



Development & Climate Approaches to Reducing Vulnerability

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The Hague, 25 September 2008

Outline of Presentation

- Building Resilience to Climate Change
 - Basic Facts
 - Common but differentiated responsibilities
 - Need for support to adaptation in DCs
 - Understanding D & A linkages
 - Technology and Finance challenges
 - Examples from Danida program
 - Balancing D & A in a new agreement



Basic Facts

- Greenhouse effect is a concentration problem
 - current emissions of GHGs contribute but we are already committed to climate change no matter what we do on mitigation
 - therefore Kyoto and a new global agreement are basically about limiting changes to a manageable level
 - what does a 2 degree target mean
- Important to understand three aspects of climate change
 - long-term gradual changes
 - extreme events (storms, droughts, flooding)
 - increased variations around “normal” patterns
- Adaptation needs and approaches differ between countries and ecosystems

Adaptation Challenges Over Time Will Depend on Mitigation Progress (source - World Bank)

Likely change
already
"baked in"

Likely change with
successful
mitigation action

Likely change without
significant action on
mitigation



Global temperature change (relative to pre-industrial)

0°C

1°C

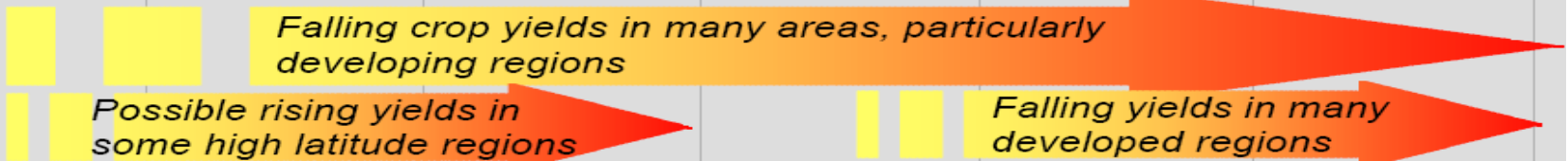
2°C

3°C

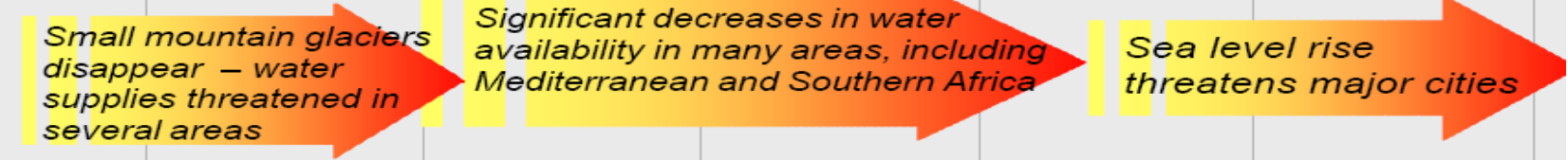
4°C

5°C

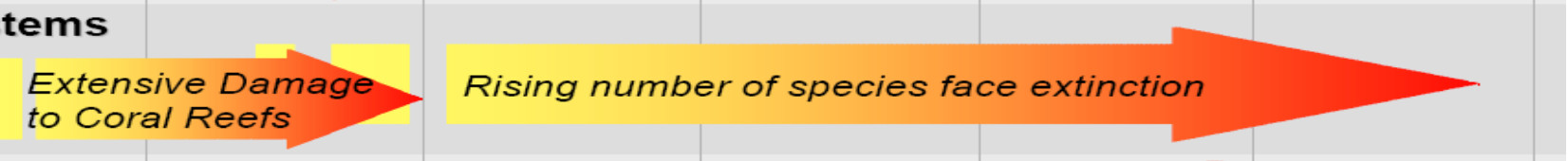
Food



Water



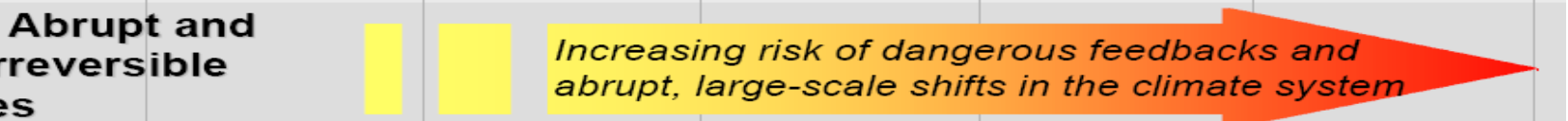
Ecosystems



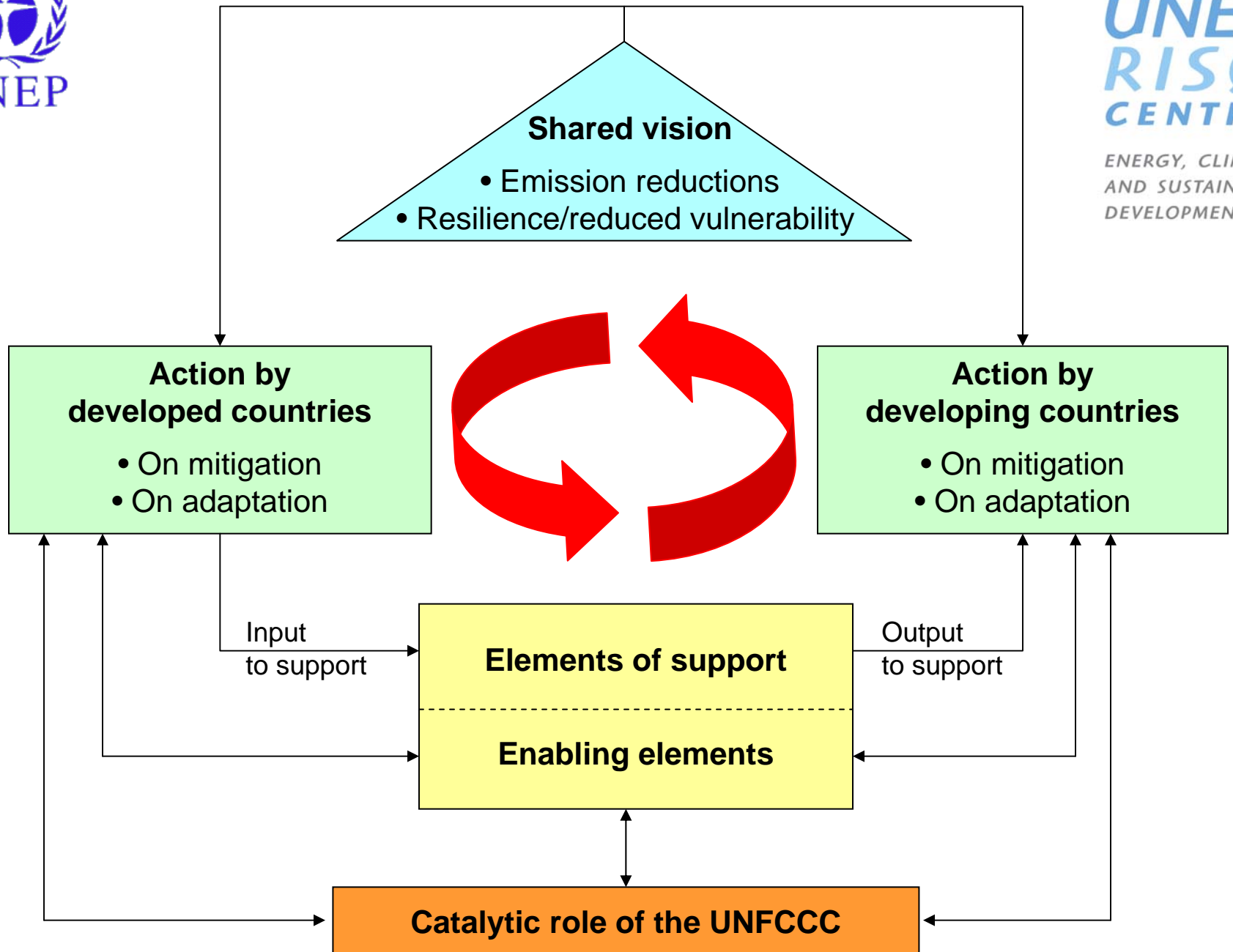
Extreme Weather Events



Risk of Abrupt and Major Irreversible Changes



