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### DRAFT OUTCOME-ORIENTED TARGETS FOR THE IMPLEMENTATION OF THE PROGRAMME OF WORK ON THE BIOLOGICAL DIVERSITY OF DRY AND SUB HUMID LANDS

*Note by the Executive Secretary*

#### EXECUTIVE SUMMARY

This note presents, for consideration by the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), a proposal for outcome-oriented targets and related indicators for the programme of work on the biological diversity of dry and sub-humid lands.

This note describes the vision, mission and aims of the programme of work on the biological diversity of dry and sub-humid lands (section II); considers the relationship of the programme of work with regard to the Millennium Development Goals (MDGs), the Plan of Implementation of the World Summit on Sustainable Development (WSSD), the joint work programme with the United Nations Convention to Combat Desertification (UNCCD), and the activities of other conventions, United Nations organizations, and regional and international organizations and programmes (as outlined in section III). Finally, the annex to the note contains recommendations for 21 outcome-oriented targets and 48 related indicators for monitoring progress towards the 2010 biodiversity target.

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\* UNEP/CBD/SBSTTA/11/1.

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## SUGGESTED RECOMMENDATIONS

The Subsidiary Body may wish to recommend that the Conference of the Parties at its eighth meeting:

1. *Endorses* the goals, global targets, timeframes and suggested indicators integrated into the programme of work on the biodiversity of dry and sub-humid lands, as annexed to the present recommendation noting the relationship between these targets and those of the Johannesburg Plan of Implementation of the World Summit on Sustainable Development, the Millennium Development Goals, and the joint work programme between the Convention on Biological Diversity and the United Nations Convention to Combat Desertification on dry and sub-humid lands;
2. *Takes note* of the elaborated technical rationale provided in the annex to the present note as guidance and suggestions for the application of targets to the programme of work on the biodiversity of dry and sub-humid lands;
3. *Emphasizes* that the targets, as applied to the programme of work on the biodiversity of dry and sub-humid lands, should be viewed as a flexible framework within which national and/or regional targets may be developed, according to national priorities and capacities, and taking into account differences in diversity between countries;
4. *Invites* Parties and other Governments to develop national and/or regional goals and targets, and, as appropriate, to incorporate them into relevant plans, programmes and initiatives, including national biodiversity strategies and action plans;
5. *Emphasizes* the need for capacity-building, and adequate financial resources especially for developing countries, in particular the least developed countries and countries with economies in transition, in order to enable them to implement activities to achieve and monitor progress towards the goals and targets;
6. *Invites* the United Nations Convention to Combat Desertification to take note of the outcome-oriented targets for the programme of work on the biodiversity of dry and sub-humid lands, and to further refine them within the framework of the joint work programme in addition to contributing to the implementation of these targets at the regional level as appropriate, and to monitor progress towards them;
7. *Decides* to integrate the proposed global outcome-oriented targets and related indicators into future reviews of implementation of the programme of work on the biodiversity of dry and sub-humid lands;
8. *Continues* to support the proposed indicators for further development as outlined in decision VII/30 of the Conference of the Parties, and repeated in the annex to the present note, so as to finalize a set of indicators whereby the achievement of the 2010 biodiversity target can be monitored in dry and sub-humid lands.

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## I. INTRODUCTION

1. The present note has been drafted in response to paragraph 13 (a) of decision VII/30 of the Conference of the Parties, by which the Executive Secretary was requested to prepare proposals for the integration of goals and targets into the programmes of work when they are due for review according to the multi-year programme of work of the Conference of the Parties, and to decision VII/31, in which the Conference of the Parties agreed that an in-depth review of the programme of work on the biodiversity of dry and sub-humid lands would take place at its eighth meeting, in 2006.
2. The document was made available for peer-review by SBSTTA focal points through a restricted-access website on 31 May 2005.

## II. VISION, MISSION, GOALS AND TARGETS OF THE PROGRAMME OF WORK ON THE BIODIVERSITY OF DRY AND SUB-HUMID LANDS

### A. *Vision*

3. The overall vision of the programme of work on the biodiversity of dry and sub-humid lands is to support the conservation and sustainable use of biodiversity in dryland, Mediterranean, arid, semi-arid, grassland, and savannah ecosystems. This vision is to be accomplished while ensuring the development of sustainable livelihoods and positive contributions to poverty alleviation.

### B. *Mission*

4. The mission of the programme of work on the biodiversity of dry and sub-humid lands is to promote, within dry and sub-humid lands, the Strategic Plan of the Convention as adopted in decision VI/26 through implementation support for the three objectives of the Convention on Biological Diversity. This mission is intended to achieve a significant reduction in the current rate of dry and sub-humid lands biological diversity loss by the year 2010 at the global, regional and national level as a contribution to poverty alleviation and for the benefit of life on Earth.

### C. *Goals and targets*

5. Eleven long-term goals, each with one to three related outcome-oriented targets for 2010, are proposed in the annex to the present note. They reflect the need, within the context of dry and sub-humid lands, to: protect the components of biological diversity (habitat, species, and genetic diversity); promote sustainable use; address threats to biodiversity (including from invasive alien species); reduce pollution and limit the negative impacts of climate change; protect indigenous knowledge, innovations, and practices; ensure the fair and equitable sharing of benefits arising out of the use of genetic resources; support and maintain sustainable livelihoods; and ensure the provision of adequate financial, technical, and institutional resources for the implementation of the programme of work.

