

To: Hamdallah Zedan
Executive Secretary
Convention on Biological Diversity
393 Saint-Jacques, Suite 300 Montréal, Quebec, Canada H2Y IN9

From : IUCN – The World Conservation Union
Rue Mauverney 28, CH-1196 Gland, Switzerland
Contact: Joshua Bishop, Sr. Advisor, Economics & Environment
(e-mail: joshua.bishop@iucn.org)

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**Re : Request for information on incentive measures
(Ref: SCBD/SEL/ML/GD/30403, 15 July 2002)**

IUCN – The World Conservation Union – has for many years supported efforts to create positive economic incentives for nature conservation, and to remove or reform so-called “perverse” incentives that result in the loss of biological diversity. IUCN has contributed numerous case studies, as well as general guidelines and manuals, draft decisions and other information for consideration by the Conference of the Parties to the Convention on Biological Diversity, with respect to the use of incentive measures. Much of this information is contained in the IUCN Biodiversity Economics library, available on-line at: <http://biodiversityeconomics.org/incentives/>. Selected pages from the library are provided in an annex to this memo. Additional material including several examples of incentives and disincentives for biodiversity conservation was provided in a memo to the CBD from the IUCN Environmental Law Center, dated 10 May 2001.

The recent request for additional information on incentive measures, issued by the CBD Secretariat and referenced above, is a timely reminder that much more remains to be done to ensure that economic policies and markets fully reflect the value of biodiversity. At present, there remains a large gap between the stated intentions of public policy-makers and the orientation of economic policy. Similarly, there is a gap between the apparent willingness-to-pay for biodiversity expressed by consumers, and the monetary rewards offered to “producers” of biodiversity (see for example: Pearce *et al.* 1999). The result is that most markets around the world continue to operate as if biodiversity had little or no economic value.

Efforts to bridge these gaps include strengthening planning procedures for infrastructure projects, reforming fiscal policy (taxes and subsidies) in resource-intensive sectors, and a range of other mechanisms intended to encourage the shift to more environmentally-friendly patterns of production and consumption. The various mechanisms through which biodiversity values can be “internalized” in market behavior are well-described in OECD (1999, 2002).

Perverse subsidies

IUCN places high priority on efforts to eliminate or reform so-called “perverse” subsidies that contribute to the loss of biodiversity. Research around the world has revealed that the most significant proximate cause of biodiversity loss is the alteration of natural habitat through modification for human use (Perrings *et al.* 1995; Wood *et al.* 2000).

Such alteration typically results from the conversion of land for agriculture, logging and the development of industrial tree plantations. Over-harvesting of wild plants and animals for industrial use or commercial trade is likewise an important cause of biodiversity loss in both terrestrial and aquatic ecosystems.

In many countries, the economic activities most directly responsible for biodiversity loss are heavily subsidized. Public support for such activities assumes many different forms, including minimum producer price guarantees, export subsidies and tax incentives, as well as the public provision of credit, insurance, market information, infrastructure and other inputs at low or no cost. Such subsidies are intended to stimulate investment and output in the target sectors, but are rarely designed with the conservation of biodiversity in mind. As a result they frequently intensify pressures on diverse habitat, stimulating more rapid conversion of larger areas and increased use of natural as well as polluting inputs. The fact that such subsidies also consume large amounts of scarce public funds, and that they typically benefit relatively well-off producers at the expense of consumers and developing country producers, reinforces the urgency of reform. IUCN is committed to assisting member countries and others in their efforts to eliminate, reduce or re-orient environmentally-harmful producer subsidies, in the interests of biodiversity conservation and sustainable development.

Positive incentives

In addition to reforming perverse incentives, there is a need to develop new positive incentives for biodiversity conservation. Some of the most innovative initiatives involve the creation of payment mechanisms, or new markets, so that biodiversity conservation becomes financially rewarding in its own right. Examples include private investment in nature conservation by eco-tourism firms, profit-sharing agreements in bio-prospecting contracts, certification and labeling of biodiversity-friendly products and services, etc. The main advantage of such approaches is that they allow people to “do well by doing good.” However, payments for biodiversity conservation need to be carefully designed and implemented, in order to avoid conflict with existing voluntary agreements and regulations, as well as minimizing harm to vulnerable groups.

A recent global assessment of efforts to create markets for a range of environmental services is contained in Landell-Mills and Porras (2002). This report is based on a review of more than 280 separate examples, mainly drawn from the developing world, including 72 different payment schemes for biodiversity conservation. Additional information on the development of payments for forest environmental services can be found in Pagiola *et al.* (2002). The latter report includes four detailed case studies of efforts to create positive incentives for biodiversity conservation, as well as examples of markets for watershed protection and carbon sequestration.

