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## **Proceedings of Biodiversity Conservation and Use: A Seminar via Internet**

**Organized by**

**The World Bank Institute Environment and Natural Resources Group (WBIEN)**



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**Prepared by Arati Belle**

## Summary of Discussions

### Background and Introduction

This Biodiversity Conservation and Use Internet seminar was organized by the World Bank Institute's Environment and Natural Resources Division as an activity in its 'Sustainable Management of Forests and Biodiversity' program. Its goals were to have an open discussion that would highlight and prioritize key questions, share knowledge and experience, and further the present discourse on the role of biodiversity in poverty alleviation and the future of biodiversity conservation. In his opening remarks, Vinod Thomas, Vice President, WBI, hoped that, "this Internet seminar will provide the opportunity to exchange innovative solutions among development practitioners across the globe. And, furthermore, to identify practical and workable solutions to sustainably manage this critical resource."

The Internet seminar was patterned on the format of a traditional seminar, with opening plenary in the first week (June 26-30), followed by parallel moderated sessions (July 3-14) – Participants however, has the option of joining multiple sessions – ending with a final plenary (July 17-21). Experts from IUCN, the World Bank and other organizations moderated the discussions. In all there were 779 members representing NGO's academia, policymakers, international agencies etc and they have altogether posted over 130 messages to the entire group.

The starting point for this discussion was the Statement of the 15th Global Biodiversity Forum to the 5th meeting of the Conference of the Parties to the Convention on Biological Diversity<sup>1</sup>, which notes that: "The conservation, sustainable use and, in particular, the fair and equitable sharing of the benefits of biodiversity should form an essential element of effective poverty eradication strategies." This document outlines various approaches to achieving the goals of poverty alleviation and biodiversity conservation including instruments for access and benefit sharing from genetic resources, recognition of cultural and indigenous rights and the focuses on the specific concerns surrounding arid and semi-arid ecosystems and agricultural systems. Education, participation and capacity-building to promote sustainable use are seen as essential ingredients of a strategy to preserve biodiversity and promote poverty alleviation.

In addition, background papers, such as those by *Perrings*<sup>2</sup>, and *Perrings and Walker*<sup>3</sup>, outlined more theoretical approaches to understanding the pressures that result in land use conversion, which are potentially harmful to biodiversity conservation. The role and limitations of economic incentives and market demand in maintaining biodiversity is highlighted by the argument that: "The demand for many species derives from their role in supporting the production of marketed goods and services. The difficulty in rangelands, as in many other systems, is that the prices of marketed goods and services are rarely good proxies for their social opportunity cost. It is generally recognized that externalities are both significant and widespread, and that this complicates the valuation of biodiversity."

The World Bank document '*Supporting the Web of Life*'<sup>4</sup>, in examining its performance on biodiversity conservation, states that the World Bank Group's mission of eradicating poverty for lasting results "depends on humankind's ability to maintain a planet that can provide the environmental services and functions upon which life and economic development can be

sustained.” To address this in its development work, the World Bank has to work towards “mainstreaming biodiversity and especially the sustainable use and restoration of biodiversity, into regular sustainable development operations and policy reforms.”

## **Issues and Approaches**

A number of key issues were highlighted during the first week of discussions, which generated about 70 postings and a wealth of ideas. These included the international nature of the biodiversity management problem and the role of the global community; valuation of use and non-use values associated with biodiversity and ecological services, species-based vs. ecosystem values; specification of property rights and other incentive and financial mechanisms; national and international legal issues affecting conservation; and most overwhelmingly, the role of community development and participation.

The discussants acknowledged the fact that conservation and sustainable use of biodiversity and/or ecosystems, dealing as it does with complex systems, intricate linkages and disparate incidence of costs and benefits, is fraught with problems. The international nature of the biodiversity management problem was highlighted by the concerns with reference to the role of the global community.

The problem of assuring the conservation and sustainable use of biodiversity as an environmental public good is one that is being addressed in part by agencies such as the GEF and its focus on the incremental costs of providing global benefits. But in general, international development agencies often have limited impacts because their conservation projects pay little attention to overall community development and their continued focus on short lived projects as opposed to long term programs.