6. The development of global outcome-oriented targets responds directly to activities 1 (on assessment of status and trends) and 3 (on further development of indicators) of the programme of work on the biodiversity of dry and sub-humid lands. The proposed outcome-oriented targets and related indicators for the programme of work on the biodiversity of dry and sub-humid lands build on discussions held at the tenth meeting of SBSTTA regarding outcome oriented targets for the marine and coastal, and inland waters programmes of work and related indicators (UNEP/CBD/COP/8/2, annex, recommendation X/4).

7. As recommended by SBSTTA, the proposed targets are challenging but realistic, recognizing the constraints of Parties, especially developing countries, particularly the least developed countries and countries with economies in transition. They should be considered as a flexible framework, and their achievement will require additional financial and technical resources especially for developing countries, particularly the least developed countries, and countries with economies in transition.

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### **III. RELATIONSHIP BETWEEN THE PROGRAMME OF WORK ON THE BIODIVERSITY OF DRY AND SUB-HUMID LANDS AND OTHER RELEVANT PROCESSES**

#### **A. Millennium Development Goals**

9. The programme of work on the biodiversity of dry and sub-humid lands can directly contribute to the achievement of goals one and seven of the Millennium Development Goals (MDGs).

10. Millennium Development Goal 1 calls for the eradication of extreme poverty and hunger. Biodiversity loss is both a cause and consequence of poverty and hunger, a relationship which is especially strong in dry and sub-humid lands where 70 per cent of the population depends directly on crops and livestock for their daily livelihood. Given this, the activities of the programme of work on the biodiversity of dry and sub-humid lands, can contribute to this goal as follows:

(a) Considering that the programme of work on the biodiversity of dry and sub-humid lands encompasses eight out of the ten world's poorest countries <sup>1/</sup> there is the potential for the activities of the work programme to contribute to efforts to address the needs of the extreme poor. For example, the conservation and sustainable use of biodiversity, a central activity of the programme of work, can support increased agricultural productivity in a sustainable manner through the implementation of sustainable management processes including indigenous/local technologies. Furthermore, the promotion of sustainable livelihoods, and support for the equitable sharing of benefits, also included in the programme of work, can contribute directly to poverty alleviation;

(b) Biodiversity conservation and sustainable use can also contribute to reducing or reversing the effects of poverty inducing processes such as land degradation. In particular, approximately 60-70 per cent of dry and sub-humid lands are subject to some degree of land degradation resulting in economic losses that exceed \$US42 billion annually due to lost productivity. <sup>2/</sup> The programme of work on the biodiversity of dry and sub-humid lands includes the protection and rehabilitation of habitat amongst other activities contributing to the conservation of biodiversity and, as such, can be expected to support efforts to combat land degradation and desertification;

(c) With regard to alleviating hunger, the maintenance of ecosystem functions and the conservation of landraces of drought resistant crop varieties resulting from biodiversity conservation activities within the programme of work on the biodiversity of dry and sub-humid lands can support and facilitate a reduction in vulnerability to exogenous shocks such as droughts and floods thereby contributing to long-term reductions in instances of famine.

11. Millennium Development Goal 7 seeks to ensure environmental sustainability and includes a target for the inclusion of sustainable development principles within country policies and programmes so as to reverse the loss of environmental resources. Since the programme of work on the biodiversity of dry and sub-humid lands supports such mainstreaming principles within the framework of active conservation efforts, the work programme will directly contribute to the achievement of this goal.

12. The programme of work on the biodiversity of dry and sub-humid lands may also contribute indirectly to other Millennium Development Goals including, *inter alia*, goal 4 (Reduce child mortality) through support for sustainable livelihoods, goal 6 (Combat HIV/AIDS, malaria, and other diseases) through targeted efforts to prevent the extinction of species with high potential value for medical research and species with widespread known uses as medicinal plants and animals, and goal 8 (Promoting global partnerships for development) through activities in support of technology transfers to developing countries.

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<sup>1/</sup> The World Bank Group, 1999. *Drylands Poverty and Development*.

[http://www-wds.worldbank.org/servlet/WDS\\_IBank\\_Servlet?pcont=details&eid=000094946\\_01061604041522](http://www-wds.worldbank.org/servlet/WDS_IBank_Servlet?pcont=details&eid=000094946_01061604041522)

<sup>2/</sup> Colombia University, 2005. Socio-Economic Data and Application Center

[http://sedac.ciesin.columbia.edu/tg/guide\\_frame.jsp?rd=LU&ds=1](http://sedac.ciesin.columbia.edu/tg/guide_frame.jsp?rd=LU&ds=1)

**B. Plan of Implementation of the World Summit on Sustainable Development**

13. The programme of work on the biodiversity of dry and sub-humid lands directly contributes to the Plan of Implementation of the World Summit on Sustainable Development (WSSD) including critical issues such as: poverty eradication, changing unsustainable use patterns, protecting and managing the natural resource base, and sustainable development in a globalizing world. In particular the work programme will contribute to, *inter alia*:

- (a) Paragraph 7: to reduce poverty and hunger, promote fair and equitable access to the natural resource base (including land), and to combat desertification and mitigate the impacts of droughts and floods;
- (b) Paragraph 10 (f): to support sustainable livelihoods for the poor through the sustainable management of natural resources;
- (c) Paragraph 25 (e): to promote the sustainable use of water and address water shortages especially in countries facing drought and desertification;
- (d) Paragraph 37 (d): to reduce the risks of flooding and drought in vulnerable countries through processes such as promoting watershed protection and restoration, and improved land-use planning;
- (e) Paragraph 40 (e): to support the efforts of developing countries to protect oases from silt, land degradation and increasing salinity by providing appropriate technical and financial assistance;
- (f) Paragraphs 41 (c) and 44 (c): to support synergies between the Convention on Biological Diversity, the United Nations Convention to Combat Desertification (UNCCD) and the United Nations Framework Convention on Climate Change;
- (g) Paragraph 44: The achievement by 2010 of a significant reduction in the current rate of loss of biological diversity.

