



Ref: SCBD/SEL/ML/GD/49115

20 May 2005

NOTIFICATION

Dear Sir/Madam,

Subject: Peer review of documents on the analysis of existing and new instruments that provide positive incentives

I wish to draw your attention to decision VII/18 of the seventh meeting of the Conference of the Parties to the Convention on Biological Diversity, on incentive measures.

In paragraph 11 of this decision, the Conference of the Parties requested the Executive Secretary “*to prepare, in cooperation with the OECD and other relevant international organizations, an analysis of existing and new instruments that provide positive incentives, including traditional laws and practices which generate positive incentives, their interaction with other policy measures and their effectiveness, including their requirements for successful application, possible limitations and shortcomings, and to develop proposals on the application of such positive incentive measures and their integration into relevant policies, programmes or strategies, for consideration by the Subsidiary Body for Scientific, Technical and Technological Advice at a meeting prior to the eighth meeting of the Conference of the Parties.*”

Pursuant to that request, the Secretariat has prepared the attached documents that provide the requested analysis as well as proposals on the application of such positive incentive measures and their integration into relevant policies, programmes or strategies. The documents are now open to peer review. The purpose of the peer review process is to receive comments on the overall balance and soundness of the arguments covered by the documents, as well as on the identification of opportunities for further research.

To: CBD National Focal Points;
Relevant organizations

Attachment: Documents “An analysis of existing and new instruments that provide positive incentives” and “Proposals on the application of such positive incentive measures and their integration into relevant policies”



I have the pleasure to invite you to take part in the peer review of the attached documents. I would be grateful to receive your comments as soon as possible but not later than **4 July 2005** to allow for the refinement of the documents in light of the comments received and their timely distribution prior to the eleventh meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA-11).

I wish to thank you in advance for your cooperation in this matter and for your continued support of the work of the Convention.

Yours sincerely,

Hamdallah Zedan
Executive Secretary



**CONVENTION ON
BIOLOGICAL
DIVERSITY**

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Eleventh meeting

Montreal, 28 November – 2 December 2005

Item 5.3 (a) of the provisional agenda*

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INCENTIVE MEASURES

2

**AN ANALYSIS OF EXISTING AND NEW INSTRUMENTS THAT PROVIDE POSITIVE
INCENTIVES**

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Note by the Executive Secretary

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DRAFT FOR PEER REVIEW – DO NOT QUOTE

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1. Introduction

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1. In paragraph 11 of decision VII/18, on incentive measures, the Conference of the Parties requested the Executive Secretary “to prepare, in cooperation with the OECD and other relevant international organizations, an analysis of existing and new instruments that provide positive incentives, including traditional laws and practices which generate positive incentives, their interaction with other policy measures and their effectiveness, including their requirements for successful application, possible limitations and shortcomings, and to develop proposals on the application of such positive incentive measures and their integration into relevant policies, programmes or strategies, for consideration by the Subsidiary Body for Scientific, Technical and Technological Advice at a meeting prior to the eighth meeting of the Conference of the Parties.”

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2. This note presents an analysis of existing and new instruments that provide positive incentives for the conservation and sustainable use of biodiversity, as requested by decision VII/18. It complements the note by the Executive Secretary contained in document UNEP/CBD/SBSTTA/11/8, which presents a synopsis of the analysis as well as the proposals on the application of such positive incentive measures and their integration into relevant policies, programmes or strategies.

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3. By paragraph 8 of the same decision, the Conference of the Parties invited Parties, governments and international organizations to submit case-studies, best practices and other information inter alia on “the use of non-monetary positive incentive measures for the conservation and sustainable use of biodiversity

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* UNEP/CBD/SBSTTA/11/1.

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1 *as an initial step in the ongoing examination of incentive measures, including traditional laws and*
2 *practices which generate positive incentives.”* The Executive Secretary communicated this invitation to
3 Parties, governments and relevant organizations by notifications 076/2004 and 077/2004 as well as
4 026/2005 and 028/2005. Pertinent submissions received further to this invitation were taken into
5 consideration in the preparation of the present note. In addition, the broad literature on this topic was also
6 taken into consideration. Particular attention was given to extracting practical, case-study-oriented
7 material.