Risk of catastrophic events increases with temperature



Common but differentiated responsibilities

- **Industrialized countries**

- Measurable, reportable, verifiable mitigation action/commitments
- Implementation of action on adaptation
- **Action to support action by developing countries**

- **Developing Countries**

- Nationally appropriate mitigation actions supported and enabled by technology, financing and capacity building
- Reducing emissions from deforestation
- **Implementation of action on adaptation**

Agreement and visible action on adaptation in DCs crucial

Developing Countries Most At Risk: 6 Climate Threats

<i>Drought</i>	<i>Flood</i>	<i>Storm</i>	<i>Coastal 1m</i>	<i>Coastal 5m</i>	<i>Agriculture</i>
Malawi	Bangladesh	Philippines	All low-lying Island States	All low-lying Island States	Sudan
Ethiopia	China	Bangladesh	Vietnam	Netherlands	Senegal
Zimbabwe	India	Madagascar	Egypt	Japan	Zimbabwe
India	Cambodia	Vietnam	Tunisia	Bangladesh	Mali
Mozambique	Mozambique	Moldova	Indonesia	Philippines	Zambia
Niger	Laos	Mongolia	Mauritania	Egypt	Morocco
Mauritania	Pakistan	Haiti	China	Brazil	Niger
Eritrea	Sri Lanka	Samoa	Mexico	Venezuela	India
Sudan	Thailand	Tonga	Myanmar	Senegal	Malawi
Chad	Vietnam	China	Bangladesh	Fiji	Algeria
Kenya	Benin	Honduras	Senegal	Vietnam	Ethiopia
Iran	Rwanda	Fiji	Libya	Denmark	Pakistan

 Low Income
 Middle Income

Source: World Bank

Potential Impacts – Africa

IPCC WG II conclusions

- **Africa:** By 2020, between 75 and 250 million people are projected to be exposed to an increase of water stress due to climate change
- Low-lying coastal regions are vulnerable due to the threat of sea-level rise and increased occurrence of extreme weather events.
