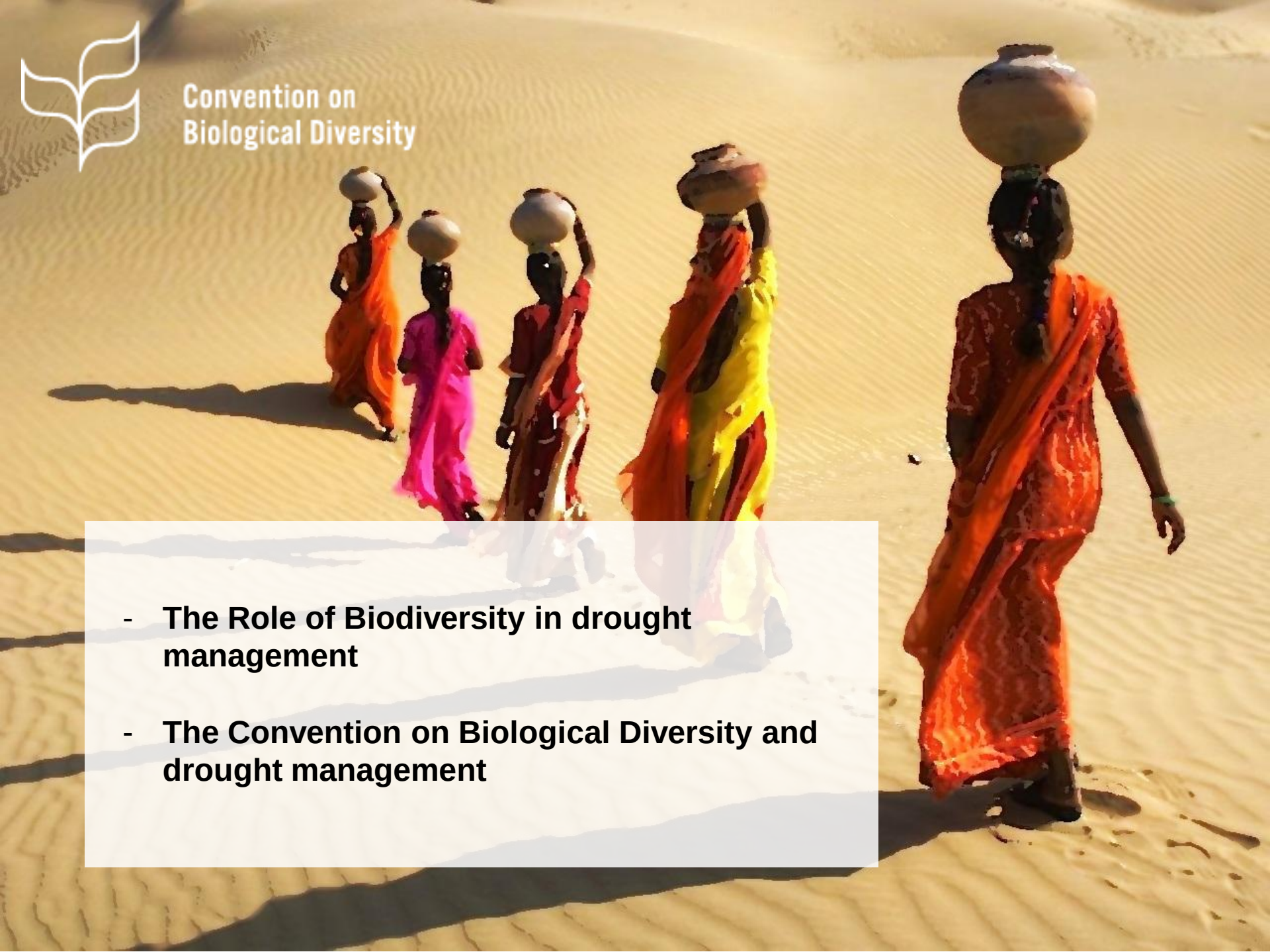
Living in harmony
with nature

United Nations Decade on Biodiversity

Convention on
Biological Diversity



- **The Role of Biodiversity in drought management**

- **The Convention on Biological Diversity and drought management**

Relevant guidance by the CBD COP - Decision X/35

The COP urges Parties and other Governments, where appropriate, to:

