

Living in harmony
with nature



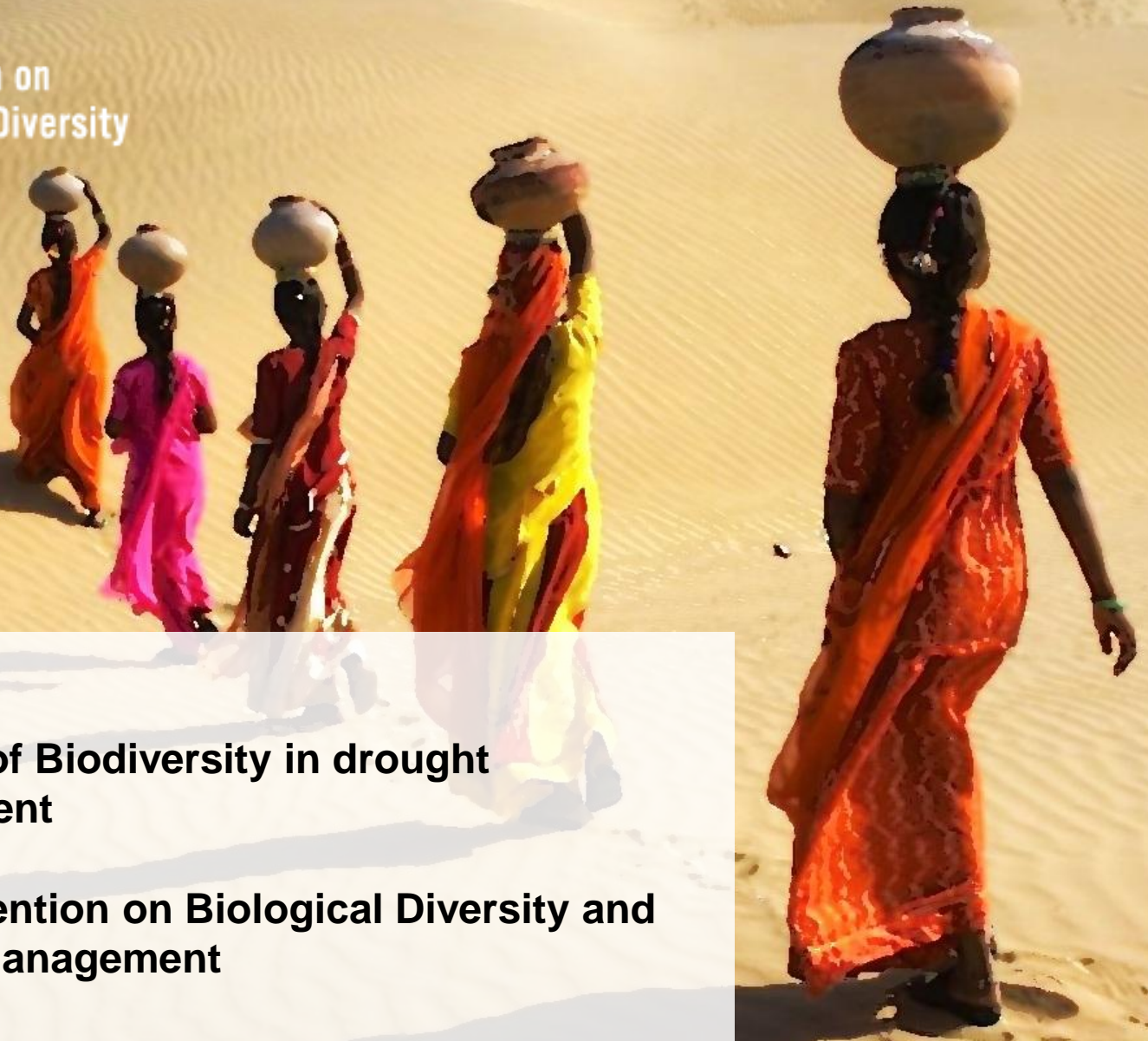
United Nations Decade on Biodiversity



Convention on
Biological Diversity



Convention on
Biological Diversity



- **The Role of Biodiversity in drought management**
- **The Convention on Biological Diversity and drought management**



Conference of the Parties

Decisions

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;



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COP 10 / MOP 5



Conference of the Parties

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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;



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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;



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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



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Strategic Plan

Aichi Biodiversity Targets

Implementation

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The Convention on Biological Diversity and drought management

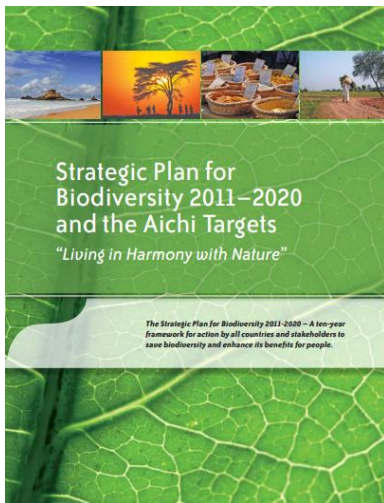
Strategic Plan for Biodiversity 2011-2020

