IUCN
The World Conservation Union

Climate change briefing

Adapting to climate change

Drylands, highlands, wetlands and oceans

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According to the Intergovernmental Panel on Climate Change[1], climate change is likely to exceed the resilience of many ecosystems, resulting in the loss of species and ecosystem services, threatening the livelihoods of people who depend on them, and increasing food insecurity and conflicts.

Developed countries are already investing in expensive adaptive responses, such as flood management infrastructure and responding to the effects of devastating droughts, while casualties and losses mount in developing countries with limited adaptive capacity.

Key facts

Biodiversity extinction crisis

Last September, IUCN released its 2007 Red List of Threatened Species™ and the news was very clear: the world is facing a global biodiversity extinction crisis. The IPCC concurs, noting that the global temperature increase of 0.6°C which occurred in the 20th century already had an impact on more than 400 plants and animals. A recent study estimated that 15–37% of regional endemic species could be extinct by 2050[2].

Environmental refugees

According to Professor Norman Myers from Oxford University, climate change could displace 50 million people by 2010 and 200 million by 2050[3]. Poor and vulnerable communities, including indigenous people and women, will be the most severely affected by the increased frequency and severity of droughts and floods. One third of the world's population depend on only 8% of the global renewable water resources.

Very recently, the tropical cyclone Sidr hit Bangladesh and killed between 3,000 and 10,000 people. With its 240 km/h winds, it was the worst storm to hit the region in a decade.

The drylands of the world are home to about 2.3 billion people – many of whom are amongst the poorest and most marginalized. Over one billion of these people depend directly upon the natural resources of the drylands. Over 40% of the world's land mass is considered as drylands. Between 1980 and 2000 some 830,000 deaths were directly associated with droughts globally.

What IUCN is doing

Influencing policy

- Working with multilateral institutions and bilateral donors, IUCN ensures that their investments and development programmes fully integrate adaptation and risk reduction strategies.
- Assisting national governments to develop and implement Adaptation plans. IUCN's approach to adaptation is community-based, participatory and built on traditional knowledge.
- Evaluating how women are affected by climate change and how they can be powerful agents of change when gender is mainstreamed into adaptation measures.

Turning policy into practice

- Assessing and addressing the vulnerability of protected areas and species at greatest risk. The Union assesses the vulnerability of World Heritage sites and other protected areas and develops strategies to reduce the impacts of climate change on them. Through its Red List of Threatened Species™, IUCN identifies which plants and animals are most at risk of extinction through climate change, for instance the polar bear or the quiver tree, and promotes ways to conserve them.
- Mobilizing local knowledge and global action for sustainable water management. IUCN works in river basins in Zimbabwe and Kenya to show how water management can improve resilience. Through the Global Panel on Water and Climate Change Adaptation, IUCN bridges the gap between water management needs and policy.
- Promoting water and food security through sound ecosystem management. The Climate Change and Development Project in Zambia, Mozambique and Tanzania evaluates how national policies can support vulnerable rural communities. The Union supports traditional people coping with desertification in the world's drylands, and supports environmental restoration and sustainable dryland management in some of the driest and most risk prone environments in the Horn of Africa
- The Mangroves for the Future initiative in South-East Asia helps to meet the long-term development needs of coastal communities while securing their livelihoods against climate impacts. IUCN is assessing the economic value of mangrove services in the Indu Delta, building capacity for coastal managers in Thailand, and restoring mangroves in Sri Lanka and Indonesia.
- Getting prepared for natural disasters. Through its regional offices, the Union builds the capacity of governments and local communities to deal with extreme weather events. Flood risk reduction strategies are being implemented in the Mekong Basin, the Caribbean and Bangladesh.

CRiSTAL: a tool for adaptation

With various partners, IUCN has developed a Community-Based Risk Screening Tool – Adaptation and Livelihoods (CRiSTAL). CRiSTAL helps people understand the links between local livelihoods and climate; assess a project's impact on community-level adaptive capacity; and make adjustments to improve local adaptive capacity.

IUCN Climate Change and Coral Reefs Working Group

This group brings together leading coral reef scientists and managers to develop management tools that enhance the resilience of coral reefs and coral reef-dependent communities in the face of climate change.

More information

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1. IPCC AR4, WGI, 2007.
2. Thomas et al, 2004.
3. "Environmental refugees: an emergent security issue", OSCE, 2005.

The World Conservation Union (IUCN) is the world's oldest and largest global environmental network. IUCN is a democratic union with more than 1,000 government and NGO member organizations, and some 10,000 volunteer scientists in more than 150 countries. The Union's work is supported by 1,100 professional staff in 62 countries and hundreds of partners in public, NGO and private sectors around the world.

The Union helps the world find pragmatic solutions to our most pressing environment and development challenges by supporting cutting-edge 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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