8 4. Like other types of incentive measures, positive incentive measures seek to address a fundamental
9 underlying cause of biodiversity loss – the fact that those in a position to preserve biodiversity and use
10 biodiversity resource in a sustainable manner often lack sufficient incentives to do so. This lack of
11 incentives is exacerbated by the fact that the benefits of activities that destroy or degrade biodiversity
12 tend to be short-term, direct, and easily captured by individuals while the benefits of conserving
13 biodiversity tend to be long-term, indirect and diffuse, accruing not only to individuals but also to
14 societies-at-large. ^{1/} In this context, the proposals for the design and implementation of incentive
15 measures, endorsed by the sixth meeting of the Conference of the Parties, have already underlined that
16 positive incentives can influence decision-making by recognizing and rewarding activities that are carried
17 out for conservation and sustainable use biodiversity. ^{2/}

18 5. The Millennium Ecosystem Assessment, in its Biodiversity Synthesis Report, has also recognized
19 that positive incentive measures such as payments and markets for biodiversity and ecosystem services
20 have been partly successful and could be further strengthened. ^{3/}

21 6. The review of the submissions received and of the literature shows that there is a wide range of
22 positive incentive measures available to encourage the conservation and sustainable use of biodiversity.
23 The note canvasses a number of concrete examples and seeks to draw lessons for policy makers based on
24 practical experiences and case studies. New and existing incentive measures are identified, and, based on
25 submissions received, case studies and other practical examples are provided to illustrate their
26 application. Moreover, variables are inferred that contribute to the success and/or limitations of these
27 measures. It is also discussed how these positive incentive measures are linked with, and can be
28 integrated into, other relevant policies, programmes and strategies.

29 7. In accordance with paragraph 8 of decision VII/18, the note is divided into two sections which deal
30 with *monetary* and *non-monetary* incentive measures, respectively. It has to be noted however that in
31 many cases, the distinction between monetary and non-monetary measures is blurred. In particular in the
32 creation of markets for biodiversity-related goods and services, both types are often applied in a closely
33 complementary manner. For instance, the establishment of labeling and certification schemes is an
34 important non-monetary tool to create markets in biodiversity-related goods such as organic food, thereby
35 generating incentives to use the related biodiversity resource in a sustainable manner. In many cases,
36 however, such a tool will be supplemented by monetary components that further support the creation of
37 the markets, for instance in form of support payments to farmers for conversion to organic agriculture, or
38 in form of provision of costly market information and capacity building.

39 **2. *Monetary incentive measures: Overview and analysis of effectiveness,***
40 ***possible limitations and shortcomings***

41 8. Positive monetary incentives involve the use of funds to reward the achievement of biodiversity-
42 friendly outcomes or to support activities that promote the conservation and sustainable use of

^{1/} Kiss, A. 2001.
^{2/} See decision VI/15, Annex I, paragraph (36) (h).
^{3/} Millennium Ecosystem Assessment (2005), page 11

Box 1: Current World Bank Work on Payments for Ecological Services in Colombia, Costa Rica, Dominican Republic, El Salvador, Ecuador, Nicaragua, and Mexico

Land users typically receive no compensation for the environmental services their land generates and so do not take these services into account when making land-use decisions. The results are often socially sub-optimal. In recent years, recognition of this problem has led to efforts by the World Bank to develop systems in which land users are compensated for the environmental services they generate.