- Water resources in mid-latitudes and the dry tropics threatened due to decreases in rainfall and higher rates of evapotranspiration.
- Agriculture in low-latitude regions vulnerable due to reduced water availability.
- Human health potentially impacted in areas with low adaptive capacity

Climate Change is a Development Issue

- Developing countries are already being affected
- The poorest countries and communities will suffer earliest and most
- Development gains and achievement of the Millennium Development Goals are at risk
- Lower carbon and climate resilient growth offers opportunities for sustainable development with multiple benefits

How best to reduce vulnerability

- **Adaptation or Mainstreaming**

- “Stand alone” adaptation will be the smallest part
- Reducing vulnerability of development activities will be key - so mainstreaming CC issues into policy and strategy development
- Basically buying insurance without yet knowing the risk or cost
- Some action for free - but some will require tough decisions

- **Preventive action or disaster management**

- With the nature of how climate will change i.e. increased variation and extremes, the answer is “prevention and disaster preparedness” and one can learn from the other
- Some parallel issues to priorities between disaster relief and development aid
- Understanding of economics and analytical tools still weak

Understanding adaptation

Adaptation & Development

- “Serendipitous” adaptation i.e. development with incidental adaptation benefits
- Climate proofing – building climate resilience into development activities
- Discrete adaptation where the objective is adaptation with possible development
 - WRI 2007