**C. The United Nations Convention to Combat Desertification (UNCCD)**

14. The programme of work on the biodiversity of dry and sub-humid lands is consistent with the aims and objectives of the United Nations Convention to Combat Desertification and will directly promote synergies between the two conventions through the related joint work programme on dry and sub-humid lands.

15. The joint work programme between the Convention on Biological Diversity and the United Nations Convention to Combat Desertification on the biological diversity of dry and sub-humid lands was developed pursuant to paragraph 8 of decision V/23 of the Conference of the Parties to the Convention on Biological Diversity, based on elements submitted to the Conference of the Parties at its fifth meeting (UNEP/CBD/COP/5/INF/15). At its sixth meeting, in 2003, the Conference of the Parties to the United Nations Convention to Combat Desertification endorsed the joint work programme, and the final version (UNEP/CBD/COP/7/INF/28) was adopted at the seventh meeting of the Conference of the Parties to the Convention on Biological Diversity, in 2004.

16. The joint work programme contains three main elements: (i) assessments; (ii) targeted actions for conservation and sustainable use of biological diversity and enabling activities; and (iii) joint reporting. Each element contains sub elements detailing joint or shared activities of the two secretariats that aim to facilitate national and local action, such as the development of assessment tools, promotion of regional and international networks and the harmonization of formats of reporting.

17. Three specific activities have been identified for immediate action. These are: (i) assessment of status and trends of biodiversity in dry and sub-humid lands and the effectiveness of conservation measures; (ii) identification of specific areas of value and/or under threat; and (iii) further development of indicators of the biological diversity of dry and sub-humid lands and its loss, for the use in the assessment of status and trends.

**D. *Other conventions, United Nations organizations, and regional and international organizations and programmes***

18. The present note integrates, wherever possible, appropriate information and targets drawn from the reporting processes of the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on Wetlands (Ramsar, Iran, 1971), the World Heritage Convention, the Convention on Migratory Species (CMS) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

19. In accordance with paragraph 8 of decision VII/2 of the Conference of the Parties to the Convention on Biological Diversity, the note also refers to synergies with the Millennium Ecosystem Assessment and the Land Degradation Assessment in Drylands project (LADA) given their role as key contributing assessment tools.

20. Other assessments, programmes, and organizations which have been considered during the drafting of this note include, *inter alia*, the United Nations List of Protected Areas, the Food and Agriculture Organization of the United Nations (FAO) – Plant Genetic Resources for Food and Agriculture, information published by the World Conservation Union (IUCN) and relevant centres of the Consultative Group on International Agricultural Research (CGIAR).

*Annex*

**PROPOSED GLOBAL OUTCOME-ORIENTED TARGETS AND RELATED INDICATORS <sup>3/</sup> FOR THE PROGRAMME OF WORK ON THE BIODIVERSITY OF DRY AND SUB-HUMID LANDS**

<b>Provisional goals and targets as per CBD decision VII/30</b>	<b>Application to the programme of work on the biodiversity of dry and sub-humid lands</b>	<b>Suggested indicators</b>	<b>Technical rationale for the selection of targets and indicators</b>
<b>GOAL 1: PROMOTE THE CONSERVATION OF THE BIOLOGICAL DIVERSITY OF ECOSYSTEMS, HABITATS AND BIOMES</b>			
1.1 At least 10% of each of the world's ecological regions effectively conserved	1.1 At least 10% of each of the dry and sub-humid lands ecological regions is effectively conserved	<b>Most relevant headline indicator(s)</b> Coverage of protected areas  <b>Parameter(s) of particular relevance</b> Spatial distribution of protected areas nationally, regionally, and globally	<p>The purpose of this target is to ensure legal protection of species and habitats within at least 10% of each ecological region within the programme of work on the biodiversity of dry and sub-humid lands: drylands, arid lands, semi-arid areas, grasslands, savannahs, and Mediterranean landscapes.</p> <p>Within dry and sub-humid lands 10% coverage of protected areas has been achieved for desert and semi-desert landscapes as well as for tropical grasslands and savannahs. Despite this, these landscapes continue to see declining population trends emphasizing the importance of ensuring <i>effective</i> conservation. In particular, since the programme of work on the biodiversity of dry and sub-humid lands encompasses a broad range of eco-regions, resident species have evolved unique adaptations to local hydrological regimes resulting in (i) high rates of endemism; and (ii) distinct regional differences in species composition. As such, it is of particular importance within the programme of work, that the distribution of conservation areas is considered when evaluating goals and targets.</p> <p>Likewise, within Mediterranean landscapes protected area coverage is currently reported at approximately 9% however, the Cape Floral Kingdom, which accounts for only 4% of the land area of southern Africa, accounts for almost 70% of the region's threatened species. Given that Mediterranean landscapes cover only 2% of the Earth's terrestrial area but contain very high levels of biodiversity, increasing the target for area under effective conservation may be appropriate.</p>

<sup>3/</sup> The proposed goals and targets are based upon those which have been mandated for the implementation of the Strategic Plan of the Convention in annex II of decision VII/30. Those targets are quoted *verbatim* here in the first column. They are then applied to the programme of work on the biodiversity of dry and sub-humid lands and where necessary re-worded to make them more appropriate to that context (column 2). Indicators listed in column 3 include three categories: (i) most relevant headline indicators; (ii) other relevant headline indicators, taken directly from annex I of decision VII/30 of the Conference of the Parties; and (iii) parameters of particular relevance including other general indicators and indicators specific to the activities of the dry and sub-humid lands programme of work.