Lessons from experience

The development of economic incentives for biodiversity conservation is still very young and much remains to be learned. Nevertheless, the experience described in the two reports cited above suggests some initial lessons with respect to the design of effective, efficient and equitable incentives for biodiversity conservation:

- **One size does not fit all.** No single market mechanism is appropriate for all situations. Even when mechanisms are similar, the details of their application are likely to differ according to local technical, economic, and institutional conditions.

- **Identify the benefits being provided clearly.** In order to sustain the interest of consumers, suppliers will need to move beyond generic 'ethical', 'fair trade' or 'eco' labels. The challenge is to define and distinguish the particular environmental (and social) benefits on offer, and to identify who might want to buy them, so as to gain maximum market share and avoid falling into the commodity trap of low prices for indistinguishable goods and services. This applies with equal force to new markets for 'ecosystem services' such as biodiversity conservation. Without a clear understanding of which specific services a given ecosystem is providing, and to whom, developing market-based solutions will be difficult.
- **Understand the links between ecosystems and services.** In the case of markets for ecosystem services, it is important to be sure how these services are generated. Too often, market developers rely on conventional wisdom that certain ecosystems provide particular services, such as the largely erroneous notion that forests help to maintain fresh water supplies (Calder, 1999). Even when the conventional wisdom is correct, it is often not precise enough to allow effective mechanisms to be designed. What kind of ecosystem management is most effective in conserving biodiversity, for example, and where should it be located? Are there trade-offs between conserving biodiversity and securing other environmental benefits? Without answers to such questions, market-based mechanisms are unlikely to be sustainable.
- **Begin from the demand side, not the supply side.** By focusing first on the demand for environmental benefits, and asking how best to meet it, it is more likely that a viable business will develop. Without demand, there can be no market. Beginning from the supply side risks developing enterprises that supply the wrong goods and services, in the wrong places, or at prices that buyers are unwilling to pay. In general, supply-driven initiatives have a higher mortality rate than demand-driven ones. At the same time, it is important obtain accurate information on the potential supply of ecosystems services, especially in developing countries where information on land use is often incomplete or out of date.
- **Monitor effectiveness.** Rigorous and transparent monitoring is essential to enable buyers to be sure they are getting what they want, and to inform suppliers of problems before they become insurmountable. At the same time, excessive monitoring requirements can discourage potential suppliers without necessarily providing more reassurance to buyers. Finding the right balance of information and compliance costs is an on-going concern, as seen in markets for certified timber and organic foods.
- **Design flexible business models.** Markets for environmental benefits must be sufficiently flexible to respond to changing demand and supply conditions, new technologies and increasing competition. They should reward efforts to expand and improve service delivery and to reduce costs, while minimizing the incentives for destructive rent-seeking or free-riding.
- **Ensure that the poor can participate.** Markets for green and ethical goods and services have great potential to provide additional sources of income to rural land users, as well as reduced risk through diversification and other indirect benefits. However, realizing this potential often requires that particular efforts be made to ensure that the poor are not excluded. Experience from recent initiatives in the

developing world offers some lessons about the factors which affect the impact of markets on the poor, and how to maximize their positive impact. One clear finding is that poor households and communities need to be fully involved in the design and implementation of market-based approaches in order for them to benefit. Other key lessons include the following:

1. **Secure property rights.** Poorer households often have insecure property rights over land and other assets, which prevents them from taking part in certain markets, such as for bio-prospecting. Special efforts may be needed to clarify property rights and to allocate them appropriately, to ensure that relatively deprived groups are not excluded. A related priority is to consider the potential impact of market-based mechanisms on the landless poor, including tenant farmers and agricultural labor.
2. **Support co-operative institutions.** Because poorer households tend to hold smaller parcels of land (if any), to be less well educated, and to have fewer contacts with potential buyers, they face significant obstacles in accessing markets. Co-operative institutions can help the poor to pool their limited resources and get better deals through collective bargaining. Local organizations can also provide a valuable conduit for external support, for example through training and marketing assistance.
3. **Identify products that the poor can sell.** When developing markets for 'green' or 'ethical' goods and services, extra care should be taken to ensure that new production processes fit the lifestyles of poorer households. Quality standards need not be diluted, but production schedules and targets may need to be more flexible – for example, to accommodate the fluctuating demands of child care, food preparation or seasonal migration. Accounting systems should be simple and easily explained to illiterate participants.
4. **Provide access to start-up finance.** New markets often require an up-front investment from new participants. This can be a major barrier for poorer households. Financial support, through direct subsidies or technical assistance, may be necessary to allow them to participate.