The search for economic and ecological rationales for conserving biodiversity and informing policy decisions has produced a rich literature on the valuation of use and non-use values associated with biodiversity and ecological services. While there may be little consensus on whether or not the various elements of biodiversity can or cannot be valued in economic terms, there is increasing recognition of these values and the role of biodiversity in maintaining essential ecological services. Attempts to identify missing and imperfect markets, specification of property rights and other incentive mechanisms have been offered as an approach to address the public good nature of biodiversity.

The discussions addressed many of these issues as well as noted various successful examples and initiatives, balancing development and conservation. Many participants emphasized the need to disseminate both the positive and negative experiences widely as a means to further understanding of the biodiversity conservation and use. Based on the high degree of interest in and enthusiasm for these topics, three parallel sessions were formed to examine in greater depth issues relating to a) Community participation b) Market mechanisms to address Biodiversity related problems and c) The role of international conventions and trade agreements.

## **Parallel Session I: Biodiversity Conservation and Community Participation / Development** (Moderated by Tony Whitten, World Bank)

Seminar participants overwhelmingly supported the strong involvement of local communities, including community associations and cooperatives. The community, it was felt, was in the best position to identify the local constraints and opportunities, and as having the highest stakes and the resources, especially time, to manage the resource sustainably. Strong community arrangements were also seen as ways to ensure that individual actions were in harmony with collective interests and averting the "tragedy of the commons", (i.e. the common plight of open access resources).

It was observed that while linking biodiversity conservation with community development was desirable it is not often compatible with many conservation projects designed by international development agencies as they focus almost exclusively on the technical aspects of biodiversity management. One participant noted, "Interventions to help reduce poverty through biodiversity conservation has a better chance of sustainability, if action is focussed more on the social parameters of community development rather than on the technical aspects of biodiversity conservation (alone)".

In this context, the report, *'Investing in Biodiversity'*<sup>5</sup>, tracing ICDP experience in Indonesia, was cited as outlining some of the difficulties in giving conservation a "human face". A key prerequisite emphasized in the report is the need to have central and provincial government commitment to protecting conservation areas and their surroundings. Another is the need to build awareness among all levels of society on the multiple benefits of nature conservation. And finally, the need to be innovative, for example, to pay cash to local governments and/or NGOs to manage protected areas subject to independent performance reviews.

Key comments emphasized:

- Participation Given that projects and protected area management often do restrict resource use by communities, Gayatri Acharya wondered whether legal recognition of communities ownership of common resources provided adequate incentives to conserve and maintain biodiversity and was a better alternative to enforcement systems.

Agi Kiss stressed that it was extremely important to ensure a common understanding of the term 'community participation' - a 'buzzword and a sacred cow'. Her views were that with participation, communities had expectations of some form of benefits, but often those benefits do not accrue at the speed or in the quantity hoped for. Some projects, therefore, provide, what are hoped to be interim, concrete benefits as compensation for the slow delivery of benefits, some, with the associated risk that these 'gifts' can be seen as entitlements and which do not reflect the scale of the likely future benefits. Asimalowo supported this interpretation and added that at least four possible interpretations which can be made include,

- (i) communities participating in conservation-related decisions that affect them; and/or
- (ii) communities participating in carrying out conservation actions, probably defined by

others, for which they expect payment or compensation; and/or  
(iii) community groups or individuals participating in direct and economic benefits derived from conservation; and/or  
(iv) individuals or communities dedicating land under their control to conservation use with or without financial gain.

