United Nations Development Programme

Risk management and adaptation

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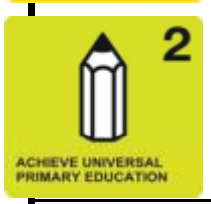
Climate change poses serious risks to MDGs

Millennium Development Goals	Climate change risks
 Eradicate extreme poverty and hunger	**Depleted livelihood assets**, reduced economic growth, and **undermined food security**.
 Achieve universal primary education	**Reduced ability of children to participate in full-time education** by loss of infrastructure, livelihoods (forcing children to work), and displaced families.
 Promote gender equality and empower women	**Additional burdens on women's health** and time to participate in decision-making and income-generating activities.
 Reduce child mortality; Improve maternal health; Combat HIV/AIDS, malaria and other diseases	**Greater prevalence of vector- and water-borne diseases**, heat-related mortality. Declining food security, maternal health and availability of potable water.
 Ensure environmental sustainability	**Negatively impacted natural resources** and productive ecosystems.

CC is both risk and opportunity for development 'business'

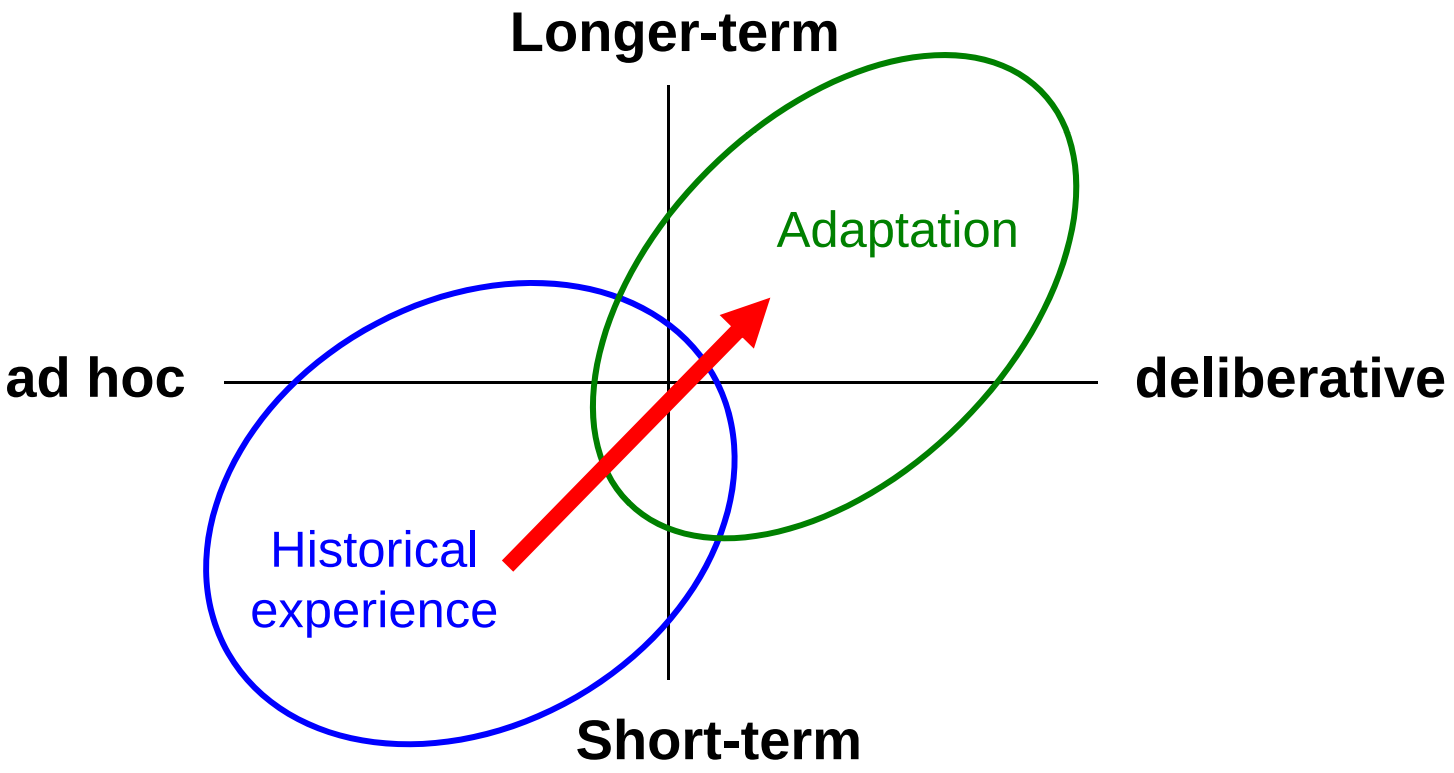
Safeguarding MDGs

Risk: Potential for climate change damage to people, poverty reduction, investments, or ecosystems

Opportunity: Potential to reduce vulnerability of people, poverty reduction investments, or ecosystems to climate change through ongoing development assistance

Adaptation must be planned as a development goal

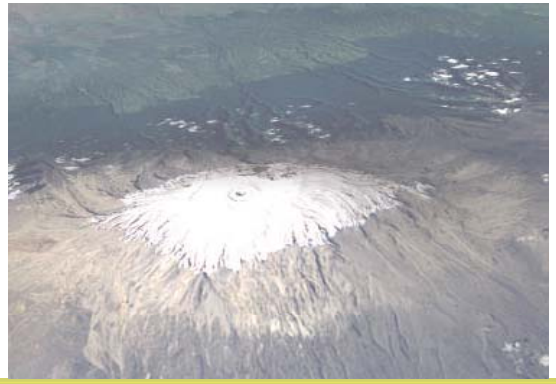
Moving from short-term and *ad hoc* toward longer-term & deliberative adaptation

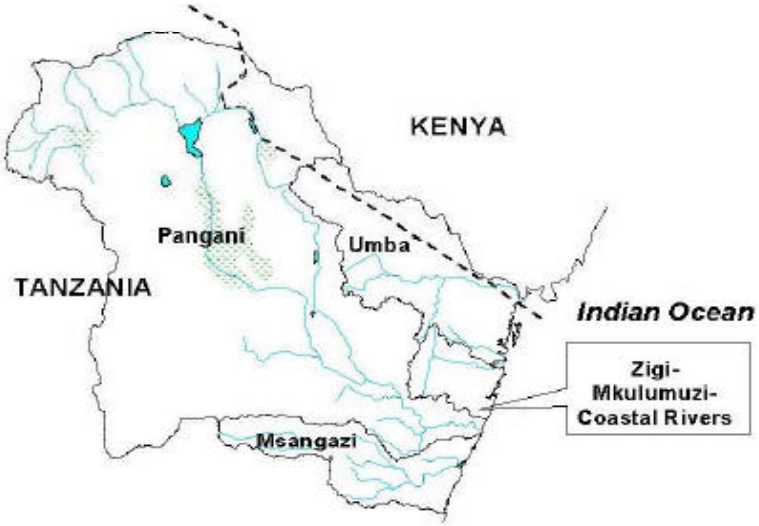


Tanzania: IWRM in the Pangani River Basin

The **Pangani Basin** is a major watershed in northeastern Tanzania, draining Mts Kilimanjaro and Meru, and providing water for hydropower, agriculture, irrigation, fisheries, etc.

Flow is declining, demand is increasing.





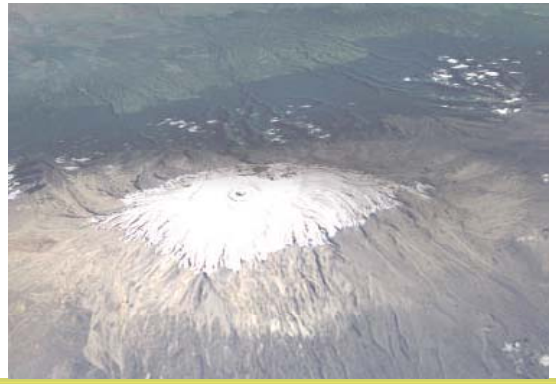
Tanzania: IWRM in the Pangani River Basin