Provisional goals and targets as per CBD decision VII/30	Application to the programme of work on the biodiversity of dry and sub-humid lands	Suggested indicators	Technical rationale for the selection of targets and indicators
1.2 Areas of particular importance to biodiversity protected	1.2 Areas of particular importance to dry and sub-humid lands biodiversity are protected	<p><b>Most relevant headline indicator(s)</b></p> <p>Trends in extent of selected biomes, ecosystems, and habitats</p> <p><b>Parameter(s) of particular relevance</b></p> <p>Extent of new areas of particular value or those under threat are protected</p> <p>Extent of degraded habitat area restored within dry and sub-humid lands areas of particular value or those under threat</p>	<p>The purpose of this target is to conserve areas of particular importance to the biodiversity of dry and sub-humid lands including those areas which are under particular threat in order to ensure: (i) the preservation of selected species with limited ranges and unique adaptations; (ii) the conservation of species important for sustainable livelihoods; and (iii) the maintenance of biodiversity in key areas at a level which facilitates the continuation of critical ecosystem functions.</p> <p>A joint liaison group meeting for the dry and sub-humid lands joint work programme was mandated by paragraph 8 of COP decision V/23 and was subsequently held in Bonn in May, 2001. This meeting identified seven areas of particular value in dry and sub-humid lands: (1) Rangelands; (2) Desert margins; (3) Key areas of species richness; (4) Protected areas and buffer zones; (5) Parkland and cropping land (6) Dryland forests; and (7) Wetlands and oases</p> <p>The percent targets for protection for each of the dry and sub-humid lands areas of particular value should vary since species distribution is generally very sporadic. For example, areas of high biodiversity tend to be centred along waterways <sup>4/</sup> which implies that a higher target would be appropriate for areas such as wetlands and oases.</p> <p>It should also be noted that many of the dry and sub-humid lands areas of particular value identified during the Bonn meeting encompass private lands and, as such, the definition of 'protection' will necessarily include broader criteria such as sustainable use and the implementation of the ecosystem approach to management.</p>

<b>Provisional goals and targets as per CBD decision VII/30</b>	<b>Application to the programme of work on the biodiversity of dry and sub-humid lands</b>	<b>Suggested indicators</b>	<b>Technical rationale for the selection of targets and indicators</b>
<b>GOAL 2: PROMOTE THE CONSERVATION OF SPECIES DIVERSITY</b>			
2.1 Restore, maintain, or reduce the decline of populations of species of selected taxonomic groups	2.1 Restore, maintain, or reduce the decline of populations of dry and sub-humid lands species of selected taxonomic groups	<p><b>Most relevant headline indicator(s)</b> Trends in abundance and distribution of selected species</p> <p><b>Other suggested indicator(s)</b> Number of species in dry and sub-humid lands with declining population trends</p>	<p>The purpose of this target is to protect a representative cross-section of dry and sub-humid lands species considering selected taxonomic groups within each dry and sub-humid lands ecological region.</p> <p>The selection of taxonomic groups would be based on criteria such as: availability of information, relevance to local livelihoods (including medicinal and culturally important taxonomic groups), and the assurance of the inclusion of all major life forms.</p> <p>The target is directly relevant to dry and sub-humid lands which contain a number of unique species groups such as <i>inter alia</i>, succulent plants, scorpions, etc.</p> <p>Within dry and sub-humid lands there is also an opportunity through this target, to highlight and expand on a number of existing efforts to reduce the decline of keystone species.</p>
2.2 Status of threatened species improved	2.2 Improve the status of threatened dry and sub-humid lands species	<p><b>Other relevant headline indicator(s)</b> Changes in the status of threatened species</p> <p><b>Other suggested indicator(s)</b> Number of species management plans developed for identified threatened and endangered species</p>	<p>The IUCN Red List of Threatened Species lists 2,311 threatened species in drylands, shrublands, savannahs, and grasslands of which 110 are critically endangered.</p> <p>The purpose of this target is to maintain and improve populations of known threatened and endangered species within dry and sub-humid lands as well as to identify any threatened species for which information is not currently available.</p> <p>The principle source of information for this target could be the IUCN Red List however, other sources of information such as national reports, the Living Plant Index, Species Assemblage Trend Indices, the Millennium Ecosystem Assessment and the Land Degradation Assessment in Drylands, could also be tapped as appropriate.</p> <p>The Global Strategy for Plant Conservation (decision VI/9) sets the target for the protection of threatened species at: 60% of the worlds threatened plant species conserved <i>in situ</i>, and 60% conserved in accessible <i>ex situ</i> collections, however no targets currently exist for fauna. The 60% target can be directly applied to plant species in dry and sub-humid lands although threatened succulent plants and other endemics, which have a high representation in dry and sub-humid lands, could conform to a higher target.</p>

