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THE PROGRAMME OF WORK OF THE CONVENTION AND THE MILLENNIUM DEVELOPMENT GOALS

Summary of the analysis of linkages between the programmes of work of the Convention and the Millennium Development Goals

Note by the Executive Secretary

1. The purpose of the present information paper is to supplement the note by the Executive Secretary on the programme of work of the Convention and the Millennium Development Goals (UNEP/CBD/COP/7/20/Add.1), by presenting, in the annex hereto, a more detailed summary of the analysis of the interlinkages between each programme of work and cross-cutting issue under the Convention and the Millennium Development Goals referred to in that note, which also discusses the implications of the analysis.

2. As stated in the above-mentioned note, the Executive Secretary proposes to publish the full review together with the United Nations Development Programme as a contribution to increasing awareness of the importance of biodiversity to the Millennium Development Goals, and the role of the Convention, in line with SBSTTA paragraph 1 of recommendation IX/14. The full review will be made available through the clearing house mechanism and through other appropriate media.

* UNEP/CBD/COP/7/1 and Corr.1.

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Annex

SUMMARY OF RESULTS OF THE ANALYSIS OF THE LINKAGES BETWEEN THE CONVENTION ON BIOLOGICAL DIVERSITY AND THE MILLENNIUM DEVELOPMENT GOALS FOR EACH PROGRAMME OF WORK AND FOR CROSS-CUTTING ISSUES.

A. Biodiversity and the Millennium Development Goals – examples of the main products (goods) and services, values and livelihoods benefits provided by biodiversity and some challenges for sustainability of use common to all programmes of work.

	Examples	*Nature of value*	*Contributions to livelihoods and benefits to stakeholders*	*Major challenges for sustainability of use in implementation of the MDGs*
PRODUCTS DERIVED FROM BIODIVERSITY (PROVISIONING SERVICES)				
1: Products derived directly from biological resources from managed systems through agriculture, forestry and fisheries activities	Crops, livestock production, timber from plantation forestry, and fish from aquaculture. Food (including nutrients and vitamins), food security.	Direct use values (consumptive, economic, trading, some non-traded)	Basis of sustainable food production and livelihood systems, especially for traditional farmers. Basis of food industry. Food supply (including nutrients and vitamins). Food security. Economic output.	To ensure sustainability of the managed ecosystem itself; To avoid negative externalities on other ecosystems.
2: Products derived directly from biological resources hunted or gathered from natural or semi-natural systems	Most fish and other aquatic animals and plants from capture fisheries, wildlife, gathered wild foods and medicinal plants etc. Timber from sustainable forest activities. Non-timber forest resources. Bushmeat.	Direct use values (consumptive, mostly not traded in markets)	Significant contribution to nutrition and other livelihood needs of rural and per-urban vulnerable groups, and of traditional healers. Food supply (including nutrients and vitamins). Food security. Economic output.	To avoid over-exploitation of resources and damage to ecosystem integrity. Avoid ecosystem degradation from other activities.
3: Products derived indirectly (from the information content) of collected genetic resources	Pharmaceutical derivatives and new plant and animal varieties	Direct use values (current use). Option value (known material, not used currently). Exploration value (undiscovered sources).	Raw material for plant and animal breeding and pharmaceutical production. Values largely appropriated by breeding and pharmaceutical companies, and by farmers in 'industrial' areas who use improved varieties. Significant use also within traditional	To ensure continued provision of genetic resources by incentives and fair and equitable sharing of benefits derived.