- Community-Driven Development Tom Hodges pointed out the importance of allowing local people to develop and implement their own projects. This is a growing movement in the Bank, especially in the area of natural resource management. He indicated that more information was available on the website ([www.onecountry.org/e111/e11113as.htm](http://www.onecountry.org/e111/e11113as.htm)) The discussion noted that such a mechanism implied ways of getting appropriate sums down to appropriate levels without having money trickle through government bureaucracies, therefore avoiding inefficiencies and wastage. Monitoring and assessment were vital, regardless. Wisdom Dlamini from Swaziland informed the group about the Shewula community, which has got involved with ecotourism enterprises as part of a tri-national project.
- Assessment and Evaluation Sama Gunawardhana attested to the above statement regarding better assessment and evaluation of biodiversity projects. Tony Whitten critiqued the lack of feedback on the impact of activities, such as, awareness increasing and education initiatives of biodiversity projects for local communities. He felt that while resources were being spent on such activities, there was still a need for convincing evidence to show a direct, positive impact on conservation and this information gap poses serious questions for the planning of future awareness building programs. The IUCN Commission on Education and Communication had a few examples where good baseline data was collected before the activities, followed by monitoring.

In addition, Tony Whitten mentioned that, as part of the preparations for Rio Plus 10, the Bank was putting together a book on lessons learned in GEF and other conservation projects. He, also, cited other sources of lessons learned and assessments of success including the book '*Last Stand*'<sup>6</sup>, '*Parks and People*'<sup>7</sup>, and Wells et al. 1999, '*Investing in Biodiversity*'<sup>5</sup>.

- Education and Information Sama Gunawardhana argued that while communities have a vital role in conservation, it is hard to get across the myriad values that biodiversity has and suggests good environmental education that pervade across conventional subjects as the key. However, it was felt that informal education and the media were probably more suitable in getting the urgent messages across. Change in standard teaching procedures, though necessary, was more of a long-term approach towards which initial steps could be providing supplemental material in support of the formal school program The discussion raised the important question - how fully informed are 'local communities' about the biodiversity around them? Obviously some are very close to the land and the resources it supports, but others are not.

Global significance and benefits generally need to be communicated but also the facilitators need to be aware of whatever local knowledge there is. Asimalowo A.

Abdullahi from Ibadan felt that education and awareness are only part of the way to get people to participate in conservation activities as a lot depended on the availability of opportunities for livelihoods. However he also notes that there is no one 'right' way to do business and the involvement of policy makers, local communities and other concerned groups is essential to understand the right mix of incentives for sustainable conservation and development.

- Traditional Management and Cultural Diversity Guillermo Rodriguez-Navarro contrasted 'austerity' and 'poverty', and argued that the developed world has found considerable value in indigenous knowledge and the resulting patterns of consumption. Based on experience, he notes that it was most useful to take into consideration methods of indigenous traditional environmental management with special attention to the revitalization of indigenous social structures and the enhancement of traditional knowledge systems. Tony Whitten concurred with his observation that traditional management schemes often include sanctions on those who break the community rules, thus the importance of allowing the traditional social structures themselves to reform. But the down side was that some indigenous (but increasingly less traditional) groups are more than willing to resurrect their rights to resources, but less keen on balancing this with the requisite responsibilities, with the result that sustainability remains a distant dream.

Elizabeth Reichel raised the issue of cultural diversity alongside biodiversity. It was felt that there would indeed be natural synergies between the two, but only if the local communities are allowed full participation. Need for felt for relevant methodologies for valuing the cognomens, knowledge, symbolic capital, etc of the indigenous peoples, or protocols to negotiate, respect or acknowledge these; this area was also regarded as of particular concern at Global Biodiversity Forums and at Conferences of the Parties to the CBD.

- Costs of Consensus Building Tom Yuill raised the issue of costs of developing community consensus, prior to engaging the community in biodiversity conservation, given that communities (with different meanings to different people) are heterogeneous groupings. Wolfram Dressler and Michael Brown responded with examples of complex situations and suggested consensus-building toolkits. Michael Brown added that the ICDP concept, while not flawed in essence, needs to be worked out with communities as partners from the outset, explaining, perhaps, the paucity of success stories.