<b>Provisional goals and targets as per CBD decision VII/30</b>	<b>Application to the programme of work on the biodiversity of dry and sub-humid lands</b>	<b>Suggested indicators</b>	<b>Technical rationale for the selection of targets and indicators</b>
<b>GOAL 3: PROMOTE THE CONSERVATION OF GENETIC DIVERSITY</b>			
3.1 Genetic diversity of crops, livestock, and of harvested species of trees, fish and wildlife and other valuable species conserved, and associated indigenous and local knowledge maintained	3.1 Genetic diversity of crops, livestock, harvested species of trees, fish and wildlife and other valuable dry and sub-humid lands species is conserved, and associated indigenous and local knowledge is maintained	<p><b>Most relevant headline indicator(s)</b></p> <p>Trends in genetic diversity of domesticated animals, cultivated plants, and fish species of major socioeconomic importance</p> <p><b>Parameter(s) of particular relevance</b></p> <p>Number of crop species on the World Information and Early Warning System for Plant Genetic Resources for Food and Agriculture List</p> <p>Number of threatened and endangered species on the World Watch List for Domestic Animal Diversity</p> <p>Number of medicinal plants classified as threatened or endangered</p>	<p>The purpose of this target is to ensure that dry and sub-humid lands biodiversity which is of value to local and indigenous people is maintained through the conservation of genetic diversity considering the number of different entities, the evenness of the distribution of these entities, and the extent of the differences between entities.</p> <p>This target is of particular relevance for the programme of work on the biodiversity of dry and sub-humid lands because:</p> <ul style="list-style-type: none"> <li>(a) Dry and sub-humid lands contain many landraces of common agricultural crops such as barley, cassava, and millet; and</li> <li>(b) The populations of many dry and sub-humid lands are especially reliant upon genetic resources as the basis of livelihood, medicinal, and disaster mitigation programs (as mentioned, approximately 70% of the populations of dry and sub-humid lands are reliant upon natural resources to sustain their livelihoods). 2/</li> </ul> <p>The achievement of this target, derived from target 9 of the Global Strategy for Plant Conservation, will reflect the continued identification and conservation of seed stock by <i>inter alia</i>, FAO, ICRISAT, and the other CGIAR centres.</p>
<b>GOAL 4: PROMOTE SUSTAINABLE USE AND CONSUMPTION OF DRY AND SUB-HUMID LANDS BIODIVERSITY</b>			
4.1 Biodiversity-based products derived from sources that are sustainably managed, and production areas managed consistent with the conservation of biodiversity	4.1 Dry and sub-humid lands biodiversity-based products are derived from sources that are sustainably managed, and production areas managed so as to be consistent with the conservation of biodiversity	<p><b>Most relevant headline indicator(s)</b></p> <p>Area of forest, agricultural and aquaculture ecosystems under sustainable management</p> <p><b>Other suggested indicator(s)</b></p> <p>Extent of rangeland under sustainable management</p> <p>Area of certified forests</p>	<p>The purpose of this target is to reduce biodiversity loss resulting from overuse and inappropriate management practices while maintaining related cultural and economic benefits.</p> <p>Within dry and sub-humid lands activities in support of the achievement of this target could follow the principles of conservation agriculture, sustainable forestry, rangeland management, sustainable tourism, etc. as outlined in the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity (decision VII/12, annex II).</p>

<b>Provisional goals and targets as per CBD decision VII/30</b>	<b>Application to the programme of work on the biodiversity of dry and sub-humid lands</b>	<b>Suggested indicators</b>	<b>Technical rationale for the selection of targets and indicators</b>
4.2 Unsustainable consumption, of biological resources, or that impacts upon biodiversity, reduced	4.2 Unsustainable consumption of biological resources and its impact upon biodiversity is reduced	<b>Most relevant headline indicator(s)</b> Proportion of products derived from sustainable sources	As with target 4.1, the goal of this target is to reduce unsustainable use including practices with a particular impact on dry and sub-humid lands such as <i>inter alia</i> , overgrazing, over harvesting, unsustainable farming practices, over-exploitation of water resources, etc.
4.3 No species of wild flora or fauna endangered by international trade	4.3 No species of dry and sub-humid lands wild flora and fauna are endangered by international trade	<b>Parameter(s) of particular relevance</b> Number of threatened and endangered species facing threats from international trade and from habitat conversion for production destined for international markets  Identification and protection of species not covered by CITES which are threatened directly or indirectly as a result of international trade	The purpose of this target, derived from targets 11 and 12 of the Global Strategy for Plant Conservation, is to reduce biodiversity loss as a result of legal and illegal international trade.  This target is directly applicable to dry and sub-humid land species including (i) those that are listed on appendix 1 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); (ii) those which are being over-harvested for trade but are not listed on CITES; and (iii) those species which are being indirectly threatened as a result of habitat conversion for production destined for international markets.  Within dry and sub-humid lands, this target will be influenced by ongoing global discussions regarding species with threatened status in some countries and overpopulations in others (as is the case with elephants).