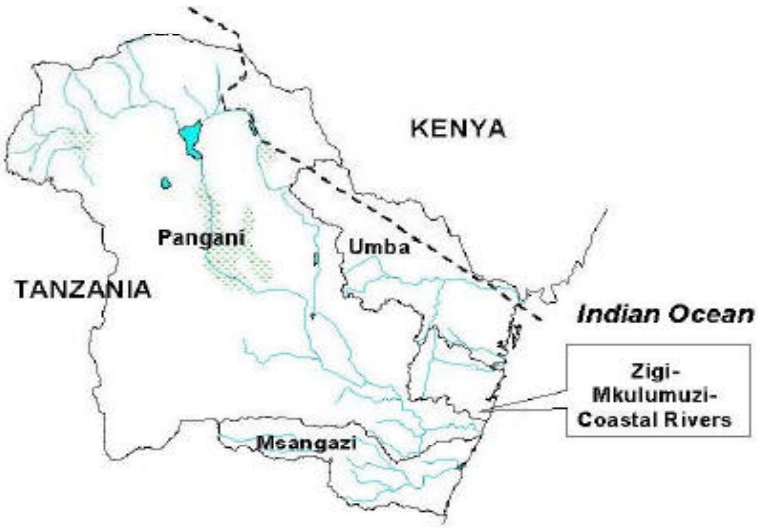
In this context, the project will prepare water managers and users for changing climatic conditions

Outcomes:

- **Understanding current and future climatic vulnerability for equitable water allocation in a changing hydrological regime**
- **Mainstreaming climate change risks in the water sector: national policy linkages and lessons learned**

Project status: Nearing Implementation





Niger: Implementing NAPA Priority Interventions

Niger faces significant climate risks…

- Increasing drought frequency
- Projected temperature increase, increasing evapotranspiration and decreasing soil moisture
- Projected reductions in surface and groundwater flows

…against a background of low adaptive capacity

- High reliance on rainfed agriculture
- Lack of market development and access
- High levels of poverty

Niger: Implementing NAPA Priority Interventions

In this context, the project will seek to build the adaptive capacity of the agricultural sector to climate change.

Outcomes:

- **Resilience of food production systems improved, through water harvesting, soil conservation, and other measures**
- **Institutional capacity of the agricultural sector enhanced, including climate information and extension services to respond to climate variability and change**
- **Lessons learned leveraged and disseminated**

Project Status:

- **Idea approved**
- **Preparatory phase to commence**
- **Implementation in 2008**

Niger and Namibia: Community-Based Adaptation

Climate change is a global phenomenon, but impacts on people and ecosystems are local and regional.

CBA will pilot the **grassroots component of adaptation** to climate change, through small grants to NGOs and CBOs for small scale adaptation projects.

- **Improving community-level adaptive capacity**
- **Promoting replication, upscaling and mainstreaming** of lessons learned at the community level in the national context
- **Capturing lessons and disseminating them globally**, to inform adaptation policy and practice with grassroots experiences

Project status:

Implementation in 2007 (expected)

Ethiopia, Kenya, Mozambique, Zimbabwe: Coping with Drought

Linkages between **climate change** and **drought** are complex, including:

- Changes in the timing and predictability of the rainy season
- Overall reductions in rainfall
- Increases in evapotranspiration
- Reductions in irrigation potential

