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PROPOSALS ON WAYS AND MEANS TO ACHIEVE CO-BENEFITS FOR BIODIVERSITY, COMBATING DESERTIFICATION/LAND DEGRADATION, AND CLIMATE CHANGE

Note by the Executive Secretary

INTRODUCTION

1. In its decision IX/16 of the Conference of the Parties to the Convention on Biological Diversity (CBD) requested the Executive Secretary to explore, *inter alia*, with the Global Environment Facility (GEF), ways and means to achieve biodiversity co-benefits and benefits for combating desertification/land degradation in climate-change activities, including through capacity-building, with a view to presenting a specific proposal to the Conference of the Parties at its tenth meeting.
2. In the same decision, the Conference of the Parties requested the Executive Secretary to collaborate with the secretariats of the other Rio conventions and the United Nations Environment Programme (UNEP) to explore the nature and scope of the Bali Strategic Plan for Technology Support and Capacity-Building¹ with a view to identifying how it might support the achievement of synergies between the three Rio conventions in national implementation, and report thereon to the Conference of the Parties at its tenth meeting. As the Bali Strategic Plan builds on existing assessments such as the national capacity self-assessments (NCSAs) which are specific to the Rio conventions, a detailed review of NCSAs is relevant.
3. Accordingly, the present note includes: a review of co-benefits in GEF-funded biodiversity, sustainable land management and multi-focal area projects (section I), a review of co-benefits in GEF-funded climate change projects (section II); an overview of frameworks for capacity-building (section III), a review of priority activities promoting synergies between the Rio conventions as listed in NCSAs (section IV); and proposals on ways and means to achieve co-benefits based on lessons learned and good practices (section V).

* UNEP/CBD/COP/10/1.

¹ UNEP/IEG/IGSP/3/4, annex.

4. The Conference of the Parties may wish to promote further activities to address the gaps identified in this document and enhance implementation of earlier decisions, building upon the lessons learned from the national capacity self assessments and the review of the GEF portfolio (in particular, the lessons learned from sections I and V). A draft decision to this effect is included in the compilation of draft decisions (UNEP/CBD/COP/10/1/Add.2) under agenda item 5.6.

5. The present document builds on existing work on achieving co-benefits including the reports of the first and second ad hoc technical expert groups on biodiversity and climate change (AHTEG), published as Technical Series Nos. 10, 25, 41 and 42. As such, many of the recommendations before this meeting arising from SBSTTA recommendation XIV/5, which considers the report of the AHTEG, are directly relevant as proposals on ways and means to achieve co-benefits. These recommendations and the accompanying background material are not repeated in the current document. The recommendations from SBSTTA, as well as draft recommendations drawn from the analysis of the GEF portfolio of projects and NCSAs are included in the compilation of draft decisions (UNEP/CBD/COP/10/1/Add.2) under agenda item 5.6.

6. The present document also recognizes the difference between co-benefits that can be generally defined as additional benefits that can be achieved in conjunction to one core benefit that is designated as the first priority (e.g. prioritizing high biodiversity-value areas within a project to reduce emissions from deforestation and forest degradation) versus multiple benefits which are achieved in projects in which no single benefit is prioritized over others (e.g., a sustainable forest management project which prioritizes equally biodiversity conservation and sustainable use and climate-change mitigation). The focus of the present document is on achieving co-benefits, although multiple benefits are considered.

I. MANAGEMENT AND MULTI-FOCAL AREA PROJECTS

7. For the purpose of the portfolio review, a selection of GEF biodiversity, sustainable land management and multi-focal area projects were reviewed.² As such, a total of 67 project documents were reviewed in order to identify examples of co-benefits for biodiversity, climate change mitigation or adaptation and combating desertification/land degradation. The review also considered the findings of the evaluation report on the biodiversity focal area completed in 2004. A complete list of these projects can be found in table form in an information document for the meeting (Case-studies on climate change, biodiversity and combating desertification/land degradation).

8. Within sustainable land management and multi-focal area projects, the conservation and sustainable use of ecosystems are the most commonly identified co-benefits. Project activities designed to achieve these co-benefits include the creation of new protected areas or the expansion of existing protected areas networks. For example, GEF BD-LD project 2975 “Mindanao Rural Development Program Phase II - Natural Resource Management Project” includes an activity for the establishment and co-management of marine sanctuaries and/or protected areas while the GEF multi-focal area MENARID projects (GEF projects 2709 and 2632) include protected areas in the overall strategy for the sustainable management of rangelands.

9. Given that protected areas are estimated to contain 16 to 20 per cent of the world’s terrestrial carbon stocks,³ protected areas projects can be assumed to have co-benefits for climate change mitigation although this is not explicitly stated in the project documents.

10. In some cases, conservation co-benefits are achieved through improved management practices in protected areas, although, in many cases, actions are limited to sustainable financing options. Specific indicators to measure whether biodiversity benefits through improved management have been achieved are rarely identified.

² Projects selected include GEF-4 full-sized projects CEO endorsed between 1 January 2005 and 1 January 2010, excluding funding for the small grants programme and projects related to planning or reporting.

³ <http://www.cbd.int/lifeweb/ecoservices1.shtml>

11. Another commonly implemented set of project activities to promote co-benefits for biodiversity conservation and sustainable use involves the establishment of payment for ecosystem services (PES) mechanisms. For example, GEF BD-CC project 3623 “Establishment of Incentives for the Conservation of Ecosystem Services of Global Significance” includes an activity for the fine-tuning of payments to better cover the full range of ecosystem services values and opportunity costs, including tradeoffs between different land-use options such as production, conservation, carbon sequestration, etc.