Provisional goals and targets as per CBD decision VII/30	Application to the programme of work on the biodiversity of dry and sub-humid lands	Suggested indicators	Technical rationale for the selection of targets and indicators
<b>GOAL 5: PRESSURES FROM HABITAT LOSS, LAND-USE CHANGE AND DEGRADATION, AND UNSUSTAINABLE WATER USE, REDUCED</b>			
5.1 Rate of loss and degradation of natural habitats decreased	5.1 Rate of loss and degradation of natural habitats in dry and sub-humid lands is decreased	<b>Most relevant headline indicator(s)</b> Connectivity / fragmentation of ecosystems Incidence of human-induced ecosystem failure <b>Parameter(s) of particular relevance</b> Extent of habitat burned annually Rate of deforestation Area of habitat being degraded as a result of desertification	<p>The purpose of this target is to reduce and prevent habitat loss as a result of conversion or degradation in dry and sub-humid lands.</p> <p>Degradation of natural habitats refers to negative processes including: soil fertility loss, soil salinization and compaction, vegetative cover loss, siltation of waterways, etc. These processes can occur as a result of natural climatic variability or because of human actions such as <i>inter alia</i>, over cultivation, over grazing, deforestation, etc.</p> <p>Conversion refers to changing land uses in a manner which is incompatible with the continued survival of local biodiversity such as through, <i>inter alia</i>, urbanization, the draining of wetlands, etc.</p> <p>This target is directly applicable to dry and sub-humid lands since, although the total extent of the ecosystem is actually increasing as forests and woodlands are converted to grasslands and precipitation regimes shift, much of the viable habitat within dry and sub-humid lands continues to face anthropogenic threats of which habitat loss is counted amongst the greatest threats to biodiversity.</p>
<b>GOAL 6: CONTROL THREATS FROM INVASIVE ALIEN SPECIES</b>			
6.1 Pathways for major potential alien invasive species controlled	6.1 Pathways for major potential alien invasive species are controlled in dry and sub-humid lands	<b>Most relevant headline indicator(s)</b> Trends in invasive alien species <b>Parameter(s) of particular relevance</b> Extent of area occupied by invasive alien species in dry and sub-humid lands habitats	<p>The purpose of this target is to reduce and prevent biodiversity loss as a result of competition and predation by invasive alien species.</p> <p>This target includes addressing threats to biodiversity from both the accidental and the purposeful introduction of invasive alien species.</p> <p>This target can be directly applied to dry and sub-humid lands as discussed in UNEP/CBD/SBSTTA/11/4/Add.1. It should be noted, however, that current information on the number of species in dry and sub-humid lands which are threatened or endangered as a result of invasive alien species is not complete.</p>

<b>Provisional goals and targets as per CBD decision VII/30</b>	<b>Application to the programme of work on the biodiversity of dry and sub-humid lands</b>	<b>Suggested indicators</b>	<b>Technical rationale for the selection of targets and indicators</b>
6.2 Management plans in place for major invasive alien species that threaten ecosystems, habitats or species	6.2 Management plans in place for major alien species that threaten dry and sub-humid lands ecosystems, habitats or species	<b>Parameter(s) of particular relevance</b> Number of countries with national laws on invasive alien species	<p>The purpose of this target is to ensure that invasive alien species threats are effectively managed so as to reduce losses to dry and sub-humid lands biodiversity.</p> <p>The seventh Conference of the Parties (UNEP/CBD/COP/7/20/ Add.3) established a target for management plans for invasive alien plants of at least 100 major alien species. Given that 220 noxious invasive alien plant species have been identified in Australia alone, <sup>5/</sup> it is suggested that this target is increased within the context of dry and sub-humid lands.</p>
<b>GOAL 7: ADDRESS CHALLENGES TO BIODIVERSITY FROM CLIMATE CHANGE AND POLLUTION</b>			
7.1 Maintain and enhance resilience of the components of biodiversity to adapt to climate change	7.1 Maintain and enhance resilience of the components of biodiversity to adapt to climate change in dry and sub-humid lands	<b>Parameter(s) of particular relevance</b> Number species identified as being particularly vulnerable to the negative effects of climate change which are actively managed for conservation	<p>The purpose of this target is to enhance the capacity of dry and sub-humid lands biodiversity to adapt to climate change. This includes maintaining healthy ecosystem attributes such as: redundancy, complementarity, spatial heterogeneity, and evolutionary memory.</p> <p>Dry and sub-humid lands are particularly vulnerable to the negative impacts of climate change because of the limited resistance of such systems. In particular, dry and sub-humid lands biodiversity is well adapted to water sparse conditions and, as such, have evolved to be highly resilient. However, expected increases in the frequency of droughts and floods as a result of climate change threaten this balanced resilience.</p> <p>This is emphasized in the text of the UNFCCC which states: "...arid and semi-arid areas or areas liable to floods, drought and desertification...are particularly vulnerable to the adverse effects of climate change".</p>

