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PROGRAMME OF WORK ON THE BIOLOGICAL DIVERSITY OF DRY AND SUB-HUMID LANDS: REVIEW OF IMPLEMENTATION

Note by the Executive Secretary

INTRODUCTION

1. The present note makes available detailed background information used in the review of the implementation of the programme of work on dry and sub-humid lands biological diversity, which is presented to the eleventh meeting of SBSTTA (UNEP/CBD/SBSTTA/11/4).

2. An overview of the implementation of the programme of work and detailed review of implementation are presented in this document. Section IV describes the status of the joint work programme with UNCCD. Contribution of implementation of the programme of work on the biological diversity of dry and sub-humid lands to the 2010 target and the Millennium Development Goals is presented in section V. Conclusions of the review are given in section VI and annex I presents supplementary information on implementation at national level including information on factors facilitating implementation and barriers to implementation.

I. OVERVIEW OF THE IMPLEMENTATION OF THE DRY AND SUB-HUMID LANDS BIODIVERSITY PROGRAMME OF WORK

3. As stated in annex II of decision V/23 of the Conference of the Parties, the programme of work on dry and sub-humid lands biodiversity is to be implemented on national, regional, and international levels.

A. *National level implementation*

4. Implementation of the programme of work on dry and sub-humid lands biodiversity primarily takes place at the national level through targeted actions and activities by country Parties to the Convention. Such actions and activities are outlined in national biodiversity strategies and action plans (NBSAPs) drafted by Parties as per the requirements of Article 6 of the Convention. Reporting on implementation is accomplished at the national level through national reports, the third series of which was requested for submission in May 2005.

5. The information in this document has been gathered primarily from the second national reports and national biodiversity strategies and action plans. Only nine countries had submitted their third national reports prior to the drafting of this review. As such, any reference to national reports in the

* UNEP/CBD/SBSTTA/11/1.

discussions on national-level implementation refers to the second national reports plus relevant third national reports.

6. A review of UNCCD national reports (second and third series) and UNFCCC national communications was also conducted in order to extract relevant national level implementation being reported to other conventions. This was complemented by the Secretariat on Biological Diversity's own research and available case-studies.

B. Regional and global level implementation

7. Paragraph 3 of decision V/23 of the Conference of the Parties calls on international and regional organization, major groups, and other relevant bodies to implement and support activities contributing to the implementation of the Convention on Biological Diversity in general and the dry and sub-humid lands biodiversity programme of work in particular at the national and regional levels. The Conference of the Parties further requests that these same agencies foster cooperation within regions and sub-regions.

8. The review of regional and global level implementation of the dry and sub-humid lands programme of work is based on agency and programme reports provided to the Convention on Biological Diversity and the responses to a questionnaire sent to agencies engaging in relevant activities. Notification for participation in the questionnaire was sent by the Executive Secretary on 28 April and 4 May to 46 sub-regional, regional, and international organizations. ^{1/}

9. This report includes responses from eleven agencies: Food and Agriculture Organization (FAO), Global Environment Facility (GEF), the World Bank, International Fund for Agricultural Development (IFAD), Recursos e Investigación para el Desarrollo Sustentable (RIDES), Ecoagriculture Partners, the Sahara and the Sahel Observatory (OSS), the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the Consultative Group on International Agricultural Research (CGIAR), the Third World Network of Scientific Organizations (TWNSO), and the African Development Bank Group (AfDB).

C. Facilitation of implementation by the Secretariat

10. Specific roles for the Secretariat of the Convention on Biological Diversity were identified in annex I to decision VII/2 of the Conference of the Parties for activities 1 (assessment of status and trends), 3 (indicators), 5 (benefits from biodiversity), 6 (best-management practices), 7 (b) (rehabilitation and restoration), 7(i) (training, education and public awareness), 8(e) (policies and instruments), and 9(e) (fair and equitable sharing of benefits). These roles are discussed in more detail in the corresponding reviews of each activity.

II. REVIEW OF IMPLEMENTATION OF THE DRY AND SUB-HUMID LANDS PROGRAMME OF WORK

11. Decision V/23, annex I of the Conference of the Parties identifies two programme elements (Part A: assessments and Part B: targeted activities) comprised of 9 main activities and 23 actions describing ways in which the activities should be implemented. The annex to decision VII/2 provides details for each activity including expected outcomes, timeframes, key actors, and progress indicators.

^{1/} ADB, AfDB, ASEAN Regional Centre for Biodiversity Conservation, Bio-Discovery, Bird Life International, CILSS, CI, CMS, DDP, Drylands Coordination Group, Eco-agriculture Partners, European Commission, FAO, GEF, ICARDA, ICRISAT, IDRC, IFAD, IFPRI, IGAD, IIED, ILRI, IWMI, International Human Development Programme on Global Environmental Change, Islamic Development Bank, LADA, MA, MAB, Millennium Project Hunger Task Force, NEPAD, OAS, OSS, Ramsar, SADC, TWNSO, UNCCD, UNEP-WCMC, UNESCO, UNDP, UNDP-Equator Initiative, UNFCCC, UNFF, WHC, WIPO, World Bank, WRI, WWF.

A. Assessments

12. In annex I to its decision V/23, the conference of the Parties identified ways and means for the implementation of Part A: Assessments of the programme of work on the biodiversity of dry and sub-humid lands. These include:

- (a) The consolidation of information from various ongoing sources;
- (b) Targeted research;
- (c) Multidisciplinary and interdisciplinary case-studies on management practices; and
- (d) The dissemination of information and capacity-building.

13. The below review of implementation of the activities in Part A reveals that:

(a) The consolidation of information from various ongoing sources has largely been left to the Secretariat of the Convention on Biological Diversity. Few Parties or agencies have implemented concerted efforts to build on past experiences. The exception to this is the environment conventions, which have devoted a good deal of time and effort to the building of synergies between conventions and work programmes.

(b) There are good examples of successful targeted research programmes amongst agencies such as the CGIAR centres. Nevertheless, serious gaps remain particularly when considering the assessment of status and trends, the valuation of areas of particular value, and the identification and dissemination of case-studies including the consideration of traditional knowledge.

(c) Many of the actions in support of activities 5 (benefits from biodiversity) and 6 (best-management practices), in particular, approach biodiversity conservation from a multidisciplinary and cross-sector angle. However, with the exception actions by 3 Parties in the implementation of activity 4 (knowledge on processes affecting biodiversity) there has been little indication that this multidisciplinary approach is being mainstreamed into multi-sector national planning.

(d) The dissemination of information in support of the implementation of Part A has taken place through: (i) the publication of reports, and (ii) participation in workshops. Capacity-building has been sporadic with most successes revealed through participation in regional and global collaborative partnerships such as, *inter alia*, the Mediterranean Action Plan, and the MA sub-regional assessment for Southern Africa.

14. In table 1 of its decision VII/2, the Conference of the Parties proposes a four-phased process for the periodic assessment of status and trends in dry and sub-humid lands. Phase II and I were proposed for completion prior to the eighth meeting of the Conference of the Parties. Progress is summarized below.

	Proposed Process	Progress
Phase I: 2002-2004	Invite LADA and MA to investigate how the needs of the dry and sub-humid lands could be integrated into the ongoing assessments, emphasizing proposals and ways to strengthen national efforts to conduct assessments.	MA produced a biodiversity synthesis report. LADA has submitted two reports on progress to the CBD.
	Develop proposals for mechanisms linking national assessments to regional/global assessment/report processes.	Proposed mechanisms have not yet been developed.
	Participatory development of draft guidelines for national assessments, including indicators initiated.	2010 biodiversity targets and related indicators under consideration for dry and sub-humid lands.
Phase II: 2004-2006	Agree to final guidelines for national assessments and adoption for implementation.	2010 biodiversity targets and related indicators under consideration for dry and sub-humid lands.

	Implementation mechanisms agreed upon and functional.	2010 targets and some related indicators were adopted in COP decision VII/30. In dry and sub-humid lands the targets and indicators are not yet functional.
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Activity 1: Assessment of status and trends of the biological diversity of dry and sub-humid lands

15. In the annex to its decision VII/2 the Conference of the Parties plans to compile, by 2010 a draft full assessment of the status and trends of biological diversity in dry and sub-humid lands such that it can produce a comprehensive review and assessment report by 2012. For this purpose, a preliminary assessment report is to be prepared in 2006.

16. As a precursor to this preliminary report, the Executive Secretary has prepared a draft assessment (UNEP/CBD/SBSTTA/11/4/Add.1). This draft sets the framework for the preliminary and full assessments of the status and trends of dry and sub-humid lands biodiversity and begins the process of identifying available information and current data gaps.

17. In the same decision, the Conference of the Parties also develops an indicative list of key actors with the potential to have a significant role with regards to contributing to the implementation of activity 1. These actors, along with other relevant agencies, are presented in table 1, below.

Table 1: Key actors in the implementation of activity 1

Key actors	Activities specific to dry and sub-humid lands	Other relevant activities
CGIAR	List of crop varieties released by country <u>2/</u>	CGIAR Systemwide Information Network for Genetic Resources (SINGER) <u>3/</u>
FAO	Biodiversity and Conservation of Forest Species in the Mediterranean Basin <u>4/</u> Biodiversity of Tropical Dry Deciduous Forest Ecosystem <u>5/</u>	World Information and Early Warning System for Plant Genetic Resources for Food and Agriculture List <u>6/</u> The Forest Resources Assessment Programme <u>7/</u> World Watch List for Domestic Animal Diversity <u>8/</u> AFRICOVER Programme <u>9/</u> Terrestrial Ecosystem Monitoring Sites <u>10/</u>
LADA <u>11/</u>	Stocktaking of Dryland Biodiversity Issues in the Context of LADA	
MA <u>12/</u>	Assessment Report: Current Status and Trends Chapter 22 – Dryland Systems Sub-global assessments in Chile, Portugal, and Southern Africa Synthesis Report on Desertification	Synthesis Report on Biodiversity Current State & Trends Assessment
OSS	Long Term Ecological Monitoring Observatories Network (ROSELT) programme <u>13/</u>	

2/ http://www.icarda.org/Crops_Varieties.htm

3/ <http://www.singer.cgiar.org/>

4/ http://www.fao.org/documents/show_cdr.asp?url_file=/DOCREP/X1880E/X1880E05.HTM

5/ <http://www.fao.org/DOCREP/ARTICLE/WFC/XII/0699-B2.HTM>

6/ <http://www.fao.org/ag/AGP/AGPS/Pgrfa/pdf/swrfull.pdf>

7/ http://www.fao.org/documents/show_cdr.asp?url_file=/docrep/007/ae217e/ae217e00.htm

8/ <http://dad.fao.org/en/Home.htm>

9/ <http://www.fao.org/WAICENT/FAOINFO/SUSTDEV/EIdirect/EIre0053.htm>

10/ <http://www.fao.org/gtos/tems/index.jsp>

11/ Reports available at: <http://lada.virtualcentre.org/pagedisplay/display.asp?section=ladahome>

12/ Reports available at: <http://www.millenniumassessment.org/en/Products.aspx?>

13/ http://www.unesco.org/oss/v_uk/programmes/programme_roseltang.htm

RIDES	No information available	Centro De Investigacion Independiente <u>14/</u>
UNCCD and Thematic Programme Networks (TPN's) <u>15/</u>	Asia TPN 1: Desertification Monitoring and Assessment Africa TPN 4: Ecological monitoring, natural resources mapping, remote sensing, and early warning systems	
WRI	Drylands, People, and Ecosystem Goods and Services <u>16/</u> Pilot Analysis of Global Ecosystems: Grasslands <u>17/</u>	
Secretariat of the CBD	Draft assessment of status and trends (UNEP/CBD/SBSTTA/11/4/Add.1)	
Parties	Twenty-nine parties reported national assessments specifically in dry and sub-humid lands <u>18/</u>	

B. Progress

National level

18. Based primarily on the second national reports of the Convention on Biological Diversity and the second and third UNCCD national reports in addition to consideration of UNFCCC national communications, activity 1 of the programme of work on dry and sub-humid lands is one of the most widely nationally implemented activities within the programme of work. With regards to reporting, 13 Parties reported activities through the national reports of the Convention on Biological Diversity, 8 through UNCCD national reports, 2 through both the national reports of UNCCD and the Convention on Biological Diversity, 2 through both national reports of the Convention on Biological Diversity and UNFCCC national communications, and 3 through the Secretariat of the Convention on Biological Diversity's own research.

19. In addition to information contained within national reports and communications to the 3 conventions, national assessment information is available from MA sub-regional studies completed in Chile, Portugal, and Southern Africa 19/ and LADA country pilot studies carried out in Argentina, China, and Senegal. 20/

20. Through its decision VII/2, the Conference of the Parties requested a periodic review of the assessment of status and trends of dry and sub-humid land biodiversity. This periodic review integrates the relevant provisional indicators for assessing progress towards the 2010 biodiversity targets as agreed to in annex I to decision VII/31 of the Conference of the Parties:

- (a) Extent of habitat;
- (b) Abundance and distribution of selected species;
- (c) Coverage of protected areas; and
- (d) Threats to biodiversity.

21. Seven national assessments (all reported on through UNCCD national reports) focus on the extent of habitat and/or threats to biodiversity. Within these reports, major threats identified include:

14/ <http://www.rides.cl>
15/ Reports available at: <http://www.unccd.int/>
16/ <http://pdf.wri.org/drylands.pdf>
17/ http://pdf.wri.org/page_grasslands.pdf
18/ Parties include : Argentina, Burkina Faso, Canada, Belgium, Chile, China, the European Community, France, Egypt, India, Kazakhstan, Liberia, Malta, Morocco, Namibia, Nicaragua, Nigeria, Oman, Peru, Philippines, Portugal, Republic of Korea, Rwanda, Senegal, South Africa, Spain, Switzerland, Tunisia.
19/ Reports available at: <http://www.millenniumassessment.org/en/Products.Subglobal.aspx>
20/ Reports available at: <http://lada.virtualcentre.org/pagedisplay/display.asp?section=description>

- (a) Increased human population pressures;
- (b) Recurring drought;
- (c) Over-pumping of water;
- (d) Overgrazing;
- (e) Deforestation;
- (f) Infrastructure construction; and
- (g) Mining. ^{21/}

22. An analysis of UNCCD reports has revealed that the assessment of the extent of habitat and threats to biodiversity can allow Parties to develop management plans with clear targets based on trends in habitat loss and the identification of specific causal relationships.

23. Twenty national assessments of status and trends (mostly reported through the national reports of the Convention on Biological Diversity) focus on extent of habitat and species abundance and distribution within specific dry and sub-humid lands ecoregions. For example, grasslands are assessed through both the Swiss Inventory of Dry Grasslands ^{22/} and the Chinese monitoring network on agricultural environments. ^{23/} Arid and semi-arid lands are being assessed through, *inter alia*: the inventory of dry forest ecosystems by the Peruvian Center for Conservation Data, and the inventories of resources in arid zones by the “Centre National de Télédétection” in Tunisia. Mediterranean landscapes are assessed within the framework of the Mediterranean Action Plan (MAP) ^{24/} which is implemented at the national level by Parties such as Spain and Malta. ^{25/}

24. The remaining 2 reports (both submitted as national reports of the Convention on Biological Diversity) contain assessment information specific to dry and sub-humid lands protected areas.

25. Analysis of national reports and communications reveals that the successful implementation of national assessments of status and trends is being facilitated through:

- (a) Collaboration with academic institutions and research agencies;
- (b) Participation in global, regional, and sub-regional assessment programmes;
- (c) Development of appropriate policy frameworks such as the establishment of national monitoring programmes; and
- (d) Provision of adequate financial and technical support, including international support to developing countries.

Regional and global level

^{21/} National reports can be accessed at: <http://www.biodiv.org/world/intro.asp> (CBD) and www.unccd.int (UNCCD).

^{22/} This inventory was identified as a planned activity in the second national report. Although the completion date was set for 2004, the BUWAL list of inventories identifies the Dry Grasslands of Switzerland inventory as being under development as of June, 2005. The third national report from Switzerland was not yet available to provide updated information at this time.

^{23/} This network includes a general monitoring center on agricultural environments and a specific monitoring center on grassland environments.

^{24/} <http://www.unepmap.gr>.

^{25/} Other relevant reports/programmes include: Spain – National Soil Inventory, Malta – Coastal Area Management Programme, Korea – National Forest Plan, Canada – Sustainable Arid Grassland Ecosystems Project, Belgium – Earth Observation Research Programme, India – Botanical Survey of India, Namibia – Life List, South Africa – Ekwangala Natural Trust, France – Réseau d’Observatoires et de Surveillance Ecologique a Long Terme, Morocco – Etude Nationale sur la Biodiversite.