12. Although not as common, a few projects were found to achieve co-benefits through ecosystem restoration. Restoration is achieved through reforestation or reforestation-enabling activities, such as facilitating investments for the creation of restoration concessions or through the restoration of wetland ecosystems. For example, GEF LD-CC project 3390 “Lower Usuthu Smallholder Irrigation Project (LUSIP)” will ensure that degraded land in the project area is restored and sustainably used although it should be noted that the above project, as with many restoration projects, doesn’t include an indicator to assess the impacts of restoration activities on biodiversity. As such, the scope of co-benefits achieved will be difficult to assess. Furthermore, the extent to which restoration activities achieve co-benefits depends on the design of such activities including, *inter alia*, the species selected, the degree to which restoration focuses on restoring ecosystem function versus productive capacity, etc. Without upstream attention to ensure that the full co-benefits potential is achieved, projects may miss an opportunity to maximize benefits.

13. In the case of climate-change co-benefits, ecosystem-based approaches to adaptation are the most commonly identified co-benefit category, including activities such as the use of agro-biodiversity in climate change adaptation planning, integrating protected areas networks into broader adaptation strategies and conserving and restoring coastal ecosystems to reduce vulnerability to climate change impacts. However, few projects have established indicators to measure the achievement of these co-benefits and those that have been established tend to be process focused.

14. With regards to ecosystem-based approaches to mitigation, sustainable land management, sustainable forest management and forest restoration are activities that can deliver co-benefits as long as native species are used and the value of biodiversity resources are recognized. In many projects, however, these conditions, essential for the achievement of co-benefits, are rarely elaborated in the project documents and, as such, it is difficult to assess the extent to which co-benefits will be realized. With regards to indicators, where indicators do exist, these include certain amounts of tons of CO₂ emissions avoided or tons of CO₂ sequestered.

15. Although most of the projects analysed consider climate change as a risk factor for their success, not all of them offer specific climate resiliency measures when discussing the long-term sustainability of the project. In fact, the report of the second AHTEG notes that climate change will impact the design and implementation of biodiversity conservation and sustainable projects if such investments are to be sustainable. However, the report notes that there are very few examples of cases in which this has been taken into consideration. The AHTEG report states that such ‘climate proofing’ or ‘climate resiliency’ can only be implemented where there is good information on the projected impacts of climate change on species, ecosystems and the drivers of loss. In many cases, within the GEF projects reviewed, mention is made of general national policies to address climate change, which are not project specific or, in some cases, adapted to the project but which may contribute to climate resiliency.

Lessons learned

Biodiversity, sustainable land management and multi-focal area projects can deliver significant co-benefits through ecosystem restoration, protected areas planning and payments for ecosystem services.
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Ecosystem based approaches for adaptation and mitigation are very well addressed in some projects, delivering good practice examples, however, there is scope for the enhanced mainstreaming of such approaches.
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There is a general lack of indicators to measure co-benefits and also, in some cases, the extent to which co-benefits will be achieved through actual project implementation are not clearly defined.

There is a need for further research on the projected impacts of climate change on species, ecosystems and the drivers of loss in order to facilitate long-term climate resiliency.

II. REVIEW OF CLIMATE-CHANGE PROJECTS

16. For the purpose of the portfolio review, CEO endorsed GEF projects under the climate change focal area as well as projects within the Climate Change Funds (LDCF and SCCF) were reviewed. As such, a total of 11 project documents were reviewed in order to identify examples of co-benefits for biodiversity and combating desertification/land degradation. A description of these projects can be found in the information note on case-studies on climate change, biodiversity and combating desertification/land degradation. The review also considered the findings of the Climate Change Programme Study completed in 2004.

17. Co-benefits for biodiversity and combating desertification/land degradation were found in most climate change projects. Specific activities promoting co-benefits include the restoration of ecosystems (mangroves, coral reefs, pastures and wetlands), the conservation of ecosystems to reduce vulnerability to the negative impacts of climate change, the establishment of sustainable ecosystem management practices and the assessment of vulnerability to climate change among species and ecosystems.

18. Some projects also ensured co-benefits through targeting adaptation activities at protected areas networks. Multiple benefits were achieved in some projects through the design and implementation of payment for ecosystem services schemes that integrate biodiversity values, carbon sequestration services and the ecosystem services provided through sustainable land management.

19. With regard to indicators, climate-change projects generally do contain indicators to capture and assess co-benefits. For example, GEF CC Project 2552 “Implementation of Pilot Adaptation Measures in Coastal Areas of Dominica, Saint Lucia and Saint Vincent and the Grenadines” contains an activity designed to improve adaptation performance indicators.

20. It should be noted, however, that there is scope for further efforts to evaluate the possible negative impacts of climate change mitigation or adaptation activities on biodiversity or efforts to combat desertification/land degradation. For projects where such potential impacts are evident, such as biomass applications, the GEF requests that sustainability criteria be observed to ensure that GEF support to modernization of biomass use does not undermine food security, contribute to deforestation, reduce soil fertility, increase greenhouse gas emissions beyond project boundaries, or violate sustainability principles relating to biodiversity conservation or sustainable land and water management.