Provisional goals and targets as per CBD decision VII/30	Application to the programme of work on the biodiversity of dry and sub-humid lands	Suggested indicators	Technical rationale for the selection of targets and indicators
7.2 Reduce pollution and its impacts on biodiversity	7.2 Reduce pollution and its impacts on dry and sub-humid lands biodiversity	<p><b>Most relevant headline indicator(s)</b></p> <p>Water quality in aquatic systems</p> <p>Nitrogen Depositions</p> <p><b>Other relevant headline indicator(s)</b></p> <p>Marine trophic index: application to freshwater and possibly other ecosystems</p> <p><b>Parameter(s) of particular relevance</b></p> <p>Extent of terrestrial area adversely affected by pollution as a result of agricultural practices</p>	<p>The purpose of this target is to reduce pollution in dry and sub-humid lands so as to reduce associated threats to biodiversity.</p> <p>In many dry and sub-humid areas water is the most important factor limiting productivity. While many dry and sub-humid species have adapted to low precipitation conditions there remains a high reliance upon access to clean water. Pollution, siltation, and changes in hydrological flows can therefore have a devastating impact on biodiversity in water-stressed dry and sub-humid lands. As a result, while this target is directly applicable to dry and sub-humid lands, there is cross-over with other programmes of work, most particularly the programme of work on inland waters.</p> <p>Terrestrial pollution as a result of the application of chemical products is also a particular problem in dry and sub-humid lands where agricultural production (including herding) forms the basis of many livelihoods. This target would benefit from collaboration with other programmes of work under the Convention, including agrobiodiversity.</p>
<b>GOAL 8. MAINTAIN CAPACITY OF ECOSYSTEMS TO DELIVER GOODS AND SERVICES AND SUPPORT LIVELIHOODS</b>			
8.1 Capacity of ecosystems to deliver goods and services maintained	8.1 Maintain capacity of dry and sub-humid lands ecosystems to deliver goods and services	<p><b>Parameter(s) of particular relevance</b></p> <p>Instances of inclusion of integrated ecosystem management into sustainable development strategies</p>	<p>The purpose of this target is to ensure that dry and sub-humid lands ecosystems continue to support the production of goods and services for the benefit of all. Such goods and services include, <i>inter alia</i>, biomass production, nutrient cycling, carbon sequestration, the maintenance of hydrological flows, the provision of cultural resources, etc.</p> <p>This target is directly applicable to dry and sub-humid lands in which many populations are highly reliant upon natural resources, and the disruption of ecosystem services is threatened by processes such as desertification. Some examples of effects of ecosystem services lost within dry and sub-humid lands as a result of desertification include: reduced soil productivity, loss of habitat, reduced water filtration rates, etc.</p>

<b>Provisional goals and targets as per CBD decision VII/30</b>	<b>Application to the programme of work on the biodiversity of dry and sub-humid lands</b>	<b>Suggested indicators</b>	<b>Technical rationale for the selection of targets and indicators</b>
8.2 Biological resources that support sustainable livelihoods, local food security and health care, especially of poor people maintained	8.2 Maintain biological resources that support sustainable livelihoods, local food security and health care, especially of poor people living in dry and sub-humid lands	<p><b>Most relevant headline indicator(s)</b></p> <p>Health and well-being of communities who depend directly on local ecosystem goods and services</p> <p>Biodiversity used in food and medicine</p> <p><b>Parameter(s) of particular relevance</b></p> <p>Proportion of the human population in dry and sub-humid lands earning less than \$1 per day</p> <p>Trends in human development indices amongst dry and sub-humid lands populations</p>	<p>The purpose of this target is to support sustainable livelihoods, local food security, and healthcare, especially considering vulnerable groups such as, the extreme poor, female headed households, youths, etc.</p> <p>It is estimated that over one billion poor people inhabit the world's dry and sub-humid areas.<sup>6/</sup> As such, ensuring sustainable livelihoods, increased food security, and reduced vulnerability to exogenous shocks is a particularly important component of biodiversity conservation in dry and sub-humid lands.</p>

<sup>6/</sup> The World Bank Group, 1999. Drylands Poverty and Development.

[http://www-wds.worldbank.org/servlet/WDS\\_IBank\\_Servlet?pcont=details&eid=000094946\\_01061604041522](http://www-wds.worldbank.org/servlet/WDS_IBank_Servlet?pcont=details&eid=000094946_01061604041522)

<b>Provisional goals and targets as per CBD decision VII/30</b>	<b>Application to the programme of work on the biodiversity of dry and sub-humid lands</b>	<b>Suggested indicators</b>	<b>Technical rationale for the selection of targets and indicators</b>
<b>GOAL 9 MAINTAIN SOCIO-CULTURAL DIVERSITY OF INDIGENOUS AND LOCAL COMMUNITIES</b>			
9.1 Protect traditional knowledge, innovations and practices	9.1 Protect traditional knowledge, innovations and practices within dry and sub-humid lands	<p><b>Most relevant headline indicator(s)</b></p> <p>Status and trends of linguistic diversity and numbers of speakers of indigenous languages</p> <p><b>Parameter(s) of particular relevance</b></p> <p>Instances of inclusion of indigenous people in biodiversity conservation planning.</p> <p>Number of new policies which are put in place to support traditional knowledge and indigenous innovations and practices</p>	<p>The purpose of this target is to ensure that biodiversity conservation activities take place within a framework of respect for, and acknowledgement of indigenous knowledge, innovations, and practices.</p> <p>Traditional land use practices have long been employed in dry and sub-humid lands in order to ensure the sustainable use of areas which are often considered marginal. Current policy frameworks and socio-economic environments, however, are threatening the sustainability of traditional management systems in dry and sub-humid lands (especially when considering traditional drought coping mechanisms).</p> <p>Activities contributing to the achievement of this target will also benefit from ongoing work under the Convention on Biological Diversity, including through the Ad Hoc Open-ended Working Group on Article 8(j), and by UNESCO, such as through the Atlas of the World's Languages in Danger of Disappearing.</p>
9.2 Protect the rights of indigenous and local communities over their traditional knowledge, innovations and practices, including their rights to benefit sharing	9.2 Protect the rights of indigenous and local communities over their traditional knowledge, innovations and practices, including their rights to benefit sharing	<p><b>Parameter(s) of particular relevance</b></p> <p>Number of benefit-sharing agreements in place regarding the use of dry and sub-humid lands biodiversity</p>	<p>The purpose of this target is to ensure that benefits derived from the conservation and utilization of dry and sub-humid lands biodiversity are shared in a just and equitable manner.</p> <p>This target is directly applicable to dry and sub-humid lands. The Ad Hoc Open-ended Working Group on Article 8(j) and the Open-ended Working Group on Access and Benefit-sharing under the Convention on Biological Diversity, could significantly contribute to efforts to address this target.</p>