ODA & Adaptation

- Climate screening
- Climate proofing
- Mainstreaming

- Still a process under development and implementation of real mainstreaming still largely absent.
 - Swedish CCD commission 2008

Table 18.1 Examples of adaptation in practice

Type of response to climate change	Autonomous	Policy-driven
Short-run	<ul style="list-style-type: none"> ▪ Making short-run adjustments, e.g. changing crop planting dates ▪ Spreading the loss, e.g. pooling risk through insurance 	<ul style="list-style-type: none"> ▪ Developing greater understanding of climate risks, e.g. researching risks and carrying out a vulnerability assessment ▪ Improving emergency response, e.g. early-warning systems
Long-run	<ul style="list-style-type: none"> ▪ Investing in climate resilience if future effects relatively well understood and benefits easy to capture fully, e.g. localised irrigation on farms 	<ul style="list-style-type: none"> ▪ Investing to create or modify major infrastructure, e.g. larger reservoir storage, increased drainage capacity, higher sea-walls ▪ Avoiding the impacts, e.g. land use planning to restrict development in floodplains or in areas of increasing aridity.



Recent convention initiatives supporting the Policy driven actions

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*ENERGY, CLIMATE
AND SUSTAINABLE
DEVELOPMENT*

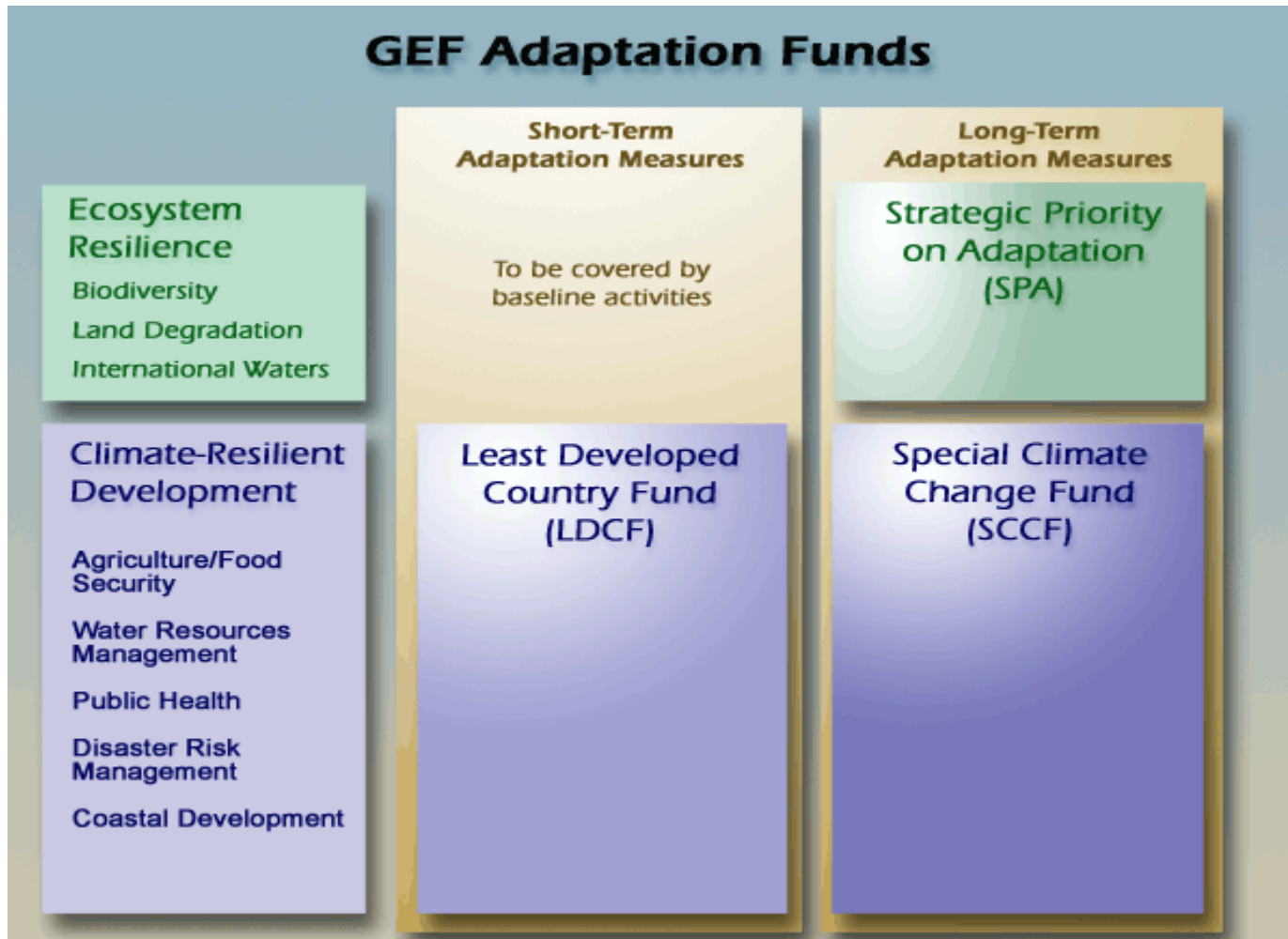
The Nairobi Work Programme (NWP) :

