation assessment:



Comparison of First and Second Generation Assessments:

1st Generation	2nd Generation
<ul style="list-style-type: none"> - Motivation: how bad are the risks? - Modus: to “predict” impacts - Careful attention to modelling future exposure - Typically focus on a single stress - Other causes of vulnerability get little attention - Treatment of adaptation is ad hoc, afterthought 	<ul style="list-style-type: none"> - Motivation: what responses can reduce risks? - Modus: to investigate causes of vulnerability - Careful attention to social causes of vulnerability - Multiple stresses considered - Recent experience with hazards, stresses used as analogues - Treatment of adaptation central

Dr Leary then described some of the regional AIACC projects located in the Philippines and Indonesia, Nigeria and Mali, Central America (Guatemala, Belize, Honduras, Nicaragua, El Salvador, Costa Rica and Panama), and Pacific Island Countries such as Fiji and the Cook Islands. All research is conducted in collaboration with local research centres.

Anticipated outcomes:

- Publication of peer reviewed papers.
- Increased numbers of developing country researchers who are actively engaged in global change research.
- Increased participation of developing country scientists in future assessments of IPCC.
- Wider understanding of climate change issues among stakeholder groups in developing countries.
- Use of AIACC generated information in National Communications and NAPAs.

Activities of the GEF on adaptation to climate change

Dr Alan Miller, Global Environment Facility, Washington, USA

Dr Miller provided a basic brief on GEF and described funding mechanisms focused on issues such as climate change, biodiversity and sustainable development. He described how US\$1.2 billion has been provided for climate change work, and stated what kind of adaptation activities could be funded by the GEF. Funding mechanisms include special convention funds, the LDC Fund and the Kyoto Protocol Adaptation fund (the amount from this is currently uncertain). US\$5 million has already funded institutional and capacity building demonstration projects.

CIDA's activities related to adaptation to climate change

Ms Liza Leclerc, Canadian International Development Agency (CIDA), Canada

Ms Leclerc described CIDA's activities and thinking on climate change and adaptation. It has three broad approaches:

1) **Mainstreaming:** Environment is treated as a cross-cutting issue in CIDA's programmes, plans and projects. Many of the existing bilateral and multilateral projects and programmes address vulnerability and adaptation.

The concept of adaptive capacity is one which is very useful for many donor agencies because it addresses the need to improve the overall capacity of a country/system to adapt to changes and shocks. By addressing poverty eradication through sustainable development, which is CIDA's mandate, adaptive capacity is increased. Moreover, many environment projects address specific adaptive capacity such as activities to manage coastal zones or desertification.

One of the ways we are mainstreaming environment and climate change into programming is through Country and Regional Development Programming Frameworks (CDPFs and RDPFs). These are frameworks prepared with the partner country which guide priority programming areas over several years.

2) CIDA also manages, on behalf of the Government of Canada, the Canada Climate Change Development Fund (CCCDF). This is a five-year \$100M Fund, which is supporting 42 climate change projects in the areas of emissions reductions, core capacity building, adaptation and carbon sequestration. Seven large adaptation projects have been selected for implementation as well as several smaller ones, including projects in support of adaptation policy development.

3) Canada has also been very involved in the UNFCCC process in support of the development of National Adaptation Programmes of Action (NAPAs) for the Least Developed Countries. These action-oriented documents serve as simplified channels of communication for urgent and immediate adaptation needs for those countries considered particularly vulnerable and least able to adapt to the impacts of climate change. Through NAPAs, CIDA is encouraging the creation of synergies between the UNFCCC and the objectives of other Conventions such as the UN Convention to Combat Desertification and the Convention on Biological Diversity.

SESSION THREE: ADAPTATION ACTIONS

Adaptation Actions in Mali

Dr Moussa Cisse, ENDA, Senegal

Dr Cisse gave a presentation on a country case study on adaptation in Mali.

