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**IN-DEPTH REVIEW OF THE APPLICATION OF THE ECOSYSTEM APPROACH***Note by the Executive Secretary***EXECUTIVE SUMMARY**

At its seventh meeting in 2004, in decision VII/11 on the ecosystem approach, paragraph 12, the Conference of the Parties requested the Executive Secretary to assess the application of the ecosystem approach, in the light of experiences gained from the activities under paragraphs 8, 9 and 10 of the same decision, for the consideration of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) prior to the ninth meeting of the Conference of the Parties. This note summarizes progress regarding the implementation of various paragraphs of decisions of the Conference of the Parties relating to the ecosystem approach by Parties, major partners, initiatives and organizations and in international forums; barriers to the application of the ecosystem approach; relevant findings and lessons learned from the Millennium Ecosystem Assessment (MA); the contribution of the ecosystem approach to implementing the Convention and reducing the rate of biodiversity loss; and key issues and opportunities for promoting the further application of the ecosystem approach.

The case-study database in the CBD ecosystem approach Source Book is now operational. It includes case studies and a range of tools that could be enhanced by incorporating links to additional resources. The value of the Source Book will increase as more case studies are entered, providing a greater resource for those seeking to implement the ecosystem approach.

Information available from the third national reports shows that the ecosystem approach is being applied by many Parties, at different scales. This approach, which has been adopted by major forums beyond the Convention, is referenced in programmes and activities, as appropriate, by all the major inter- and non-governmental organizations and initiatives reviewed. There is a significant opportunity to build upon existing experiences and progress.

Barriers have been well reviewed previously. No new barriers have emerged in this in-depth review. However, two important needs were identified: (i) to simplify the description of the ecosystem approach and make it more attractive to, and comprehensible for, key target audiences (which vary widely); and (ii) to improve the “marketing” of the approach, chiefly by promoting it as a tool to achieve improved economic benefits.

The Millennium Ecosystem Assessment has significant relevance to this review. The ecosystem approach as a method for addressing the issues raised by the Millennium Ecosystem Assessment is

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\* UNEP/CBD/SBSTTA/12/1.

embodied in its conceptual framework, but the Assessment discusses the issues in the economic context that key actors may respond to. It presents an opportunity for enhanced application of the ecosystem approach because of its potential to drive fundamental policy reform, including at the highest political level, and therefore governance, administrative and management reform, which affect the application of the ecosystem approach at the institutional level.

Global assessments suggest that the ecosystem approach is not being applied systematically to reduce the rate of biodiversity loss, but there are many examples of successful application on the regional, national and local scales. Most of these examples can be considered as positive outcomes for both biodiversity and human well-being. Without indicators, the impacts of the ecosystem approach are difficult to quantify.

Opportunities to strengthen ongoing efforts include, *inter alia*, developing standards for the application of the ecosystem approach; simplified and improved marketing approaches to appeal to a wider audience; and capacity-building at all levels by developing a strategic approach through enhanced partnerships.

### SUGGESTED RECOMMENDATIONS

1. The Subsidiary Body on Scientific, Technical and Technological Advice may wish to request the Executive Secretary to:

(a) *Develop and implement*, in collaboration with relevant partners, including in particular the Communication, Education and Public Awareness Informal Advisory Committee, a strategy and action plan for capacity-building at all levels on the application of the ecosystem approach,

(b) *Further develop* the Source Book, *inter alia* by identifying additional case studies relating to all the programmes of work of the Convention and all economic sectors, and/or linking to the Millennium Development Goals; and by identifying tools that integrate the ecosystem approach into planning and monitoring of biodiversity; and

(c) *Report* on these activities to the Conference of the Parties at its ninth meeting.

2. The Subsidiary Body on Scientific, Technical and Technological Advice may also wish to recommend that the Conference of the Parties request the Executive Secretary to:

(a) *Provide* a scientific basis for the development of a “marketing” strategy to facilitate the understanding and application of the ecosystem approach on a wider scale and in all sectors affecting biodiversity, taking into account the elements identified in section III of the Note by the Executive Secretary on key issues for the further application of the ecosystem approach and the findings of the Millennium Ecosystem Assessment that promote ecosystem assessment as a tool for ensuring and enhancing economic benefits in biodiversity conservation activities;

(b) *Develop* standards for the application of the ecosystem approach, bearing in mind that the 12 ecosystem approach principles already form a framework for this work but need to be accompanied by methods to assess their degree of application, individually and collectively, on a case-by-case basis;

(c) *Integrate* ecosystem approach issues in ongoing work on incentives;

(d) *Identify* outcome indicators of performance in applying the ecosystem approach, preferably among those already available (such as the indicators of ecosystem integrity in the framework adopted in decision VII/30) to be used in future assessments of the application of the ecosystem approach; and

(e) *Submit* a report on these activities for consideration by SBSTTA at a meeting prior to the tenth meeting of the Conference of the Parties.