<b>Provisional goals and targets as per CBD decision VII/30</b>	<b>Application to the programme of work on the biodiversity of dry and sub-humid lands</b>	<b>Suggested indicators</b>	<b>Technical rationale for the selection of targets and indicators</b>
<b>GOAL 10: ENSURE THE FAIR AND EQUITABLE SHARING OF BENEFITS ARISING OUT OF THE USE OF GENETIC RESOURCES</b>			
10.1 All transfers of genetic resources are in line with the Convention in Biological Diversity, the International Treaty on Plant Genetic Resources for Food and Agriculture and other applicable agreements	10.1 All transfers of dry and sub-humid lands genetic resources are in line with the Convention on Biological Diversity, the International Treaty on Plant Genetic Resources for Food and Agriculture and other applicable agreements	<b>Parameter(s) of particular relevance</b> Number of landraces brought under sustainable management plans including, where applicable, <i>ex situ</i> conservation planning Number of countries with legislation in place in support of the International Treaty on Plant Genetic Resources for Food and Agriculture	<p>The purpose of this target is to conserve the genetic diversity that is essential for food and agriculture through the implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture and other applicable international agreements.</p> <p>Dry and sub-humid lands encompass key areas which are associated with the origin of many important agricultural crops. The maintenance of these landraces is key in terms of ensuring a genetic base for the propagation of drought and pest resistant dry and sub-humid crops and fodder. As such, this target is directly applicable to dry and sub-humid lands.</p>
10.2 Benefits arising from the commercial and other utilization of genetic resources shared with the countries providing such resources	10.2 Benefits arising from the commercial and other utilisation of dry and sub-humid lands genetic resources shared with the countries providing such resources	<b>Parameter(s) of particular relevance</b> Establishment of administrative, legislative and/or regulatory measures and systems in line with the Convention to ensure access to genetic resources, and ensure that benefits arising from their utilization are fairly and equitably shared	<p>The purpose of this target is to ensure that countries are benefiting from the utilization of their biodiversity in a fair and equitable manner.</p> <p>The third objective of the Convention on Biological Diversity is the “fair and equitable sharing of the benefits arising out of the utilization of genetic resources”. As such, this target is applicable to the programme of work on the biodiversity of dry and sub-humid lands.</p>

<b>GOAL 11: PARTIES HAVE IMPROVED FINANCIAL, HUMAN, SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL CAPACITY TO IMPLEMENT THE CONVENTION</b>			
11.1 New and additional financial resources are transferred to developing Country Parties to allow for the effective implementation of their commitments under the Convention, in accordance with Article 20	11.1 New and additional financial resources are transferred to developing Country Parties to allow for the effective implementation of their commitments under the Convention, in accordance with Article 20	<p><b>Most relevant headline indicator(s)</b> Official development assistance provided in support of the Convention</p>	<p>The purpose of this target is to provide financial support to developing countries in order to enable them to fulfil their obligations under the Convention on Biological Diversity, in accordance with Article 20, paragraph 2.</p> <p>This target is particularly relevant for the programme of work on the biodiversity of dry and sub-humid lands since biodiversity in such areas is often overlooked in favour of areas with higher rates of biodiversity. This is in part due to a lack of adequate information on biodiversity within dry and sub-humid lands and is amplified within developing countries by incomplete information on the linkages between biodiversity conservation and poverty alleviation.</p>
11.2 Technology is transferred to developing country Parties to allow for the effective implementation of the programme of work on the biodiversity of dry and sub-humid lands and their commitments under the Convention, in accordance with Article 20, paragraph 4	11.2 Technology is transferred to developing country Parties, to allow for the effective implementation of the programme of work on the biodiversity of dry and sub-humid lands and their commitments under the Convention, in accordance with Article 20, paragraph 4	<p><b>Most relevant headline indicator(s)</b> Indicator for technology transfer</p> <p><b>Parameter(s) of particular relevance</b></p> <p>Number of research and extension projects and programs which are under development or implementation in dry and sub-humid areas of developing countries</p> <p>Number of partners who are actively participating in information exchange mechanisms and processes</p>	<p>The purpose of this target is to facilitate the implementation of the Convention among developing countries through technical capacity-building and technology transfers.</p> <p>A number of ongoing and upcoming projects are exploring sustainable use technologies for dry and sub-humid lands (including, <i>inter alia</i>, the Desert Margins Program, the International Centre for Agricultural Research in the Dry Areas, and the Desertification, Drought, Poverty and Agriculture Research Consortium). These technologies have the potential to reduce degradation and promote the restoration of sites suffering from desertification. As a result, this target is particularly applicable to the programme of work on the biodiversity of dry and sub-humid lands.</p>

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