21. With regards to the above, the existing frameworks to analyse the potential environmental and cross-sectoral impacts of projects and the environmental safeguard policies in place within the GEF implementing agencies could be considered as tools to evaluate and address the possible negative impacts of all relevant climate change mitigation and adaptation activities.

22. As such, although the risks of negative impacts from climate change mitigation and adaptation are low given the scope and nature of the GEF projects reviewed, risks may be higher for non-GEF projects which may not have a specific focus on multiple benefits. For example, reforestation activities designed for climate change mitigation can have either positive, neutral or negative impacts on biodiversity depending on the location of such activities and the species used. This issue is further expanded in the report of the second AHTEG on biodiversity and climate change.

Lessons learned

23. The Climate Change Programme Study completed in 2004 states that the GEF supports mainly long-term mitigation projects and has recommendations to shift from technology-based towards market-based approaches for greenhouse gas emission reduction or avoidance. Since 2004, the climate change adaptation portfolio has strengthened links between climate change and biodiversity. Additional lessons learned include:

Co-benefits for biodiversity and combating desertification/land degradation were found in most climate change projects

There is a much greater focus on indicators to assess co-benefits within the climate change portfolio compared with other portfolios reviewed
Co-benefits in climate change adaptation projects are most often found in coastal zones
There is scope for additional work on assessing, when it is relevant, the possible negative impacts of climate change mitigation and adaptation activities on biodiversity and efforts to combat desertification / land degradation

III. FRAMEWORKS FOR CAPACITY-BUILDING

24. The Bali Strategic Plan for Technology Support and Capacity-building was approved by the 23rd session of UNEP Governing Council, in February 2005. The objectives of the Bali Strategic Plan do consider capacity-building for enhanced synergies between the Rio conventions including through strengthening cooperation among UNEP, the Convention Secretariats and other bodies engaged in environmental capacity-building. With regards to national implementation of synergies among the Rio conventions, the Bali Strategic Plan builds on the country-driven assessment of priority capacity-building needs as outlined in National Capacity Self Assessments.

25. The National Capacity Self Assessment (NCSA) is an assessment and planning exercise to address priority national and global environmental issues based and to assess priority needs and prepare a national capacity development plan – the objectives and actions required to improve the ability of individuals, institutions and systems to make and implement decisions, and to perform functions in a sustainable manner.⁴ The purpose of the NCSA is to enable each participating country to:

(a) Review the global environment issues that require its priority attention, particularly, but not exclusively, with regard to issues covered by the Rio conventions (United Nations Convention on Biological Diversity; the United Nations Framework Convention on Climate Change (UNFCCC); and the United Nations Convention to Combat Desertification(UNFCCD);

(b) Determine what capacity development is needed to strengthen management of these issues; and

(c) Prepare a national plan of capacity development actions.

26. In order to meet MEA responsibilities, each country will need the capacity to manage the following functions:

(a) To mobilize information and knowledge;

(b) To build consensus and partnerships among all stakeholders;

(c) To formulate effective policies, legislation, strategies and programmes based on problem identification and long-term strategy for effective implementation;

(d) To implement policies, legislation, strategies, programmes and projects, including mobilizing and managing human, material and financial resources; coordination of technical support with available funding for on the ground implementation; and

(e) To monitor, evaluate, report and learn.

Status of national capacity self assessments

27. Since 2002, 152 countries—nearly all developing countries and those with economies in transition—have become engaged in the NCSA programme which required each country to prepare and submit an NCSA proposal, plan and budget with assistance from one of the GEF Implementing Agencies: the United Nations Development Programme is responsible for 116 NCSAs (76%); the United Nations Environment Programme for 35 (23%) and the World Bank for 1. An important feature of the NCSA is that it is a country-driven enabling activity, a self-assessment of issues and needs, leading to a national

⁴ GEF: Global Environmental Facility, 2001, Proposed Elements for Strategic Collaboration.

capacity action plan which serves as the core strategy to strengthen a country's environmental management framework.

28. Approved by the GEF in 2004, the Global Support Programme (GSP) was established in mid-2005 as a support mechanism for NCSAs and capacity development under the GEF. Since then, GSP has convened 13 subregional workshops. GSP recently convened two subregional workshops to address the specific needs of teams currently implementing their NCSAs, as well as to catalyze the use of national and regional experts as resource persons and organizations.

IV. REVIEW OF NATIONAL CAPACITY SELF ASSESSMENTS

29. The primary goal of the review is to note national priorities which are promoting synergies between the Rio conventions for capacity development to better address global environmental issues. The focus is on a country's capacity-development actions to implement the three "Rio conventions" – biodiversity (CBD), climate change (UNFCCC) and land degradation (UNCCD).

30. In conducting the review the NCSA Final Reports, Action Plans and/or Cross-cutting Assessment Reports from 101 country Parties were analyzed.

31. The review categorized priority activities into following four subjects:

- (a) Mobilizing information and knowledge;
- (b) Enhancing stakeholder participation;
- (c) Formulating and/or implementing effective policy, legislation and strategy; and
- (d) Building an effective organization.

A. Mobilizing information and knowledge

1. Establishing and developing integrated information management system

32. A number of inefficiencies with regards to the development and management of information related to implementation of the three Rio conventions are identified in NCSAs. They include: repetitions in data collection, non-compatibility of databases, and a lack of clarity on which agency is responsible for what information. Lessons learned include the need to ensure that there is a clear indication of who is responsible for information management and the importance of ensuring that consistency and interoperability are established early on in the process of data collection.