The World Bank is working with several clients to develop systems of payments for environmental services, in particular in Central and South America. Bank-supported operational work on payments for environmental services includes:

- The *Ecomarkets Project*, which supports **Costa Rica's** system of payments for environmental services. This project includes a US\$32.6 million loan from the World Bank to help the government ensure current levels of environmental service contracts, and US\$8 million grant from GEF for the biodiversity services provided through the program.
- The *Regional Integrated Silvopastoral Ecosystem Management Project*, which is piloting the use of payments for environmental services as a means of encouraging a shift from unsustainable agricultural practices to sustainable silvo-pastoral practices in **Colombia, Costa Rica, and Nicaragua**.
- On-going project preparation work in **El Salvador, Ecuador, and the Dominican Republic** aimed at developing pilot programs on payments for environmental services.
- Assistance to **Mexico** in carrying out a survey of land management practices in the *ejido* sector (which includes most of the remaining forest area) to help design a system of payments for environmental services and provide a baseline to monitor its implementation.

According to the World Bank, the process of designing a system of payments for environmental services can be broken into several steps:

1. **Identifying and Quantifying Environmental Services** - What environmental services does a given land use generate? How much of that service is generated? And how much is the service worth?
2. **Developing Systems of Environmental Services Payments That Work** - How are payments actually to be made in order to achieve the desired change in land use sustainability efficiently?
3. **Paying for Systems of Environmental Service Payments** - How can payment systems be financed?
4. **Institutional Issues** - What are the institutional preconditions for the payments to be possible?
5. **Political Economy Issues** - How do we deal with the political economy implications (i.e. winners and losers) of setting up and enforcing payments?

1 biodiversity. Monetary incentives can also be generated through the use of breaks on governmental levies
2 such as taxes, fees or tariffs that grant advantages or exemptions for activities that are beneficial for
3 conservation and/or sustainable use (see box 5 for a case from Brazil). Such measures could generally be
4 applied in situations where desirable activities would not be undertaken without support, or to create a
5 differential in favour of such activities where it is not feasible to discourage the undesirable
6 alternatives ^{4/} (that is, through measures acting as disincentives such as taxes or charges)

7 9. Measures that are based on payments are most common in OECD countries. ^{5/} This is in part a
8 function of the need for substantial funds to implement these types of measures through government
9 programmes or, in a number of cases, through the intervention of other actors such as non-governmental
10 organizations, but it also involves a need for appropriate capacity, including through adequate

^{4/} See OECD 1999 as well as the CBD *Proposals for the design and implementation of incentive measures*, paragraph 37 and the referred table.

^{5/} OECD 1996.

Box 2: New Zealand: Conservation of the Pae O Te Rangi Area

This case study concerns land near Auckland, New Zealand which consists of a combination of regenerating and old growth forest. It had been in private ownership for over 100 years. The main impacts on biodiversity of the area were extensive logging and the conversion of large tracts of land to sheep and cattle farming and horticulture.

The incentive measure was the **outright purchase of the property** by three organisations: the New Zealand Government's Forest Heritage Fund, the Auckland Regional Council and the Waitakere City Council. In this case the negotiations between the local bodies and the landowners had stalled and the Forest Heritage Fund acted as a catalyst to renew the negotiations. The fresh initiative coming from a party with no prior relationship with the landowners proved invaluable.

The objective of the incentive measure was to ensure the land would be administered by an organization that would protect the forest. It also ensured that the forest would not suffer from fragmentation (which was a possibility if it were to be sub-divided). Lessons learned:

- NGO activism and skill at researching and preparing a case for protection of the forest and presenting it to the relevant government bodies was very important in this case.
- Human resources within the government, skilled at negotiations was important in this case.
- It is vital to deal with landowners fairly and transparently.
- A third party can be valuable in land purchase.
- The fact that the Forest Heritage Fund had a clear vision and strict criteria for forest purchases was vital and it was considered key to the success of the purchase that the Fund stuck to the criteria originally drawn up for buying land.

Source: Case Study from New Zealand: Conservation of the Pae O Te Rangi Area. (OECD, ENV/EPOC/GEEI/BIO(98)2, 19 Feb. 1998)

1 government and non-government institutional structures and the legal mechanisms for their successful
2 application and implementation.