- To assist countries, in particular developing countries, including the least developed countries and small island developing States, to improve their understanding and assessment of impacts, vulnerability and adaptation; and
- To assist countries to make informed decisions on practical adaptation actions and measures to respond to climate change on a sound, scientific, technical and socio-economic basis, taking into account current and future climate change and variability

Technology & Finance are key

- Technology transfer:
 - EGTT mandate – still weak on adaptation
 - Work on new strategic programme under the GEF to scale up investments
- Launch of the Adaptation Fund (funded from the Kyoto Protocol Clean Development Mechanism)
- Review of the financial mechanism, initiation of new WB funds and bilateral initiatives

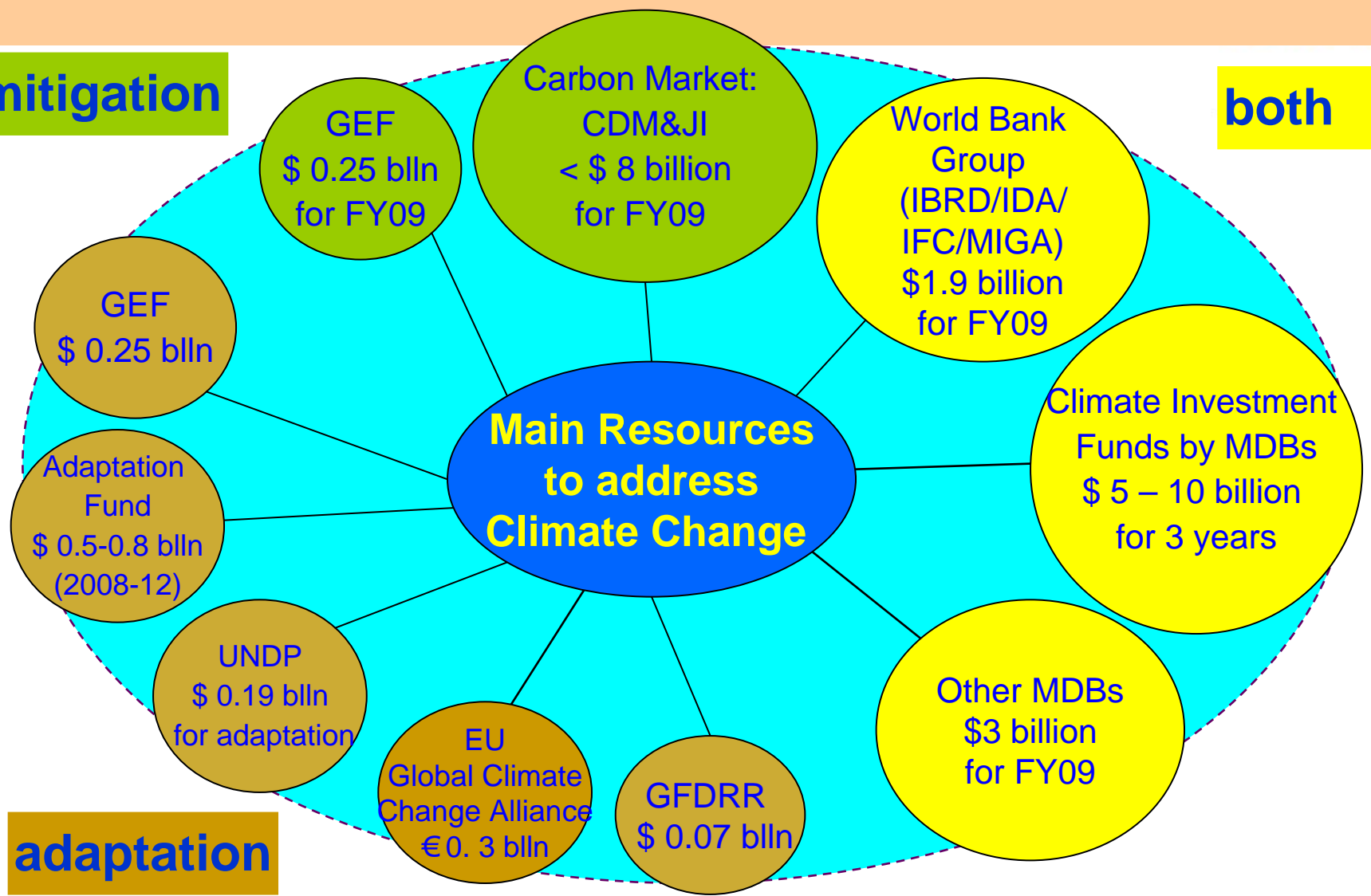
Current GEF Funds for Adaptation



Estimate of Available Financial Resources

mitigation

both



adaptation



Source WB
FY09 estimates are projections

Finance needs and available funds

- **Estimated cost of adaptation** (source WRI)

– UNDP	86 \$bn
– UNFCCC	28 – 67
– World Bank	9 – 41
– Oxfam	>50
– Stern	4 – 37

- All figures annual \$bn with UNDP and UNFCCC forecasted to 2015 and 2030

- **Current Funds (optimistic assessment)**

- 1 to 2 Billion USD now
- Share of WB transformation funds 1 to 2 billion
- Integrated in private investment decisions and international development assistance ??
- Significant gap, but still small compared to investments in e.g. infrastructure and energy

Adaptation financing – role of ODA

- Current adaptation funds are small and complex to access
- Even with Adaptation Fund resources are small compared to cost of adaptation
- Dedicated funds have a political rationale, but activities need to be targeted
- New agreement on funding adaptation needs to balance dedicated funds with mainstreaming efforts
- ODA can play an important role in mainstreaming
- ODA funds are significantly higher than dedicated adaptation funds
- Need to move from portfolio screening towards proofing ODA into supporting national mainstreaming efforts
- Barriers are not only related to finance – data on local climate patterns, impacts and costs/benefits are still weak.