Country background:

- Sahelian country vulnerable to drought and desertification
- Population: 10 million in 2000
- Growth rate: 3.2% per year
- Economy dominated by the agricultural sector
- GNP: US\$2.6 billion

Existing information on vulnerability:

- Many studies directly and indirectly related to vulnerability and adaptation
- Sectors concerned: Agriculture and food security – water – energy – ecosystems
- Key studies on vulnerability and adaptation within the framework of the implementation of the UNFCCC

Vulnerability and adaptation in the agricultural sector:

- Zone of study: the upper valley of Niger River
- Objectives:
 - o Evaluate the potential impacts of climate change on yields of millet and sorghum
 - o Evaluate the socio-economic impact of climate change
 - o Propose strategies for adaptation to climate change
- Methods used
 - o GCM to established climate change scenarios with six models: Canadian climate change model – UK meteorological office – UK MET office for 1989 – geophysical fluid dynamics laboratory model – Goddard Institute for space studies model – geophysical fluid dynamics.
 - o Reference year 1995
 - o Normal climatology period 1961-1990
 - o Temporal horizon 2025

Results:

- Best possible correlation obtained between GFDZ model and CCCM model
- Temperature rise by year 2025: 2.7 – 4.5
- Decrease in rainfall (8 – 10%) and insolation (1 – 10%)
- Impacts on crops such as sorghum
- 16% - 25% decrease in yield for the various varieties

Adaptation strategies:

- Current adaptation strategies referred to climate variability to address the impact of drought
- Agro hydro meteorological follow up studies on cultivation and pastoral lands (meteo and hydro data collection – analysis and dissemination)

- Agro hydro meteo assistance to rural communities
- Other adaptation strategies suggested: genetic modification of certain species – improvement of agricultural techniques and practices – reinforcement of agro meteo assistance

Water sector:

- Zone: Niger River at Mopti
- Methods used:
 - Analog methodology – expert judgement – simulation models.
 - Base year 1995
 - Climatological normal 1961 – 1990
 - Temporal horizon 2025

Vulnerability and adaptation in the water sector:

- Scenarios
 - BAU: Continuation of the current trend with temperature rise of 0.4 to 1.1 and decrease in rainfall below 12 – 29%
 - Doubling of carbon dioxide concentration with 15% increase in rainfall in the year 2025
- Adaptation strategies
 - Development of water supply system
 - Combined exploitation of surface and underground water
 - Protection against flooding and pollution

Integrating Climate-Change Adaptation in World Bank Operations

Dr Ajay Mathur, Head, Climate Change Team, World Bank, Washington, USA

What is adaptation to climate change?

- In most cases, climate-change impacts enhance existing stresses, thereby
 - Enhancing vulnerability
 - Reducing quality of health
 - Increasing uncertainty of livelihoods, and
 - Reducing economic opportunities
- Sustainable development addresses these concerns
- What should a ‘climate change adaptation’ project do?
 - At the very least, ensure integration of climate variability in development where appropriate

As climate variability becomes integrated into development projects in the short term, this enhances long-term community resilience and thus promotes sustainable development. However, vulnerability issues are not being addressed for a variety of social, political and financial reasons.

What does the bank need to do?

- Assessment of impacts and adaptation options
 - Quick assessment; planning and preparation; data collection and management
- Prioritise and Mainstream adaptation options

- Cost-benefit assessment; institutional strengthening; integration in CAS and PRSPs; Pro-vention; redesign of infrastructure projects
- Support the removal of barriers that constrain sustainable development strategies – which also enhance resilience to climate change
 - Water pricing; land-use planning; agricultural prices and policies; privatisation and diversification; enhanced insurance coverage

What is the bank doing?

- Assessments
 - Caribbean, Bangladesh
 - Agriculture in Africa
 - Quick Assessment Best Practices
- Prioritisation and Mainstreaming
 - Assessment of PRSPs
 - Redesign of Madagascar Port project
 - Integration with development planning in Kiribati
 - Mainstreaming Climate Change in the Caribbean
 - Cost-Benefit Assessment Methodology
- Barrier Removal
 - Disaster Management Facility
 - Addressing drought management in central Asia
 - Scientific information needs of farmers and fishermen in Andean countries