	Examples	*Nature of value*	*Contributions to livelihoods and benefits to stakeholders*	*Major challenges for sustainability of use in implementation of the MDGs*
			farming, forestry and aquaculture systems.	
SERVICES PROVIDED BY BIODIVERSITY:				
4: Regulating services -	Air quality maintenance, climate regulation, water regulation, erosion control, water purification and waste treatment, regulation of human diseases, biological control, pollination, storm protection, flood protection	Indirect use values	Essential support to sustainable food production and livelihood systems for all people. Benefits largely appropriated at the local level.	To maintain ecosystem integrity; to prevent pollution and habitat loss and degradation; to internalize externalities.
5: Supporting services -	Primary production, production of atmospheric oxygen, soil formation and retention, nutrient recycling, water cycling, provision of habitat	Indirect use values	Benefits of services appropriated at regional to global levels.	To maintain ecosystem integrity; to prevent pollution and habitat conversion and degradation.
6: Cultural services -	Cultural diversity, spiritual and religious values, knowledge systems, educational values, inspiration, aesthetic values, social relations, sense of place, cultural heritage values, recreation and ecotourism.	Direct use value (sport and recreation), indirect use value, existence (nonuse) value. Traditional knowledge and values. Social and cultural security. Food security. Livelihoods.	Benefits of services appropriated at various levels, from local to global. Values important to sustaining social and cultural systems which is important for food security and livelihoods sustainability.	To prevent damage from excessive or inappropriate tourism; prevention of habitat conversion, recognition of cultural values, local knowledge and the rights of indigenous peoples and local communities.
7: Insurance against risk and uncertainty	Use of multiple species, breeds and varieties. Traditional knowledge. Food safety nets in times of crisis.	Portfolio value, option and exploration values. Food security	Portfolio value appropriated at various levels, from local to global. Safety nets enhance food security and allow greater risk taking in other activities (e.g., commercial production).	To maintain incentives for their use. Integrated planning which recognizes the value of insurance against risk.

B. Biodiversity and the Millennium Development Goals – some typical examples of development activities leading to adverse effects on biodiversity and/or long-term development objectives , and some activities and tools to address these under the programmes of work of the CBD.

The list below provides typical examples where development objectives were often pursued by activities that failed to give due consideration to their impact on environmental assets and on biodiversity in particular. In consequence, such activities led in many cases not only to environmental degradation and a loss in biodiversity, but, in the long run, also proved to be ineffective in reaching their development objectives. . Hence, these examples also point to the crucial importance of MDG 7 and, specifically, the objectives of biodiversity conservation and sustainable use of the Convention is achieving the MDGs. As noted further in the note by the Executive Secretary on relevance of the Convention to the MDGs and WEHAB initiative (UNEP/CBD/COP/7/20/Add.1), in principle the Convention and MDGs are mutually reinforcing.

Programme of Work	**Example of activities leading to adverse effects on biodiversity and/or long-term development objectives**	**Examples of activities under the programme of work that can help ensure that MDGs are achieved consistent with the Convention on Biological Diversity**
Agricultural biodiversity	Expansion of agriculture decreases natural ecosystems and the monetary and non-monetary benefits derived from the goods and services natural ecosystems provide; Agricultural intensification can damage agricultural biodiversity and surrounding ecosystems, with detrimental impacts on the monetary and non-monetary benefits derived from the goods and services natural ecosystems provide ; Unsustainable water consumption for irrigation can jeopardize, in the long term, economic and social development objectives such as increasing agricultural production and improving human health; Soil erosion, pollution (pesticides, fungicides and herbicides) can negatively impact on agricultural productivity ; Perverse incentives; Improved affluence may increase demand for products; Agricultural intensification and dependency on commercial seed producers leads to erosion of traditional knowledge, practices and innovations; Reliance on narrowing number of crops and changing diets.	Assessment of agricultural biodiversity (Programme of work, Element 1). Identification of cost-effective practices and technologies, and related policy and incentive measures that enhance the positive and mitigate the negative impacts on agricultural biodiversity (Programme of work, Element 2). Local level capacity building (Programme of work, Element 3). Mainstreaming (Programme of work, Element 4). The ecosystem approach provides a framework for decision making at various levels and scales. Incorporation of awareness and understanding of biodiversity into curricula.

Programme of Work	**Example of activities leading to adverse effects on biodiversity and/or long-term development objectives**	**Examples of activities under the programme of work that can help ensure that MDGs are achieved consistent with the Convention on Biological Diversity**
Forest biodiversity	Excessive forest exploitation results in loss of ecosystem goods and services and leads to habitat degradation; Improved affluence may increase demand for forest resources; Plantation forestry decreases natural habitats and is susceptible to diseases; Reliance on genetically improved varieties leads to increased dependency of producers and to erosion of traditional knowledge, practices and innovations.	Integration of consideration of MDGs into the ongoing refinement and elaboration of the programme of work on forest biological diversity. The ecosystem approach principles and operational guidance, applied to the management of forests, has the potential to reduce potential conflicts between forest use and its conservation. To promote the sustainable use of forest biodiversity is one of the main goals of the expanded programme of work on forest biodiversity. (programme element 1, goal 4). The mitigation of economic failures and distortions that result in loss of forest biodiversity though, *inter alia*, valuation of forest ecosystem goods and services and the incorporation of these values into forest planning and management, the elimination or reform of perverse incentives, and the provision of market and other incentives is identified as an important activity to create an institutional and socio-economic enabling environment (programme element 2, goal 2) In general, activities on use, conservation, and benefit sharing of forest biological diversity within the programme of work will contribute to overall environmental sustainability if properly implemented.