26. Five agencies 26/ provided reports on the assessment of the status and trends of biological diversity in dry and sub-humid lands with an additional three agencies 27/ identified through distributed publications and reports. These agencies and their principle contributions are identified in table 1 above.
27. Assessments by the Millennium Ecosystem Assessment (MA) and the Land Degradation Assessment in Drylands Project (LADA) are taken note of in decision VII/2 of the Conference of the Parties. As such, these two assessments are afforded more in-depth consideration below.
28. The (MA) has published a number of status and trends synthesis reports including one on desertification 28/ and another on biodiversity. 29/ Additional reports have been developed at the regional and national levels (see table 1 above).
29. The biodiversity synthesis report identifies 10 areas of particularly rapid change in terrestrial ecosystems over the past twenty years. Four of these areas are in dry and sub-humid lands: Asia (land degradation in drylands), parts of the Middle East, sections of Central Asia, and the Great Plains region of the United States. Furthermore, three of the four biomes which have experienced 35% or more conversion to cropland are in dry and sub-humid lands: tropical dry forests, temperate grasslands, and Mediterranean forests.
30. Although the classification of ecosystems employed by the MA is not identical to that which is employed by the Convention on Biological Diversity within the programme of work on the biodiversity of dry and sub-humid lands, the desertification synthesis does cover arid, semi-arid and sub-humid lands only. Additionally, the division of analysis by biomes and ecoregions employed by the MA does provide valuable information which can be consolidated within the dry and sub-humid lands programme of work analysis.
31. LADA is entering the implementation phase following a number of successful national pilot assessments. Biodiversity assessments are integrated into LADA and carried out through remote sensing and local level assessments. Biodiversity indicators are reflected in a number of monitoring categories including: ecosystem diversity, management practices, measures of loss of animal, plant, and microbial populations, soil and water health, and food and livelihood security.
32. Initial analysis conducted by LADA 30/ revealed four key pressures affecting dryland biodiversity:
- (a) Clearing, fragmentation, and conversion of habitat;
 - (b) Intensification and inappropriate land use;
 - (c) Invasive alien species; and
 - (d) Overexploitation and unsustainable harvesting of natural resources.
33. LADA also identified five main dryland natural systems: Mediterranean-type ecosystems, grasslands and savannahs, wetlands, inland waters, and oases.

Facilitation of implementation by the secretariat

34. The Secretariat has prepared, as a preliminary report, UNEP/CBD/SBSTTA/11/4/Add.1, Status and Trends of, and Threats to, Dry and Sub-Humid Lands Biodiversity. This document compiles information from the second and third national reports submitted within the context of the Convention on Biological Diversity and UNCCD and represent a detailed review covering ongoing assessment activities.

26/ FAO, MA, RIDES, OSS, and CGIAR.
27/ LADA, WRI, and UNCCD.
28/ Millennium Ecosystem Assessment. Synthesis Report for the Convention to Combat Desertification.
29/ Millennium Ecosystem Assessment. Synthesis Report for the Convention on Biological Diversity.
30/ LADA. Stocktaking of Dryland Biodiversity in the Context of the Land Degradation Assessment of Drylands.

C. Obstacles

National level

35. Despite the high level of reported implementation of activity 1 only 4 Parties ^{31/} have reported on comprehensive assessments which address all: habitat extent, abundance and distribution of selected species, coverage of protected areas, and threats to biodiversity.
36. Reported obstacles to the further implementation of activity 1 include:
- (a) Lack of attention to the sustainability of project based funding for assessments; and
 - (b) Weak technical and institutional capacity in many countries.
37. Targeted efforts to address the above obstacles will require collaboration between regional and global agencies and national level implementers.

Regional and global level

38. A review of the current regional and global assessments of status and trends highlights a number of information gaps. For example, in the stocktaking of biodiversity report, LADA reveals that it is currently not possible to draw an accurate correlation between the rate of dryland degradation and the rate of species extinction because of a lack of data on endemic species distribution. Likewise, the MA synthesis report on desertification expresses concerns that current desertification evaluations are conducted over time periods which are too short and cover a scale which is either too large to include local phenomenon, or too small to be useful for scaling.

39. Responses to the questionnaire revealed a number of additional barriers preventing a more complete regional and global assessment of the status and trends of dry and sub-humid lands biodiversity. These include:

- (a) Insufficient bio-geographical data;
- (b) The requirement for studies to be conducted over several years;
- (c) The complexity of dry and sub-humid ecosystems as a result of high climatic variation;
- (d) A weak framework for the coordination of assessment activities; and
- (e) A lack of guidelines to facilitate the engagement of regional and global agencies in the assessment processes.

Activity 2: Identification of areas of particular value for biodiversity and/or under particular threat

40. The Conference of the Parties in the annex to its decision VII/2 calls for the completion of a review and assessment of areas of value/under threat by 2012 with a draft map and assessment report delivered in 2008. It is expected that this review will include a listing of areas important for conservation as per the criteria identified by the joint liaison group meeting between the secretariats of the Convention on Biological Diversity and UNCCD held in Bonn in May 2001:

- (a) Rangelands;
- (b) Desert margins;
- (c) Key areas of species richness;
- (d) Protected areas and buffer zones;
- (e) Parkland and cropping land;
- (f) Dryland forests;

^{31/} Belgium, Morocco, Tunisia, and the Philippines.

(g) Wetlands and oases.

41. Annex I of the same decision also includes an indicative list of key actors contributing to the implementation of activity 2. These and other actors are described in table 2 below.

Table 2: Key actors in the implementation of activity 2

Key actors	Activities specific to dry and sub-humid lands	Other relevant activities
Bird Life International	No information available	Endemic Bird Areas ^{32/}
Conservation International	No information available	Biodiversity Hotspots ^{33/}
IUCN-WCPA	Seminar on the Protection and Conservation of Grasslands in East Asia August 14, 2000, Ulaanbaatar, Mongolia ^{34/}	Centers of Plant Diversity ^{35/}
MAB Secretariat	Sustainable Management of Marginal Drylands (SUMAMAD) in 8 countries. ^{36/}	Biosphere Reserve Integrated Monitoring (BRIM) ^{37/}
UNEP – World Conservation Monitoring Centre	Submitted proposal for assessing areas within dry and sub-humid lands of particular value for biological diversity and/or under particular threat	
World Heritage Centre	Identified 154 natural and 23 mixed (natural and cultural) sites of particular value worldwide of which approximately 25% are in dry and sub-humid areas. ^{38/}	
Parties	Twenty-four countries have reported on national level implementation. ^{39/} Regional initiatives have identified additional dry and sub-humid areas of particular/under threat in almost 100 countries ^{40/}	

Progress

National level

42. Twenty four countries have identified areas of particular value in dry and sub-humid lands. Twenty three countries reported through NBSAPs and national reports of the Convention on Biological Diversity. One UNCCD national report contains information on areas under threat from desertification.

43. National reporting on areas of particular value reveal the following criteria for the identification and classification of areas:

- (a) High biological diversity;
- (b) Presence of threatened species;
- (c) Large number of endemic species;
- (d) Reserve of natural resources such as water and arable land;
- (e) Habitats whose conservation and sustainable management can provide benefits at a local and national level including economic, aesthetic, medicinal and educational benefits.

^{32/} http://www.birdlife.org/action/science/endemic_bird_areas/

^{33/} <http://www.biodiversityhotspots.org/xp/Hotspots>

^{34/} http://www.iucn.org/themes/wcpa/pubs/pdfs/Grassland8_00Proc.pdf

^{35/} <http://www.iucn.org/themes/ssc/plants/centres.htm>

^{36/} <http://www.inweh.unu.edu/inweh/drylands/SUMAMAD.htm>

^{37/} <http://www.unesco.org/mab/brim/>

^{38/} Complete list available at: <http://whc.unesco.org/en/list/>

^{39/} Armenia, Australia, Burkina Faso, Burundi, Cameroon, Canada, China, Ecuador, Eritrea, Greece, Kazakhstan, Lithuania, Lebanon, Namibia, Republic of Moldova, Romania, Russian Federation, Sierra Leone, South Africa, Spain, Sudan, Tunisia, Turkmenistan, and Uzbekistan.

^{40/} These global and regional initiatives include biodiversity hotspots and World Biosphere Reserves.

44. Areas under threat are identified using the following criteria interchangeably:

- (a) Area loss;
- (b) Quantity and severity of threats/disturbances (including desertification, drought, pests, urbanization, agricultural expansion, deforestation, overgrazing and human pressures);
- (c) Habitats in proximity to extreme polluting sources;
- (d) Unique habitats requiring special regulations.

45. Nineteen of the 24 Parties that identify areas of particular value and/or under threat also target activities for those areas. ^{41/} The activities listed include, *inter alia*:

- Establish and/or extend protected areas and improve their management;
- Restore and rehabilitate threatened areas and species;
- Monitor identified areas and the species living in them;
- Identify threats and monitor changes in ecosystems;
- Take measures to control invasive alien species and to prevent further introductions;
- Revise and adapt policies and legislation/regulation that affect threatened areas and/or of particular value;
- Compile and promote relevant traditional knowledge, know-how and practices in ecosystem management and participatory approach;
- Assess possible incentives for conservation and sustainable use of resources;
- Promote international cooperation on transboundary and regional issues;
- Information sharing;
- Sensitize local communities to the sustainable utilisation of resources.

Regional and global level

46. The review of implementation of activity 2 identified 6 regional and global agencies involved in the identification of areas of particular value and/or under threat.

47. Some of these programmes classify areas based on strict adherence to specific criteria: biodiversity hotspots must: (i) contain at least 1500 endemic vascular plant species, and (ii) have lost at least 70 per cent of the original habitat extent. ^{42/} Endemic Bird Areas are defined by the overlap of habitat for at least two restricted-range birds. ^{43/}

48. Other regional and global programmes incorporate guiding criteria into local efforts to define areas as is the case for Centers of Plant Diversity. IUCN, in identifying such areas, employs a bottom-up approach to identification providing only broad guidelines: (i) the area is evidently species-rich and (ii) the area is known to contain a large number of endemic species.

49. The world network of biosphere reserves is another example of a global initiative which provides broad criteria to guide the national identification of areas of particular value with an emphasis on areas which: (i) contribute to the conservation of landscapes, ecosystems, species and genetic variation; (ii) foster economic and human development which is socio-culturally and ecologically sustainable; and

^{41/} Armenia, Australia, Benin, Burkina Faso, Cameroon, China, Egypt, Eritrea, E. U., Mexico, Moldova, Morocco, Namibia, New Zealand, Niger, Pakistan, Slovenia, Tunisia.

^{42/} http://www.biodiversityhotspots.org/xp/Hotspots/hotspotsScience/hotspots_defined.xml

^{43/} Restricted-range birds are birds with a range smaller than 50,000 km²

(iii) provide support for research, monitoring, education and information exchange related to local, national and global issues of conservation and development. 44/

Facilitation of implementation by the Secretariat

50. The Secretariat of the Convention on Biological Diversity is currently working with the Secretariat of the UNCCD to strengthen support for the identification of areas of particular value and/or under particular threat through the development of terms of reference for the mobilization of the rosters of experts of each convention.

51. The Secretariat of the Convention on Biological Diversity also participated in an expert group meeting which defined priority areas as listed above. 45/

Obstacles

National level

52. Reporting countries identified areas of particular value and/or under threat in general terms including ecosystems, forests, wetlands, and national parks. None of the Parties specify the boundaries of identified areas. This is a serious constraint when considering the mandate of decision V/23 of the Conference of the Parties, to map dry and sub-humid areas of particular value and/or under threat.

53. National reporting mechanisms reveal, as obstacles to further implementation:

- Weak technical and financial capacity (including weak institutions, a lack of trained personnel, and poor access to planning and management technologies);
- Lack of institutional capacity amongst local / national partners; and
- Lack of well-defined criteria to identify areas of value and/or under threat and weak supporting data to evaluate said criteria.

Regional and global level

54. Barriers to the further identification of areas of particular value and/or under threat include:

- Insufficient information on the local importance of biodiversity;
- Weak linkages between regional and global and national and local level institutions; and
- Poor coordination of efforts between and amongst agencies.

55. At the regional and global level, implementation of activity 2 could benefit from improved planning and coordination including targeted efforts to address informational gaps and capacity building needs amongst partners.

Activity 3: Further development of indicators of biological diversity

56. As stated in the annex to its decision VII/2, the Conference of the Parties intends to have indicators for the assessment of status and trends fully operational by 2012 with a draft set of indicators prepared for 2004. It is intended that these indicators incorporate the 2010-biodiversity target and the Millennium Development Goals (MDGs) as per the guidelines set out in decision VII/30 paragraph 3 of the Conference of the Parties. Annex I of the same decision proposes 8 indicators for immediate testing and suggests 13 possible indicators for development. Draft indicators for the programme of work on the biodiversity of dry and sub-humid lands are presented in Addendum 2 to this document.

44/ Broad criteria include: (i) representative of a major biogeographic region, including a gradation of human intervention in these systems, (ii) contain landscapes, ecosystems or animal and plant species, or varieties which need to be conserved, (iii) provide an opportunity to explore and demonstrate approaches to sustainable development within the larger region where they are located, (iv) be of an appropriate size to serve the three functions of biosphere reserves, and (v) have an appropriate zoning system, with a legally constituted core area or areas, devoted to long-term protection; a clearly identified buffer zone or zones and an outer transition area.

45/ Information available in UNEP/CBD/SBSTTA/7/2.

57. In decision VII/2, the Conference of the Parties further identifies potential key actors contributing to the implementation of activity 3. These actors are presented along with other actors indicative of implementation in table 3 below.

Table 3: Key actors in the implementation of activity 3

Key actors	Activities specific to dry and sub-humid lands	Other relevant activities
Bird Life International	No Information Available	Indicators of avian biodiversity 46/
CEC	No Information Available	Environmental Impacts in the Agricultural Sector: Using Indicators as a Tool for Policy Purposes 47/
FAO	No Information Available	World Information and Early Warning System for Plant Genetic Resources for Food and Agriculture List 48/ World Watch List for Domestic Animal Diversity 49/
IISD	No Information Available	Compendium of Indicator Initiatives 50/
LADA	Stocktaking of Dryland Biodiversity Issues in the Context of LADA 51/	
MA	Synthesis Report on Desertification 52/	Biodiversity intactness index 53/
OECD	No Information Available	Environmental Indicators 54/
UNESCO-MAB	No Information Available	Land Use Change Analysis System 55/
Secretariat of the CBD	Draft set of global outcome-oriented targets and indicators	
Parties	Sixteen Parties have reported on the development and implementation of indicators for the assessment of status and trends of biodiversity in dry and sub-humid lands 56/	

Progress

National level

58. As mentioned in table 3 above, 16 Parties [57/](#) have reported on the implementation of activity 3. Thirteen Parties reported through UNCCD national reports, 2 through CBD national reports, and one was identified by a Secretariat search on national level implementation.

59. Of the 16 Parties reporting on implementation 6 refer to indicators which have been developed to monitor the implementation and outcomes of a specific project or programme. Eight implementing parties reported that the development and monitoring of indicators are the responsibility of a defined national

[46/](#) <http://www.birdlife.org/action/science/indicators/index.html>

[47/](#) http://www.cec.org/files/pdf/ECONOMY/OECDParris_EN.PDF

[48](#) <http://apps3.fao.org/wiews/wiews.jsp>

[49/](#) <http://dad.fao.org/en/Home.htm>

[50/](#) <http://www.iisd.org/measure/compendium/>

[51/](#) http://lada.virtualcentre.org/eims/download.asp?pub_id=92440

[52/](#) <http://www.millenniumassessment.org/en/Products.Synthesis.aspx>

[53/](#) <http://www.millenniumassessment.org/documents/bridging/papers/biggs.oonsie.pdf>

[54/](#) http://www.oecd.org/department/0,2688,en_2649_34441_1_1_1_1_1,00.html

[55/](#) <http://www.cs.utk.edu/~lucas/>

[56/](#) Armenia, Botswana, Canada, Kenya, Lesotho, Madagascar, Malta, Mexico, Mongolia, Morocco, Namibia, Nigeria, Peru, Portugal, Romania, Spain.

[57/](#) It should be noted that while only 16 Parties reported on the development of indicators it can be assumed that those Parties which carried out assessments of status and trends of biological diversity also developed indicators. If these Parties are included, the number of Parties reporting on the implementation of activity 3 increases to 34.

agency or institution. The remaining 2 Parties do not present specific information on the organizational framework for indicators.