Instruments

- Bank lending
- PHRD Grants – for project development and pilots
- GEF Grants
- National Adaptation Strategy Studies (NASS)
 - To support prioritisation and capacity building in developing countries
- Vulnerability and Adaptation Resources Group
 - To highlight best practices through assessment and synthesis of knowledge and experience

Capacity building and knowledge management

- National Adaptation Strategy Studies
 - Multi-donor, Bank-managed program with country execution, focusing on prioritisation
 - Capacity building intrinsic to the process
 - Outputs could be used to (re)define national policies, sectoral project designs, areas of bilateral and multilateral focus, communications to UNFCCC
- Vulnerability and Adaptation Resources Group
 - Informal network of agencies and experts
 - Produce and disseminate best practice
 - Review and consolidate knowledge and practice to distil ways and means to incorporate climate change concerns in development

Adaptation Actions by UNDP

Dr Arun Kashyap, Climate Change, UNDP, New York, USA

Dr Kashyap explained UNDP's activities on adaptation to climate change.

Global context:

- Millennium Development Goal: halve the proportion of people living in extreme poverty by 2015
- Water, energy, health, agriculture and biodiversity (WEHAB)
- Climate change - a cross cutting issue

UNDP and climate change:

- Climate change is an issue of sustainable development
- Interventions must be integrated into national strategies for poverty eradication
- New knowledge - policy formulation and implementation, and partnerships
- Innovative and integrative approaches to capacity development

Climate change corporate strategy: external validation at the Adaptation Roundtable in Nairobi, February 2002, from experts, policy makers, bilaterals and multilaterals.

The climate change adaptation strategy involves developing adaptive capacity (human, institutional, systemic) and learning by doing. It aims to:

- Reduce the vulnerability of the poor and the disadvantaged
- Mainstream climate change adaptation in national planning priorities

Translating scientific knowledge:

- Need for new science and knowledge
- Apply existing science and knowledge
- Feedback from on the ground activities into ongoing research

Climate change adaptation: the aim is to achieve synergy in the interventions relating to global conventions, including:

- UNFCCC
- CCD
- CBD
- Others?

Water governance and adaptive capacity: adaptation to climate change in the water sector:

- Integrated water resources management
- Water governance
- Adaptation Policy Framework
- Linkage to NAPAs

Risk management and insurance: strategies to manage and reduce vulnerability risks:

- Incorporation in to economic and planning instruments
- Access to insurance and other safety net mechanisms
- Brainstorming session
 - o Use of micro credit

- Capacity development of national insurance companies
- Neutral convening task force/ international body
- Mainstreaming at country level and development institutions

Poverty and climate change adaptation:

Interagency Document: ADB, AfDB, DFID, DGIS, GTZ, EC, IMF, UNDP, UNEP, The World Bank. Presented at COP8.

Linking adaptation and mitigation strategies:

- Land use and biomass
- Private sector involvement – CDM potential

Developing capacities of UNDP country offices through Climate Change Day, and adaptation and mitigation work.

National Adaptation Programmes of Action (NAPAs)

Dr Mizan Khan, LDC Expert Group (LEG) and consultant to Ministry of Environment and Forest, Dhaka, Bangladesh

Dr Khan described the National Adaptation Programmes of Action (NAPAs) which are to be carried out by the least developed countries (LDCs) and assisted by the LDC Expert Group (LEG).

NAPAs:

- Each LDC to carry out a NAPA over 2002-2003
- Funded from the LDC Fund created at COP7 in Marrakech in 2001
- Annotated guidelines for NAPAs prepared by LDC Expert Group
- All LDCs given guidelines at workshop in Dhaka, Bangladesh in September 2002
- NAPAs expected to identify immediate requirements of LDCs for adaptation

Given the NAPA Guidelines and TOR for the LDC Expert Group, adopted by COP7 at Marrakech, the LDC Expert Group is trying to develop a practicable Service Model on how best to assist the LDCs in their preparation of NAPAs.