Programme of Work	Example of activities leading to adverse effects on biodiversity and/or long-term development objectives	Examples of activities under the programme of work that can help ensure that MDGs are achieved consistent with the Convention on Biological Diversity
Dry and sub-humid lands	Unsustainable water use; Erosion; Desertification; Unsustainable land use; Salinization of soils and water resources.	The programme of work on biological diversity of dry and sub-humid lands has a strong development focus and thus largely complies with the MDGs and their associated targets. Element B of the programme of work on dry and sub-humid lands supports activities that, (a) protect and sustain biodiversity crucial for healthy environment and (b) contribute to sustainable livelihoods Research and case-studies on the socio-economic impact of biodiversity loss and the linkage to poverty are being developed specifically. An emphasis is on identifying best management practices, which are being widely shared. Guidelines for the assessment of such good practices are being developed. Further areas of particular value and/or under threat are being identified to allow for priority action - this can be of particular use to support eradication of poverty in "hotpots". Targeted actions aim at identifying, promoting and providing guidance for managing dry and sub-humid lands, natural and production systems for sustainability - including integrated water and land management. The economic valuation of the biological diversity of dry and sub-humid lands and the use of economic instruments and the promotion of the introduction of adaptive technologies that enhance productivity of dry and sub-humid lands ecosystems are also important activities identified by the programme of work. Demonstration sites of best practices to be identified and used for training and information and experience exchange initiatives. Strengthening of local institutions for land tenure, resource management and governance *per se*, as well as conflict resolution is important to the long-term eradication of poverty. The work programme foresees that Parties include

Programme of Work	Example of activities leading to adverse effects on biodiversity and/or long-term development objectives	Examples of activities under the programme of work that can help ensure that MDGs are achieved consistent with the Convention on Biological Diversity
		such aspects in their NBSAPs and take targeted actions in this regard. Guidelines and sharing of best practices are facilitated through this process. Support and investment to sustainable livelihoods i.e. through promotion of sustainable harvesting and use of wildlife and ranching as well as through off-farm activities through the sharing of best practices and guideline development. Further focus on market development for and valuation of biodiversity and related products. As a direct outcome of the 1992 Earth Summit and in line with Agenda 21, it was recognized that in spite of the fundamental roles various gender groups play in dryland management, they are often omitted from decision making and management processes. The Parties to the United Nations Convention to Combat Desertification and Drought (UNCCD) therefore committed themselves to promote an enabling environment that will strengthen their possibilities for active participation in the implementation of the UNCCD. Through the joint programme of work between the UNCCD and the Convention, the work on gender that is being carried out under the UNCCD, explicitly helps address the MDGs relating to women. Assessment and research priorities under the programme of work focus on establishing the linkages between poverty and biodiversity. The SBSTTA recommendation VIII/4 call for the explicit harmonization of the national Biodiversity Strategies and Action Plans, as well as congruent instruments under other related conventions, with a focus on poverty alleviation and cross-sectoral integration.