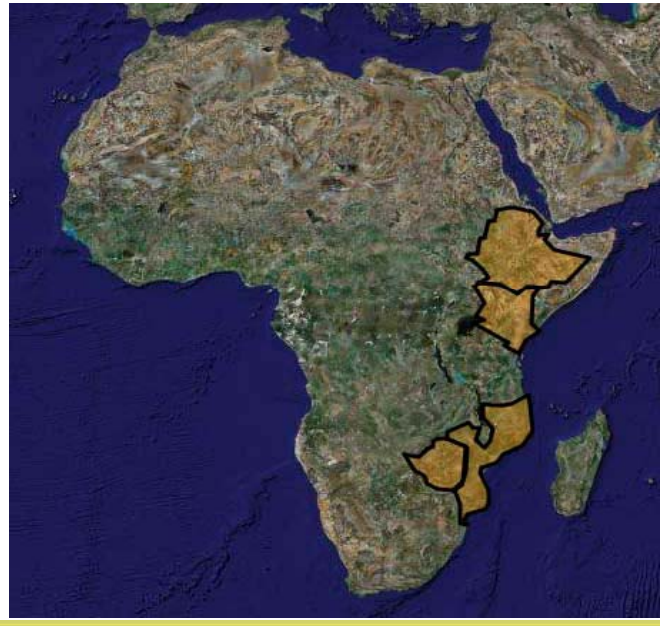
Climate change projections for the region:

Southern Africa

- decreasing average annual rainfall
- increasing overall rainfall variability

Eastern Africa

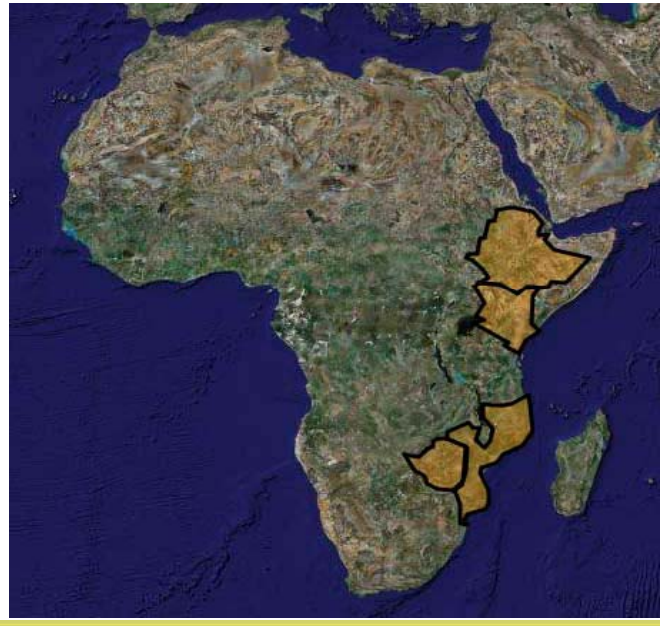
- increasing/decreasing average rainfall depending on region
- Increasing overall variability



Ethiopia, Kenya, Mozambique, Zimbabwe: Coping with Drought

In this context, the project will operate in four countries to:

- **Improve the resilience of vulnerable farmers by piloting improved coping strategies in selected pilot sites**
- **Enhance use of early warning information for agricultural systems at the selected pilot sites**
- **Integrate drought mitigation and preparedness activities into national policy and practice**
- **Facilitate replication of successful approaches outside the pilot sites**



Project Status: Implementation to begin in 2007
Kenya component 2008 (with World Bank)

Namibia: Adapting to climate change through improvement of traditional crops and livestock farming

The IPCC has projected increasing temperature and decreasing rainfall over Namibia by mid-century. This will exacerbate existing land degradation pressures through:

- **Increased competition for water** and consequent vegetation stress
- **Increased soil erosion** resulting from increasingly intense rainfall events
- **Lack of adaptive capacity** and dependence on climate-sensitive resources

In response, the project will develop and pilot a range of coping mechanisms to assist subsistence farmers in Namibia's North-Central regions to better address climate variability and change, including droughts.

Outcomes include:

- **Climate change adaptation measures piloted** and tested in rural communities
- **Improved information flows** on climate change between providers and key users
- **Climate change issues integrated into planning processes**

Ecuador: Adaptation to Climate Change through Effective Water Governance

Project Objective:

- Increase adaptive capacities to address climate change risks in water resource management.

Project:

- Addresses priorities of capacity development and institutional changes, including integrating climate change risk of the water sector into key plans and policies.
- Implements specific responses at the local level in two important economic activities—agriculture and hydropower.
- Addresses disaster risk reduction in vulnerable zones in all the provinces of intervention.