2. Enhancing research

33. General knowledge on the links between biodiversity, climate change and combating desertification/land degradation is quite well developed however, some gaps were identified with regards to modelling and scenarios as well as detailed knowledge on interlinkages at the species or ecosystem level. Additional research is also needed by many Parties on the valuation of ecosystem services, mapping tools and the impacts and vulnerability of biodiversity and land resources with regards to the negative impacts of climate change.

34. Lessons learned include the importance of establishing a programmatic approach to research on synergies, the need to identify experts who can be engaged in expanded research programmes, and the need to strengthen the science-policy interface in order to ensure that research can contribute to the development and implementation of policies and plans.

B. Enhancing stakeholders participation

1. Strengthening participation of government stakeholders

35. Implementing synergies among the three Rio conventions is strengthened when all relevant government agencies and sectors are effectively engaged in a coordinated manner. As such, a number of Parties propose specific actions to expand the involvement of government stakeholders. Lessons learned in the involvement of stakeholders include the value of building links based on specific themes that lend

themselves to synergies and the importance of establishing permanent mechanisms for information sharing and awareness raising to ensure that efforts are sustained.

2. *Facilitating public participation in the implementation of 3 Rio conventions*

36. Although there is a strong focus within NCSAs on capacity-building for Governments, the importance of involving a broad range of stakeholders in the implementation of the three Rio conventions (including academic institutions, local communities, non-governmental organizations and the private sector) is highlighted in many submissions. These submissions highlight lessons learned including the value of focusing engagement on effecting changes in behaviour and the importance of managing outreach and awareness raising material to avoid over-saturating the audience with too much information.

C. *Formulating and/or implementing effective policy, legislation and strategy*

1. *Building an appropriate policy and legal framework*

37. The lack of environmental policies and the lack of coherence among and between different environmental policies are identified as significant obstacles to the implementation of synergies among the three Rio conventions. Lessons learned from addressing these gaps include the need to sensitize policy makers on the benefits of linking the three Rio conventions and educating them on the possible negative impacts of conflicting and overlapping legislation.

2. *Develop and support a financing system/mechanism*

38. In order to support regulatory capacity-building, Parties recognize that adequate and predictable financial resources must be made available. In this regard, Parties identified opportunities for strengthening resource mobilization and availability both within national budgets and within development assistance.

39. Lessons learned include the importance of packaging financial resource requests in a coherent manner in order to achieve a critical mass, the need to identify areas well suited for synergies before the development of funding proposals and requests, and the value of supportive financial management structures such as common project databases to ensure that the benefits from a synergies approach can be captured and reported.

D. *Building an effective organization*

1. *Institutional strengthening*

40. Institutional capacity-building is listed in all NCSAs as an important issue to consider. With regards to enhancing synergies Parties recognize the importance of strengthening lines of communication and information exchange as well as clarifying and, where necessary, reforming institutions and their associated roles and responsibilities.

41. Lessons learned include the need to ensure that institutions and institutional mechanisms responsible for the facilitating of synergies are supported at the highest political level. It is also critical to ensure that institutions are provided with sufficient resources to fulfil their mandate.

2. *Enhancing human resources*

42. A number of stakeholders are involved in implementation of the three Rio conventions and, as such, have a role to play in enhancing synergies. In NCSAs, Parties largely focus on enhancing human resources within the government and within the scientific community through building skills and knowledge and improving the utilisation of in-country expertise. Lessons learned include: the need to ensure that once staff are trained, they are retained in the government, the value of forming long-term partnerships with educational institutions, and the importance of mechanisms to share limited skills across ministries and departments.

**V. PROPOSALS ON WAYS AND MEANS TO ACHIEVE
BIODIVERSITY CO-BENEFITS AND BENEFITS FOR
COMBATING DESERTIFICATION/LAND DEGRADATION**

A. General proposals on ways and meant to achieve co-benefits

43. The CBD Technical Series No. 10, chapter 6, identifies a number of lessons learned for the analysis of case-studies promoting synergies between biodiversity conservation and sustainable use, combating desertification/land degradation and climate change mitigation and adaptation. These can be applied to projects and investments across all ecosystems and include:

(a) There is scope for afforestation, reforestation, improved forest management and avoided deforestation activities to be harmonized with biodiversity conservation benefits;

(b) The linkages between conservation and sustainable use of biodiversity with community livelihood options provides a good basis for projects supported under the Clean Development Mechanism (CDM) to advance sustainable development;

(c) The neglect and/or omission of social, environmental and economic considerations can lead to conflicts which could undermine the overall success of carbon mitigation projects, and long-term biodiversity conservation;

(d) Countries and key stakeholders need to have the necessary information, tools and capacity to understand, negotiate, and reach agreements under the Kyoto Protocol to ensure that the resulting projects are balanced with respect to environment, social and development goals;

(e) Some minimum environmental and social norms (or guiding frameworks) when purchasing carbon credits through Clean Development Mechanism projects could avoid perverse outcomes;

(f) The application of appropriate analytical tools and instruments can provide constructive frameworks for *ex ante* analysis to guide decision-making; provide adaptive management options during implementation; and provide a basis for learning and replication through *ex post* evaluations;

(g) Measuring the impact of Clean Development Mechanism and joint implementation projects on biodiversity requires baseline data, inventories and monitoring systems;

(h) The ecosystem approach provides a good basis to guide the formulation of climate change mitigation policies/projects and conservation of biodiversity.