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





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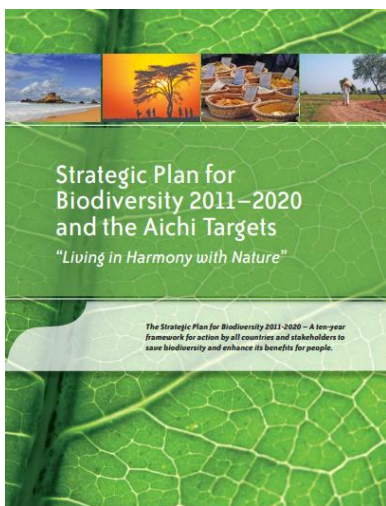
Strategic Plan for Biodiversity 2011-2020

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





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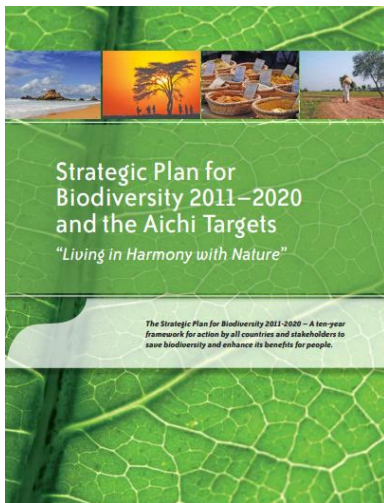
Strategic Plan

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





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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.



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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



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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.



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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.



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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)



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

Guatemala:

- Goal 5 By 2022, 15% of biodiversity and ecosystem services have been restored, improving their capacity to adapt to climate change and contributing to the decline in social and environmental vulnerability.
- Target 10: By 2018, they have developed coping mechanisms and decreased social and environmental vulnerability caused by the effects of climate change in order to maintain the integrity of biodiversity and functioning of ecosystem services and livelihoods of population



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

Within the United Nations Convention to Combat Desertification and Drought, the State of Guatemala is committed to the provisions of Article 4.2.d, which states: " ... shall promote cooperation among affected country Parties in the fields of environmental protection and the conservation of land and water resources, as they relate to desertification and **drought** ... ", so that proper implementation of this policy will assist compliance to the commitments made by this international convention. (pg. 31)

Strategic Goal 9: Institutionalize the tools to ensure the sustainable use of biodiversity components and ecosystem services.

Strategic activity 9.2: Develop a monitoring and evaluation plan for ecological integrity and feasibility of biodiversity components and ecosystem services.

- **9.2.1:** Assessment of current use patterns of biodiversity, redirecting those that are not sustainable.
- **9.2.2:** Development of a monitoring and evaluation baseline of ecological integrity and feasibility of biodiversity components and ecosystem services (particularly taking into account actions under the following conventions: CITES, RAMSAR, Climate Change, Desertification and **Drought**) (pg. 91)



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

Dominican Republic:

National Target 15: By 2016, ecosystems resilience and biodiversity contribution to carbon sequestration will be improved, through conservation and restoration, including restoration of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and the fight against desertification.

The most cost effective way to mitigate the impact of extreme weather conditions and climate change is through the protection of natural ecosystems, such as coral reefs and mangroves, for coastal protection. It is important to recognize the value of ecosystems resilience to human wellbeing.

Milestones:

- By 2013, information on the possible contribution of major ecosystems to carbon storage and sequestration will be reviewed and compiled in order to enhance biodiversity contribution to ecosystem resilience and carbon storage.
- By 2016, the country (Dominican Republic) will have made efforts to increase the resilience of natural ecosystems.



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

Venezuela:

LINE 3: STRATEGIC AREAS FOR CONSERVATION

Preserve and manage areas of the country, whose natural elements make them strategic for the nation, because of the social benefits derived from their conservation and their contribution to enduring supreme social happiness.

Strategic Level

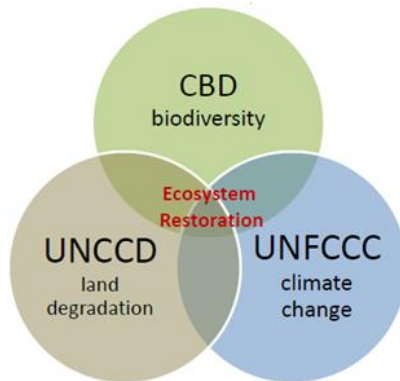
3.1.7: Develop and strengthen environmental contingencies programs (forest fires, **disasters**, etc.) (pg. 43)

Specific actions:

3.1.7.1: Define areas at high risk for environmental contingencies (forest fires, **disasters**, etc.) that threaten biodiversity conservation.



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



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Available guidance relevant in the context of droughts – Ecosystem Restoration

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



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CONVENTION ON BIOLOGICAL DIVERSITY
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