60. Although none of the Parties reporting directly to the Convention on Biological Diversity include specific indicator lists, some indicators are identified in UNCCD national reports including, *inter alia*,

Production indicators

- Vegetative cover and crop yields;
- Market prices for agricultural goods;
- Livestock pressure index.

Socio-economic indicators

- Land tenure/use;
- Population density;
- Poverty rates and food security.

Bio-physical indicators

- Soil properties / rates of loss;
- Climatic information (temperature and precipitation);
- Aridification of natural vegetation;
- Extent of regenerating areas;
- Species distribution and quantity;
- Percent of endemic species;
- Number of threatened/endangered species.

Threat indicators

- Number of flood/drought warnings;
- Number of monetary claims for damage to fields (as a result of natural disasters);
- Extent of forest and steppe fires;
- Number of invasive alien species;
- Extent of pollution.

61. Where implemented, activity 3 has been facilitated, at the national level, by:

- The mainstreaming of indicators into national strategies and assessment processes; and
- The definition of associated benchmarks and/or targets.

62. The development of indicators at the national level will also be affected by the integration of the 2010 biodiversity target within the dry and sub-humid lands biodiversity programme of work (as per decision VII/30 of the Conference of the Parties).

Regional and global level

63. Implementation of activity 3 at the regional and global level is underway within 8 agencies as discussed in table 3 above. Overall the MA and LADA have both developed indicators specific to dry and sub-humid lands. In the case of LADA, biodiversity indicators are integrated within the overall objective of assessing land degradation. These indicators include, *inter alia*:

Production indicators

- Plant health;
- Crop and livestock productivity.

Socio-economic indicators

- Human population growth;
- Urban/rural area and population;
- Incidences of disease amongst human populations;
- Change in income and food security.

Bio-physical indicators

- Change in vegetation cover;
- Change in distribution and abundance of species and communities;
- Soil surface stability;
- Infiltration and nutrient cycling capacity;
- Soil biodiversity;
- Depth to water table;
- Aquatic biota, birds and terrestrial users of water.

Threat indicators

- Nutrient load and chemical residues in water;
- Extent, timing and frequency of burning;
- Extent and severity of erosion.

64. Similarly, the MA Desertification Synthesis considers biodiversity indicators in terms of how biodiversity impacts land degradation in arid, semi-arid, and sub-humid lands. The Biodiversity Synthesis of the MA does focus directly on the development of indicators for the purpose of evaluating biodiversity status and trends. Indicators employed by the MA in dry and sub-humid areas include, *inter alia*:

Production indicators

- Extent and use of rangelands;
- Conversion of land to cropland.

Socio-economic indicators

- Access to basic materials (food, fibre, etc.);
- Health;
- Social relations;
- Security (food and energy);
- Freedom and choice.

Bio-physical indicators

- Species endangerment and extinction;
- Distribution of species;
- Genetic diversity;
- Extent of protected areas;
- Land cover.

Threat indicators

- Land degradation;
- Invasive alien species;

- Nutrient loading.

Facilitation of implementation by the secretariat

65. Consensus has been achieved between the environment conventions (CBD, CITES, CMS, Ramsar, and UNESCO-WHC) that each convention will adopt, as appropriate, the 2010 biodiversity target indicators. This agreement has been facilitated by ongoing collaboration through the Biodiversity Liaison Group. ^{58/}

66. The meeting of the Ad-Hoc Technical Expert Group (AHTEG) on the biological diversity of dry and sub-humid lands, hosted by the Secretariat of the Convention on Biological Diversity identified the following indicator sets:

Core indicator set

- Abundance of keystone species;
- Structural landscape indices;
- Livestock density;
- Number of exported reptiles;
- Number of traditional herbalists;
- Number of sacred sites;
- Total plant cover;
- Extent of deforestation;
- Number of threatened species;
- Number of nomadic herdsman;
- Area of protected sites;
- Total amount of fertilizer usage per year;
- Number of invasive alien species;
- Area of soil degradation.

Headline indicators

- National biodiversity index;
- Desertification index;
- Soil degradation index.

67. In support of the development of indicators, the Secretariat has further prepared the Draft Global Outcome-Oriented Targets for the Programme of Work on Dry and Sub-Humid Lands Biodiversity (UNEP/CBD/SBSTTA/11/4/Add.2). This document includes suggested indicators for each of the eleven 2010 biodiversity targets.

68. In addition, national-level indicators were compiled in document UNEP/CBD/SBSTTA/9/10 for a number of work programmes. ^{59/} Although no specific indicators were compiled for dry and sub-humid lands biodiversity, 53 general application indicators were identified.

^{58/} Information is available in the report on the proceedings of the Third meeting of the Biodiversity Liaison Group Gland, Switzerland, 10 May 2005.

^{59/} Forest biodiversity, agricultural biodiversity, inland waters biodiversity, and marine and coastal biodiversity.

Obstacles

National level

69. Only one report submitted to the Convention on Biological Diversity [60/](#) and two submitted to the UNCCD [61/](#) contained specific information on biodiversity indicators. All others contained either indirect indicators for issues such as habitat loss and threats due to natural disasters or did not contain any specific indicator information.

70. Barriers to the scaled-up implementation of activity 3 at the national level include:

- a lack of technical and financial capacity; and
- the limited availability of comprehensive biodiversity data.

Regional and global level

71. Both LADA and the MA reports reveal that current indicators do not address all of the needs of biodiversity assessments.

72. The MA Biodiversity Synthesis provides the following list of criteria for improved and effective ecological indicators:

- Provide information about changes in important processes;
- Be sensitive enough to detect important changes but not so sensitive that signals are masked by natural variability;
- Be able to detect changes at the appropriate temporal and spatial scale without being overwhelmed by variability;
- Be based on well-understood and generally accepted conceptual models of the system to which it is applied;
- Be based on reliable data that are available to assess trends and are collected in a relatively straightforward process;
- Be based on data for which monitoring systems are in place;
- Be easily understood by policy-makers.

Activity 4: Building knowledge on ecological, physical, and social processes that affect biodiversity

73. In the annex to decision VII/2, the Conference of the Parties committed to the development and dissemination of reports and publications on the structure and functioning of dry and sub-humid lands ecosystems, including the potential impact of climate change and poverty on dry and sub-humid lands. A draft summary publication is scheduled for 2006.

74. In the same annex the Conference of the Parties identifies an indicative set of key actors for the implementation of activity 4 which are presented, along with other relevant actors, in table 4 below.

Table 4: Key actors in the implementation of activity 4

Key actors	Activities specific to dry and sub-humid lands	Other relevant activities
DIVERSITAS	No Information Available	Assessing the Impacts of Biodiversity Changes on Ecosystem Functioning and Services 62/
FAO	No Information Available	Forest Biodiversity: Adapting to a Changing Climate 63/
Global Drylands Initiative	Vulnerability and Adaptation to Climate Change in the Drylands 64/	

[60/](#) Morocco.

[61/](#) Mongolia and Romania.

[62/](#) http://www.diversitas-international.org/pub_core.html

[63/](#) <http://www.fao.org/DOCREP/ARTICLE/WFC/XII/0508-B3.HTM>

	Biodiversity in the Drylands <u>65/</u>	
Intergovernmental Panel on Climate Change	No Information Available	Climate Change and Biodiversity <u>66/</u>
IISD	No Information Available	Sustainable Drylands Management: Livelihoods and Climate Change Information Paper <u>67/</u>
Local knowledge systems	No Information Available	LinKS Project - Gender, Biodiversity and Local Knowledge Systems for Food Security in Southern Africa (FAO) <u>68/</u>
WRI	Drylands, Ecosystem and People <u>69/</u>	
Parties	Ten countries reported on the functioning of dry and sub-humid lands ecosystems including the impact of climate change <u>70/</u>	

Progress

National level

75. Five parties reported activities through CBD national reports, 2 through UNCCD national reports and one through UNFCCC national communications with one country reporting in both UNFCCC and CBD national documents. An additional country was identified through the Secretariat's own research.

76. Within those countries that have reported progress in the implementation of activity 4, process that have received significant attention include the impact on biodiversity of *inter alia*,

- Policy frameworks;
- Land use;
- Development activities;
- Pollution;
- Urbanization;
- Invasive alien species;
- Land degradation.

77. The outcomes of national level publications are varied with 3 countries reporting on the integration of information collected through the implementation of activity 4 within national policies. 71/ An additional 3 countries report on linking relevant knowledge building activities to the implementation of specific projects and programmes. 72/

78. Australia, in its National Biodiversity and Climate Change Action Plan: 2004-2007 73/ identifies clear strategies which can be applied to dry and sub-humid lands in order to incorporate climate change knowledge into biodiversity conservation planning. These are:

64/ <http://www.undp.org/drylands/docs/cpapers/Vulnerability%20and%20Adaptation%20to%20Climate%20Change%20in%20the%20Drylands.doc>

65/ <http://www.undp.org/drylands/docs/cpapers/Biodiversity%20in%20the%20Drylands.doc>

66/ <http://www.ipcc.ch/pub/tpbiodiv.pdf>

67/ <http://www.iisd.org/publications/pub.aspx?pno=595>

68/ http://www.fao.org/sd/LINKS/documents_download/ProcKiba_2000.pdf

69/ <http://pdf.wri.org/drylands.pdf>

70/ Australia, Cameroon, Canada, China, European Community, Guatemala, India, Morocco, Spain, South Africa

71/ Australia – National Biodiversity and Climate Change Action Plan: 2004 – 2007, Canada – Canadian Regional Agriculture Model and the Erosion Productivity Impact Calculator are used in policy planning, Cameroon – Information on ecological processes impacting biodiversity in each ecoregion have been incorporated into the Strategie et Plan d'Action National sur la Diversite Biologique.

72/ France and the EC – Research and Technical Development Framework Programme: Planetary Change, Climate, and Biodiversity Project, India – Eastern and Western Ghats Research Programme.

73/ <http://www.deh.gov.au/biodiversity/publications/nbccap/objectives.html>

- (a) Addressing important knowledge gaps regarding climate change impacts on biodiversity, and on the cumulative effects of other threatening processes whose impacts on biodiversity will be exacerbated by climate change, at scales relevant to adaptation planning;
- (b) Maintaining and improving capacity to predict climate change impacts on biodiversity;
- (c) Increasing capacity to monitor impacts on biodiversity and evaluating the effectiveness of adaptation strategies and actions;
- (d) Addressing information needs of natural resource managers and decision makers involved in developing and implementing strategies to minimize the loss of biodiversity due to climate change;
- (e) Improving and increasing capacity to assess environmental, economic and social costs and benefits of taking action;
- (f) Improving information systems and flows between key groups;
- (g) Developing a targeted communication strategy to promote awareness in the broader community;
- (h) Increasing capacity of natural resource managers and environmental planners and decision makers to manage dynamic systems;
- (i) Building capacity to predict the impact of climate change on aquatic and semi-aquatic species and ecosystems;
- (j) Integrating consideration of the impacts of climate change on biodiversity into water allocation and management strategies that deal with hydrological systems.
- (k) Maximizing the resilience of inland aquatic and semi-aquatic ecosystems to manage the impacts of changes in catchment hydrology resulting from climate change.
- (l) Reviewing reserve acquisitions to strengthen the capacity of the reserve system to act as refuges for vulnerable inland aquatic and semi-aquatic species and communities and to encompass bioclimatic gradients;
- (m) Identifying and incorporating into vegetation management strategies across all tenures, ongoing activities to improve the opportunity for species at risk from climate change to adapt;
- (n) Reviewing reserve acquisitions to strengthen the capacity of the reserve system to act as refuges for vulnerable terrestrial species and integrate reserve planning and management with broader landscape protected area networks to allow the movement of species across bioclimatic gradients;
- (o) Conserving threatened species that have the potential to become extinct as a result of climate change impacts;
- (p) Building capacity to predict the effects of climate change on the distribution of new and established alien invasive organisms;
- (q) Considering implications of native species becoming invasive, and incorporating this information as appropriate into invasive species and threatened species programmes;
- (r) Preventing the establishment of new alien invasive organisms in Australia, which could be attributed to climate change;
- (s) Reviewing priority alien invasive organisms for management action and re-evaluating alien invasive organism management strategies, taking into account the potential effects of climate change on their distribution;
- (t) Incorporating consideration of climate change impacts on biodiversity into natural resource management/biodiversity policies, strategies and programs, consistent with ecologically sustainable development principles;
- (u) Incorporating consideration of climate change impacts on biodiversity into land-use planning and land-use change programmes;

(v) Incorporating consideration of the impacts of climate change when listing threatened species and ecological communities and, in planning for the recovery of these species and ecological communities, ensure prioritization.

79. An analysis of reports on progress made in the implementation of activity 4 reveal three facilitating conditions:

- The use of technology such as modelling software;
- Government commitment to identify threats to biodiversity; and
- International partnerships and collaborative frameworks.

Regional and global level

80. Although little was reported with regards to the implementation of activity 4 through the questionnaire, 6 agencies are engaging in activities in support of this activity as discussed in table 4 above.

81. Regional and global reports reveal the following linkages between climate change and biodiversity:

Possible impacts of climate change on biodiversity

- Increased CO₂ is expected to favour invasive alien plant species over native varieties;
- Pressures on species with limited habitats and restricted ranges are expected to increase;
- Species assemblages within ecosystems will change as habitats shift poleward;
- Critical predator-prey and pollination cycles may become mismatched as phenologies change;
- Soil moisture change and CO₂ content will affect individual soil biota;
- The resilience of ecosystems dominated by long-living species is expected to decrease;
- Perturbations such as pest infestations and fire are expected to increase;
- Opportunities may be created for the establishment of new species.

Impact of biodiversity loss on climate change

- The conversion of forests to lower biodiversity grazing systems can increase the rate of climate change;
- Decreased vegetative cover can reduce precipitation producing seasonal dry periods and increasing local surface temperatures thereby exasperating climate change.

82. Furthermore, through the implementation of the joint work programme on dry and sub-humid lands biodiversity, the UNCCD is contributing to building knowledge on the relationship between land degradation and biodiversity loss.

Facilitation of implementation by the Secretariat

83. The Secretariat is contributing to the implementation of activity 4 through publications, such as the Global Biodiversity Outlook, and through implementation of the joint work programme with the UNCCD. The Global Biodiversity Outlook contains detailed information on threats to dry and sub-humid lands biodiversity. This will be updated in the second Global Biodiversity Outlook currently under development.

Obstacles

National level

84. Implementation of activity 4 continues to be hampered by:

- limited technical and financial capacity; and
- incomplete baseline information.

Regional and global level

85. Despite the above activities, there remains a need to strengthen the regional and global implementation of activity 4 especially with regards to coordination, collaboration, and the dissemination of information to country Parties.

86. The Global Dryland Initiative identified the following challenges to the implementation of an integrated approach to adaptation to climate change, biodiversity conservation, and land degradation abatement:

- Greater knowledge is needed in many areas;
- Available knowledge is not being used effectively;
- A gap exists between top-down investments and bottom-up needs;
- A time lag persists between problem identification and the implementation of a solution;
- National and international efforts are falling short of identified investment needs;
- Desertification, climate change, biodiversity and natural disaster policies are fragmented and disconnected.

Activity 5: Identification of local and global benefits, including soil and water conservation, derived from biological diversity

87. In the annex to its decision VII/2, the Conference of the Parties of the Convention on Biological Diversity plans to complete, by 2006 a draft compilation of information on local and global benefits; economic valuation of priority specific sites; assessment of the socio-economic impact of biodiversity loss and linkage to poverty; and case-studies on inter-linkages between biodiversity loss and poverty with a final publication produced by 2012.

88. Within the same annex key actors contributing to the implementation of activity 5 are identified. These actors, along with additional implementing agencies are described in table 5 below.