44. Furthermore, the report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change (CBD Technical Series No. 41) suggests a number of additional tools and methodologies to enhance synergies and co-benefits⁵ including through mechanisms for reducing emissions from deforestation and forest degradation (REDD), ecosystem-based approaches for adaptation, reducing impacts and vulnerability and valuation and incentive measures. Additional ways and means to promote co-benefits based on the review of the GEF portfolio and NCSAs are elaborated below.

45. Finally, it is possible to achieve co-benefits through the broader adoption of sustainable management practices which, through their very nature deliver multiple benefits. This is because environmental problems are generally interlinked as are their solutions. For example, climate change directly affects biodiversity and desertification. The more intense and far-reaching climate change is, the greater will be the loss of plant and animal species. Climate change can further exacerbate the expansion of degraded lands, deserts and semi-arid regions, potentially leading to additional increase in carbon dioxide emissions. Sustainable land management can provide multiple global environmental benefits - increasing carbon stocks in soil, vegetation, and litter, reducing agricultural emissions of greenhouse gases and sustaining local livelihoods. Furthermore, forests are responsible for over 70 per cent of all biodiversity globally and net effects of land use, land-use change and forestry currently contribute

⁵ A complete list of tools and methodologies proposed can be found in the “Key Messages” section of CBD Technical Series No. 41 (p.8-14).

about 17 per cent of all CO₂ emissions and. The sustainable management of forests can contribute by reducing greenhouse emissions and sequestering carbon, while reducing the vulnerability of forest ecosystems to climate impacts, conserving biodiversity and enhancing carbon stocks.

1. *Improving and implementing indicators*

46. Co-benefits may be better achieved in all types of projects if guidelines for the development of indicators to capture co-benefits are developed to measure the extent to which co-benefits are realized and insuring that these indicators are fully adopted and implemented. An improved set of indicators would also better facilitate an evaluation of the effectiveness of project activities allowing for further adaptive management and project improvement based on lessons learned. Such a set of indicators would be best developed through a collaborative effort involving experts from biodiversity, climate change and land degradation fields.

47. In developing indicators, attention should be paid to ensuring that such indicators conform to the SMART standards and are:

- (a) **Specific** — Clearly articulated and relative to a particular objective or result;
- (b) **Measurable** — Capable of being accurately tracked — such as “number of observed species in a given area over a specific time period;”
- (c) **Achievable and attributable** — *Achievable* indicators are realistic projections of what can be accomplished. *Attributable* indicators can reliably link a given change directly to the intervention;
- (d) **Relevant and realistic** — These indicators establish a level of performance that is feasible to achieve and that meets the expectations of stakeholders;
- (e) **Time-bound, timely, trackable and targeted** — The evaluation system allows indicators to be tracked at a given frequency for a designated period; and the indicator clearly identifies the group or groups of stakeholders who will be affected.⁶

48. It would also be useful to identify how such an indicator list could be linked to the ongoing process of harmonized reporting under the three Rio conventions (including the UNCCD inter-agency task force on harmonized reporting, and consideration of harmonized reporting by the Joint Liaison Group⁷) and the various synergy processes within the Environmental Management Group (EMG) including those on land and biodiversity.

2. *Promoting ecosystem restoration*

49. Given that terrestrial ecosystems store about 2,500 gigatonnes of carbon (Gt C) compared to approximately 750 Gt C in the atmosphere, and given that, over time, land-use change and land use have reduced potential terrestrial ecosystem stocks, restoring degraded ecosystems can contribute to climate change mitigation. Restoration activities also improve habitat in support of biodiversity conservation and sustainable use and combat desertification when implemented in dry and sub-humid lands.

50. Ecosystem restoration involves activities that transform a degraded ecosystem into an ecosystem that is less disturbed and better able to provide ecosystem services. Restoration should be guided by the ideal of returning the ecosystem to its historical state; however this is an ideal that is seldom fully realized. Restoration is considered to be successful once ecosystem resilience has been re-achieved.⁸

51. Restoration can involve reducing pressure and allowing ecosystems to naturally recover or undertaking movement related activities such as replacing lost ecosystem services with temporary

⁶ http://www.gefcountrysupport.org/report_detail.cfm?projectId=232.

⁷ A background paper on harmonized reporting was prepared for the ninth meeting of the JLG by the UNFCCC Secretariat highlighting the mandates from each Conventions' Conference of the Parties with regards to the feasibility and desirability of harmonized reporting and the differences in reporting cycles and themes / content.

⁸ Foundations of Restoration Ecology. Society for Ecological Restoration International. Edited by Falk, D., M. Palmer and J. Zedler. 2006.

artificial alternatives or the re-introduction of lost species. Typically restoration includes both physical restoration (restoration of the basic physical structure of the ecosystem) and biological restoration (restoration of the species assemblages and functional roles).

52. It should be noted, however, that restoration often has high cost implications when compared to conservation. For example, the cost of physical restoration in coral reefs has been estimated at between US\$ 100,000 and US\$ 1 million per hectare.⁹ There is a need to undertake careful cost-effectiveness analyses to ensure that the most appropriate approach is adopted and to compare with other infrastructure-based alternatives.