Mainstreaming Adaptation to Climate Change in Bangladesh

Dr Atiq Rahman, Executive Director, Bangladesh Centre for Advanced Studies (BCAS), Dhaka, Bangladesh

Dr Rahman explained how adaptation should not occur at the cost of mitigation, and that mitigation is a 'must'. Delays in mitigation make adaptation more costly, as demonstrated by the 1990 cyclone that hit Bangladesh. In situations such as this, the poor pay with their lives, whereas the wealthy pay through economics. Women in particular, suffer many of the costs.

Integration is required at various levels. A sectoral approach is needed with ultimate integration at the village level, but sectors such as energy, water and others must all ensure actions account for future climatic change. Integrated coastal zone

management is needed and little has been done in the fields of health and biodiversity. In the field of agriculture, research is being done to develop crops that can better accommodate climatic changes.

Facilitating agencies play an important role. They link donors and recipients and can act as catalysts and connectors. The need for adaptation must be accepted at both at the highest levels of government and the lowest community levels. Communities need information, which is simple enough to understand and yet scientifically valid.

UNEP's role on adaptation

Dr Ravi Sharma, United Nations Environment Programme (UNEP), Nairobi, Kenya

Dr Ravi Sharma outlined some of the issues emerging from COP8 and mentioned few other points including:

- The need for studies on adaptive capacity to climate change.
- The uncertainty existing regarding funding for adaptation under the UNFCCC.
- The need for strengthening capacity building activities (learning by doing).
- The importance of reducing the gap between the research community and the communities affected by climate change.
- The importance of focusing research by collecting information regionally or even at sub-regional level.
- If funding for adaptation is limited, then the projects should be linked with mitigation projects wherever possible.
- The way forward is to conduct research on adaptive capacity and create a better network between research and extension activities. Stakeholders should drive such research. This will help prevent maladaptation.

SESSION FOUR: FUTURE OF ADAPTATION

Mr Frank Pinto, Head UNDP-GEF, UNDP, New York, USA

Mr Pinto provided a few key points relating to the future of adaptation:

- The Bureau of Crises Prevention and Recovery (BCPR) established under UNDP aims to bridge the gap between emergency relief and long-term development. It is expected that BCPR will have an impact on adaptation.
- The role of UNDP in adaptation to climate change has involved the setting up of the National Communications Support Unit (NCSU).
- There is a need for appropriate analyses of adaptive capacity.
- Funding has focused on 'disaster preparedness.'
- The need to look at 'synergy' issues among the different conventions (for example COP and CBD) was stressed.

Mr Janos Pasztor, Coordinator, Sustainable Development Programme, Secretariat of the United Nations Framework Convention on Climate Change, Bonn, Germany

Mr Pasztor discussed the role of Adaptation in the UNFCCC Process, drew attention to recent developments which put more emphasis on adaptation, and also described

the emergence of new funds that will be able to support adaptation activities. His main points included:

- Adaptation is well lodged in Article 2, and in a number of other articles of the Convention. Parties have paid little attention to this up till COP7 – even though it was always high priority issue for the developing countries;
- COP7 in Marrakech launched the Adaptation Fund, as well as the Special Climate Fund – both of which can be used to fund adaptation activities, once funds start flowing.
- A specific fund for LDCs was also set up, which again can include adaptation activities – but for LDCs only.
- Since the Adaptation Fund is to be funded primarily from a “tax” on the CDM, the entry into force of the Kyoto Protocol, and an accelerated start of the CDM process are crucial for moving forward on adaptation;
- More work is needed at the methodological level for Parties to understand what the scope of eventual adaptation activities might be.
- There are good possibilities also to explore synergies between Convention issues such as mitigation and adaptation, as well as with other Conventions, such as, and in particular, UNCCD and CBD.

Dr Mohan Munasinghe, Deputy leader, Delegation of Sri Lanka to COP8 and adviser to President of Sri Lanka

Dr Munasinghe shared some of his thoughts on the future of adaptation in the climate change arena:

- Adaptation was an integral part of the climate change problem
- Adaptation to climate change was the most important feature of climate change for most of the developing countries who are likely to be adversely affected
- Without taking adaptation and mitigation together it will be unlikely that agreement will be reached in future climate change negotiations
- Both adaptation and mitigation needed to be addressed in the climate change negotiations as well as the IPCC

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