Table 5: Key actors in the implementation of activity 5

Key actors	Activities specific to dry and sub-humid lands	Other relevant activities
ADB/IUCN	No Information Available	ADB-IUCN Partnership: Poverty, Health and Conservation 74/
FAO	No Information Available	Biodiversity Awareness Folder 75/
IIED	No Information Available	Integrating Local and Global Biodiversity Values 76/
Local knowledge systems	No Information Available	LinKS Project - Gender, Biodiversity and Local Knowledge Systems for Food Security in Southern Africa (FAO)
MA	No Information Available	Biodiversity Synthesis Report
UNDP/EC	No Information Available	UNDP-EC: Poverty and Environment Initiative 77/
UNEP-WCMC	No Information Available	Biodiversity Benefits People: Educational Presentation 78/
World Bank	Mainstreaming Biodiversity in Development: Case Studies from South Africa 79/	World Bank: Assessing the Economic Value of Ecosystem Conservation 80/
Collaborating partners including WIPO	No Information Available	

[74/ http://www.adb.org/documents/events/2004/poverty-health-and-conservation/default.asp](http://www.adb.org/documents/events/2004/poverty-health-and-conservation/default.asp)

[75/ http://www.fao.org/biodiversity/index.asp](http://www.fao.org/biodiversity/index.asp)

[76/ http://www.iied.org/docs/blg/issuepap5.pdf](http://www.iied.org/docs/blg/issuepap5.pdf)

[77/ http://www.undp.org/seed/pei/](http://www.undp.org/seed/pei/)

[78/ http://www.unep-wcmc.org/index.html?http://www.unep-wcmc.org/biodiversity/index.htm~main](http://www.unep-wcmc.org/index.html?http://www.unep-wcmc.org/biodiversity/index.htm~main)

[79/ http://www-wds.worldbank.org/servlet/WDS_IBank_Servlet?pcont=details&eid=00009496_03010904013987](http://www-wds.worldbank.org/servlet/WDS_IBank_Servlet?pcont=details&eid=00009496_03010904013987)

[80/ http://www-wds.worldbank.org/servlet/WDS_IBank_Servlet?pcont=details&eid=000012009_20041208104054](http://www-wds.worldbank.org/servlet/WDS_IBank_Servlet?pcont=details&eid=000012009_20041208104054)

Secretariat of the CBD	Ad Hoc Technical Expert Group on the Biological Diversity of Dry and Sub-Humid Lands	
Parties	Only one Party reports on the benefits derived from biodiversity in dry and sub-humid lands ^{81/}	

Progress

National level

89. The identification of local and global benefits derived from biological diversity remains extremely limited at the national level with only one instance of dry and sub-humid lands specific reporting which was delivered through a CBD national report.

90. The one report available discusses the local benefits of grasslands including the provision of (i) medical and aromatic plants, and (ii) forage and fodder for livestock.

Regional and global level

91. Nine Regional and global agencies have identified a number of local and global benefits from dry and sub-humid lands biodiversity including *inter alia*,

Direct use values

- Foodstuffs;
- Medicines;
- Fodder and feed;
- Building materials.

In-direct use values

- Protection from predators, parasites and disease;
- Regulation of climate;
- Maintenance of air quality;
- Maintenance of water quality;
- Soil formation;
- Nutrient/chemical cycling;
- Pollination;
- Ecosystem resilience.

Non-use values

- Option value;
- Bequest value;
- Intrinsic value (including cultural/spiritual/educational value).

92. Seven agencies attended and contributed to the Ad-Hoc Technical Expert Group (AHTEG) on the biological diversity of dry and sub-humid lands held March 18 – 22, 2002. ^{82/} Identified local and global benefits from the AHTEG include:

Ecosystem services

- Soil fertility;
- Natural water balance;
- Nutrient cycling;
- Provision of clean air;
- New species/genetic variation.

Livelihoods and health

- Choice of usage/produce/production;

^{81/} Nepal.

^{82/} UNCCD, UNEP-WCMC, GEF, World Bank Group, FAO, ICARDA, IUCN.

- Resistance to perturbations (drought, market changes, epidemics);
- Provision of food;
- Tourism value;
- Crafts and production industry;
- Medicinal products;
- Biodiversity based technologies for management;
- Spiritual/cultural value;
- Medicinal products;
- Industrial products;
- Useful adaptations;
- Scientific research;
- Marketable genetic and species material.

Facilitation of implementation by the secretariat

93. The Secretariat supported the AHTEG on the biological diversity of dry and sub-humid lands including the global benefits derived from biodiversity and the socio-economic impacts of biodiversity loss.

Obstacles

National level

94. An analysis of efforts to identify the local and global benefits of biodiversity revealed the following barriers to implementation:

- A lack of technical and financial capacity (including difficulties quantifying benefits, weak understanding of complex upstream – downstream relationships, and poor access to planning and management technologies);
- Limited mainstreaming of biodiversity considerations across multiple sectors;
- A weak scientific base; and
- Difficulties in assigning quantitative values to certain benefits.

Regional and global level

95. Difficulties have been identified in quantifying the complex benefits from biodiversity. Furthermore, as mentioned in the IIED report, although some benefits are fairly evident, it is difficult to establish how much biodiversity returns the highest overall benefits.

Activity 6: Identification and dissemination of best management practices

96. In annex I of its decision VII/2 the Conference of the Parties plans to compile and distribute case-studies including: (i) consideration of traditional knowledge; (ii) guidelines for assessment of good practices; and (iii) case-studies on the applied ecosystem management approach. Guidelines for the assessment of good practices were requested by the Conference of the Parties in draft form by 2003 with final guidelines to be submitted in 2004. Parties were requested to submit case studies in 2005 to facilitate the publication of final case studies in 2006.

97. Within the same decision of the Conference of the Parties, annex 1 also includes an indicative list of key actors contributing to the implementation of activity 6. These actors as described in table 6 below along with other relevant implementing actors.

Table 6: Key actors in the implementation of activity 6

Key actors	Activities specific to dry and sub-humid lands	Other relevant activities
Global	Highlighted biodiversity best management practices	Biodiversity Matters: GEF's Contribution to

Environment Facility (GEF) <u>83/</u>	in: Mali, Morocco, Sudan, Mongolia, Botswana, Kenya, Tanzania, and Ethiopia.	Preserving and Sustaining the Natural Systems that Shape our Lives Making a Visible Difference in our World: GEF and Protected Areas
Third World Network of Scientific Organizations (TWNISO)	Promoting Best Practices for Conservation and Sustainable Use of Biodiversity of Global Significance in Arid and Semiarid Zones in the Developing World <u>84/</u> International Conference on Implementing Programmes to Conserve Biodiversity in Arid and Semi-Arid Regions in Developing Countries <u>85/</u> Partnerships with over 30 institutions from developing countries to develop and disseminate case studies on best practices to the sustainable use of biodiversity in drylands <u>86/</u>	
UNDP	Sharing Innovative Experiences: Examples of the Successful Conservation and Sustainable Use of Dryland Biodiversity (with TWNSO, UNESCO, TWAS, GEF, and UNEP) <u>87/</u>	
UNESCO	No Information Available	Financial award scheme for best management practices in World Biosphere Reserves
WIPO	No Information Available	
World Bank	No Information Available	Agricultural Investment Sourcebook
Secretariat of the CBD	No Information Available	Clearing House Mechanism Using the Ecosystem Approach to implement the CBD: A global synthesis report drawing lessons from three regional pathfinder workshops
Parties	Although many countries included some best practice discussions in their national reports, only 3 countries have actively developed and disseminated best management practices for biodiversity conservation in dry and sub-humid lands <u>88/</u>	

Progress

National level

98. The identification and dissemination of best practices has been implemented to a limited extent at the national level with one country reporting on best practices through CBD national reports and 2 countries reporting through UNCCD national reports. However it is important to note that many countries have contributed case studies to regional and global efforts to implement activity 6. 89/

99. All 3 of the Parties reporting on national level implementation of activity 6 also identify some specific good practices. These include:

- Artificial and aerial grass sowing
- Enclosed animal husbandry
- Agro-forest pastoral systems
- Incorporation of traditional knowledge

83/ Documents available at: <http://thegef.org/Outreach/outreach-Publications/outreach-publications.html>

84/ <http://www.ictp.trieste.it/~twngo/docs/AridBiodiversity0TOC.pdf>

85/ http://www.ictp.trieste.it/~twngo/archive/TWNSO_Rabat.html

86/ Information available at: <http://www.twnso.org/>

87/ <http://tcdc.undp.org/experiences/vol9/content9new.asp>

88/ Cameroon, China, and Spain.

89/ These regional and global best practice studies are highlighted in table 6, above.

- Herder cooperatives and management groups
- Decentralization of natural resource management.

100. The examination of the reports submitted by the 3 Parties reveals that the implementation of activity 6 has been facilitated by a strong institutional structure in support of both monitoring and evaluation and research and extension.

Regional and global level

101. At the regional and global level the identification and dissemination of best practices has been implemented through two principal avenues (i) the compilation and publication of best practice case studies, and (ii) financial incentives and direct funding for the development of best practices.

102. The first approach has been most frequently employed with only one agency (UNESCO) reporting on the second approach.

103. A review of best practice case studies reveals a number of specific practices including *inter alia*,

- Identifying and developing alternative resources to replace the existing livelihood strategies of local populations
- Providing compensation for the extra costs incurred by conservation activities
- Deriving benefits from conservation as a motor for development.
- Collaboration between all levels from local to global
- Integrating public awareness programmes
- Decentralization of natural resource management
- Incorporating traditional knowledge
- Collaborating with private sector partners
- Availability of baseline information
- Pairing of *in situ* and *ex situ* conservation measures.

Facilitation of implementation by the Secretariat

104. The Secretariat of the Convention on Biological Diversity has begun the process of collecting best practice case-studies from agencies and Parties.

Obstacles

National level

105. The analysis of submitted national reports reveal barriers to further implementation including:

- A lack of prioritization at the national level of best practice identification and dissemination given limited resources; and
- The need to develop local specific solutions to biodiversity loss.

Regional and global level

106. Identified barriers to further implementation of activity 6 at the regional and global level include:

- Lack of agreement on the criteria for defining best practices;
- The need to institute a long-term approach to the review and collection of best-practice case-studies; and
- Weak reporting processes for the collection and dissemination of local and small scale best practices.

III. TARGETED ACTIONS IN RESPONSE TO IDENTIFIED NEEDS

107. In annex I to its decision V/23, the Conference of the Parties identified ways and means for the implementation of Part B: Targeted Actions. These include:

- (a) Capacity-building and investments in the development and promotion of sustainable livelihoods;
- (b) Establishment of an international network of demonstration sites;
- (c) Case-studies on the successful management of dry and sub-humid lands;
- (d) Improved consultation, coordination, and information sharing;
- (e) Enhanced interactions between the Convention on Biological Diversity and the UNCCD;
- (f) Partnerships between all relevant stakeholders.

108. The review of implementation of Part B of the programme of work on the biodiversity of dry and sub-humid lands reveals:

- (a) There appears to be a disconnect between local sustainable livelihood investment needs and the funding provided by regional and global agencies;
- (b) No demonstration sites have been mentioned except for those piloted by the UNESCO Man and the Biosphere Programme;
- (c) Many case-studies have been developed however, it is unclear the extent to which the lessons learned from these case studies are being used during project and programme planning;
- (d) There are still a number of gaps in terms of consultation, coordination, and information sharing
- (e) The joint work programme between the UNCCD and the Convention on Biological Diversity and workshops such as the Viterbo and Gaborone workshops discussed in Part A have enhanced interactions between the Convention on Biological Diversity and the UNCCD;
- (f) While some strong partnerships do exist, such as in the Mediterranean Basin, and between country Parties and the CGIAR centres, there is still a great deal of scope for improvement and expansion.

109. Below is a summary of the implementation of activities seven through nine of the programme of work on the biodiversity of dry and sub-humid lands. More detailed information on the component activities within the three activities comprising the targeted actions component of the work programme can be found in annex I.

Activity 7: Promotion of specific measures for the conservation and sustainable use of biodiversity

110. The dry and sub-humid lands programme of work was agreed upon through decision V/23 of the Conference of the Parties, which describes activity 7 as the promotion of specific measures for the conservation and sustainable use of the biological diversity of dry and sub-humid lands through the implementation of, *inter alia*, 13 sub-components as highlighted in table 7 below.

111. In annex I of its decision VII/2, the Conference of the Parties compiled an indicative list of key actors for each sub-component of activity 7. These actors, along with other relevant agencies identified through the questionnaire circulated to agencies and the research carried out by the Secretariat of the Convention on Biological Diversity, are discussed in table 7 below.

Table 7: Key actors in the implementation of activity 7

Expected outcomes	Key actors	Activities specific to dry and sub-humid lands	Other relevant activities
7a: Protected areas			
Guidelines on establishment of "adequate and	Environment Conventions	No information available	RAMSAR: Training CD-ROM for trainers of protected area management planning ^{90/}

^{90/} http://www.medwetcoast.com/article.php3?id_article=10

effective protected areas networks” Additional protected area established	MAB Secretariat	No information available	All biosphere reserves are subject to a 10 years' periodic reporting process including evaluation of the effectiveness of protection.
	WCPA/IUCN	Task Force on Grassland Protected Areas <u>91/</u> Seminar on the Protection and Conservation of Grasslands in East Asia <u>92/</u>	Countdown 2010 Initiative <u>93/</u>
	World Heritage Centre	No information available	World Heritage Review <u>94/</u>
	Parties	Sixteen countries reported on activities in support of adequate and effective protected areas management in dry and sub-humid lands <u>95/</u> Of these, 10 reported through CBD national reports, 5 reported through UNCCD national reports, and one through both UNCCD and CBD national reports.	
7b: Rehabilitation and/or restoration			
Report and database on appropriate technologies and transfer mechanisms Evaluation of effectiveness of measures at test sites Measures implemented through NBSAPs and NAPs	ICRISAT	Desert Margins Programme <u>96/</u>	
	IIED	Drylands Issue Papers <u>97/</u>	
	Norway	No information available	Global Resource Information Database (GRID) <u>98/</u> Technology Transfer and Capacity Building with Equity at COP 7 (2004) <u>99/</u>
	World Bank	No information available	No-till Farming for Sustainable Rural Development <u>100/</u>
	Secretariat of the CBD	Ad Hoc Technical Expert Group on the Biological Diversity of Dry and Sub-Humid Lands	
	Parties	Sixteen countries have reported on investments for the rehabilitation and/or restoration of degraded habitat. <u>101/</u> Of these 5 reported through CBD national reports, 9 through UNCCD national reports, and 2 through UNFCCC national communications.	
7c: Invasive alien species			
Increased information and information exchange on invasive alien species	European Commission	Invasive Grass Species in Southern Africa <u>102/</u>	
	GISN	No information available	Global Invasive Species Information Network <u>103/</u>
	GISP	Invasive Grassland/Shrublands Bird Indicators	Global Strategy on Invasive Alien Species <u>104/</u>

- 91/ <http://www.iucn.org/themes/wcpa/theme/grasslands/grasslands.html>
- 92/ http://www.iucn.org/themes/wcpa/pubs/pdfs/Grassland8_00Proc.pdf
- 93/ Information available at: http://www.countdown2010.net/index_topics.html
- 94/ <http://whc.unesco.org/events/review.htm>
- 95/ Algeria, Benin, Burkina Faso, Cape Verde, Cote d'Ivoire, Guatemala, Hungary, Italy, Kazakhstan, Myanmar, Nauru, Nepal, Rwanda, South Africa, Togo and Zimbabwe.
- 96/ <http://www.icrisat.org/web/ASP/mainsection.asp?flag=yes&cid=255>
- 97/ <http://www.iied.org/drylands/pubs/issuepapers.html>.
- 98/ <http://www.grida.no/>
- 99/ http://www.gbf.ch/desc_workshop.asp?no=36&app=&lg=EN&now=2
- 100/ http://www-wds.worldbank.org/servlet/WDS_IBank_Servlet?pcont=details&eid=000094946_02080704010340
- 101/ Canada, Cuba, Cape Verde, Cameroon, China, Fiji, France, Lebanon, Mali, Mongolia, Nauru, Niger, Republic of Korea, Senegal, Spain, and Vietnam.
- 102/ <http://www.nioo.knaw.nl/cto/invass/>

Guidelines and mechanisms for best management; integration through NBSAPs	IUCN	No information available	Global Invasive Species Database 105/ Invasive Species Specialist Group 106/
	Parties	Three Parties reported on invasive alien species specifically within dry and sub-humid lands. 107/ All 3 reports were received through CBD national reports.	
7d: Production systems			
Operational guidelines on sustainable use, good farming practices, integrated production system and drought preparedness Progress report on development of incentives, including “fair and equitable” markets	CGIAR Centres	ICARDA National Agricultural Research Systems in West Asia and North Africa Region. 108/ ICARDA Dryland Agrobiodiversity Project. 109/ ICARDA Caravan Series of publications. 110/	ICRISAT Research Theme: Markets Policy and Impacts 111/
	DIVERSITAS	No information available	Cross-cutting network on agriculture and biodiversity 112/
	FAO	Database containing case-studies on sustainable land management	Livelihood Support Programme 113/ Interagency Experiences and Lessons Learned: Forum on Operationalizing Sustainable Livelihoods Approaches 114/
	ICRISAT	No information available	Coping with Drought Training Module 115/
	IFAD	No information available	Sustainable Livelihoods Approach and Guidelines on Household Food Security 116/
	World Bank	No information available	Agriculture Investment Sourcebook (modules 4, 5, 6, 10) Environment Strategy Note No. 3: Payments for Environmental Services Paying for Biodiversity Conservation Services in Agricultural Landscapes Mainstreaming Biodiversity in Agricultural Development: Toward Good Practice