3. *Shifting to a greater focus on achieving multiple benefits*

53. While usually targeting a central theme, successful environmental interventions rarely fail to deliver a multitude of benefits across a variety of areas that include biodiversity, climate change mitigation and adaptation, provision of ecosystem services and others. At times, these have been termed co-benefits because they are accrued as a secondary objective. However, as environmental challenges expand in scale and severity, it is necessary that multiple benefits be delivered purposely by projects and programmes, particularly as the gap between financial resources and the need to address global environmental goods widens. There is a scope, therefore, to shift focus to actions that promote complementarity and synergy in the generation of multiple environmental benefits, together with minimizing any trade-offs or negative impacts. As the financial mechanism of all the three Rio conventions, GEF strategies are articulated focal area by focal area and draw closely on Convention guidance. However, project design and implementation are increasingly being formulated to seek synergies and connections across the different focal areas, reflecting the multiple needs of recipient countries.

B. *Achieving co-benefits in biodiversity projects and projects to combat desertification/land degradation*

1. *Improved protected areas management*

54. Biodiversity and land degradation projects that involve establishing, increasing or improving protected areas seem to have been the most successful at establishing co-benefits. They offer clear land conservation benefits which can be measured through the area of land to be protected. As well, when the project involves forest protected areas it has clear climate change mitigation benefits by maintaining or increasing carbon sequestration.

55. The establishment of national protected area systems that ensure coverage of relevant biomes, eco-regions, representativeness for various biodiversity elements and effectively managed is a means to ensure adaptation through increasing resilience to climate change, and the continued delivery of ecosystem services in the production landscape/seascape. As recommended by SBSTTA-14, specific measures to ensure the resilience of protected area systems include:

(a) The incorporation of climate considerations into systematic conservation planning and protected area gap analysis assessments and implement the results of these assessments to establish an ecologically representative national protected area system;

(b) The integration of protected areas into wider landscapes and seascapes and sectors, including through the use of connectivity, development of ecological networks and biological corridors and restoration of degraded habitats and landscapes;

(c) Consideration of climate change adaptation in management effectiveness evaluations including ensuring that the results of these assessments are implemented to secure maintenance and improvement of carbon stocks;

(d) Capacity-building and awareness raising among protected area managers concerning management under conditions of increased risk and uncertainty; and

⁹ Reef Restoration – Concepts and Guidelines. Edwards, A. and E. Gomez. 2007.

(e) The recognition and involvement of all forms of governance including the role of indigenous and community conserved areas and conserved areas of other stakeholders.

56. Perhaps the most interesting protected area related projects also try to establish sustainable financial mechanisms, which involve sustainable use of the land either through PES schemes or other sustainable use of resources.

2. *Supporting natural resource-based livelihoods*

57. Other possible areas for further investment that could be explored in further detail include biodiversity and land degradation projects with a focus on ensuring and enhancing income from natural resource-based livelihoods. For example, projects to combat land degradation through improving the sustainability of pastoral livelihoods would allow for the biodiversity benefits typically associated with such livelihood options to be better realized (sustainable use of grassland biodiversity, conservation of traditional livestock varieties, etc).

58. Furthermore, enhancing the sustainability of land use in drylands would limit the release of greenhouse gasses while supporting traditional knowledge has been demonstrated to contribute to climate change adaptation through, for example, promoting improved drought management.

3. *Climate-proofing investments*

59. Adaptation mechanisms to ensure that the project outcomes are not negatively impacted by climate change through, for example, maintaining and enhancing the natural adaptive capacity of biodiversity, including climate change impacts in long-term monitoring and evaluation of the state of biodiversity and designing protected areas based on projected future ranges of target species or ecosystems should also be considered to guarantee the success of biodiversity and land-degradation projects in a changing environment. This is especially true given the recent findings of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change, which reiterates that: (i) climate change is emerging as one of the greatest threats to biodiversity; and (ii) managing biodiversity under changing climatic conditions will require changes to conservation and sustainable use approaches in many cases.

60. In climate-proofing (or enhancing the climate resilience of) biodiversity investments, a number of lessons learned should be considered:¹⁰

- (a) Climate change needs to be treated as a major environmental, economic and social risk;
- (b) Addressing short-term vulnerabilities is key;
- (c) Climate risk management requires a high level of coordination;
- (d) Climate risk management needs to be fully integrated into planning;
- (e) All relevant stakeholders, including local communities and the private sector, should be involved in climate risk management;
- (f) Bottom-up consultations should be linked to top-down policy planning;
- (g) Existing regulations should be evaluated and, if necessary, strengthened;
- (h) Soft solutions, including improved natural resource management, should be considered ahead of structural investments.

¹⁰ World Bank Group, Managing Climate Risk – integrating adaptation into World Bank Group operations. <http://siteresources.worldbank.org/GLOBALENVIRONMENTFACILITYGEFOPERATIONS/Resources/Publications-Presentations/GEFAadaptationAug06.pdf>

C. Achieving co-benefits in climate change projects

1. Avoiding negative impacts from climate change mitigation and adaptation

61. Climate change mitigation projects do not seem to naturally or easily establish co-benefits. As such, there is scope for additional work identifying the links between mitigation related to renewable energy and biodiversity and combating land degradation. First, in order to ensure that climate change mitigation projects don't have negative impacts on biodiversity and land degradation objectives the following approaches could be considered:

- (a) Ensuring that a full life cycle analysis is required for mitigation projects;
- (b) Considering the value of ecosystem services in project cost-benefit analyses, and
- (c) Applying environmental impact assessments to mitigation and adaptation projects to avoid un-intended negative consequences.