Programme of Work	Example of activities leading to adverse effects on biodiversity and/or long-term development objectives	Examples of activities under the programme of work that can help ensure that MDGs are achieved consistent with the Convention on Biological Diversity
The biodiversity of inland water ecosystems	Developments in other sectors, and increasing affluence, will place significantly increased demands on inland waters (water extraction and use, pollution, sedimentation and eutrophication); Reduced resource availability increases exploitation pressures on remaining resources; Demands for *in-situ* uses of water (e.g., fisheries) will limit water availability for other sectors (e.g., agriculture); Demands for rehabilitation of inland waters will place higher financial costs on industry, urbanization and agriculture; Carbon emission targets and higher energy demands may stimulate expanded hydropower development.	The recommended revised programme of work on the biological diversity of inland water ecosystems takes into account the MDGs (UNEP/CBD/COP/7/12/Add.1). Draft targets for the programme of work have also considered the MDGs (UNEP/CBD/COP/7/20/Add.4). Programme element 1 addresses the need for conservation, sustainable use and benefit sharing. Programme element 2 addresses the need to create an institutional and socio-economic enabling environment in order to reach the targets and goals. Programme element 3 addresses the need to improve knowledge, assessment and monitoring, including *inter alia*, for elaborating the linkages between the biological diversity of inland water ecosystems and sustainable development (and hence with the MDGs). Some ways in which these are translated into activities include: Generation and disseminate more information and raise awareness of the importance of inland water biodiversity to livelihoods and food security. Promotion of holistic, "ecosystems", based approaches to development that incorporate adequate and appropriate attention to inland water biodiversity. *Integration of the conservation and sustainable use of biological diversity into all relevant sectors of water-resource and river-basin management, taking into account the ecosystem approach* Guidelines for integrated resources management , catchment (basin) based, are being developed in order to improve policy decisions for multiple use of resources. *To encourage the development, application and transfer of low-cost appropriate technology, non-structural and*

Programme of Work	Example of activities leading to adverse effects on biodiversity and/or long-term development objectives	Examples of activities under the programme of work that can help ensure that MDGs are achieved consistent with the Convention on Biological Diversity
		innovative approaches to water resource management and the conservation and sustainable use of the biological diversity of inland water ecosystems, taking into account any decision taken by the Conference of the Parties at its seventh meeting on technology transfer and cooperation *To provide the appropriate incentives and valuation measures to support the conservation and sustainable use of inland water biological diversity, and to remove, or reform appropriately, all perverse incentives opposing such conservation and sustainable use of ecosystems*. Tools for assessing the impact of policy management decisions on inland water biodiversity are being produced. Wise use principles and guidelines for wetlands. Exchange of experiences and information on appropriate policy and management approaches (examples of best practice). Promote better management of inland water biological resources including improved approaches to governance. Collaboration with other Conventions and initiatives (in particular the Convention on Wetlands). Generate and disseminate information on the role of women ref. inland water biodiversity. Generate data/information and awareness raising of the linkages between inland waters and child mortality. Provide and disseminate information on linkages between freshwaters and water-borne diseases (awareness-raising that it is generally pollution and degradation of the aquatic ecosystem that is the problem).

Programme of Work	Example of activities leading to adverse effects on biodiversity and/or long-term development objectives	Examples of activities under the programme of work that can help ensure that MDGs are achieved consistent with the Convention on Biological Diversity
		Provide and disseminate more information and raise awareness of the important linkages between water, inland water biodiversity and sustainable development.
Marine and coastal biodiversity	Over-population in coastal regions leads to multiple uses, demands, pressures and conflicts; Overexploitation of fisheries; Politicized nature of fisheries policy; Negative impacts of mariculture on biodiversity. Mariculture of carnivorous fish results in net loss of food production; Marine ecosystems suffer from accumulation of pollutants (etc.) from land based developments;. International regimes for sustaining biodiversity on the high seas may constrain some stakeholders.	The programme of work on the biological diversity of marine and coastal ecosystems is currently being revised and elaborated taking into account the MDGs (UNEP/CBD/COP/12/Add.2). Draft targets for the programme of work have also considered the MDGs (UNEP/CBD/COP/20/Add.5). Programme element 1 refers to the implementation of integrated marine and coastal area management approaches in order to reduce potential conflicts between activities. Programme element 2 address the need for sustainable use of marine and coastal living resources (including managing over-exploitation). Programme element 3 addresses the need for marine and coastal protected areas (see also comments under protected areas as a cross-cutting issue below). The programme of work on mariculture (element 4) deals with sustainable increases in food production and the mitigation of the impacts of mariculture on the marine and coastal environment.

C. Biodiversity and the Millennium Development Goals – some cross-cutting issues under the programme of work of the Convention and tools to address the needs to consider the Convention on Biological Diversity and the MDGs together.

Cross-cutting issues, obviously, apply to all programmes of work in the thematic areas (as per table B above).