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- [103/](http://www.gisnetwork.org/)
[104/](http://www.gisp.org/downloadpubs/globalstrategy.pdf)
[105/](http://www.issg.org/database/welcome/)
[106/](http://www.issg.org/)
 107/ Belgium, China, South Africa.
[108/](http://www.icarda.org/NARS_Studies.htm)
[109/](http://www.icarda.org/Gef.html)
[110/](http://www.icarda.org/Caravan.htm)
[111/](http://www.icrisat.org/web/ASP/Theme.asp?cid=2&ThemeId=6)
[112/](http://www.diversitas-international.org/cross_agriculture.html)
[113/](http://www.fao.org/sd/dim_pe4/pe4_040501_en.htm)
[114/](http://www.eldis.org/static/DOC7957.htm)
[115/](http://www.cgiar.org/enews/march2005/story_19.html)
[116/](http://www.ifad.org/sla/)

	Parties	Nineteen countries reported on the sustainable management of production systems. <u>117/</u> Six countries reported through CBD national reports, 11 through UNCCD national reports, and 2 reported in both CBD national reports and UNFCCC national communications.	
7e: Water resources			
	GIWA	No information available	Regional Assessment Reports <u>118/</u>
	IUCN	No information available	Freshwater initiative for enhancing capacities to identify threats to freshwater resources and ecosystems and to promote their conservation and sustainable use
	RAMSAR	No information available	Sustainable Management of Water Resources: The Need for a Holistic Ecosystem Approach <u>119/</u>
	UNEP	No information available	Report on the Conference of African Water Resources Management Policy
	World Fish Center	No information available	FishBase biological database <u>120/</u>
	Parties	Water resources management was not reported on within the framework of CBD national reports or UNFCCC national communications, however, UNCCD reports contain information from 13 Parties <u>121/</u>	
7f: In situ and ex situ conservation			
Guidelines for <i>in situ</i> and <i>ex situ</i> conservation and management needs based on best practices implemented Capacities of zoos and seedbanks and other institutions for <i>ex situ</i> conservation strengthened	ICARDA	Seedbanks	
	ICRISAT	No information available	Seedbanks
	ILRI	Seedbanks	
	IUCN	Workshops on: Managing Water Resources and Wetland Habitats in Drylands <u>122/</u>	
	RIDES	No information available	Supports conservation activities in 7 national parks in Latin America
	WCPA	No information available	The Development and Application of Ecological Networks <u>123/</u>
	WWF	Species conservation programmes for two dry and sub-humid lands species: African Elephants <u>124/</u> and Rhinos <u>125/</u>	
Parties	Thirteen countries reported on <i>in situ</i> and <i>ex situ</i> conservation activities in dry and sub-humid lands. <u>126/</u> Ten of these were reported on in CBD national reports and 3 through UNCCD national reports.		
7g: Economic valuation and adaptive technologies			

117/ Algeria, Belgium, Benin, Canada, France, Kazakhstan, Kenya, Lebanon, Liberia, Libya, Peru, Mauritania, Morocco, Nauru, Saudi Arabia South Africa, Sri Lanka, USA, and Uzbekistan.

118/ <http://www.giwa.net/publications/>

119/ http://www.ramsar.org/wssd_side_paper.htm

120/ <http://www.fishbase.org>

121/ Algeria, Burkina Faso, Burundi, Kenya, Mongolia, Namibia, Nauru, Philippines, Sri Lanka, Uganda, Uzbekistan, Vietnam and Zimbabwe.

122/ http://www.gbf.ch/desc_workshop.asp?no=35&app=&lg=EN&now=1

123/ <http://www.iucn.org/themes/wcpa/pubs/pdfs/DevelopmentandApplicationEcologicaNetworks.pdf>

124/ http://www.panda.org/about_wwf/what_we_do/species/showspecies.cfm?SID=16&LID=1&FH=E

125/ http://www.panda.org/about_wwf/what_we_do/species/showspecies.cfm?SID=1&LID=1&FH=E

126/ Belgium, Botswana, Burkina Faso, Cameroon, Canada, Chile, China, Ethiopia, France, Jordan, Nepal, Lebanon, and Tanzania.

Study on economic valuation of goods and services in areas of specific value for biodiversity Guidelines for the use of economic instruments implemented through NBSAP	Environmental Valuation Reference Inventory <u>127/</u>	No information available	Environmental Valuation Reference Inventory <u>128/</u>
	FAO	No information available	Paying for Biodiversity Conservation Services in Agricultural Landscapes <u>129/</u>
	IUCN	No information available	The Economic Value of Biodiversity <u>130/</u>
	OECD	No information available	Valuation of Biodiversity Studies <u>131/</u>
	World Bank <u>133/</u>	No information available	Revealing the Economic Value of Biodiversity <u>132/</u>
	Parties	Seven Parties have reported on the economic value of dry and sub-humid lands biodiversity and adaptive technologies. <u>134/</u> Five parties reported through UNCCD national reports, one through UNFCCC national communications and one through both UNCCD and CBD national reports.	Environment in Poverty Reduction Strategies and Poverty Reduction Support Credits Policy Applications of Environmental Accounting
7h: Plant and animal biomass			
Case-studies on best practices	FAO	Carbon Sequestration in Dryland Soils <u>135/</u>	
	IFAD	The Rangelands of Arid and Semi-Arid Areas <u>136/</u>	
Incorporation of lessons learnt in NBSAPs and NAPs	Parties	Two Parties reported on the sustainable management of plant and animal biomass. <u>137/</u> One report was received as a UNFCCC national communication the other as a UNCCD national Report.	
7i: Training, education and public awareness			
Training programmes nationally and regionally in place Public awareness campaigns on the importance of dry	Ecoagriculture partners	No information available	Strategies to Feed the World and Save Wild Biodiversity <u>138/</u>
	Global Mechanism	Regional and sub-regional workshops on resource mobilization for the implementation of the UNCCD <u>139/</u>	
	RIDES	Booklets, brochures, and interactive CD-ROMs on dry and sub-humid lands biodiversity <u>140/</u>	

127/ <http://www.evri.ca/>

128/ <http://www.evri.ca/>

129/ http://www.fao.org/documents/show_cdr.asp?url_file=/wairdocs/lead/x6154e/x6154e05.htm

130/ <http://biodiversityeconomics.org/pdf/topics-608-00.pdf>

131/ <http://www1.oecd.org/publications/e-book/9701151e.pdf>

132/ [http://www.oilis.oecd.org/olis/1997doc.nsf/43bb6130e5e86e5fc12569fa005d004c/4dec1f3d944f2a17c1256b4f004b45c8/\\$FILE/JT00119990.PDF](http://www.oilis.oecd.org/olis/1997doc.nsf/43bb6130e5e86e5fc12569fa005d004c/4dec1f3d944f2a17c1256b4f004b45c8/$FILE/JT00119990.PDF)

133/ Documents available at: <http://lnweb18.worldbank.org/ESSD/envext.nsf/44ByDocName/Publications>

134/ Canada, Nigeria, Mexico, Morocco, Mozambique, Tanzania, Uzbekistan.

135/ http://www.fao.org/documents/show_cdr.asp?url_file=/docrep/007/y5738e/y5738e02.htm

136 http://www.ifad.org/lrkm/theme/range/arid/arid_2.htm

137 France and Spain.

138/ McNeely, Jeffrey and Sara Scherr. Ecoagriculture: Strategies to Feed to World and Save Wild Biodiversity.

and sub-humid lands biodiversity	UNCCD and UNCCD Thematic Programme Networks (TPN's) <u>141/</u>	Year of Deserts and Desertification Desertification Comic Strip Global Alarm: Dust and Sandstorms from the World's Drylands	
	UNESCO	Teachers Kit on Desertification <u>142/</u>	
	Secretariat of the CBD	Gaborone Regional Workshop for Africa on the Synergy Among the Rio conventions and other biodiversity-related conventions in implementing the Programmes of Work on Dry and Sub-Humid Lands and Agricultural Biodiversity	Viterbo Workshop on Forests and Forest Ecosystems: promoting synergy in the implementation of the three Rio conventions
	Parties	Fifteen Parties have reported on training, education and public awareness campaigns on dry and sub-humid lands biodiversity. <u>143/</u> 7 Parties reported through CBD national reports, 6 through UNCCD national reports, one through both CBD and UNCCD national reports, and one through a UNFCCC national communication.	
7j: Information on sustainable use			
Development of information exchange mechanisms	NEPAD	No information available	Environment and Tourism Priority Area <u>144/</u>
	UNCCD Thematic Programme Networks (TPN's) <u>145/</u>	Africa: TPN3: Rational use of rangelands and promotion of fodder crops development TPN6: Promotion of sustainable agricultural farming systems Asia: TPN2: Agroforestry and soil conservation in arid, semi-arid, and dry sub-humid areas TPN3: Rangeland management in arid areas including the fixation of sand dunes TPN6: Assistance for the implementation of integrated local development programmes (LAPDs) initiative	
	UNESCO-MAB	Case studies for the sustainable use of biodiversity in drylands (China, Egypt, Iran, Jordan, Pakistan, Syria, Tunisia, Uzbekistan)	
	Parties	No parties reported on information exchange mechanisms for the sustainable use of biodiversity	
7k: Promotion of research and development programmes			
Research priorities established Pilot projects developed and implemented on local	Drylands, Drought, Poverty and Agriculture Research Consortium	Various Publications <u>146/</u>	

139/ Available at: <http://www.gm-unccd.org/English/Events/workshops.htm>

140/ Available at: <http://www.rides.cl/>

141/ Available at: <http://www.unccd.int>

142/ <http://www.unccd.int/publicinfo/unescoKit/unescoKit.php>

143/ Algeria, Belgium, Canada, Egypt, Ethiopia, Gambia, Greece, Jamaica, Lebanon, Mongolia, Namibia, Nicaragua, Papua New Guinea, Peru, Rwanda.

144/ <http://www.nepad.org/2005/files/envitourism.php>

145/ Available at: <http://www.unccd.int>

146/ <http://www.ddpa.net>

level	Research Programme for the Sustainable Use of Dryland Biodiversity (RPSUD)	Various Publications <u>147/</u>	
	ICARDA	Conservation and Sustainable Use of Dryland Agrobiodiversity in Jordan, Lebanon, Syria, and Palestinian Authority <u>148/</u>	
	Parties	Seventeen Parties reported activities for the promotion of research and development programmes. <u>149/</u> Ten reports were received as CBD national reports and 7 as UNCCD national reports.	
7l: Integrated catchment management and endangered species			
Case-studies on (i) integrated catchment management, (ii) migratory species corridors, (iii) conservation of rare and endangered species	CITES	Elephant Programme	Bushmeat Working Group
	Ecoagriculture Partners	No information available	Strategy II: Developing Habitat Networks in Non-farmed Areas <u>150/</u>
	IUCN	No information available	Species Survival Commission <u>151/</u>
	UNESCO	No information available	World Water Assessment Programme <u>152/</u>
	World Water Forum	No information available	Local Actions for a Global Challenge: Implementing Integrated Water Resource Management <u>153/</u>
	WWF	No information available	Global Species Programme - Looking at Endangered and Threatened Species <u>154/</u>
	Parties	Four countries reported specifically on dry and sub-humid lands as follows: Integrated catchment management in dry and sub-humid lands (2) <u>155/</u> Migratory species corridors (0) Rare and endangered species (2) <u>156/</u> . Three reports were received as CBD national reports and one as a UNCCD national report.	
7m: Cooperation with relevant conventions			
Memorandum of Cooperation and joint work programmes (MoC) with relevant conventions	Various conventions	MoC and Joint Work Programme with UNCCD	Joint Work Programme with RAMSAR
	Parties	Twenty-one Parties reported on activities in support of cooperation amongst relevant conventions <u>157/</u> . Twelve countries submitted relevant information through CBD national reports and 9 reported through UNCCD national reports.	

147/ <http://www.rpsud.org/>

148/ http://www.icarda.cgiar.org/Announcement/Agrobiodiversity_18-21April05.htm

149/ Armenia, Belgium, Canada, China, Costa Rica, France, Jordan, Kazakhstan, Lebanon, Morocco, Nicaragua, Spain, Syria, Tanzania, Tunisia, Turkmenistan, Uganda.

150/ <http://www.ecoagriculturepartners.org/CSII.htm>

151/ <http://www.iucn.org/themes/ssc/>

152/ www.unesco.org/water/wwap/case_studies/index.shtml

153/ <http://www.worldwaterforum4.org.mx/home/cuartowwf.asp?lan=>

154/ http://www.panda.org/about_wwf/what_we_do/species/index.cfm

155/ Algeria and Australia.

156/ France and Syria.

157/ Australia, Botswana, Burkina Faso, Cape Verde, Central African Republic, China, Democratic Republic of the Congo, Ethiopia, Hungary, Italy, Lebanon, Namibia, the Netherlands, Niger, Nigeria, Republic of Korea, Romania, Rwanda, St. Lucia, South Africa, Tunisia.

Progress

National level

112. Overall 70 countries have reported some activities in support of activity 7 of the programme of work on the biodiversity of dry and sub-humid lands. However, the implementation of each of the components of this activity has been varied.

113. Fifteen or more countries reported on the implementation of :

- Activity 7a: protected areas management (16 countries);
- Activity 7b: rehabilitation and/or restoration of degraded habitat (16 countries);
- Activity 7d: sustainable management of production systems (19 countries);
- Activity 7i: training, education and public awareness (15 countries);
- Activity 7k: the promotion of research and development programmes (17 countries);
- Activity 7m: cooperation with relevant conventions (21 countries).

114. Key findings from the countries reporting on the above activities include:

Activity 7a

- Six Party reports primarily discuss protected areas governance issues including management planning;
- Five Party reports primarily describe protected areas in dry and sub-humid lands including information on the extent of coverage and types of habitat/species being protected;
- Three Parties report on the need to establish additional protected areas;
- Two Party reports identify specific funding constraints and needs for protected areas.

Activity 7b

- Twelve Parties report on specific projects targeting restoration and/or rehabilitation (most of these specifically combat land degradation);
- Four Parties identified restoration and/or rehabilitation needs.

Activity 7d

- Eight Parties address the sustainable use of multiple production systems (agriculture, forestry, medicinal plant harvesting, hunting, etc.);
- Nine Parties focus on the sustainable use of agricultural and pastoral production systems;
- Two Parties report on the sustainable use of forest production systems;

Activity 7i

- Seven Parties report on awareness raising activities for dry and sub-humid lands biodiversity and/or desertification (6 of these are through the UNCCD national reports);
- Seven Parties report on training activities on: alternative livelihoods, renewable energy, biodiversity reporting, marketing sustainably produced goods, the use of technology in biodiversity management, and synergies between the environmental conventions (all 7 reports are CBD national reports);
- One Party report focuses on building local knowledge through training and awareness raising.

Activity 7k

- Seven Party reports focus on research to improve habitat restoration and management;
- Six Parties report on research programmes and partnerships encompassing a broad range of biodiversity management issues including species specific studies, habitat functions, and sustainable livelihoods;

- Four Party reports focus on research and development with the aim of strengthening and expanding sustainable livelihoods, especially agriculture and herding.

Activity 7m

- Eight Parties report that collaboration between the Convention on Biological Diversity, UNCCD, and UNFCCC occurs through the implementation of specific projects addressing the goals and mandates of all three conventions;
- Five Parties refer to UNCCD national reports within CBD national reports;
- Three Parties report that convention focal points are housed within the same agency so as to facilitate regular collaboration;
- Three Party reports refer to specific national mandates for collaboration including established processes built into project proposals and formal institutional collaboration pathways;
- Two Parties referred only to their participation in coordination meetings.

115. Marginal implementation is reported for activities:

- 7c: invasive alien species
- 7e: water resource management
- 7h: plant and animal biomass
- 7j: information on sustainable use
- 7l: integrated catchment management, migratory species corridors and endangered species.

116. A number of other components of activity 7 were implemented well in some circumstances but face significant challenges in others. In particular activity 7f: *in situ* and *ex situ* conservation reveals a high level of implementation for *in situ* conservation (11 countries) but extremely limited implementation for *ex situ* conservation (2 countries). The exception to the weak national participation is national contributions to regional efforts through CGIAR centres including ICRISAT, ILRI, and ICARDA.