2. Ecosystem-based approaches for mitigation

62. There is significant potential to address climate change mitigation objectives through both enhancing natural carbon stocks and assuring the continued storage of carbon in terrestrial and marine sinks. Projects that address such mitigation potential could have co-benefits for biodiversity and combating land degradation if upstream consideration is given to issues related to such issues through, for example, selecting indigenous species in reforestation programmes, supporting traditional land-use practices where such practices are sustainable, and enhancing the resilience of ecosystems.

3. Ecosystem-based approaches for adaptation

63. Because of the variety of ecosystem services provided by biodiversity such as the provision of food and fodder and protection from flooding and drought, biodiversity is an important resource for climate change adaptation. In some ecosystems, such as marine and coastal zones, the role of ecosystems in broader adaptation planning has already been identified and a number of corresponding activities have been implemented, including through integrated marine and coastal zone management.

64. In order to be effective with regards to realizing co-benefits, ecosystem-based approaches for adaptation should consider the ecosystem approach. In particular, since the ecosystem approach takes a broad perspective to management, it is an ideal methodology through which the multiple impacts from climate change, including on biodiversity, can be reflected in comprehensive and responsive adaptation planning.

65. Additional guidelines for implementing ecosystem-based approaches for adaptation were identified by the second Ad hoc Technical Expert Group on Biodiversity and Climate Change.

4. Integrating biodiversity and desertification land degradation into assessments of the impacts of climate change

66. In considering impact and vulnerability assessments, projects should be based on a strong baseline including: (i) experimental studies to establish causality and define both the nature and the magnitude of cause and effect relationships; (ii) modelling studies that relate the risk probability of species and ecosystems to future climatic or other factors; and (iii) observational data including that gathered by indigenous and local communities, who often observe species and ecosystems on a daily basis.

D. Capacity-building activities

1. Identifying and scaling-up best practices

67. To promote learning-by-doing, the most successful co-benefits projects in each focal area need to be identified and disseminated to all interested parties. This initiative should include a clear description of factors of success (why is this 'a successful' project?) as well as information on the outcomes, activities, stakeholders and monitoring and evaluation approaches. The presentation of the successful projects should also be accompanied by a description of shortcomings and ways to avoid them.

68. Furthermore, in order to improve the recognition and importance of successful examples of projects that achieve co-benefits, each project document, national budget or investment strategy could have a clearly identified section that would state and thoroughly describe expected co-benefits and the indicators used to measure their success.

2. Enhancing monitoring and evaluation

69. Greater capacity is needed in all project areas to facilitate the identification and application of appropriate monitoring and evaluation programmes that capture co-benefits. This should include explaining the importance of indicators in all focal areas and presenting examples of indicators and mechanisms to implement them. Such an approach could be added to existing GEF efforts to strengthen capacity for monitoring and evaluation in the implementation of GEF projects.

70. Enhanced monitoring and evaluation would also benefit from increased awareness raising with regards to existing monitoring frameworks including the UNCCD performance review and assessment of implementation system (PRAIS). This system, adopted through UNCCD decision 12/COP.9,¹¹ is designed to allow for monitoring of a number of elements including (i) the implementation of UNCCD and its 10-year Strategic Plan, and (ii) best practices in implementation of UNCCD.

3. Improving synergies at the national level

71. In decision IX/16, the Conference of the Parties to the Convention on Biological Diversity recognized that synergies at the national level are the most effective way to achieve co-benefits between biodiversity, climate change and combating land degradation. In order to maximize such synergies at the national level, GEF focal points could also be included in relevant processes and mechanisms, including, *inter alia*, national coordination bodies, meetings across ministries, national and regional capacity-building workshops, etc.

72. Additional ways and means to improve synergies at the national level are identified by Parties in their NCSAs. A summary of such activities is presented below.

(i) Mobilizing information and knowledge

A) Establishing and developing integrated information management system

(a) Strengthening or developing centralized national environmental information and documentation centres (e.g., Ethiopia, Fiji, Niger, Honduras, Nicaragua);

(b) Coordinating national monitoring and evaluation and reporting teams (e.g., United Republic of Tanzania, Bulgaria);

(c) Identifying opportunities for coordinating information collection and exchange at the regional level (e.g., Mauritania, Cambodia);

(d) Assigning responsibility for information management for all three conventions to one lead agency (e.g., Palau, Mauritius); and

(e) Strengthening or establishing information exchange networks and protocols, including with academic institutions and the private sector (e.g., Uganda, United Republic of Tanzania).

B) Enhancing research

(a) Integrating environmental research into national research plans (where available) (e.g., Bulgaria);

(b) Developing a database of scientific experts within the country (e.g., Saint Kitts and Nevis);

(c) Strengthening or establishing a joint research and monitoring unit for the three Rio conventions (e.g., Fiji, Central African Republic);

¹¹ [decisions 11/COP.9, 12/COP.9 and 13/COP.9](#)

- (d) Strengthening or establishing national monitoring networks (e.g. Poland, Mongolia);
- (e) Enhancing collaboration between research departments within relevant government agencies (e.g. Malaysia).