## I. INTRODUCTION

1. The ecosystem approach was endorsed by the Conference of the Parties in 2000 through decision V/6. In decision VII/11 on the ecosystem approach, paragraph 12, the Conference of the Parties requested the Executive Secretary to assess the application of the ecosystem approach, in the light of experiences gained from activities under paragraphs 8, 9 and 10 of the same decision, for the consideration of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) prior to the ninth meeting of the Conference of the Parties. In annex II of decision VIII/10, the Conference of the Parties decided to undertake the in-depth review of the application of the ecosystem approach at its ninth meeting. Decision VIII/15 (annex III) of the Conference of the Parties provided guidelines for the review of the thematic programmes of work of the Convention. These guidelines are used here as a basis for undertaking this in-depth review of the application of the ecosystem approach (a cross-cutting issue). The review considers: the extent of implementation of requests of the Conference of the Parties in decisions V/6, VII/11 and relevant paragraphs in other decisions; how the principles, operational guidance and implementation guidelines have been applied; barriers to application; and opportunities to further enhance application.

2. The review process included: (i) the development of the ecosystem approach and its consideration to date by the Conference of the Parties and SBSTTA; (ii) an examination of information available from the third national reports; (iii) consideration of the relevance of the Millennium Ecosystem Assessment to the application of the ecosystem approach (pursuant to decision VIII/9, paragraphs 2 and 11); (iv) a review of recent activities of major partners, initiatives and organizations in the application and/or further refinement of the ecosystem approach; (v) a review of the application of the ecosystem approach from case studies and opportunities for promoting its further application; (vi) the findings of a workshop on the ecosystem approach, protected areas and customary practice in small islands held in Bangkok from 12 to 16 December 2006; (vii) an assessment of barriers to the application of the ecosystem approach; (viii) inter-sessional activities of the Secretariat in support of the application and further refinement of the ecosystem approach; and (ix) the current status of development of the ecosystem approach Source Book and case study database.

3. In 2004, the Conference of the Parties agreed in decision VII/11, paragraph 2, that the priority at that time should be facilitating the implementation of the ecosystem approach as the primary framework for addressing the three objectives of the Convention in a balanced way, and that a potential revision of the principles of the ecosystem approach should take place only at a later stage, when the application of the ecosystem approach has been more fully tested.

4. This note has been prepared to provide a summary of the outcomes of the review process undertaken by the Executive Secretary. Section II presents a summary of the findings of the review under the following headings: progress regarding implementation of relevant paragraphs in decisions of the Conference of the Parties; barriers to the application of the ecosystem approach; relevant findings and lessons learned from the Millennium Ecosystem Assessment; and the contribution of the ecosystem approach to implementing the Convention and reducing the rate of biodiversity loss. Some conclusions are drawn in section III.

5. A draft of this note was posted for comments from 26 February to 13 March 2007 under notification 2007-026 and review comments were incorporated as appropriate.

## II. SUMMARY OF FINDINGS OF THE REVIEW

### A. *Progress regarding implementation of relevant paragraphs in decisions of the Conference of the Parties*

#### 1. *Decision VII/11, paragraphs 8, 9 and 10, of the Conference of the Parties*

6. In paragraph 8 of decision VII/11, the Conference of the Parties noted that, in addition to sustainable forest management, some existing approaches, such as “ecosystem-based management,” “integrated river basin management,” “integrated marine and coastal area management” and “responsible fisheries approaches,” the Biosphere Reserve concept, the Regional Seas Programmes, and regional conventions such as the Alpine Convention and the Carpathian Convention, may be consistent with the application of the Convention’s ecosystem approach, and further support its implementation in various biomes. This review has not discriminated between these different approaches. In particular, the examination of case studies (see next paragraph) used to support this in-depth review was undertaken on the basis of the extent to which the principles of the ecosystem approach were addressed irrespective of terminology used.