3 10. However, there are also recent initiatives to apply monetary positive incentive measures in a number
4 of developing countries. These initiatives are often discussed under the heading of *payments for*
5 *environmental services* (see box 1 for recent activities of the World Bank in different Central and South
6 American countries). As the World Bank explains, these programmes are generally based on the
7 observation that different forms of land use can generate a variety of environmental services, but that
8 land users typically do not receive any compensation for such environmental services. As a result, they
9 usually ignore them in making their land use decisions. Often, this can lead to land use decisions that are
10 socially sub-optimal. The World Bank notes that, in recent years, recognition of this problem has led to
11 efforts to develop systems in which land users are compensated for the environmental services they
12 generate. In this way, land users would have a direct incentive to include these services in their land use
13 decisions, resulting in more socially-optimal land uses. ^{6/}

14 11. Monetary incentive measures can be further differentiated into direct and indirect approaches. Direct
15 approaches generally involve paying relevant actors to achieve biodiversity-friendly outcomes or,
16 conversely, to not achieve biodiversity-harmful outcomes. Indirect approaches seek to support activities
17 or projects that are not designed exclusively to conserve or promote the sustainable use of biodiversity,
18 but have the side-effect of contributing to these objectives.

19 *2.1 Direct approaches*

20 12. Direct approaches typically involve the acquisition, by private or public actors, of certain or all use
21 and development rights of an area in exchange for a payment. This can involve *outright purchase* of the

^{6/} See the presentation of the work of the World Bank on payments for ecological services, at <http://www.worldbank.org/>.

Box 3: A Revolving Fund for Biodiversity Conservation

In this case, the ecosystems targeted by the incentive measure are remnant of heritage vegetation ranging from grasslands to old growth forests. They range in geographic location. Pressures on the ecosystems include both direct and indirect effects from increased human population and activity, the need for food, water, housing, energy, transportation, and recreation. Pressure is particularly observed where agricultural activities have encroached on grasslands and woodlands.

The economic incentive is a **Revolving Fund** administered by the Trust for Nature (Victoria), which operates independently of government. It involves setting aside funds for the purchase of land with conservation significance that can have a covenant placed on it to ensure future maintenance. The fund is unique in that it was formed through government legislation and is provided with some funding but also attracts funds from non-government source including private sector organizations and individuals.

This incentive measure seeks to protect the ecosystems and minimize the long term impacts resulting from pressures of urban sprawl and conversion of areas to agricultural forms of land use. The rationale for the implementation of the Revolving Fund arose from the need to capture nature conservation values on private land. With access to sufficient capital, and at relatively modest overall expense, the revolving fund enables the establishment of a substantial private conservation reserve system, which is managed by private landowners. Lessons learned include:

- Information on biodiversity values is very important .
- Habitat management practices on covenanted land compares favourably with public land for less cost.
- Success lies in its ability to recapture the whole or most of the capital purchase cost and pass on responsibility for land management to owners who are committed to a conservation ethic.
- This mechanism is frequently appropriate in areas of high priority for nature conservation.
- An effective land stewardship programme is critical for maintaining sound management of covenanted land and long term habitat maintenance.

Source: A Revolving Fund for Biodiversity Conservation in Australia. ENV/EPOC/GEEI/BIO(97)17 27 January 1998, OECD.

1 land through government funds or by non-governmental organisations, or in combination, with the aim of
2 conservation (see box 2 for a case study from New Zealand). It can also involve securing land for
3 conservation – without taking ownership – by acquiring certain use and development rights through **long-**
4 **term retirement (or set aside) schemes, conservation leases or easements.** A related, growing area of
5 direct payments by non-governmental organizations in particular in the forestry sector, are **conservation**
6 **concessions** in which conservation organizations bid against logging companies to win logging
7 concessions and take them off the market. The fact that logging concessions are relatively inexpensive in
8 many parts of the world makes this a potentially viable instrument for large-scale application. However,
9 this approach could prove prohibitively expensive if conservation bidders are required to cover not only
10 the direct value of the timber concession, but also the opportunity costs such as taxes and employment
11 that the logging alternative would provide. ^{7/}