## **Parallel Session II: Market Mechanisms to Promote Biodiversity Conservation and its Sustainable Use** (Moderated by Frank Vorhies and Andrea Bagri, IUCN)

Many of the participants highlighted the need for communities to benefit directly from the conservation of biodiversity, in order to ensure they have the incentive to continue with conservation rather than degrade the resource base. However, it was noted that these benefits must be linked to conservation activities, and must be sustained over a long-term time horizon. Thus, the emphasis on project-based financing, which lasts for 2-3 years does little to create a solid incentives structure for conservation was misguided.

The group also enumerated important causes of biodiversity loss including unregulated / open access to resources, incentives to undermine biodiversity, imbalance between population size and resource availability, production and consumption patterns in the developed world, inadequate government policy and absence of community representation in planning, implementation and monitoring. This last point was brought out by a number of participants as a key missing ingredient of many incentive programs. Successful incentives, many argued, must be built around solid community participation.

Participants pointed out that identifying market "niches" and opportunities to increment value-added activities for marketable biological resources is an important way to ensure conservation and sustainable use (But, "there is a need to draw a line between the need for the market and the greed to over harvest"). Several successful examples have been quoted from around the world--medicinal plants from India, China and Vietnam, shade grown coffee in Central America, agroforestry in many tropical countries, etc. The promise and risks of ecotourism were also mentioned.

Building viable local enterprises and processing for higher value-added, strengthening marketing channels and collaborating with the private sector were some examples offered by participants of ways in which to provide incentives for market protection of biodiversity.

Addressing this issue of sustainability, Andrea Bagri asked interesting questions that offered further food for thought:

- What types of sustainable financing mechanisms can be built such that they provide incentives for the conservation of biodiversity?
- How can the private sector contribute to this process? The private sector is inherently financially sustainable - it is in business to stay in business. Would such a model be a useful framework to analyze biodiversity conservation issues?
- Incentive measures are clearly bound to the community and culture in which they are developed and implemented...they must remain appropriate for this community and culture. But communities and cultures are not static. What mechanisms are needed to ensure that the incentives developed today for biodiversity conservation remain useful and appropriate tomorrow? If not, checks should ensure that inappropriate incentives are dismantled.

**Parallel Session III: Role of International Conventions and Trade Agreements in Biodiversity Conservation and Use** (Moderated by Manuel Rodriguez, Andean Center for Sustainable Development, Colombia)

Convention on Biological Diversity Gayatri Acharya and Nalin Kishor set the context for the discussion with a few background facts. They pointed out that the Convention on Biological Diversity (CBD), which came into force on 29 December, 1993, was seen as testimony to the increasing global concern over biodiversity loss and a recognition of the need for coordinated action towards its conservation. More than 160 countries have ratified the convention. They feel that if the Convention is to succeed as an international agreement, it must create the mechanisms and support systems necessary to transform this expression of concern into an effective instrument to conserve the World's biodiversity. These mechanisms must address the local and global facets of the biodiversity problem and recognize the fact that much of the world's biodiversity is found in countries and regions too poor to invest in conservation. Under the Convention, the burden of these conservation efforts to provide global benefits is in fact noted.

International Agreements and Issues There are several other international conventions, such as the RAMSAR Convention of Wetlands, the Bonn Convention, the Convention on International Trade in Endangered Species, which support various aspects of the CBD. It was noted that the existence of multiple conventions necessitated cooperation and close links between institutions effecting them in order to focus on priorities and avoid contradictory initiatives. Also, given the interlinkages between the different global threats, sound policy recommends cohesion in efforts to combat them. The effectiveness of these Conventions in addressing the direct (overexploitation) and indirect (habitat loss) causes of biodiversity loss was questioned. Issues of Intellectual Property Rights were raised and the importance of relevant, precise and updated information to support the implementation of all conventions was noted.

Manuel Rodriguez highlighted the perceived stagnation in the implementation of these global agreements. This stems from poor compliance by the developed world on key issues of the non-binding Rio Agreements as well as climate change and Biodiversity conservation, which has alienated a number of developing countries. Developing countries were further constrained in providing attention by their vulnerability to a number of economic crises in the recent past.