7. In decision VII/11, paragraph 9, the Conference of the Parties requested the Executive Secretary, in collaboration with Parties and relevant international and regional organizations, to facilitate various activities related to an analysis of existing, and development of new, tools and approaches, continue collection of case studies and make these widely available through the clearing house mechanism. Progress on this activity was reported to the eleventh meeting of SBSTTA in a note by the Executive Secretary (UNEP/CBD/SBSTTA/11/3). The case study database in the CBD Ecosystem Approach Source Book ([http://www.biodiv.org/programmes/cross-cutting/ecosystem/Source\\_Book/search.shtml](http://www.biodiv.org/programmes/cross-cutting/ecosystem/Source_Book/search.shtml)) is now operational. The Source Book currently contains 44 case studies. Most of the case studies have sought to apply the ecosystem approach and provide good examples of the approach’s implementation. Some biomes are particularly poorly represented (e.g. island biodiversity, one case-study; mountain biodiversity, four; polar regions, none). For all biomes, further case studies could be added drawing on the wide range of projects undertaken globally. The value of the Source Book will increase as more case studies are entered providing a greater resource for those seeking to implement the ecosystem approach. The Source Book now includes tools on public participation, stakeholder consultation, social factors, education and awareness, governance law and policy, management incentives, data collection and monitoring, protected areas and land use policy, cross-sectoral research and working, and indicators. The tools section could be enhanced by incorporating links to additional resources available on the internet and in some cases within the CBD’s own website. It is important for the Source Book not to replicate work done elsewhere, but it can provide an important link to methods developed by other organizations.

8. In decision VII/11, paragraph 10, the Conference of the Parties recommended that Parties and other Governments facilitate the full and effective participation of indigenous and local communities and other stakeholders and continue or start implementation of the ecosystem approach. Effective participation of relevant groups is embodied in principles 1, 2, 11 and 12 of the ecosystem approach (decision V/6, section B). Therefore, the level of attention to participation is reflected in the progress in the application of the ecosystem approach itself, which is reviewed in sub-section 2 immediately below.

#### 2. *Progress in application of the ecosystem approach by Parties*

9. Information available from the third national reports shows that some principles of, and operational guidance for, the ecosystem approach are being applied by many Parties. There is a significant opportunity to build upon the existing experiences and progress.

10. A review of the third national reports was undertaken by the Executive Secretary based on 101 reports submitted to the Secretariat as of 31 December 2006. Information on the ecosystem approach is

contained in section B of the report devoted specifically to this topic but also in other sections where activities were reported that reflect the application of the ecosystem approach. Thirteen Parties did not complete certain sections.

11. In response to the request of the Conference of the Parties in paragraph 2 of decision V/6, only 12 per cent of Parties indicated that the principles and guidance for the ecosystem approach contained in the annex to decision V/6 were being substantially applied; 74 per cent of Parties reported that some were being applied; 10 per cent indicated that applications were under consideration; and 4 per cent reported that they were not applying the ecosystem approach.

12. Regarding implementation of decision V/6, paragraph 2, of the Conference of the Parties, concerning developing practical expressions of the ecosystem approach, only 12 per cent of Parties reported that they applied most principles of the ecosystem approach; 59 per cent of Parties reported they had developed some expressions; 23 per cent noted that development was under consideration; and 6 per cent of Parties reported that they had not developed any practical expressions.

13. With reference to decision VII/11, paragraph 14, in which Parties were invited to strengthen capacity within their own country, 68 per cent of Parties reported that they did this, whereas 32 per cent of Parties reported that they had not strengthened capacity. In addition, 8 per cent of Parties also provided technical and financial support to other Parties (as invited by the Conference of the Parties in decision V/6, paragraph 6).

14. In decision V/6, paragraph 7, the Conference of the Parties invited the promotion of regional cooperation in applying the ecosystem approach. Fifty-seven per cent of Parties reported that they had done this, whereas a further 23 per cent reported that they had informal co-operative agreements and 20 per cent of Parties reported that they had none. Not surprisingly, these cooperative arrangements largely involve trans-boundary protected/managed areas and in particular trans-boundary water resources issues.

15. In decision VII/11, paragraph 14, the Conference of the Parties invited Parties to create an enabling environment for the effective application of the ecosystem approach, including through the development of appropriate institutional frameworks. Although 11 per cent of Parties reported that they had not, or did not have plans to, create this, 83 per cent had done so, with a further 6 per cent in the process of doing so.

16. The questionnaire did not distinguish between Parties that have applied the approach only at the local/site/project level and those that have applied it across the nation at large. Neither is it easy to ascertain whether the ecosystem approach, case-by-case, is applied only for particular biomes or sectors (e.g. to forest management or wetlands) or is being applied as a more comprehensive policy development tool.