(ii) *Enhancing stakeholders participation*

A) Strengthening participation of government stakeholders

- (a) Strengthening or establishing government workgroups or forums that draw from multiple agencies and departments (e.g. Ecuador, Poland, Ukraine);
- (b) Sensitizing government policy-makers on the links between the three Rio conventions (e.g. Uganda, Vietnam, Lesotho);
- (c) Strengthening or establishing links between local and national level government officials working on policy development and implementation of the three Rio conventions (e.g. Fiji);
- (d) Identifying issues that lend themselves to enhanced synergies on a sector-by-sector basis (e.g. Bulgaria).

B) Facilitating public participation in the implementation of 3 Rio conventions

- (a) Introducing incentives to encourage participation in implementation of the three Rio conventions (e.g. Armenia, St. Lucia);
- (b) Strengthening awareness raising efforts of the value of synergies including through focusing on effecting behavioural change (e.g. Tunisia, Mauritius);
- (c) Developing a coordinated communications strategy to avoid overwhelming the public with similar messages from different sources (e.g. Guatemala, Mexico, St. Vincent and the Grenadines);
- (d) Facilitating the participation of civil society in national environmental planning bodies (e.g. Palau, Mongolia);

(iii) *Formulating and/or implementing effective policy, legislation and strategy*

A) Building an appropriate policy and legal framework

- (a) Reviewing and addressing inconsistencies in current strategies (e.g. St. Lucia, Bulgaria, Fiji, Morocco, Uganda, Mexico);
- (b) Establishing and/or developing a national policy/agenda (e.g. St. Vincent and the Grenadines, Ecuador);
- (c) Consolidating environmental laws/regal frameworks (e.g., Saint Kitts and Nevis, Poland, Malaysia, Bhutan);
- (d) Integrating the consideration of three Rio conventions into development plans (e.g., Saint Lucia, Ethiopia, Chad, Burkina Faso, Central African Republic);
- (e) Strengthening the enforcement of existing laws and policies (e.g., Eritrea);
- (f) Developing guidelines for the implementation of environmental policies (e.g., Mongolia);
- (g) Establish a legal framework to recognize the contribution of traditional knowledge to implementation of the conventions (e.g., Armenia).

B) Develop and support a financing system/mechanism

- (a) Include actions to implement synergies in national budgets (e.g., Ecuador, Fiji, Eritrea, St. Lucia);

- (b) Strengthen or establish a national environment fund (e.g., Djibouti, Malawi, Niger, Palau, Tanzania);
- (c) Coordinate funding requests among the different agencies and departments responsible for implementation of the three Rio conventions (e.g., Cambodia, Morocco, Bulgaria, Gabon, Peru);
- (d) Identify one resource mobilization person or unit to mobilize funding for all three Rio conventions (e.g., Fiji, Central African Republic, Mali).

(iv) *Building an effective organization*

A) Institutional strengthening

- (a) Establishing a new unit related to environmental issues (e.g., Saint Kitts and Nevis);
- (b) Establishing an intra- and/or inter-institutional collaboration framework/mechanism (e.g., Armenia, Ukraine, Eritrea, Albania, Morocco, Palau, Uganda, Malaysia);
- (c) Ensuring institutions have access to the physical and technological infrastructure required to fulfil their mandate (e.g., China, Ethiopia, Mongolia);
- (d) Strengthening or clarifying the institutional authority, including through supporting legislation (e.g., Saint Lucia, Fiji, Niger, Ecuador);
- (e) Sharing human resources between the departments and ministries responsible for implementation of the three Rio conventions (e.g., Fiji);
- (f) Strengthening information exchange between focal points of the three Rio conventions (e.g., Poland);
- (g) Establishing environment units within relevant existing ministries and departments (e.g., Mongolia).

B) Enhancing human resources

- (a) Establishing and/or developing training/education programmes on synergies at the professional level (e.g. Ecuador, Malaysia, Mauritius, Mongolia, Palau, Fiji, Ukraine, Ethiopia);
- (b) Developing a policy manual on commitments and responsibilities under the Rio conventions (e.g. Djibouti, Saint Vincent and the Grenadines, Saint Kitts and Nevis);
- (c) Increasing the number of well-qualified staff working on synergies among the three Rio conventions (e.g., Poland, Eritrea, Kenya);
- (d) Implementing training programmes for negotiators (e.g. Niger, Burkina Faso, United Republic of Tanzania);
- (e) Establishing databases of skills and expertise available within the government (e.g., Saint Kitts and Nevis, Saint Lucia);
- (f) Establishing an internship programme to support the development of young staff (e.g. Peru).

73. In summary, in order to further enhance the achievement of biodiversity co-benefits and co-benefits for combating desertification/land degradation, it is proposed that the following areas should be considered:

Improving project design and implementation	Enhancing indicators
	Climate-proofing projects and programmes
	Identifying and scaling-up best practices
	Enhancing monitoring and evaluation
	Avoiding negative impacts from climate change mitigation and adaptation
	Considering a greater focus on achieving multiple benefits

Integrating relevant activities	Promoting ecosystem restoration
	Improving protected areas management and integration into wider landscapes / seascapes
	Supporting natural resource-based livelihoods
Recognizing and strengthening the contribution of ecosystem services	Adopting ecosystem-based approaches for mitigation
	Adopting ecosystem-based approaches for adaptation
Improving synergies at the national level through capacity building	Mobilizing information and knowledge
	Enhancing stakeholders participation
	Formulating and/or implementing effective policy, legislation and strategy
	Building an effective organization