(a) Develop and implement, or revise existing, drought-management plans and early warning systems at all levels, including regional and subregional and basin-level management plans, taking into account the impact of drought and desertification on biodiversity and the role of biodiversity and actions to combat desertification in increasing the resilience of dry and sub-humid lands, seeking:

(i)The inclusion of risk evaluation, impact assessments and impact management; and

(ii)To direct biodiversity management for the prevention of desertification, including through the involvement of all stakeholders, particularly women and pastoralists and other indigenous and local communities and, as appropriate, in accordance with traditional community-based strategies, particularly through customary use systems;

Life in harmony, into the future
いのちの共生を、未来へ
COP 10 / MOP 5

Relevant guidance by the CBD COP - Decision X/35

The COP urges Parties and other Governments, where appropriate, to:

(e) Consult with neighbouring countries and other countries in their respective subregions and regions to develop and execute collaborative drought management strategies and action plans to reduce the impact of drought and desertification on biodiversity at regional, subregional and/or basin levels;

Life in harmony, into the future
いのちの共生を、未来へ
COP 10 / MOP 5

Relevant guidance by the CBD COP - Decision X/28

The COP:

42. *Notes* the role of biodiversity and ecosystems in providing services that reduce vulnerability to the impact of some natural disasters, in particular water-related impacts such as flooding and drought, and that current global changes are anticipated to increase disaster vulnerability and risk;

43. *Encourages* Parties and other Governments to recognize the role of healthy ecosystems, and in particular wetlands, in protecting human communities from some natural disasters and to integrate these considerations into relevant policies;

44. *Encourages* Parties and other Governments to conserve, sustainably use and, where necessary, restore ecosystems so that freshwater flows and water resources sustain biodiversity and thus contribute to human well-being;

Life in harmony, into the future
いのちの共生を、未来へ
COP 10 / MOP 5

Developing national drought management plans – background on the role of biodiversity in drought management

Linkages:

- Environmental degradation can lead to droughts
- Environmental degradation can aggravate the impacts of droughts
- Droughts can cause environmental damage
- Environmental degradation can impact livelihoods of people and reduce their resilience to droughts

However: Healthy ecosystems

- prevent, mitigate or regulate droughts
- reduce peoples exposure to droughts
- reduce people's vulnerability to droughts impacts through supporting livelihoods and basic needs – before, during and after hazards

Examples: Contribution of biodiversity to the prevention and mitigation of droughts

•Diverse agricultural systems are more likely to be able to cope with the effects of drought
•Farmers have bred drought resistant crops and livestock over decades
•Soils which are rich in organic matter can better retain soil moisture and are therefore able to better cope with periods of water stress.
•Generally more diverse ecosystems tend to be more resilient to change. Ecosystems provide a range of services which directly and indirectly affect human wellbeing. During times of drought these services become particularly important as people, particularly in developing countries, tend to depend on them for their survival.

Examples: Drought mitigation functions of ecosystems

- Mountain forests and hillside vegetation:
- Wetlands and floodplains
- Drylands

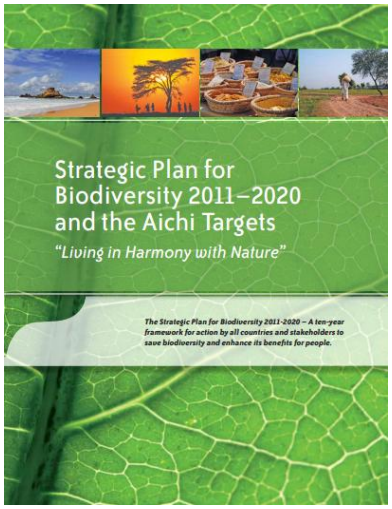
Elements for national drought management policies