3. *Progress in application of the ecosystem approach by international forums, major partners, initiatives and organizations*

17. The ecosystem approach has been adopted by a number of intergovernmental and non-governmental organizations and initiatives.

18. For example, the ecosystem approach is referred to in the 2002 Plan of Implementation of the World Summit on Sustainable Development (paras. 30 (d) and 32 (c) in relation to fisheries, para. 44 (e) in relation to biodiversity, and 70 (b) in relation to sustainable tourism). Organizations and initiatives using the ecosystem approach include those working at the sector or biome level (e.g. on agriculture, forestry or fisheries, such as the Food and Agriculture Organization of the United Nations (FAO)) and those working more broadly on natural resources management (e.g., WWF and the IUCN-World

Conservation Union). Importantly, for some actors there have been recent shifts towards using the ecosystem approach more systematically.

19. The role of the ecosystem approach in these organizations or initiatives varies considerably, largely depending upon their field of interest or nature of operation. This includes, for example, cases where activities are undertaken at the sector or biome level but which acknowledge the need to consider broader issues by referencing the ecosystem approach, and those that use the ecosystem approach as a primary framework for promoting improved integrated natural resources management.

20. As acknowledged in decisions V/6 and VII/11 on the ecosystem approach, the ecosystem approach is not a competing but rather complementary approach to others. Many principles of the ecosystem approach exist in other management approaches and are implemented in projects and other activities without reference to the ecosystem approach. These approaches can also contribute to the goals of the Convention on Biological Diversity.

### ***B. Barriers to the application of the ecosystem approach***

21. Barriers to the application of the ecosystem approach have been well reviewed in previous assessments and no new barriers have emerged in this in-depth review. Two important needs were identified: (i) to simplify the description of the ecosystem approach and make it more attractive to, and comprehensible for, key target audiences (which vary widely); and (ii) to improve the “marketing” of the approach, chiefly by promoting it as a planning tool to achieve enhanced economic benefits.

22. Barriers to application have been identified in previous reviews, for example, in the note by the Executive Secretary prepared for the ninth meeting of SBSTTA (UNEP/CBD/SBSTTA/9/INF/4) and annex I to decision VII/11. These include general obstacles to implementation of the Convention (List B in annex to decision VIII/8) and those specific to the ecosystem approach, identified in reports and documents on the website of the Secretariat. <sup>1/</sup> <sup>2/</sup> Matters considered at the fifth and ninth meetings of SBSTTA, resulting in recommendations for the decisions at the fifth and seventh meetings of the Conference of the Parties, were based on the investigation of barriers using a case-study approach. Case-studies have also been used to identify barriers by most relevant international organizations and processes in support of the further development and application of the ecosystem approach. Many specific lessons learned regarding barriers have already been partly addressed through the guidance, tools and resources developed in the Source Book (see subsection 1 below).

23. The barriers specific to the ecosystem approach require two main responses: (i) enhancing the availability of tools to implement the ecosystem approach; and (ii) removing general barriers to the use of the approach itself and ensuring its application goes beyond the biodiversity sector to all sectors whose actions affect the delivery of ecosystem goods and services (positive and negative) across different levels (e.g. internationally, nationally and locally).

#### *1. Enhancing the availability of tools to implement the ecosystem approach*

24. The Source Book now includes many applicable tools and approaches. Some important work on marine ecosystems and in particular fisheries has been undertaken but is not included in the Source Book, a gap that needs to be addressed.

25. The Millennium Ecosystem Assessment highlighted the need to provide policy makers with reliable information on biodiversity, ecosystem services and the benefits the environment delivers to human well-being. Information on social and economic costs (not taking into account environmental

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<sup>1/</sup> <http://www.biodiv.org/programmes/cross-cutting/ecosystem/background.asp?tit=syn>

<sup>2/</sup> <http://www.biodiv.org/programmes/cross-cutting/ecosystem/documents.aspx>

values) is usually more readily available than information on biodiversity, the ecosystem services it provides and how these can be valued. This limits policy makers' ability to make informed decisions. Considerable efforts are now underway to develop the necessary tools (these include, *inter alia*, IUCN projects such as the Valeurs project, the Water and Nature initiative and the Who Pays for Biodiversity report; projects led by the European Environment Agency on the development of environmental economic tools; FAO projects on valuing water and forests; and projects carried out by government agencies (e.g. <http://www.defra.gov.uk/wildlife-countryside/natres/index.htm>). Efforts will need to be made to ensure these new tools are captured in the Source Book.

