



Water and Climate Change Adaptation

Using water management, ecosystems and empowerment
to build climate change resilience

December 2009



Drought, floods, storms, melting glaciers and sea-level rise all feature in headlines and fears about the expected impacts of climate change. All concern water. Living with climate change will mean coping with impacts on water adaptation.

To guide effective country-driven climate change adaptation, the CoP-15 agreement on adaptation should reflect the importance of water management for reducing vulnerability and building climate resilience.

Key Messages

To make adaptation more effective, more coherent and more strongly reinforce development, an adaptation framework is needed that will:

1. Put Integrated Water Resources Management (IWRM) at the centre of planning and investment for climate change adaptation,
2. Promote implementation that incorporates management, restoration and sustainability of 'natural infrastructure' – the ecosystem services provided by healthy watersheds and coasts n 1os1(or Tw 10.4 0 Td (8.88j EMC /P <<0.002 Tw -23.5147 TD.58713(t)15 watersheds and coasts puts EbA into practice. People and development benefit by retaining ecosystem services that are critical to reducing climate change vulnerabilities – such as water storage, flood regulation and coastal defences.

¹ Dialogue on Land and Water Management for Adaptation to Climate Change, April 2009. www.landandwaterdialogue.um.dk

Building Climate Resilience in Practice

Adaptation will have to build climate resilience to safeguard the Millennium Development Goals. This means that adaptation must be implemented within strategies that make societies better at withstanding shocks and coping with unknown and unexpected futures.

Climate resilience is strengthened by ecosystem services provided by well-functioning river basins. More broadly, resilient systems are characterized by diversity and by self-organisation and learning. The challenge is to build climate resilience in practice.

IUCN's global experience of integrating environment and development in the IUCN Water and Nature Initiative has shown that four components combine to build climate resilience in practice:

- x diversity – of the economy, livelihoods and nature
- x sustainable infrastructure and technology – combining built infrastructure and the 'natural infrastructure' of river basins
- x self-organisation – through participatory governance and empowerment in adaptive institutions
- x learning – from improved climate information and capacity building

Adaptation actions such as developing or adapting drainage or water storage, whether with built or natural infrastructure, should be implemented within this framework. The components should guide policies, planning and investment strategies across sectors – including economic planning, poverty reduction strategies, agriculture, energy and water resources development. The resilience framework is thus a practical means of mainstreaming climate change in development and safeguarding the MDGs.

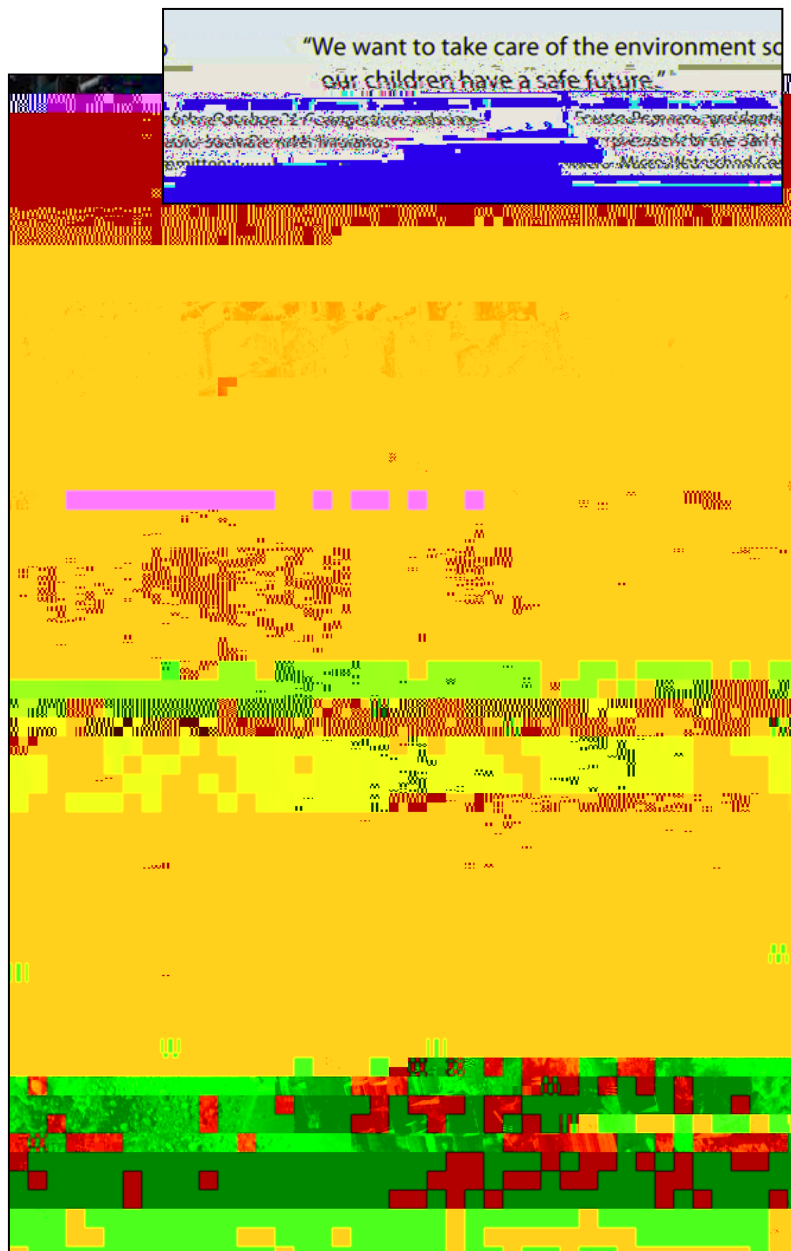
From Dialogue to Action

Following CoP-15, global dialogue on climate change adaptation will have to transform into country-driven action.

Support for country-driven implementation will be provided through a global IUCN programme of action on water and climate change that builds on the IUCN Water and Nature Initiative, incorporating:

- x demonstrations of integrated water, land and coastal management to build climate resilience
- x application of empowerment and governance reform to build adaptive capacity
- x planning and investment strategies for sustainable infrastructure
- x capacity building and knowledge sharing
- x support for mainstreaming climate resilience in policy

IUCN will support and assist climate change adaptation through its global network of members and partners from government and civil society, covering Latin America, Africa, the Middle East, Asia and Oceania.



Ecosystems are infrastructure for climate change adaptation that reduce vulnerability to floods, droughts, and storms. In the Tacana watershed (Guatemala, Mexico), degradation and climate change are raising the risk of devastating flash floods. Disaster propelled communities to take action. With support from WANI, they built microwatershed councils to lead watershed restoration and development that met their priorities. Empowerment of community-owned institutions is making watersheds more secure and livelihoods less vulnerable to climate change.

More information

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IUCN Water Programme

IUCN, the International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges by supporting scientific research; managing field projects all over the world; and bringing governments, NGOs, the UN, international conventions and companies together to develop policy, laws and best practice.

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