Global Environment Organization (GEO) Lack of cooperation, inefficiency and the generally poor performance of the global community in protecting environmental resources were the reasons cited to support the creation of a global environmental organization. The debate between Dan Esty of Yale and Calestous Juma of Harvard (and former Executive Secretary of the CBD) provided various arguments for and against the creation of yet another international organization, examining issues such as the role of such an organization in addressing issues of national concern and the added value of a global environment body to the existing array of international conventions and agreements.

The 'pros' were thought to be:

- Significant number of pressing pollution control and natural resource management issues are transboundary in nature and cannot be adequately addressed by compliance with national / domestic environmental laws and regulations

- The current suite of global treaties, conventions, etc system is dysfunctional. Consolidating a number of existing UN agencies with environmental responsibilities into a streamlined new body with a decentralized structure represents a better approach. It will contribute to consistency of policies and a harmonization of standards
- The existing treaties give lip service to serious issues, cover for governments and offer little to citizens. A well functioning international environmental regime would address these concerns

On the other hand, the ‘cons’ were identified as:

- Most “global” aspects of environmental and natural resource management are already covered in the UNCED Conventions on Climate Change, Desertification and Biological Diversity. Improving the effectiveness of existing agreements and voluntary collaboration may be easier and more effective than creating a new body.
- The feasibility, probability and costs of agreeing on a new instrument and then of implementing that agreement are open questions. Devoting energies to the formation of a GEO may well be used as an excuse for avoiding more effective actions.
- Many developing nations cannot meet their obligations under various environmental treaties partly because the richer nations have not honored their commitments to assist them with technology and finances. There is no guarantee that a new agency will perform better in this regard.
- Many of the expressed concerns about global environmental problems have local/national origins and repercussions. Much of this involves domestic efforts to cut pollution, protect wildlife, and conserve soils and freshwater. But many developing countries concerned with national sovereignty strongly feel that these are internal affairs, not the subject for international laws set by a GEO.

It was concluded that this debate was not an easy one to resolve and that the next weeks and months would likely see heating up of the discussions.

### **Additional Noteworthy Issues**

Valuation and Ecosystem Approaches Angela Andrade raised an issue that struck a chord with many participants; keeping in sight the principles of ecosystem management. The Malawi principles, which support an ecosystem approach to conservation and sustainable use of biodiversity and a number of transboundary projects have been initiated in order to capture the ecological (as well as economic and in many cases, political) benefits of transboundary cooperation were cited. These efforts were thought to provide insights for implementing elements endorsed by international conventions.

In the context of valuation, there were several suggestions that the focus should be on estimating ecosystem services rather than only on valuation of individual species. An ecosystem approach is likely to lead to holistic and better solutions, which a species-based approach may miss. Indeed, the resilience of ecosystems and their continued ability to provide ecological services that we are dependent on is of critical importance to economic development and human welfare. The implications of biodiversity for the healthy functioning of ecosystems were deemed as a question for both ecologists and economists to grapple with. Therefore, it was seen as

increasingly evident that the focus of valuation studies would have to move towards ecosystem functions rather than the willingness to pay for species preservation if the objective were to capture the value of life-support services performed by natural capital.

Legal Issues in Biodiversity Conservation Rules and regulations, it was considered, at best should promote conservation and at the least should not hinder it. Two examples posted by participants deserved mention. First, in the case of India, the 1991 amendments to the National Wildlife Act imply that no commercial harvesting or felling of wildlife resources is allowed from any type of national parks and wildlife sanctuaries. This discourages park managers from undertaking any people oriented programs, as there is no scope to compensate the people for loss of access to resources. On the other hand, Mozambique has relatively progressive policies and legislation. The legislation gives rights to the rural poor to enter into partnership with the private sector in sustainably utilizing biodiversity-in which communities can use land as collateral in enterprise based biodiversity conservation programs.

Participants agreed that it was critical to examine how laws could be modified to remove their anti-conservation bias and to examine how laws might be further strengthened so that stakeholders are made fully aware of their rights. Protected area networks provided real protection only when there were additional mechanisms in place to induce the allocation of resources and commitment by local communities. Legal and financial mechanisms must in turn be supported by monitoring and careful supervision activities.