26. Tools for understanding ecosystem function, thresholds and limits are also identified as being inadequate in the Millennium Ecosystem Assessment. Such information is important to implementing the ecosystem approach and for undertaking economic valuation of ecosystem goods and services. While considerable information is available on ecosystems that could be used to determine functions, thresholds and limits (e.g. monitoring and ecosystem management), it is not in a readily usable form. The Source Book could be an important source of information on appropriate methods and case studies that have applied these.

## 2. *Addressing general barriers to the use of the ecosystem approach*

27. For summary purposes, barriers to the use of the approach can be subdivided as:

- (a) Ineffective stakeholder participation in planning and management;
- (b) Limited understanding of what the approach seeks to achieve;
- (c) The lack of capacity for decentralized and integrated management;
- (d) Insufficient institutional cooperation and capacity;
- (e) The lack of dedicated organizations able to support delivery of the ecosystem approach;
- (f) The overriding influence of perverse incentives; and
- (g) Conflicting political priorities, including those that arise when a more holistic approach to planning is adopted.

28. Capacity-building is required at all levels of policy-making and management from the local to the highest political level. Priorities differ according to the target groups in question. A considerable degree of capacity-building, including the development of tools, has been undertaken by relevant organizations and the Secretariat has supported capacity-building within available resources.

29. The clearest applications of the ecosystem approach occur at the local level, where communities can participate more directly. Where appropriate, local efforts need to be further enhanced.

30. Extensive current experience and guidance largely applies at the local site-specific, level and is relatively well developed and applied. Weaknesses are the lack of awareness, and capacity-building responses at the level of national, regional and local government planning, including for the development of institutions that can facilitate the effective application of the ecosystem approach.

31. The application of the ecosystem approach at the national and international levels is constrained by poor understanding of how it seeks to address economic and social issues in addition to environmental ones. Where the ecosystem approach is applied, biodiversity and socioeconomic benefits collectively are maintained and/or promoted. In fact, application of the approach, particularly at the local level, is often driven by social and economic motives – not biodiversity considerations directly (Principle 4 of the

approach already recognizes this fact, stating that “there is usually a need to understand and manage the ecosystem in an economic context”). However, the current description of the ecosystem approach <sup>3/</sup> can be seen as reinforcing the notion that it is “biodiversity”-focused by not explicitly noting its role in human welfare. This may contribute to making the ecosystem approach less attractive to many potential users. Nevertheless, reference in the description of the ecosystem approach to sustainable use and the sharing of benefits from the utilization of genetic resources should provide reassurance that the ecosystem approach is linked to human welfare. The links between the application of the ecosystem approach and the delivery of sustainable development is an important area to develop further.

32. Experience of partners <sup>4/</sup> has shown that challenges to implementation of the Convention on Biological Diversity in some countries, especially in developing nations, are: the complexity of linkages between the thematic programmes of work, cross-cutting issues and the guidelines and recommendations respectively approved hereunder; the resulting difficulties in implementation at any scale other than the particular biome addressed by each thematic programme; and, while the ecosystem approach stresses the importance of integrated planning and management, the biome-based division of thematic programmes may artificially isolate natural systems that in reality, are intimately inter-connected and mutually dependent on one another. Considering that the ecosystem approach is the primary framework for the implementation of the Convention (decision II/8, para. 1), there is a need to stress that the ecosystem approach should be the entry point for planning for implementation of the Convention.

33. Barriers to effective management of ecosystem services identified by the Millennium Ecosystem Assessment, <sup>5/</sup> which largely mirror barriers to the application of the ecosystem approach, are numerous and include: *governance* – including lack of empowerment/participation of stakeholders, failure to use existing knowledge and lack of political will to create coordinated and cohesive governance structures; *economic* – including market failure, perverse incentives and inappropriate economic approaches (including lack of effective valuations); and *technical* – including the slow response of ecosystems to disturbance, and lack of technical knowledge in some areas (in particular regarding ecosystem services and management, policy, technological, behavioural and institutional responses). The principles of the ecosystem approach and guidance for their application address each of these constraints. In effect, the ecosystem approach is a framework for operationalizing the conceptual framework of the Assessment.