117. The analysis of national reports and communications reveals that the successful implementation of activity 7 has largely been facilitated by:

- Strong institutional capacity;
- The availability of adequate information and technologies;
- The adoption of appropriate incentive frameworks;
- The availability of project-based funding; and
- Participation in partnerships and collaborative relationships.

Regional and global level

118. At the regional and global level, 33 different agencies were noted for specific contributions. Eight of these agencies reported through the questionnaire sent by the Secretariat of the Convention on Biological Diversity, while others were identified through reports to the Convention on Biological Diversity and the Secretariat's own research.

119. Regional and global efforts in support of 6 of the components of activity 7 ^{158/} complement implementation activities at the national level. The following is an overview of some of the principle regional and global contributions to these 6 components.

Activity 7a

- Forums for information exchange;

^{158/} These 6 components (7a, 7b, 7d, 7f, 7i, and 7l) were identified based on (i) reasonable national implementation, (ii) the participation of a number of agencies, and (iii) the presence of clear linkages between regional and global efforts and the implementation of activity 7 at the national level.

- Frameworks for the review and assessment of protected areas;
- Training tools for managers and planners.

Activity 7b

- Forums for information exchange;
- Compilation and distribution of good practices.

Activity 7d

- Compilation and distribution of good practices;
- Targeted research and technical assistance;
- Training tools for managers and planners.

Activity 7f

- Forums for information exchange;
- Financial assistance;
- Regional and global storage facilities for genetic material.

Activity 7i

- Development and distribution of training and awareness raising materials;
- Regional and global workshops and seminars.

Activity 7l

- Forums for information exchange
- Compilation and distribution of good practices

120. Strong regional and global strategies have been developed in support of activity 7c although linkages with implementation at the national level are weak.

Facilitation of implementation by the Secretariat

121. The Secretariat of the Convention on Biological Diversity has facilitated implementation of activity 7 through (i) support for workshops, (ii) the development of partnerships, and (iii) the implementation of relevant joint work programmes.

122. The Secretariat organized the Gaborone Regional Workshop for Africa on the Synergy Among the Rio conventions and other biodiversity-related conventions in implementing the Programmes of Work on Dry and Sub-Humid Lands and Agricultural Biodiversity. ^{159/} The Secretariat of the Convention on Biological Diversity also participated in the UNCCD organized Viterbo Workshop on Forests and Forest Ecosystems: promoting synergy in the implementation of the three Rio conventions. ^{160/} This is directly relevant to component 7m (cooperation with relevant conventions). Also in support of 7m, the Secretariat was also represented at the Consultation Workshop for National Focal Points on Synergy between Rio conventions, Marrakech, Morocco, 27-31 January 2003 at which working groups were established to identify (i) obstacles to synergy among conventions, (ii) capacity building needs, and (iii) information tools and management. Recommendations were subsequently made to remedy to these obstacles. ^{161/}

123. The Secretariat attended the 11th meeting of the Science and Technical Review Panel (STRP-11) of the Ramsar Convention on Wetlands from the 8th to 11th April 2003 in Gland, Switzerland. ^{162/} The Secretariat nominated staff members to function as "synergy" liaison contacts and resource persons for

^{159/} <http://intranet/doc/meeting.aspx?mtg=WSAGDL-01>

^{160/} <http://www.unccd.int/workshop/menu.php>

^{161/} http://www.iepf.org/docs_prog03/pol_envir03/0103_Synerg_marr/Sommaire.htm

^{162/} http://www.ramsar.org/key_strp_workplan_2003.htm

each of Ramsar's working groups. The working group on Water Resource Management is particularly relevant to the dry and sub-humid lands biodiversity work programme however there has, thus far, been no further concrete action on this theme.

124. Finally, the Secretariat has developed relevant joint work programmes with both the UNCCD and Ramsar. ^{163/}

Obstacles

National level

125. Suggested barriers affecting the components of activities 7 discussed above as being only marginally implemented include *inter alia*,

- Insufficient financial resources;
- Lack of scientific and technical information;
- Weak institutions;
- Continued conflicts over resource use and access; and
- The perpetuation of perverse incentive frameworks.

126. For two activities, 7e on sustainable water resource management, and 7h on the sustainable use of plant and animal biomass, almost no information is available within the documents of the Convention on Biological Diversity. However, in both cases, external documents such as UNCCD and UNFCCC national communications reveal a high level of activity.

127. Based on the review of national level implementation of activity 7 it is suggested that more attention be paid at the national level to institutional, technical, and financial capacity building. There are a number of good examples of implementation with the potential for scaling up amongst Parties (see annex I).

Regional and global level

128. Obstacles to the scaled-up implementation of activity 7 at the regional and global level can be characterized by (i) a disconnect between global and regional efforts and national level implementation, and (ii) limited activity at the regional and global level.

Disconnect between global and regional efforts and national implementation

Activity 7c:

Although global and regional invasive alien species strategies are available, only 3 countries report on national level implementation.

Limited activity at the regional and global level

Activity 7e:

Although there are a number of ongoing global and regional water resource management initiatives, few efforts specifically target dry and sub-humid lands.

Activity 7g:

Although pilot studies are underway at the regional and global level, a number of technical difficulties are blocking full scale implementation including: defining and identifying environmental goods, developing and accessing appropriate markets, and assigning accurate values to previously non-marketable goods.

Activity 7h:

^{163/} <http://www.biodiv.org/doc/meetings/sbstta/sbstta-05/information/sbstta-05-inf-12-en.pdf>

Although global and regional agencies are providing financial support for localized studies to measure plant and animal biomass, there are few large-scale and long-term monitoring and evaluation efforts.

129. Implementation of activity 7 at the regional and global levels would benefit from:

- Greater coordination amongst agencies and between agencies and national and local level implementers;
- Improved reporting and access to information exchange mechanisms;
- Clearer prioritization of gaps and needs; and
- Increased mainstreaming of the conservation of biodiversity by country Parties within their national development strategies.

Activity 8: Promotion of responsible resource management, at appropriate levels, applying the ecosystem approach, through an enabling policy environment

130. Annex I of decision VII/2 of the Convention on Biological Diversity identifies key actors contributing to the implementation of the dry and sub-humid lands biodiversity work programme through activity 8. These actors, along with other relevant agencies, are described in table 8 below.

Table 8: Key actors in the implementation of activity 8

Expected outcomes	Key actors	Activities specific to dry and sub-humid lands	Other relevant activities
8a: Local institutional structures, and indigenous and local techniques			
Case-studies in place and success stories documented and shared Broad implementation through NBSAPs and NAPs	FAO	No information available	Rethinking the decentralization and devolution of biodiversity conservation <u>164/</u>
	Global Mechanism	The Community Exchange and Training Programme: Grassroots Initiatives to Combat Land Degradation and Poverty <u>165/</u>	
	IUCN-WCPA	Environmental Management in Drylands from a Community Perspective <u>166/</u>	Indigenous and Local Communities and Protected Areas <u>167/</u>
	Noragric	No information available	The process of institution building to facilitate local biodiversity management <u>168/</u>
	Parties	Eight Parties reported on specific activities for the strengthening of local institutional structures and indigenous and local techniques. <u>169/</u> Four Parties reported through CBD national reports and 4 through UNCCD national reports.	
8b: Decentralization of management			
Case-studies and success stories of community-based management of resources	CIFOR	No information available	The Implications for Biodiversity Conservation of Decentralized Forest Resources Management <u>170/</u>
	WWF	No information available	Shifting the Power: Decentralization and Biodiversity Conservation <u>171/</u>

164/ http://www.fao.org/documents/show_cdr.asp?url_file=/docrep/x3030e/x3030e04.htm

165/ <http://www.gm-unccd.org/FIELD/Multi/GM/CETPeng.pdf>

166/ http://www.gbf.ch/desc_workshop.asp?no=35&app=&lg=EN&now=2

167/ <http://www.iucn.org/themes/wcpa/pubs/pdfs/guidelinesindigenouspeople.pdf>

168/ <http://www.nlh.no/noragric/publications/workingpapers/noragric-wp-26.pdf>

169/ Gambia, Iran, Kazakhstan, Malawi, Morocco, Peru, Zimbabwe, USA.

170/ http://www.cifor.cgiar.org/int/_ref/events/swiss/implications.htm

Case-studies on the effect of users' access to land and water resources	Parties	Ten Parties reported on relevant activities for the decentralization of management. <u>172/</u> Nine Parties reported through UNCCD national reports and one Party through both CBD and UNFCCC national communications.	
8c: Institutions for land tenure and conflict resolution			
Case-studies and success stories of strengthened national organization structures	FAO	No information available	Land Tenure Series <u>173/</u> Land Reform Bulletin <u>174/</u>
	Global Drylands Initiative	Land Tenure Reform and the Drylands <u>175/</u>	
	IIED Drylands Programme	Land Tenure and Resource Access Publications <u>176/</u>	
	Parties	No reports were submitted through CBD national reports however 3 were received through UNCCD national reports <u>177/</u>	
8d: Transboundary issues			
Guidelines on transboundary collaboration implemented through NBSAPs and NAPs	CMS	No information available	African-Eurasian Migratory Waterbird Flyways Programme <u>178/</u>
	NEPAD	No information available	Environment and Tourism Priority Area <u>179/</u>
	OSS	North-Western Sahara Aquifer System <u>180/</u>	
Increased number of bilateral and sub-regional collaborative arrangements in place	UNEP	Mediterranean Action Plan <u>181</u>	
	WCPA	No information available	Countdown 2010 Initiative <u>182/</u>
	Parties	Sixteen Parties reported on the implementation of transboundary collaborative activities. <u>183/</u> Thirteen Parties reported through CBD national reports and 3 through UNCCD national reports.	
8e: Policies and instruments			
Mechanisms for collaboration between respective national focal points developed	IUCN	No information available	Policy, Biodiversity & International Agreements <u>184/</u>
Case-studies, guidelines for cross-	UNCCD	Joint Work Programme with the CBD National reports theme: linkages and synergies with other environmental conventions and, as appropriate, with national development strategies (CRIC 3)	

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- 171/ http://www.worldwildlife.org/bsp/publications/aam/shifting/Shift_Power_00.pdf
172/ Algeria, Canada, Malawi, Mali, Mauritius, Mexico, Morocco, Myanmar, Namibia, Vietnam.
173/ http://www.fao.org/sd/LTdirect/ltstudies_en.htm
174/ <http://www.fao.org/sd/LTdirect/landrf.htm>
175/ <http://www.undp.org/drylands/policy-cpapers.htm>
176/ <http://www.iied.org/drylands/pubs/landtenure.html>
177/ Jamaica, Nauru, Vietnam.
178/ <http://www.wetlands.org/GFC/Info.htm>
179/ <http://www.nepad.org/2005/files/envitourism.php>
180/ <http://www.unesco.org/oss-sass/index.htm>
181/ www.unepmap.gr/
182/ <http://www.countdown2010.net/>
183/ Armenia, Benin, Burkina Faso, Canada, Egypt, Ethiopia, Greece, Italy, Kazakhstan, Mongolia, Paraguay, Portugal, Republic of Korea, Slovak Republic, Rwanda, Zimbabwe
184/ <http://www.iucn.org/themes/pbia/>

sector integration, integration of NBSAPs and NAPs	Secretariat of the CBD	Gaborone Regional Workshop for Africa on the Synergy Among the Rio conventions and other biodiversity-related conventions in implementing the Programmes of Work on Dry and Sub-Humid Lands and Agricultural Biodiversity	Viterbo Workshop on Forests and Forest Ecosystems: promoting synergy in the implementation of the three Rio conventions
	Parties	Twenty-seven Parties reported on policies and instruments. ^{185/} Eight Parties reported through CBD national reports, 16 through UNCCD national reports, and one through both CBD and UNCCD national reports.	

Progress

National level

131. Forty-four countries reported activities in support of the implementation of activity 8 at the national level.

132. More than 15 country Parties reported on the implementation of activities 8d (16 reports) and 8e (27 reports). Key findings from the reports on these activities include *inter alia*,

Activity 8d:

- Eleven Party reports on transboundary agreements for the sustainable management of a particular ecosystem (grasslands, Mediterranean landscapes, arid zones, etc);
- Three Party reports mention transboundary protected areas;
- Two Party reports refer to specific transboundary projects contributing to biodiversity conservation.

Activity 8e:

- Eighteen Party reports list specific government regulations (laws, bills, and policies) relating to biodiversity and the sustainable management of dry and sub-humid lands;
- Six countries report on national strategies and action plans in support of biodiversity conservation;
- Three Part reports identify specific agency mandates and responsibilities for biodiversity conservation and sustainable use.

133. The review of CBD national reports and NBSAPs, UNCCD national reports, and UNFCCC national communications reveal that three component of activity 8 are not well implemented:

- Activity 8a: 8 country Parties reporting;
- Activity 8b: 10 country Parties reporting;
- Activity 8c: 3 country Parties reporting.

134. An analysis of the reports submitted for the above activities reveals that the success achieved can be attributed to:

- The implementation of relevant partnerships;
- The availability of project based funding;
- A strong commitment to biodiversity conservation at the national level; and
- The mainstreaming of biodiversity conservation within national and sector planning.

^{185/} Algeria, Armenia, Australia, Benin, Burkina Faso, Cameroon, Canada, Cap Verde, China, Democratic Republic of the Congo, Ethiopia, Greece, Jordan, Kazakhstan, Kenya, Lesotho, Liberia, Malaysia, Mauritania, Mauritius, Morocco, Mozambique, Myanmar, Namibia, Philippines, South Africa, Uganda.

Regional and global level

135. Fourteen regional and global agencies are included in the review of implementation of activity 8 of the dry and sub-humid lands biodiversity work programme. Of these, 7 agency responses were garnered from responses to the questionnaire with the other 7 agencies identified through reports to the Convention on Biological Diversity and the Secretariat's own research.

136. Implementation of activity 8 at the regional and global level is strongest with regards to activities 8a (4 contributing agencies) and 8d (5 contributing agencies). Some key activities implemented at the regional and global levels in support of these components include:

Activity 8a:

Good practice case-studies developed and disseminated on *inter alia*, community management of natural resources, local and indigenous protected area management, and local initiatives to address land degradation.

Activity 8d:

Development and implementation of regional and global initiatives including the establishment of formal frameworks for transboundary cooperation.

137. Only 2 agencies reported on the regional and global implementation of activity 8b, 3 on 8c and 2 on 8e. This lack of implementation at the regional and global level is, however, understandable since policy development, decentralization and land tenure necessarily require national level activities.

Facilitation of implementation by the Secretariat

138. In annex I of its decision VII/2, the Conference of the Parties of the Convention on Biological Diversity defines the role of the Secretariat in the implementation of activity 8 in terms of support to, and participation in, synergy workshops. These workshops are described in more detail in activity 7 as they relate to the implementation of activity 7m.

Obstacles

National level

139. Amongst the three components of activity 8 with few supporting activities, as discussed above, the weak implementation of components 8b and 8c is particularly worrisome since the lack of decentralization, poorly defined land tenure, and ongoing conflict over resource use are all cited as barriers to the implementation of other activities within the dry and sub-humid lands biodiversity programme of work.

140. Possible reasons for the weak implementation of activities 8b and 8c include:

- The lack of appropriate enabling environments to facilitate the decentralization processes; and
- Weak political commitment regarding the resolution of resource use conflicts.

Regional and global level

141. The implementation of activity 8 at the regional and eco-regional level largely takes the form of technical assistance including research. A more detailed analysis is required to determine the extent to which the assistance being provided to country Parties is adequately and appropriately addressing needs.

Activity 9: Support for sustainable livelihoods

142. Annex I of decision VII/2 of the Conference of the Parties identifies key actors contributing to activity 9 of the dry and sub-humid lands biodiversity programme of work. These actors, and additional contributing agencies, are described in table 9 below.