- Conservation and management of natural resources
- Reducing the vulnerability of drylands
- Integrated land and water management
- Conserving and using traditional knowledge, innovations and practices
- Using agricultural biodiversity
- Restoring degraded ecosystems

About the Convention
Conference of the Parties
Strategic Plan
Aichi Biodiversity Targets
Implementation
UN Decade on Biodiversity

The Convention on Biological Diversity and drought management

Strategic Plan for Biodiversity 2011-2020



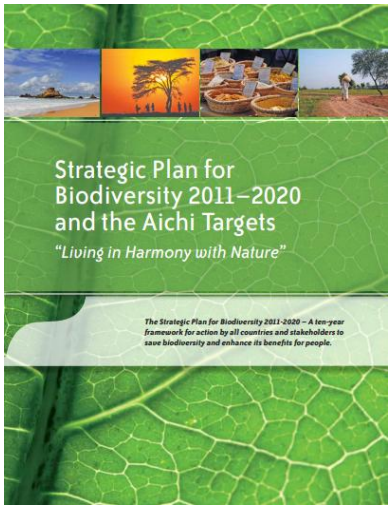
Vision

Living in harmony with nature. By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people

Mission

Take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet's variety of life, and contributing to human well-being, and poverty eradication

About the Convention
Conference of the Parties
Strategic Plan
Aichi Biodiversity Targets
Implementation
UN Decade on Biodiversity



Strategic Plan for Biodiversity 2011-2020

Parties to:

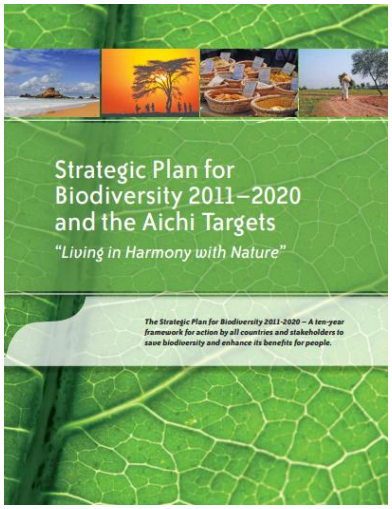
Develop national targets taking into account national circumstances

Review, update and revise National Biodiversity Strategies and Action Plans, in line with the Strategic Plan

Monitor and review the implementation of their NBSAPS… and report to COP through the fifth (2014) and sixth national reports

About the Convention
Conference of the Parties
Strategic Plan
Aichi Biodiversity Targets
Implementation
UN Decade on Biodiversity

Strategic Plan for Biodiversity 2011-2020 - Aichi Targets on Water, Agriculture and Ecological Restoration: readily available elements for drought management plans



About the Convention
Conference of the Parties
Strategic Plan
Aichi Biodiversity Targets
Implementation
UN Decade on Biodiversity

Aichi Targets relevant to drought management

By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

About the Convention
Conference of the Parties
Strategic Plan
Aichi Biodiversity Targets
Implementation
UN Decade on Biodiversity

Aichi Targets relevant to drought management

By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

About the Convention
Conference of the Parties
Strategic Plan
Aichi Biodiversity Targets
Implementation
UN Decade on Biodiversity

Aichi Targets relevant to drought management

By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes

About the Convention
Conference of the Parties
Strategic Plan
Aichi Biodiversity Targets
Implementation
UN Decade on Biodiversity

Aichi Targets relevant to drought management

By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

About the Convention
Conference of the Parties
Strategic Plan
Aichi Biodiversity Targets
Implementation
UN Decade on Biodiversity

Aichi Targets relevant to drought management

By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

National Biodiversity Strategies and Action Plans (NBSAPs) - opportunity for synergies with drought management plans? (I)

•In the development of national targets and actions to support them, countries can be encouraged to integrate elements related to drought

Examples for relevant elements of NBSAPs

Cameroon:

Identified 20 national level targets and 10 ecosystem-specific targets.
One of the ecosystem-specific targets is:
E-Target 9: By 2020 at least 25% of sites degraded by droughts or floods are rehabilitated within the semi-arid ecosystem.
Goal: To provide a response to the threats from climate change and climate variation with a focus on droughts and floods that are specific to this ecosystem calls for an increase in the mitigation approach of rehabilitation. Priority intervention here is to rehabilitate degraded flood and drought zones with high biodiversity.