34. The Millennium Ecosystem Assessment puts particular emphasis on institutional constraints and the need for reform. The key is to manage resources in terms of managing ecosystem services, including maintaining biodiversity options for the future. Existing institutional arrangements are largely not adapted to this need, and institutional capacity needs to enable more widespread use of the available responses identified by the Assessment—including the application of the ecosystem approach. <sup>6/</sup> Most notably, it concludes that unprecedented efforts will be needed to achieve the 2010 biodiversity target <sup>7/</sup>

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<sup>3/</sup> “The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Thus, the application of the ecosystem approach will help to reach a balance of the three objectives of the Convention: *conservation; sustainable use; and the fair and equitable sharing* of the benefits arising out of the utilization of genetic resources.” (*emphasis added*) (decision V/6, annex, section A, para. 1).

<sup>4/</sup> See, for example, the WWF *Mountains to the Sea Implementation Plan*, which was circulated for the information of participants in the eighth meeting of the Conference of the Parties to the Convention (UNEP/CBD/COP/8/INF/42).

<sup>5/</sup> Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well-being: Synthesis*. Island Press, Washington, DC. p. 20.

<sup>6/</sup> *Ibid.*, p. 98.

<sup>7/</sup> Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well-being: Biodiversity Synthesis*. World Resources Institute, Washington, DC, p. 14, Key messages.

and that the significant changes in policies, institutions and practices required are not currently under way. <sup>8/</sup>

**C. *Relevant findings and lessons learned from the Millennium Ecosystem Assessment***

35. The Millennium Ecosystem Assessment has significant relevance to this review. The ecosystem approach is embodied in its conceptual framework, but the Assessment discusses the issues in the economic context that key actors may respond to. It presents a substantial opportunity for enhanced application of the ecosystem approach because of its potential to drive fundamental policy reform, including at the highest political level, and therefore governance, administrative and management reform, which are the major barriers to the application of the ecosystem approach.

36. In decision VIII/9, the Conference of the Parties recognized that the reports prepared under the Millennium Ecosystem Assessment include key findings relevant to the implementation of the Convention's programmes of work (para. 1); decided to consider the findings of the Assessment in the implementation and future review of the programmes of work and cross-cutting issues under the Convention (para. 12); requested the SBSTTA to draw upon the lessons learned and to make use as appropriate of its conceptual framework and methodologies in further developing work on, *inter alia*, the ecosystem approach (para. 22).

37. In paragraph 6 of its decision VII/11, the Conference of the Parties also noted the relevance of the conceptual framework of the Millennium Ecosystem Assessment in supporting the implementation of the ecosystem approach. This conceptual framework, which considers the relationship between biodiversity, ecosystem services and human well-being, and the impact of indirect and direct drivers of change on biodiversity, adds weight to the ecosystem approach in the context of human development. The Millennium Ecosystem Assessment itself is an example of the application of the ecosystem approach to an assessment. The Assessment notes that the ecosystem approach, as adopted by the Convention on Biological Diversity and others, provides an important framework for assessing biodiversity and ecosystem services and evaluating and implementing potential responses. <sup>9/</sup>

38. The Millennium Ecosystem Assessment concludes that changes in ecosystems are inevitable. <sup>10/</sup> Similarly, principle 9 of the ecosystem approach states that “[m]anagement must recognize that change is inevitable” and refers to the “inherent dynamics of change” in ecosystems. However, the Assessment concluded that 15 of the 24 ecosystem services it examined are being degraded or used unsustainably owing to drivers such as over-harvesting, climate change, invasive species, and nutrient-loading. This finding points to a need to strengthen efforts to keep ecosystem changes under review and to implement appropriate responses when human-induced negative changes are observed. The current inability to effectively manage ecosystem services collectively in order to optimize service delivery and achieve overall ecosystem sustainability signals that the ecosystem approach is not being successfully applied at the global level.

39. The ecosystem approach provides a robust economic, ecological and social framework for dealing with the negative impacts highlighted in the Millennium Ecosystem Assessment scenarios since it was developed through wide consultation with Parties to the Convention on Biological Diversity. It is important to raise the profile of the ecosystem approach so its role in meeting these issues ensures ecosystems are capable of delivering ecosystem goods and services essential for human well-being in a

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<sup>8/</sup> Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well-being: Synthesis*. Island Press, Washington, DC, Finding # 4.

<sup>9/</sup> Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well-being: Biodiversity Synthesis*. World Resources Institute, Washington, DC, p. 14.

<sup>10/</sup> *Ibid*, p. 16.

sustainable manner. To date, the ecosystem approach has typically been applied mainly to conservation policy (this is reflected in the case studies submitted to the ecosystem approach Source Book). Its application across policy sectors would ensure a sustainable approach to natural resource use, including biodiversity. Some Parties have already assessed their responses to the MA concluding, *inter alia*, that its findings and conceptual framework should influence policy-making including, importantly, in ministries responsible for finance and planning.