Cross-cutting issue	**Rationale and example of potential inconsistencies addressed**	**Tools**
Ecosystem approach	Activities in one sector have impacts in another. Benefits to some stakeholders need to be addressed in relation to risks or losses to others. Win-lose situations.	The ecosystem approach is regarded as a significant toolto address potential inconsistencies and to achieve fully integrated resources management and sustainable development including incorporating issues of access, benefits and equity.
Biosafety	New technologies offer significant benefits but also risks. Benefits and risks will differ between stakeholders. Potential negative impacts of biotechnology on biodiversity and its ability to contribute to the MDGs – in particular loss of biodiversity assets for the rural poor.	Cartegena Protocol on Biosafety
Sustainable use	Sustainable use is threatened by any unsustainable activity in any sector.	Addis Ababa principles and guidelines for the sustainable use of biodiversity.
Biodiversity and tourism	Tourism can benefit some stakeholders at the expense of others, through impacts upon biodiversity.	Guidelines of the Convention on Biological Diversity on biodiversity and tourism.
Access and benefit-sharing -including intellectual property rights	Improved property rights, access and benefit sharing may limit the current and future activities of some stakeholders.	Bonn guidelines on access to genetic resources and fair and equitable sharing of the benefits arising out of their utilization. Draft Action Plan on capacity building for access and benefit-sharing.
Traditional knowledge, innovations and practices (Article 8(j))	Loss of traditional knowledge innovations and practices, through inappropriate development activities, may undermine the sustainability of biodiversity and its benefits – including loss of livelihoods and food security. Increased awareness of traditional knowledge, innovations and practices may constrain, or be a threat to, certain	Draft guidelines or recommendations for the conduct of cultural, environmental and social impact assessments regarding; developments proposed to take place on sacred sites and on lands and waters occupied or used by indigenous and local communities. Mechanisms to promote the effective participation of

Cross-cutting issue	Rationale and example of potential inconsistencies addressed	Tools
	stakeholders.	indigenous and local communities.
Taxonomy	Lack of taxonomic knowledge will constrain the analysis of linkages between biodiversity and development and undermine attempts to sustain biodiversity and livelihoods. Improved taxonomic knowledge may increase knowledge of the impacts of some stakeholders upon biodiversity.	Global Taxonomy Initiative.
Incentives	The purpose of incentive measures is to "internalize" the public-good value of biodiversity into decision-making, and is therefore a key instrument to ensure that biological diversity as well as environmental assets in general, are used in a sustainable manner. However, activities related to incentive measures can sometimes be difficult and controversial to implement. For instance, perverse incentives often favour powerful commercial, lobby and other interest groups. Some incentive measures that are otherwise effective may put a disproportionate burden on the poor.	Proposals for design and implementation of incentive measures. Proposals for the application of ways and means to remove or mitigate perverse incentives. Proposals point to the distributional aspects of incentive measures and that they should support the objective of poverty alleviation and social and economic development needs of indigenous and local peoples. Also stresses equity and poverty alleviation.
Invasive alien species	Invasive alien species can bring benefits to some stakeholders but can have serious negative consequences for other stakeholders. Potential inconsistencies between commercial (or economic) interests and impacts upon biodiversity as expressed through losses of livelihood benefits for the poor. Access of the poor to the benefits of alien species may be constrained through biodiversity considerations.	Guiding principles on Invasive Alien Species. Development of improved control and management approaches for invasive alien species. Toolkit of best prevention and management practices of invasive alien species.
Protected areas	Protected areas, if not properly designed, implemented and managed, may restrict access of poor and vulnerable communities to natural assets.	Guidelines for the establishment and management of protected area systems across each thematic area.

Cross-cutting issue	Rationale and example of potential inconsistencies addressed	Tools
Climate change	Development activities can increase climate change which can adversely impact upon the poor. Adaptation and mitigation to/of climate change could adversely impact biodiversity.	Outputs of the AHTEG on climate change and biodiversity.
Public education and awareness	Limited public awareness and education will compound problems and inconsistencies through misunderstanding of the linkages between biodiversity and development. Improved public awareness may increase inconsistencies between certain stakeholders	Information and outreach programme. Global initiative on capacity-building for education and public awareness in biodiversity (CEPA) Community education and public awareness activities. Awareness raising of the importance of biodiversity, the Convention on Biological Diversity and links to the MDGs as encouraged, for example, through draft recommendations in the note by the Executive Secretary on relevance of the Convention to the MDGs and WEHAB initiative (UNEP/CBD/COP/7/20/Add.1).