Table 9: Key actors in the implementation of activity 9

Expected outcomes	Key actors	Activities specific to dry and sub-humid lands	Other relevant activities
Activity 9a: Income diversification			
Case-studies on income diversification	FAO	No information available	Livelihood Support Programme Livelihood Diversification and Enterprise Development Sub-Programme <u>186/</u>
Guidelines for income diversification opportunities implemented through NBSAPs and NAPs	IFAD	Income Diversification Project in Jordan <u>187/</u>	
	Parties	No Parties reported on income diversification through CBD reports however 4 reports were received from the UNCCD <u>188/</u>	
Activity 9b: Sustainable harvesting			
Guidelines on best practices incorporated in NBSAPs, NAPs and other relevant policies	FAO	No information available	Sustainable Agriculture and Rural Development (SARD) <u>189/</u> Good Agricultural Practices (GAP) <u>190/</u>
	UNDP - Equator Initiative	No information available	Case studies of sustainable harvesting <u>191/</u>
	Parties	Five countries reported on sustainable harvesting specifically within dry and sub-humid lands. <u>192/</u> Two countries reported through CBD national reports, and 3 through UNCCD national reports.	
Activity 9c: Innovations for local income generation			
Relevant case-studies made available	UNDP	No information available	Various projects for income generation <u>193/</u>
	Parties	Seven countries reported on innovations for local income generation in dry and sub-humid lands. <u>194/</u> Two countries reported through CBD national reports and 5 through UNCCD national reports.	
Activity 9d: Market development			
Products derived from sustainable use increasingly marketed	FAO	No information available	Agricultural Marketing <u>195/</u> Agricultural Support Systems Division <u>196/</u>
Conducive market relationships developed	ICARDA	Diversification and sustainable improvement of rural livelihoods <u>197/</u>	
	ICRISAT	GT Markets, Policy and Impacts <u>198/</u>	

186/ http://www.fao.org/sd/dim_pe4/pe4_040501a_en.htm

187/ http://www.ifad.org/evaluation/public_html/eksyst/doc/prj/region/pn/jordan/r329joae.htm

188/ Cameroon, Kenya, Namibia, Swaziland

189/ http://www.fao.org/wssd/sard/SARD0_en.htm

190/ <http://www.fao.org/ag/AGP/AGPC/doc/themes/5g.html>

191/ <http://www.undp.org/equatorinitiative/>

192/ Benin, Hungary, Lesotho, Madagascar, Spain

193/ <http://www.undp.org>

194/ Lebanon, Myanmar, Namibia, Peru, Philippines, Sri Lanka, USA

195/ <http://www.fao.org/ag/ags/subjects/en/agmarket/agmarket.html>

196/ <http://www.fao.org/ag/ags/index.html>

197/ <http://www.icarda.cgiar.org/ResearchPortfolio.htm>

198/ <http://www.icrisat.org/web/ASP/Theme.asp?cid=2&ThemeId=6>

	IFPRI	No information available	Markets, Trade, and Institutions Division <u>199/</u>
	World Trade Organization (WTO) <u>200/</u>	No information available	High Level Symposium on Trade and the Environment Article 3.13 Doha Ministerial Declaration
	Parties	Ten Parties reported on market development. <u>201/</u> Nine were reported through UNCCD reports and one through CBD national reports.	
Activity 9e: Fair and equitable sharing of benefits			
Guidelines produced and integrated in NBSAPs, NAPs and other relevant policies	African Centre for Technology Studies	No information available	Intellectual Property Protection and Traditional Knowledge <u>202/</u>
	American Association for the Advancement of Science	No information available	Traditional Knowledge and Intellectual Property: A Handbook on Issues and Options for Traditional Knowledge Holders in Protecting their Intellectual Property and Maintaining Biological Diversity <u>203/</u>
	IIED	No information available	Stakeholder Participation in Policy on Access to Genetic Resources, Traditional Knowledge and Benefit-sharing. Case Studies and Recommendations <u>204/</u>
	IUCN	No information available	Access to Genetic Resources, Intellectual Property Rights and Biodiversity: Processes and Synergies <u>205/</u>
	UNDP <u>206/</u>	No information available	Access and benefit sharing projects Assessments of national capacity building needs
	Secretariat of the CBD <u>207/</u>	New approach to benefit sharing in bio-prospecting (Australia)	Access to genetic resources and benefit sharing cross-cutting issue
	Parties	No country Parties reported on the fair and equitable sharing of the benefits of dry and sub-humid lands biodiversity	

Progress

National level

143. Twenty-two countries presented reports on the implementation of activity 9 at the national level.
144. Only one activity, 9d, was reported on by 10 or more countries. Principle activities in support of this component include:

199/ <http://www.ifpri.org/>
200/ Information available at: http://www.wto.org/english/tratop_e/envir_e/envir_e.htm
201/ Egypt, Kenya, Lesotho, Malawi, Mongolia, Namibia, Niger, Uganda, USA, Zimbabwe.
202/ <http://www.acts.or.ke/paper%20-%20intellectual%20property.htm>
203/ <http://shr.aas.org/tek/handbook/handbook.pdf>
204/ http://www.iied.org/docs/blg/synthesis_final.pdf
205/ http://www.iucn.org/themes/pbia/wl/docs/trade/ipsdweek_may04/PGCS_TB_Ruiz.pdf
206/ Information available at: <http://www.undp.org/biodiversity/benefitsharing.html>
207/ <http://intranet/programmes/socio-eco/benefit/default.asp>

- Five reports on general market access for dry and sub-humid lands goods;
- Three reports on market access specifically for sustainably produced agricultural products;
- One country report on markets for forest products;
- One country report on eco-tourism market development.

145. Key contributing factors to the success of Activity 9 include:

- Awareness raising to enlist support of stakeholders
- Capacity-building to facilitate stakeholder participation.
- The provision of incentives, and
- Access to technical assistance.

Regional and global level

146. Eleven agencies reported activities in support of the implementation of activity 9. Of these, only 3 agencies reported through the questionnaire with other contributions identified through CBD reports and research by the Secretariat.

147. Reporting on regional and global implementation of activity 9 revealed significant activities with regards to activities 9d (market development), and 9e (fair and equitable benefit sharing). Reported implementation focused on the production of reports and the development of case-studies.

Facilitation of implementation by the Secretariat

148. The Secretariat actively contributed to the first inter-regional meeting of the Global Biodiversity Forum (GBF) on "Ecosystem Approach to Dryland Management: Integrating Biodiversity Conservation and Livelihood Security". The meeting took place in Havana, Cuba, 30 and 31 August 2003. The objective of the meeting was to exchange information and advance the debate on sustaining livelihoods of local people through the conservation and sustainable use of drylands and its natural resources. The trade-offs between conservation and development endeavours in drylands and recommended policy options were particularly discussed.

Obstacles

National level

149. According to national reports and other information, limited attention and resources have been dedicated to support sustainable livelihoods. In particular the analysis of reported implementation reveals that most components have been initiated to varying degrees but have failed to result in the integration of guidelines into NBSAPs, NAPs and other relevant policies.

150. Activities 9a and 9c, income diversification and innovations for local income generation, for example, have been widely implemented at local project scales but have not been reported at the national level. Although most reported efforts targeted populations dependent on protected areas for their livelihoods, implementation of the activities has not been exclusive to those target populations.

151. Activity 9e, fair and equitable sharing of benefits, is mentioned in the majority of NBSAPs and NAPs as a core objective. However, according to national reports, the overwhelming majority of countries are at the very early stages of development and have yet to develop operational guidelines.

152. Analysis of country reports reveal that the primary obstacles to the further implementation of activity 9 are, *inter alia*,

- The weak integration of economic development objectives within biodiversity conservation and sustainable use objectives, policies and activities
- Insufficient financial and technical capacity
- Weak economic incentives for local populations to alter their livelihoods, and

- The absence of legal and institutional frameworks conducive to the integration of biodiversity conservation within sustainable livelihood programmes.

153. Integration of economic development strategies, including income diversification, sustainable harvesting and innovations for local income generation, with biodiversity conservation and sustainable use strategies is central to the success of each respective strategy. While numerous local projects have been carried out, lessons learnt from the former should be developed into guidelines in order to mainstream best practices at national levels as instructed in the programme of work. As to fair and equitable sharing of benefits, the progress of the international Access and Benefit-Sharing (ABS) regime should be reflected in increased integration in national policies, including NBSAPs and NAPs.

Regional and global level

154. Very few agencies were identified as contributing to activities 9a (income diversification), 9b (sustainable harvesting), and 9c (innovations for local income generation). It is believed that this does not reflect a lack of regional and global efforts but rather the fact that most regional and global efforts for the above 3 activities take the form of financial assistance through projects which are reported on at the national level.

155. The scaled-up implementation of activity 9 at the regional and global level would benefit from the enhanced exchange of investment information and experiences.

IV. STATUS OF THE JOINT WORK PROGRAMME

156. The UNCCD – CBD joint work programme on the biological diversity of dry and sub-humid lands was developed in response to paragraph 8 of decision V/23. A liaison group constituted of national focal points of both conventions and the convention secretariats drafted the joint work programme at a workshop in May 2001. ^{208/} Subsequently the programme was finalized and agreed to by the two secretariats in September 2002, during the second meeting of the Ad Hoc Technical Expert Group on Dry and Sub-Humid Lands in Montreal.

157. At the sixth meeting of the UNCCD COP (COP6), the joint work programme on the biological diversity of dry and sub-humid lands was presented as an annex to the report on the review of activities for the promotion and strengthening of relationships with other relevant conventions. ^{209/} This document reflected an agreement that the first phase of the implementation of the joint work programme would focus on three specific activities within the dry and sub-humid lands programme of work:

- Assessment of status and trends of biodiversity in dry and sub-humid lands and the effectiveness of conservation measures;
- Identification of specific areas of value and/or under threat; and
- 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.

158. In accordance with paragraph 8 of decision V/23 of the Convention on Biological Diversity, the secretariats of the Convention on Biological Diversity and the UNCCD held a joint liaison group meeting in Bonn in May 2001.

159. The main recommendations of the liaison group meeting are summarized in table 10 below:

Table 10: Implementation of the joint programme of work

Liaison Group Recommendation	Status of implementation
Support to sustainable livelihoods (element B3 of the	Activity 9 of the dry and sub-humid lands biodiversity

^{208/} <http://www.biodiv.org/doc/meetings/sbstta/sbstta-07/official/sbstta-07-04-en.pdf>

^{209/} [http://www.unccd.int/php/document.php?ref=ICCD/COP\(6\)/4](http://www.unccd.int/php/document.php?ref=ICCD/COP(6)/4)

joint work programme and activity 9 of the dry and sub-humid lands biodiversity programme of work) should be given high priority	programme of work is being implemented with very little input for the CBD and UNCCD Secretariats
Demonstration sites should be identified by making use of the thematic programme networks (TPNs) under the Convention to Combat Desertification	Terms of reference drafted
Country focal points should prepare GEF projects under the umbrella of the joint work programme	The GEF reports 34 national level, 10 regional, and 2 global full-sized projects within its OP15 portfolio
Non-governmental organizations should be encouraged to prepare medium-size projects and to utilize the small grants programme administered by UNDP	The GEF reports 4 national level medium-sized projects within its OP15 portfolio
Sub-regional organizations should be encouraged to prepare sub-regional medium-size GEF projects	The GEF reports 2 global and 4 regional medium-sized projects within its OP15 portfolio
The secretariats of the two conventions should identify other bilateral and multilateral players to join in the joint work programme to ensure its successful implementation	An indicative list of key actors was identified in annex I to CBD COP decision VII/2 <u>210/</u>
The secretariats of the two conventions should identify some experts who could assist in the preparation of GEF projects	Both the CBD and the UNCCD maintain a rostr

160. In accordance with paragraph 5 of Decision VII/2, the Secretariat of the Convention on Biological Diversity, in collaboration with the secretariats of the UNCCD, UNFCCC, WHC, CMS, CITES and the Ramsar Convention, organized a Regional Workshop for Africa on Synergy among the Rio conventions and other biodiversity-related conventions in implementing the Programmes of Work on Dry and Sub-humid Lands and Agricultural Biodiversity (Gaborone, Botswana 13 - 17 September 2004). This workshop aimed *inter alia* to develop proposals for the synergistic implementation of the programme of work on the biological diversity of dry and sub-humid lands. 211/ Achievements included the identification of mechanisms to improve synergies between the conventions leading to the identification of a number of draft project concepts dealing with implementing synergies for agriculture in drylands. These proposals include:

- Establish or strengthen early warning systems for food security
- Restoration of soil fertility
- Rehabilitation of degraded lands
- Erosion control by local communities through reforestation, wetland management towards sustainable agriculture and biodiversity conservation
- Bamboo resources as alternative reforestation
- Rural development projects using the synergy approach to combat land degradation and conservation of biodiversity
- Building capacity of local populations to enhance shared responsibility in managing bush fires by protecting and using grassland biodiversity
- Rehabilitation of degraded land through reforestation activities by the local communities.

210/ CGIAR, FAO, GEF, GISP, GIWA, Global Mechanism, IUCN, LADA, MA, MAB, Ramsar, TWNSO, UNCCD, UNEP, WCPA, WHC, WIPO, World Bank, WTO.

211/ <http://www.biodiv.org/doc/meetings/agr/wsagdl-01/official/wsagdl-01-06-en.doc>

161. Terms of reference have also been developed in collaboration with the UNCCD Secretariat specifically to guide the further implementation of priority activities 1 and 2.

162. Finally, the UNCCD, during its third CRIC meeting aimed to improve synergies between national reporting processes and mechanisms. [212/](#)

V. CONTRIBUTION OF IMPLEMENTATION TO THE 2010 TARGETS AND THE MILLENNIUM DEVELOPMENT GOALS

Millennium Development Goals

163. MDG 1: The programme of work on the biodiversity of dry and sub-humid lands has a great deal of potential to contribute positively to the achievement of MDG 1, combating extreme poverty and hunger. In particular, the focus of the programme of work on sustainable production, alternative livelihoods, income generation, and the preservation of ecosystem functions is directly relevant to the goals and objectives of MDG 1.

164. Despite the obvious linkages between MDG1 and the programme of work on the biodiversity of dry and sub-humid lands, thus far only 3 country Parties have linked biodiversity conservation in dry and sub-humid lands to poverty alleviation in their CBD national reports, UNCCD national reports, and UNFCCC national communications. [213/](#) Further efforts should, therefore, be undertaken to elaborate the linkages between biodiversity conservation and MDG 1.

165. MDG 7: MDG 7 calls for environmental sustainability which is directly addressed by the conservation, protection, and sustainable use activities of the dry and sub-humid lands programme of work. The review of implementation of these activities has revealed some positive progress, however efforts should continue to be targeted towards the on-the-ground implementation of the activities of the convention. This requires considerable efforts including the mainstreaming of environmental sustainability considerations within national sector and economic planning with support from regional and global initiatives, partnerships, and funding agencies.

Progress towards the 2010 Targets

166. Annex I of decision VII/30 of the Conference of the Parties identifies eight indicators for immediate testing in support of assessing progress towards the implementation of the 2010 biodiversity targets. The review of the programme of work on the biodiversity of dry and sub-humid lands has revealed that relatively complete information is available for: coverage of protected areas.

167. Limited or incomplete information is available for:

- Trends in extent of selected biomes, ecosystems and habitats;
- Trends in abundance and distribution of selected species;
- Water quality in aquatic systems;
- Status and trends of linguistic diversity and numbers of speakers of indigenous languages; and
- Official development assistance provided in support of the Convention.

168. No information is available for:

- Nitrogen deposition; and
- Marine trophic index.

[212/](#) <http://www.unccd.int/cop/officialdocs/cric3/pdf/9eng.pdf>

[213/](#) Mozambique - activities 7g and 8e; Nigeria – activity 7m; Uganda - activity 7i

V. CONCLUSIONS

Overview of implementation of the dry and sub-humid lands biodiversity programme of work

169. In the light of the present document, SBSTTA is in a position to review and assess the status and trends of the biological diversity of dry and sub humid lands on the basis of the outputs of the of the activities of the programme of work, and make recommendations for the further prioritization, refinement and scheduling of the programme of work, as requested by decision V/23 paragraph 5.

National level

170. Implementation of the dry and sub-humid lands biodiversity programme of work primarily takes place at the national level through targeted actions and activities by country Parties to the convention. Such actions and activities are outlined in NBSAPs drafted by Parties as per the requirements of Article 6 of the Convention.

171. The analysis of those country Parties that have implemented the activities of the work programme highlights the importance of:

- Strong commitment from the national Government;
- An appropriate incentive framework;
- Adequate information and knowledge;
- The incorporation, whenever possible, of local and indigenous knowledge and stakeholders;
- The provision of financial support and technical assistance to developing countries;
- Participation in partnerships and collaborative agreements;
- Awareness of biodiversity – poverty alleviation linkages.

Regional and global level

172. Paragraph 3 of decision V/23 calls on international and regional organization, major groups, and other relevant bodies to implement and support activities contributing to the implementation of the dry and sub-humid lands biodiversity programme of work. The Conference of the Parties further requests that these same agencies foster cooperation within regions and sub-regions.

173. The analysis of those partner agencies that have implemented the activities of the work programme highlights the importance of:

- Partnerships and collaborative frameworks for cooperation amongst agencies;
- Strong linkages with national and local level institutions;
- Adequate information and knowledge;
- Responsiveness to local needs.