Timeframe:
2008-2012
Funding:
US$19,185,432

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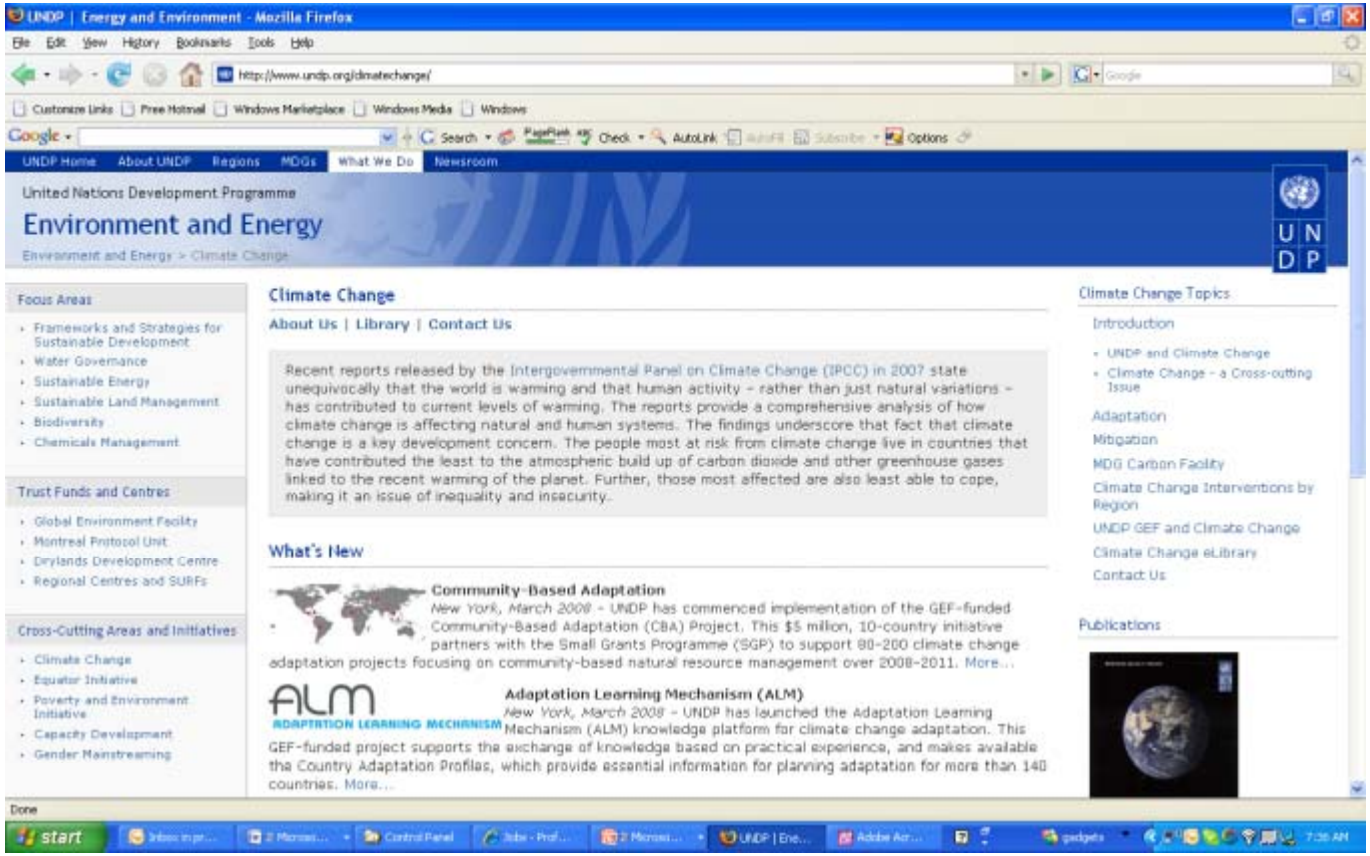

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