Conclusion

IUCN is committed to efforts to reform economic policies and market institutions, in order to reverse biodiversity loss and to create the conditions for more sustainable, equitable and efficient use of biological resources. A key priority is to identify, eliminate or reform environmentally harmful subsidies that exacerbate the loss of biodiversity. Action is also required to synthesize, disseminate and build on the lessons learned from recent efforts to create positive incentives for biodiversity conservation around the world. Particular attention should be paid to the impact of emerging markets for ecosystem services on poor countries, communities and households.

References:

- Calder, I. 1999. *The Blue Revolution: Land Use and Integrated Water Resource Management*. Earthscan: London.
- Landell-Mills, N. and I.T. Porras. 2002. *Silver bullet or fools' gold? A global review of markets for forest environmental services and their impact on the poor*. International Institute for Environment and Development: London.
- OECD. 1999. *Handbook of Incentive Measures for Biodiversity: Design and Implementation*. OECD: Paris.
- OECD. 2002. *Saving Biological Diversity: Harnessing Markets for Conservation and Sustainable Use*. OECD: Paris.
- Pagiola, S., Bishop, J. and N. Landell-Mills (eds.) 2002. *Selling Forest Environmental Services: Market-based Mechanisms for Conservation and Development*. Earthscan: London.
- Pearce, D. W., Moran, D. and W. Krug. 1999. *The Global Value of Biological Diversity: A Report to the United Nations Environment Programme*. CSERGE: London.
- Perrings, C., Goran Maler, K., Folke, C., Holling, C.S. and B.O. Jansson (eds.) 1995. *Biodiversity Loss: Economic and Ecological Issues*. Cambridge University Press: Cambridge.
- Wood, A., Stedman-Edwards, P. and J. Mang (eds.) 2000. *The Root Causes of Biodiversity Loss*. Earthscan: London.

Annex

Selected pages and documents on incentives for biodiversity conservation, from the IUCN Biodiversity Economics Library (<http://biodiversityeconomics.org/index.htm>):

[Economics and Biological Diversity](#)

[Perverse Habitats](#)

[Economic Incentives for Rain Forest Conservation](#)

[Economics of National Biodiversity Strategies](#)

[Biodiversity Perverse Subsidies](#)

[Incentives for the Conservation of Crocodilians](#)

[Centro Latinoamericano para la Competitividad y el Desarrollo Sostenible](#)

[Economics of Canadian Sealing Industry](#)

[User-Pays Revenue](#)

[Subsidies to Marine Capture Fisheries](#)

[Global Habitat Protection: Limitations of Development Interventions](#)

[Guide to Building a Biodiversity Strategy](#)

[Community Involvement in Sustainable Forest Management](#)

[Incentives for River Basin Management](#)

[Making Wildlife Economically Viable](#)

[Why Wildlife Conservation Has Not Economically Benefited Communities in Africa](#)

[Community-based Incentives for Nature Conservation](#)

[Green Scissors](#)

[Government Policies Affecting Forests in Latin America](#)

[Forest Resource Policy in Latin America](#)

[Deforestation and Property Rights in Latin America](#)

[Protected Areas Economics and Policy](#)

[Environmental Economics Explained: Incentive Measures](#)

[Economic Incentives to Develop the Rangelands of the Serengeti](#)
[Economics, Policy and Biodiversity](#)
[Deforestation and Wood Uses in the Ecuadorian Andes](#)
[Economic Instruments for Environmental Management](#)
[Market Based Instruments for Environmental Policymaking](#)
[Using Incentives for Biodiversity Conservation](#)
[Tariff Liberalization, Wood Trade Flows & Global Forests](#)
[Poverty and Employment in Timber Dependent Countries](#)
[Economic Instruments for Pollution Control and Resource Management](#)
[Behavioral Responses to Environmentally-Related Taxes](#)
[Economic Instruments to Foster Sustainable Use: Bioprospecting](#)
[The Law and the Economics of Habitat Conservation](#)
[Evaluating Eden: Community Based Wildlife Management](#)
[The Policy Think Tank](#)
[Economic Instruments for Natural Resource Management & Conservation](#)
[Economic Constraints to the Management of Marine Protected Areas](#)
[Economic Tools for the Management of Marine Protected Areas](#)
[The Domestic Benefits of Tropical Forests](#)
[Economic Incentives for Watershed Protection](#)
[The Cost-Effectiveness of Conservation Payments](#)
[Annotated Bibliography - Economics for Biodiversity Planning](#)
[Economics and the CBD](#)
[Incentive Measures Toolkit](#)
[Case Studies](#)
[OECD Database of Environmental Taxes](#)
[Conserving Genetic Diversity](#)
[Freshwater Ecosystems and Economic Security](#)
[Market-Based Instruments](#)
[Building Economics into Biodiversity Strategies](#)
[Incentives for Community-Based Conservation](#)
[Agriculture](#)
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