Balancing socio-economic needs and conservation priorities John Newby recommended a recent paper in 'Biodiversity and Conservation'<sup>8</sup> that questions whether it is indeed possible to address both the socio-economic needs of local communities and the conservation of biodiversity. This contention could not be dismissed, but under certain conditions, socio-economic and conservation needs may be balanced even if such cases were typically exceptions rather than the rule.

The question of how socio-economic and conservation needs should be balanced was considered crucial for organizations such as the World Bank where the primary focus is on poverty reduction. Through numerous examples, participants noted that the goals of poverty alleviation, livelihood enhancement and biodiversity conservation couldn't be met without understanding the needs, capacity, knowledge and aspirations of local communities. Tony Whitten pointed out that, in fact, there was little point in going ahead with conservation activities if communities were not on board and that approaches such as that used in the ICDPs would be more successful if community participation was ensured from the start.

The range of participation was verified by the examples of community participation described by the discussions. Many of the participants expressed frustration with communities that appear to want development and not conservation. Others supported the view that communities need assurances that they will receive benefits beyond the life of the project if they are to be truly cooperative and actively involved in conservation activities. The alternative suggested by John Newby was to scale up conservation and development work to a much greater extent such that the trade-offs and choices are made across a broader socio-political and ecological space. The practicalities of such a path, however, would need to be explored.

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Notes:

<sup>1</sup> Statement of the 15<sup>th</sup> Global Biodiversity Forum to the 5<sup>th</sup> meeting of the Conference of the Parties to the Convention on Biological Diversity. May 2000. Nairobi Kenya. Available at <http://www.gbf.ch/sessions/gbf15/speech.pdf>

<sup>2</sup> Perrings, Charles. 2000. 'The Economics of Biodiversity Loss and Agricultural Development in Low Income Countries', in Lee D., and Barret C. (eds.), Tradeoffs and synergies: Agricultural Intensification, Economic Development and the Environment, Wallingford, CABI. In press.

<sup>3</sup> Perrings, Charles and Brian Walker. 'Optimal Biodiversity Conservation in Rangelands', Working Paper available at [http://www.worldbank.org/devforum/forum\\_biodiversity.html](http://www.worldbank.org/devforum/forum_biodiversity.html)

<sup>4</sup> World Bank. April 2000. 'Supporting the Web of Life: The World Bank and Biodiversity - A Portfolio Update (1988 – 1999)', Washington D. C.

<sup>5</sup> Wells, Michael, et al. 1999. *Investing in Biodiversity: A Review of Indonesia's Integrated Conservation and Development Projects*', World Bank, Washington D.C.

<sup>6</sup> Kramer, Randall et al (eds.). 1997. *Last Stand: Protected Areas and the Defense of Tropical Biodiversity*, Oxford University Press, New York

<sup>7</sup> Wells, M., K. Brandon, and L. Hannah. 1992. *People and Parks: Linking Protected Area Management with Local Communities*, World Bank, WWF, and USAID, Washington D.C.

<sup>8</sup> Attwell and Cotteril. 2000. 'Postmodernism and African conservation Science' in *Biodiversity and Conservation*, 9: 559-577

### Useful World Bank Websites

Forestry - <http://www.worldbank.org/forestry>

Biodiversity - <http://www.worldbank.org/biodiversity>

World Bank Institute, Rural and Natural Resources Management Group - <http://www.worldbank.org/wbi/wbien/rural.html>

International Workshop on Community based Natural Resource Management - <http://www.worldbank.org/wbi/conatrem>

☰ Contact Information: Gayatri Acharya ([gacharya@worldbank.org](mailto:gacharya@worldbank.org)), Nalin Kishor ([nkishor@worldbank.org](mailto:nkishor@worldbank.org)), or Arati Belle ([abelle@worldbank.org](mailto:abelle@worldbank.org)), World Bank Institute, 1818H street, Washington D. C. 20433.