12 13. In Australia a **revolving fund** was introduced as an innovative mechanism to reduce the level of
13 monies that need to be available on a permanent, long-term basis to purchase and protect biodiversity-
14 rich lands and important habitats (see box 3). This involves the purchase of land by an independent fund,
15 the application of a statutory covenant to protect conservation values, and the resale of that land to a
16 sympathetic purchaser prepared to manage the land according to the terms of the covenant. The primary
17 aim of this mechanism is to move areas of high conservation and biodiversity value away from land
18 managers whose practices may be deleterious, to owners who positively maintain such values. It also
19 means that for a relatively modest level of capitalisation, the fund can acquire and protect an apparently
20 unlimited amount of land. ^{8/}

^{7/} Kiss, A. 2001.

^{8/} OECD 1998 Australia.

Box 4: Agri-environmental measures in the European Community

Support for agri-environmental measures represents by far the biggest share of the European Community's rural development expenditure, that is, 30% of the total of the European Agriculture Guidance and Guarantee Fund (EAGGF). According to monitoring data provided by the Member States, the share of agricultural land enrolled in agri-environmental measures in total utilised agricultural area has increased from approximately 15 % in 1998 to 27% in 2001. In the year 2001, this share varied considerably between Member States, ranging from less than 10% of the total agricultural area for Greece, Spain and The Netherlands to more than 75% for Finland, Luxembourg, Austria and Sweden.

The Member States have defined Codes of Good Farming Practice in their Rural Development Plans that act as baseline for agri-environmental measures and payments for less-favoured areas. According to the European Community, the codes have proven to be a valuable tool for minimising potential negative environmental effects of the agricultural activity and ensuring that agri-environmental support delivers more environmental benefits.

Source: Submission of the European Community to the Executive Secretary of the CBD

1 14. Covenants and conservation easements are contractual agreements between private landowners and
2 public or non-governmental organisations that involve specified conservation practices on land.^{9/} These
3 arrangements typically involve some restrictions to an owner's existing property rights with regard to
4 land use. Land retirement schemes also involve payments by governments to farmers who agree to
5 remove environmentally sensitive or important habitat farmland from production, for instance, by
6 returning farmed or converted wetland back into a functional wetland environment.

7 15. Substantial monitoring and enforcement costs are associated to ensure compliance in particular with
8 easements and covenants once they are established. It may in fact prove to be complicated to monitor and
9 enforce the terms of the easement contract especially over long periods of time and as ownership
10 changes.^{10/} For instance, the Australian revolving fund relies on the willingness of landowners to take a
11 greater role in the conservation of the land, including its associated ecological processes and biodiversity
12 functions and, to ensure this, it also involves an ongoing monitoring component.

13 16. These complications may be exacerbated if payments are frontloaded into the first few years of the
14 easement. The World Bank concludes that, as the biodiversity benefits that are being sought are generally
15 on-going benefits, which will be enjoyed year after year as long as appropriate land uses are maintained,
16 the payments also need to be on-going. However, the OECD suggests that when diverting agricultural
17 land from certain intensive uses, outright purchase is more cost-effective than payments in perpetuity
18 under management agreements by regulating subsequent use and lowering moral hazard and monitoring
19 problems involved in the negotiation and maintenance of management agreements.^{11/}

20 17. The biodiversity-related benefits of such programmes clearly increase with the length of time land is
21 removed from productive uses. For example, many wetland services and other wildlife habitat functions
22 arise only when the ecosystem is fully established, a process that may take years if not decades. Some of
23 the previous biodiversity losses may even be irreversible. While direct purchase and conservation
24 easements can ensure the protection of land in perpetuity, one shortcoming of land set-aside schemes has
25 been that they are rarely of long enough duration to ensure that the benefits of conserving biodiversity are
26 fully realised.^{12/} It is under discussion whether the period envisaged for long-term land set-asides under
27 the European Common Agricultural Policy (20 years) is sufficient to generate substantial environmental
28 benefits.