National Biodiversity Strategies and Action Plans (NBSAPs) - opportunity for synergies with drought management plans? (II)

The Gambia:

Strategies proposed to enhance the conservation and sustainable use of biodiversity in different sectors referring to drought:

- *Forest:* restoration of degraded forest areas affected by human encroachment, drought and desertification.
- *Water resources*: improve the analysis of climate and hydrological aspects of drought and desertification monitoring.
- *Agriculture*: identify and adopt drought mitigation measures, such as the introduction of salt tolerant, drought tolerant and short cycle species of crops.

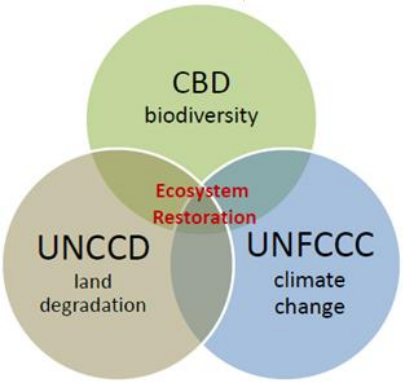
National Biodiversity Strategies and Action Plans (NBSAPs) - opportunity for synergies with drought management plans? (III)

Nigeria:

The NBSAP refers to the National Action Programme (NAP) to Combat Desertification and Mitigate the Effects of Drought (2000), developed in line with Article 10 of the UNCCD, which spells out long-term integrated strategies that focus simultaneously on improved productivity of land, and the rehabilitation of resources in dry sub-humid, semi and arid areas of Nigeria.

The implementation of the NAP is through the Ministry of Environment, the Ministry of Water Resources, the Task Force on Afforestation and the Ecological Funds Office.

The role of biodiversity in drought management – multiple benefits



- Preventing, mitigating or regulating droughts, reducing peoples' exposure to droughts and reducing people's vulnerability to drought impacts

- Reducing the loss of biodiversity and ecosystem services

- Reducing land degradation and fostering ecosystem restoration - thereby contributing to land degradation neutrality

- Climate change mitigation and adaptation

Available guidance relevant in the context of droughts – Ecosystem Restoration

XI th Conference of Parties
CONVENTION ON BIOLOGICAL DIVERSITY
HYDERABAD INDIA 2012

Decision XI/16: The COP urges Parties, and invites other Governments, organizations and donors in a position to do so,

taking note of extreme weather events,

to support the implementation of ecosystem restoration for the mitigation and management of the impact of extreme weather events and for ecosystem-based adaptation to climate change;

- Report on 'Available Guidance and Guidelines on Ecosystem Restoration' (UNEP/CBD/COP/11/INF/17)

- Available Tools and Technologies on Ecosystem Restoration (UNEP/CBD/COP/INF/18)

- COP 11: Hyderabad Call for a Concerted Effort on Ecosystem Restoration

Contact us

Secretariat of the Convention on Biological Diversity
World Trade Centre
413 St. Jacques street, Suite 800
Montreal, Quebec, Canada H2Y 1N9

Tel. 1 (514) 288 2220
secretariat@cbd.int
www.cbd.int

United Nations Decade on Biodiversity

About the Convention
Conference of the Parties
Strategic Plan
Aichi Biodiversity Targets
Implementation
UN Decade on Biodiversity

Biodiversity-related indicators of the Strategic Plan – useful elements for drought early warning and vulnerability assessments?

Agreed Strategic Plan Indicators

Headline indicators:

•Trends in distribution, condition and sustainability of ecosystem services

Operational indicators:

•Trends in components of biodiversity or ecosystem services that communities rely on [e.g. http://www.bipindicators.net/foodandmedicine]

•Population trends of forest-dependent species in forests under restoration

Other indicators

•Ecological indicators (e.g. sap flow) and indicator species (sensitive to changes in environment)