40. A full assessment of appropriate responses to the Millennium Ecosystem Assessment is beyond the scope of this review, as other ongoing processes are relevant, particularly in relation to paragraph 29 of decision VIII/9 in which the Conference of the Parties decided to consider, at its ninth meeting, the evaluation of the Millennium Ecosystem Assessment to be undertaken during 2007.

***D. The contribution of the ecosystem approach to implementing the Convention and reducing the rate of biodiversity loss***

41. Global assessments suggest that the ecosystem approach is not being applied systematically to reduce the rate of biodiversity loss, but there are many examples of successful application at the regional, national and local scales. Most of these examples can be considered positive outcomes for both biodiversity and human well-being. Without indicators, the impacts of the ecosystem approach are difficult to quantify.

42. It is not possible, based upon current information, to make a detailed quantitative assessment and there is an urgent need to develop effective mechanisms for doing so. Some important general conclusions can, however, be drawn:

(a) The findings of global assessments, for example the Millennium Ecosystem Assessment, indicate that the ecosystem approach is not being systematically applied and biodiversity continues to be lost;

(b) There are a great many success stories with the application of the ecosystem approach at the regional, national and, in particular, local levels;

(c) Experience is showing that where the ecosystem approach has been applied effectively, in most if not all cases it has resulted in a very desirable combination of conservation and sustainable use of biodiversity on the one hand and increased and more sustainable economic and social benefits on the other. This combination is a powerful marketing tool for the approach, which needs to be utilized more effectively; and

(d) The absence of targets and indicators for the ecosystem approach makes scientifically based review of its application and impact difficult; needs include the successful monitoring of ecosystem service delivery and sustainable use.

**III. KEY ISSUES FOR THE FURTHER APPLICATION OF THE ECOSYSTEM APPROACH**

43. Opportunities to strengthen ongoing efforts include, *inter alia*, identifying indicators of performance among those already available; developing standards for application of the ecosystem approach; simplified and improved marketing approaches to appeal to a wider audience; addressing incentives through ongoing processes; and capacity-building at all levels by developing a strategic approach through enhanced partnerships.

44. A key strength of the ecosystem approach is its ability to be applied at different scales, to many different problems by practitioners with varying resources and capacity. <sup>11/</sup> It is recognized that there is no single right way to apply the ecosystem approach and that it works because it can be adapted to meet circumstances and needs. Therefore, there is no one-size-fits-all solution to needs.

**A. Indicators of performance**

45. Considering the importance of the ecosystem approach as the primary framework of action to be taken under the Convention (decision II/8, para. 1), and the emphasis placed by Parties on the 2010 target, the ability to more effectively gauge the contribution of the ecosystem approach is a pressing need. Indicators of performance are needed if progress is to be credibly assessed. Consideration might be given to assessing the extent to which existing indicators can be used effectively in future assessments of the application of the ecosystem approach.

**B. Standards for application**

46. In order to help quantify and improve application, consideration might be given to developing standards for the application of the ecosystem approach. The twelve principles already form a framework for this but need to be accompanied by methods to assess their degree of application, individually and collectively, on a case-by-case basis. Such approaches (certification schemes, codes of practice and procedures of the International Organization for Standardization (ISO), etc.) are already common practice for other areas. Standards would form a yardstick by which practitioners can not only gauge their progress but also showcase their success.

**C. The need for the ecosystem approach to be applied by non-traditional users**

47. The ecosystem approach needs to be applied beyond its traditional users at the “environment” level. For example:

(a) The ecosystem approach needs to be systematically applied within strategies to achieve the Millennium Development Goals, in particular as a means to address potential tradeoffs and synergies among the various Goals;

(b) The application of the ecosystem approach could help in designing and implementing measures to accompany trade liberalization aimed at avoiding undesirable land and other resource use changes; and

(c) Application of the ecosystem approach to planning and development, including for example transport networks, housing needs and sanitation, would ensure that benefits beyond the primary goal (e.g. a road) are sustainable and more wide-ranging.

48. These examples illustrate the need for the ecosystem approach to be used more widely as a tool for addressing important trade-off decisions between multiple and/or potentially conflicting objectives. Therefore, it needs to be marketed better to a wider range of users.