Experiences from the Danish – Development and Climate Programme

- **Mainstreaming approach:** Link poverty alleviation, MDG's, sectoral issues and climate change
- Pilot countries: Vietnam, Mozambique, Tanzania, Uganda, Kenya, Bangladesh, Nicaragua, Bolivia, Ghana, Zambia
- Activities:
 - **initial focus on portfolio screening**
 - **rapid shift towards supporting countries in sectoral screening activities and capacity building**
 - **Moving towards supporting both data collection, capacity building and broader mainstreaming efforts**



Mainstreaming Approach

Climate change is assessed in the context of general development goals. This means:

- Climate change is addressed as a development problem and human welfare aspects and its various social and human dimensions are linked to environmental issues
- The issue moves into the domain of new ministries such as planning, finance, agriculture, water, health, transport, and energy
- Links between future climate change and current variability, extremes and disasters are established



Mainstreaming Approach

Key development-climate links include aspects like:

- Economic development goals such as growth, investments and employment
- Income generation and distribution
- Water, food and energy access
- Health status and services
- Education
- Governance



Barriers to mainstreaming - information on local climate change, vulnerabilities and costs

Climate screening and proofing are interdisciplinary:

- Definition of climate links, risks, time dimension, data limitations, and uncertainties
- Strong overlap with general development problems
- Defining costs and benefits are difficult and methods not well developed – hard political choices when defining priorities
- Only pragmatic approaches can work right now to make progress and will help establish common and tested methods but waiting for these to be fully in place will mean unacceptable delays

Uganda Example

- Implementation of the mainstreaming approach is very timely:
 - National development plan review/revision
 - New water sector programme
 - Agricultural programme is in a planning phase
- Climate vulnerability is on the agenda, all institutions ready to discuss the issues. Experiences exist with mainstreaming in other areas e.g. environmental impacts and gender issues
- Everybody see climate vulnerability as a cross-cutting issue that should be dealt with by finance, planning authorities, agriculture, water, environment, health and corresponding local authorities
- Lacking capacity to implement and capacity to analyse and prioritize, follow up action initiated in these areas

Examples from Ghana

- Establishment of better climate information, including uncertainties, vulnerabilities, and risks
- Integration of climate vulnerability in development planning and implementation
- Integration of climate vulnerability in integrated water resource management
- Awareness raising and education
- Coordination with disaster risk reduction
- Support regional water management coordination efforts including collaboration with Burkina Faso

Ghana Water sector

- Climate vulnerability in relation to specific water/sanitation projects:
 - Develop risk and cost assessment methods
 - Design improvements, e.g. hand pump design that minimize contamination risks
- Support adaptive technologies, e.g., rainwater harvesting
- Multi-functional water storage facilities as part of technical solutions
- Protective measures related to groundwater, e.g. zoning

The Time to Start Acting is Now

- Beneficial measures which enhance resilience to cope with climate variability and weather extremes already exist and much can be learned from experience.
- Need to integrate adaptation into a focus on more climate resilient development reflecting that climate change will affect average climatic conditions as well as variability and extremes
- Infrastructure, agriculture and forestry need to integrate resilience building into regular activities, preserving ecosystems may be a different challenge

Issues for a new agreement (I)

- “Household items”

- National communications
- NAPAs & Implementation
- Strengthening the activities under the Nairobi Workprogram
 - Scientific capacity and data enhancement
 - Providing the basis for decision making incl. mainstreaming

- Adaptation Fund

- “Objective of the AF is to provide international finance to help developing countries to undertake concrete adaptation projects/programmes consistent with their development needs, goals and strategies. “
- Key issue is to position it strategically in the context of mainstreaming i.e. what is the best role it can play in view of other efforts

Issues for a new agreement (II)

- **Role of ODA & FDI**

- Resource flows are magnitudes larger than dedicated CC funds and by nature broadly sectoral and development oriented
- Need to move ODA from pipeline proofing to mainstreaming support
- ODA can secure a broader engagement institutionally compared to dedicated funds
- FDI need to integrate CC

- **Avoiding the pitfalls**

- Risk of a mainstreaming “overload” in weak institutional settings
- Time horizon for ODA usually short and action requires long term engagement
- Will funds be additional or divert resources from other priorities
- Risk of additionality concerns leading to negotiations focusing on small but dedicated fund structures, which will not get the required funding