Overview of obstacles to the scaled-up implementation of the dry and sub-humid lands biodiversity programme of work

174. Overall, key barriers to the full implementation of the programme of work include:

- Ongoing conflicts related to resource access and use rights;
- Resource constraints in terms of access to financial and technical resources;
- Weak institutional frameworks;
- A lack of effective partnerships;
- The presence of perverse incentive frameworks;
- Knowledge gaps regarding biodiversity linkages with affecting processes;
- Limited political support at all levels.

175. In order to improve implementation it is critical that successful practices are scaled up and that concerted efforts are undertaken to alleviate the above barriers. This can largely be accomplished within the framework of the current dry and sub-humid lands biodiversity work programme although a number of changes have been proposed in the suggested recommendation section of this document.

Lessons learned from the in-depth review process

176. A number of challenges were encountered during the review process regarding the poor availability of data and a lack of in depth data reporting on the effectiveness and outcomes of actions to implement the programme of work on the biodiversity of dry and sub-humid lands.

177. Particular challenges encountered during the review process include:

- Very few country Parties had submitted their third national reports prior to the drafting of this document. As a result, much of the information used for the review is outdated;
- 'Local knowledge systems' were identified as key actors for activities 4 and 5 however the availability of information on such systems is very limited. There is no formal reporting process for such actors and, as a result, their contributions could not be properly included in the in-depth review;
- Response rates to requests for information were very low (less than 24%) amongst partner agencies which may have led to the under-reporting of regional and global level implementation;
- The 2010 targets baseline has not yet been established for the dry and sub-humid lands programme of work and, while every effort was made to include such a baseline in this report, data is still incomplete and progress cannot always be measured adequately.

178. The development of recommendations in response to the above challenges faced during the in-depth review of implementation may be accomplished through the Ad-Hoc Open Ended Working Group on Review of Implementation of the Convention to be held in Montreal, from 5–9 September, 2005

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AfDB	African Development Bank Group
AHTEG	Ad Hoc Technical Expert Group
BUWAL	Bundesamt für Umwelt Wald and Landschaft Swiss Agency for Environment, Forests and Landscape
CGIAR	Consultative Group on International Agricultural Research
CI	Conservation International
CILSS	Comité Permanent Inter États de Lutte contre la Sécheresse au Sahel
CMS	Convention on Migratory Species
COP	Conference of the Parties
DDPA	Desertification, Drought, Poverty, Agriculture Research Consortium
FAO	Food and Agriculture Organization of the United Nations
GEF	Global Environment Facility
ICARDA	International Center for Agricultural Research in the Dry Areas
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IDRC	International Development Research Center
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IGAD	Intergovernmental Authority on Development
IIED	International Institute for Environment and Development
ILRI	International Livestock Research Institute
IWMI	International Water Management Institute
LADA	Land Degradation Assessment in Drylands
MA	Millennium Ecosystem Assessment
MAB	Man and the Biosphere Programme of UNESCO
MAP	Mediterranean Action Plan
NBSAP	National Biodiversity Strategy and Action Plan
NEPAD	New Partnership for Africa's Development
OAS	Organization of American States
OSS	Sahara and Sahel Observatory
RIDES	Recursos e Investigacion para el Desarrollo Sustentable
SADC	Southern African Development Community
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice
SCBD	Secretariat of the Convention on Biological Diversity
TWNSO	Third World Network of Scientific Organizations
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
WB	The World Bank
WCMC	World Conservation Monitoring Center
WHC	World Heritage Convention
WIPO	World Intellectual Property Organization
WRI	World Resources Institute
WWF	World Wildlife Fund

Annex I: SUPPLEMENTAL INFORMATION FOR THE REVIEW OF NATIONAL LEVEL IMPLEMENTATION OF ACTIVITIES SEVEN THROUGH NINE OF THE PROGRAMME OF WORK ON THE BIODIVERSITY OF DRY AND SUB-HUMID LANDS

Activity		Examples of Reported Activities ^{214/}	Factors Facilitating Implementation	Barriers to Implementation
7. Measures for conservation and sustainable use	Protected areas	<p><i>Protected area governance:</i> The Government of Togo intends to address protected areas governance through: creating awareness; refining of borders in association with peripheral communities and organizations; and technical and material capacity-building within related agencies.</p> <p><i>Descriptions of protected areas:</i> Nepal has categorized national parks, conservation, and hunting reserves which contain dry and sub-humid lands.</p> <p><i>Identification of protected area needs:</i> In Guatemala, the document “Life in the semi arid zones of Guatemala” includes suggestions to establish three protected areas.</p> <p><i>Protected area funding:</i> Benin addresses some of its protected area funding needs through specific projects and collaboration with international organizations such as IUCN.</p>	<p>Strong institutional capacity</p> <p>The availability of adequate scientific information</p> <p>The adoption of innovative financing mechanisms</p> <p>Recognition of the important role of protected areas within national conservation strategies</p>	<p>On-going conflicts related to resource access and use rights, and</p> <p>Resource constraints for scientific management.</p>
	Rehabilitation and/or restoration	<p><i>Project-based efforts:</i> Projet de Réhabilitation de la végétation autochtone en Zones aride et semi-aride d’Afrique in Mali.</p> <p><i>Pilot projects:</i> After floods in 1998, China has been implementing pilot projects to convert steep arable land (with slope more than 25 degrees) back to forests and grasslands.</p>	<p>The availability of project-based funding</p> <p>Development and adoption of new technologies</p> <p>Targeted and detailed government responses to failing ecosystem functions</p>	<p>Limited access to locally relevant technologies,</p> <p>Insufficient financial resources, and</p> <p>Poorly defined institutional responsibilities</p>

^{214/} This is not intended to be a comprehensive identification of best practices, rather samples of implementation activities have been selected based on (i) completeness of the descriptions available in national reports, (ii) representation from different regions and countries, and (iii) potential utility to CBD Parties.

Activity		Examples of Reported Activities <u>214/</u>	Factors Facilitating Implementation	Barriers to Implementation
	Invasive alien species	<p><i>Species removal:</i> over one million hectares have been cleared of invasive alien plants in South Africa.</p> <p><i>Prevention:</i> in China the quarantine system is implemented for import and export goods to prevent the dispersion of plant diseases and insect pests.</p> <p><i>Research:</i> In Belgium, the alien species issue is part of the research priorities of the Second Plan for a Sustainable Research Programme (2000-2004) of the Federal Office for Scientific, Technical and Cultural Affairs.</p>	<p>The availability of adequate scientific information</p> <p>A clear accounting of the costs of alien species invasions</p> <p>Mainstreaming of invasive alien species planning within broader conservation and development plans</p>	<p>Insufficient financial resources, and</p> <p>Inadequate technologies for control and removal.</p>
	Sustainable Management of Production systems	<p><i>Multiple production systems:</i> The Project Maghreb in Morocco, Algeria and Tunisia prioritizes the sustainable management of all genetic resources in the Maghreb oases.</p> <p><i>Sustainable agriculture:</i> The Canadian Prairie CARE Program (Conservation of Agriculture, Resources and the Environment) provides incentives and technical assistance to promote practical farming techniques which benefit wildlife and the landowner.</p> <p><i>Sustainable production in dry forests:</i> In Peru, the Algarrobo project supports sustainable livelihood development in the dry forests of the northern Peruvian coast.</p>	<p>Effective sustainable technology research and extension programmes</p> <p>Appropriate incentive frameworks</p> <p>Decentralization of management processes</p> <p>The availability of project-based funding</p>	<p>Weak public-private partnerships.</p> <p>Perverse incentive frameworks, and</p> <p>Ongoing conflicts related to resource access and use rights.</p>
	Water resources	<p><i>National strategies:</i> The Ethiopian Water Sector Development Programme (WSDP) has a time horizon of 15 years (2002-2016).</p> <p><i>Community management:</i> in Ghana, community based improved land and water management has been actively pressured with support for the preparation of Village Land Development Plans including water management strategies.</p>	<p>Decentralization of management processes</p> <p>Strong national commitment to sustainable water resource management</p>	<p>Absence of clear national water strategies, and</p> <p>Continued conflict over use rights</p>

Activity		Examples of Reported Activities <u>214/</u>	Factors Facilitating Implementation	Barriers to Implementation
	<i>Ex situ and in situ conservation</i>	<p><i>Re-introduction of threatened/endangered species:</i> joint project between Tunisia and Belgium for the reintroduction of Sahara-Sahel antelopes in Northern Africa.</p> <p><i>Combining in situ and ex situ conservation:</i> In Chile the CONAF/PNUD project supports the propagation and ex-situ protection of threatened firewood crops of vital importance in the semi arid zone.</p>	<p>The availability of project-based funding</p> <p>Adequate technical and scientific capacity</p> <p>Available baseline information on species status and trends</p> <p>Partnerships with universities, regional and global programmes, NGOs and other relevant agencies</p>	<p>Insufficient financial resources, and</p> <p>Insufficient information.</p>
	Economic valuation and adaptive technologies	<p><i>Economic valuation:</i> Morocco has published an Etude Nationale sur la Biodiversité - Evaluation économique de la biodiversité.</p>	<p>Strong technical capacity</p>	<p>Insufficient financial resources, and</p> <p>Difficulties in defining environmental goods.</p>
	Plant and animal biomass	<p><i>Plant biomass as a planning tool:</i> Spain incorporates measured of plant biomass into its planning for livestock in arid and semi-arid zones.</p>	<p>Established national-level planning framework</p>	<p>Insufficient financial resources, and</p> <p>Insufficient scientific and technical capacity.</p>
	Training, education, and public awareness	<p><i>Training:</i> Belgium, through the NFP developed a training programme to enable the persons in charge of the CHM in their country to develop and maintain webpages for their CBD-CHM.</p> <p><i>Education:</i> In Lebanon, CIHEAM trains many students in biodiversity conservation in arid lands and the application of bio-information for the conservation and management of biodiversity</p> <p><i>Public awareness:</i> In Uganda, efforts to create awareness of biodiversity-poverty linkages are managed through the National Convention Coordination Center.</p>	<p>Partnerships with universities, regional and global programmes, NGO's and other relevant agencies</p> <p>The availability of project-based funding</p>	<p>Insufficient financial resources, and</p> <p>Insufficient scientific and technical capacity.</p>

Activity		Examples of Reported Activities <u>214/</u>	Factors Facilitating Implementation	Barriers to Implementation
	Information on sustainable use	No information available	No information available	Sustainable use efforts prioritize production areas over natural systems, and Limited collection and dissemination of good practice case-studies.
	Promotion of research and development programmes	<i>Improving habitat restoration/management:</i> the MedWet inventory and monitoring database is supported by and accessible to scientists from the Mediterranean countries for the purpose of improved management of the Mediterranean ecosystem. <i>Species specific studies:</i> in Kazakhstan, the Institute of Zoology, Institute of Soil Science and Institute of Botany and Phytointroduction carries out a number of species specific research activities. <i>Improving sustainable livelihoods:</i> Tanzania is conducting research on sustainable livelihood processes and technologies through the Food Security and Household Income for Small-holder Farmers in Tanzania project.	Adequate technical and scientific capacity Partnerships with universities, regional and global programmes, NGO's and other relevant agencies The availability of project-based funding	Insufficient financial resources, and Insufficient scientific and technical capacity.
	Integrated catchment management and endangered species	<i>Integrated catchment management:</i> In the Murray-Darling Basin Initiative, the Australian Government is addressing biodiversity using integrated catchment management principles. <i>Migratory species:</i> The North American Waterfowl Management Plan is an international action plan to conserve migratory birds throughout the continent. <i>Endangered species management:</i> France is funding a regional project in Africa for the conservation of antelope in the Sahara and Sahel.	The identification of lead agencies Adequate inter-agency collaboration The availability of project-based funding	Difficulties implementing programmes across political boundaries Insufficient institutional capacity
	Cooperation with relevant conventions	<i>Coordinated planning:</i> Biodiversity is taken into account in the UNCCD National Action Plan for the Democratic Republic of the Congo.	Active focal points	Incomplete understanding of biodiversity – desertification linkages.
8. Promotion of responsible resource management	Local institutional structures; and indigenous and local techniques	<i>Local capacity building:</i> countries such as the Gambia are supporting efforts to establish local trust funds for biodiversity conservation <i>Indigenous techniques:</i> in Iran traditional practices, such as Subterranean water canals known as “Qanats” are integrated into investments whenever it is possible and appropriate	The availability of project-based funding Decentralized decision making	Lack of recognition of local voice and indigenous people

Activity	Examples of Reported Activities <u>214/</u>	Factors Facilitating Implementation	Barriers to Implementation
Decentralization of management	<i>Community management of common resources:</i> Canada has implemented a community pasture programme for the decentralized management of community pastures	National commitments to the process of decentralization Adequate capacity within local institutions	Incomplete decentralization including financial and institutional decentralization
Institutions for land tenure and natural resource use conflict resolution	<i>Long-term leases:</i> Ethiopia is currently restructuring its cadastre system to formalize long-term land leases	Recognition of the link between land tenure and sustainable management incentive frameworks	Lack of political commitment
Transboundary issues	<i>Transboundary habitat management:</i> the Slovak Republic, Austria, the Czech Republic and other collaborate with regards to grasslands management. <i>Transboundary protected areas:</i> Benin, Burkina Faso and Niger are collaborating on the management of the Parc du W transboundary protected area	Partnerships with universities, regional and global programmes, NGO's and other relevant agencies The availability of project-based funding	Political instability
Policies and instruments	<i>Institutional structure:</i> in Canada the main national agency responsible for protecting drylands and ensuring sustainable rural development, is the Prairie Farm Rehabilitation Administration (PFRA). <i>Legislation:</i> in Armenia, the use of natural pastures and grasslands is regulated by Government Regulation No. 282 (1991) <i>National Strategies:</i> Australia is implementing a number of relevant National Strategies, including The National Strategy for Rangelands Management, National Weeds Strategy, National Strategy for the Conservation of Australia's Biological Diversity, and the National Drought Policy.	Mainstreaming of biodiversity conservation within national strategies and multi-sector planning Strong national commitment to biodiversity conservation	Incomplete understanding of the impacts of biodiversity loss (and benefits of conservation), Political instability
Activity 9 Support for Sustainable Livelihoods	<i>Sustainable agriculture:</i> Ghana's Northern Savannah Biodiversity Conservation Project includes the following activities: fruit tree plantation development; bee-keeping and honey production; seed nursery establishment and management; and medicinal plant nurseries. <i>Income diversification in protected areas:</i> UNESCO's MAB Programme supports projects with income diversification components in Benin, Burkina Faso, Cote d'Ivoire, Mali and Niger.	Consultation of stakeholders Awareness raising Capacity-building of stakeholders	Weak integration of economic development and biodiversity conservation and sustainable use policies and programmes

	9b. Sustainable Harvesting	<i>Generating awareness:</i> Botswana has conducted public education campaigns and designed legislative instruments to curb fuel wood harvesting.	Public awareness and education Appropriate incentive frameworks Availability of technical assistance	Low economic incentives for perpetrators of unsustainable harvesting to alter their behaviour Insufficient financial and technical capacity of national governments to promote and enforce sustainable harvesting
	9c. Innovations for Local Income Generation	<i>New market development:</i> Lebanon has stimulated local income generation through organic farming allying technology transfer and extension in Yammouneh. <i>National programmes:</i> In Mexico, CONAZA (National Arid Zones Commission) has developed sustainable production systems in highly marginalized communities.	Consultation of stakeholders Awareness raising Capacity building of stakeholders	Weak integration of economic development and biodiversity conservation and sustainable use policies and programmes
	9d. Market Development	<i>Multiple products:</i> Uganda is implementing a programme to improve market access for drylands commodities <i>Sustainable agriculture and herding:</i> Namibia has forged market relationships for sustainably produced agricultural and herding products with the Namibian Agricultural Union and the Namibian National Farmers Union <i>Ecotourism:</i> in Kenya the private-sector is actively involved in the development of ecotourism opportunities	Mediation between farmers and private sector The availability of project-based funding	Lack of financial and technical capacity Lack of market knowledge Trade regulations
	9e. Fair and Equitable Sharing of Benefits	<i>Framework for compensation:</i> South Africa's Bioprospecting Consortium has set up a Trust to ensure fair and equitable sharing of financial benefits from bioprospecting with indigenous peoples and communities and other stakeholders	Relevant legislative framework Creation of operational tools Participation in regional and global initiatives	Lack of legal frameworks, policies and institutions to introduce and enforce the principle