49. The ecosystem approach needs to be more at the forefront of implementation of the programmes of work collectively. One option is to strengthen reference to the ecosystem approach being the framework for implementation of the Convention in the Strategic Plan of the Convention in order to clearly indicate its status as the entry point for considerations at the programme level. Further tools and approaches to simplify considerations across the programmes of work can be designed. <sup>4/</sup>

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<sup>11/</sup> The need for adaptation is reflected in principle 9 of the ecosystem approach which states management must recognize that change is inevitable.

50. One strength of the ecosystem approach is that it can be applied at different scales, although application at a large scale, for example at the national level, can be challenging. The conceptual framework of the Millennium Ecosystem Assessment is of considerable help here in that it provides an enhanced methodology for national assessments. In paragraph 26 of its decision VIII/9, the Conference of the Parties, has already encouraged Parties, other Governments and relevant organizations to make use, as appropriate, of the methodologies and conceptual framework of the Millennium Ecosystem Assessment. The Conference of the Parties has also emphasized the need for capacity-building to support, *inter alia*, the dissemination of findings, methodologies and procedures of the Assessment (decision VIII/9, para. 27). This review notes that this need should be a major aspect of activities relating to capacity-building for the ecosystem approach developed in response to paragraph 6 of decision V/6 and paragraph 14 of decision VII/11 of the Conference of the Parties. A manual for implementation of the Millennium Assessment methodology at national level is currently being developed by a consortium under the guidance of the Millennium Assessment Board (on which the Convention Secretariat is represented). Funding for mainstreaming the Millennium Assessment into national planning is also being considered by the Global Environment Facility (GEF).

51. Some responses to promote improved “marketing” beyond the traditional users are to consider:

(a) Enhancing the description of the ecosystem approach to include specific reference to achieving sustainable human development;

(b) Making it more explicit that ecosystem goods and services are essential for human welfare; and

(c) Compiling, disseminating and showcasing the social and economic advantages for using the ecosystem approach.

52. Throughout this process, it is important to recognize and build on the experience and capacities of those who have spent many years working on related issues. Integrated resource management has been used by a number of sectors for many decades. There is a need for improved approaches to link the ecosystem approach with other integrative approaches in order to promote their commonalities.

#### ***D. The need for enhanced awareness and understanding***

53. The ecosystem approach needs to be marketed in a way that makes it more easily understood and effectively used by many stakeholders and target groups. For example, the five points used as operational guidance in decision V/6 of the ecosystem approach and the IUCN consolidation of the 12 ecosystem approach principles into five Action Steps are designed to help a variety of would-be users see a way forward. <sup>12/</sup> The ecosystem approach needs to be adapted further to make it more practical for a range of target groups.

54. Communication, education and public awareness and related capacity-building materials need to be developed in a style appropriate to the target group in question (speak the language of the audience). In particular, the style should focus on incentives for applying the ecosystem approach by particular groups (e.g. use economic arguments for economic planners, locally appropriate concepts for local and indigenous communities based around sustainable use and livelihoods).

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<sup>12/</sup> <http://app.iucn.org/dbtw-wpd/edocs/CEM-003.pdf>

***E. Incentives***

55. Perverse incentives are a major obstacle to the application of the ecosystem approach, and incentives to over-use rather than conserve are often very strong. Conversely, the ecosystem approach can help identify positive incentives to manage resources better under certain circumstances, but usually only if access rights and rights to control and allocate are strengthened.

56. Incentives are addressed through the activities of the Convention in relation to economics, trade and incentive measures. The work of the Convention on incentives (Article 11) will be reviewed at the ninth meeting of the Conference of the Parties and preparations need to consider relevant issues and needs in relation to the ecosystem approach.

***F. Capacity-building***

57. Responses to further strengthen capacity-building might include:

(a) Undertaking a detailed assessment of capacity-building needs and key strategic opportunities in order to prioritize activities; and

(b) Developing a more effective partnership with lead organizations based upon a strategic approach to capacity-building that builds upon the identified strengths of each actor.

58. Capacity-building at the planning and decision-making level might be promoted through:

(a) Building capacity in response to the Millennium Ecosystem Assessment (see above);

(b) The development and testing of practical tools based on the ecosystem approach to inform planning and decision-making at the national level;

(c) The setting up of mechanisms facilitating joint learning about how to apply and fine-tune such practical tools at both the national and international levels; and

(d) The development of standards for the application of the ecosystem approach at the national and sectoral level, based on lessons learned from the above.

59. Furthermore, the ecosystem approach is one of the main tools for mainstreaming biodiversity into the sectors, and it would be of benefit to develop further capacity in this field, together with tools to facilitate the application of the approach.

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