^{9/} OECD 1996.

^{10/} Millennium Ecosystem Assessment, volume three, chapter 5.

^{11/} OECD, 1996.

^{12/} OECD 1996.

Box 5: A tax incentive for protected areas and water supply areas in Brazil

Some states in Brazil have large-scale land-use restrictions due to protected areas and water supply areas, and are at an economic disadvantage because of the constraint on development. Furthermore, the federal government in Brazil redistributes the ICMS (value-added tax) to the country's 26 states on the basis of valued added generated. As a result, states with many protected areas receive lesser allocation from the federal government, despite the environmental benefits they provide.

In response, an Ecological ICMS was introduced in four states, providing extra fiscal compensation for protected areas and/or water supply sources. The initiative for the Ecological ICMS came from the Parana state, and its implementation involved participation by a range of organizations including federal, state and municipal bodies and NGOs.

The results of the measure include an increase in the number and size of protected areas, an increase in revenue for participating states, reinvestment of revenue into protected areas and the adoption of the Ecological ICMS by other states.

- The initiative is subject to an annual review to ensure that it is meeting its objectives and to suggest any improvements;
- The initiative was possible through the cooperation of all levels of government and participation by stakeholders.

Source: Loureiro, 1996, in Notes on Sharing of Experiences on Incentive Measures for Conservation and Sustainable Use. Note by the Executive Secretary. UNEP/CBD/COP/3/24. Convention on Biological Diversity. 20 September 1996.

1 18. Furthermore, it will often not be sufficient to just idle the land. Nature management strategies that
 2 take the context of the specific ecosystem fully into account will be needed in order to restore the areas in
 3 a targeted and effective way and to avoid, e.g., weed and pest problems. Moreover, a careful selection of
 4 eligible areas in target regions will often be necessary to avoid the designation of tiny, fragmented land
 5 set-asides scattered among highly intensified agricultural lands.

6 19. *Incentive payments under direct approaches* typically involve cost-sharing and management
 7 agreements, whereby payments are made to reimburse landholders for the incremental cost of providing
 8 non-marketable biodiversity services. In return for the payment, users of the biodiversity resource agree
 9 to contribute to the maintenance of biodiversity. ^{13/} In many developed countries, such incentive
 10 payments are part of policies and programmes that seek to improve the environmental performance in
 11 sectors such as agriculture, forestry, or fisheries. For instance, incentive payments are an important
 12 element of many agri-environmental programmes that focus on improving the environmental
 13 performance on current agricultural land (e.g., payments for land conversion from arable land to
 14 extensive grassland or for reducing livestock density), or that aim on maintaining specific agricultural
 15 practices associated with a high level of biodiversity (see box 4 for an overview of agri-environmental
 16 measures in the European Community).

17 20. Notwithstanding the dominance of such incentive measures in developed countries, it is noteworthy
 18 that biodiversity-related problems are also sometimes addressed by *monetary positive incentive*
 19 *measures in developing countries*, possibly under the 'payments for ecological services' paradigm
 20 explained in paragraph 10 above (see box 1). Examples include: payments for wildlife and wildlife
 21 habitat conservation, such as compensation of crop losses due to foraging wildlife, conservation
 22 concessions, conservation leases for wildlife migration corridors, performance payments for endangered
 23 species; payments for the use of endangered local landraces; payments for the improved provision of
 24 ecosystem services such as for instance the hydrological services provided by forests. ^{14/}

^{13/} Kiss, A. 2001.

^{14/} See Ferraro and Kiss (2002) for a more extensive discussion and examples.

Box 6: Biodiversity stewardship payments: The Bush Tender Trial in Australia

An example of voluntary payment programs as a tool to achieve environmental objectives is the Bush Tender trial, conducted in Australia by the Government in the State of Victoria. In this program, bids were sought from landholders for entering into contracts to undertake a range of vegetation management actions. The bids were evaluated using a “biodiversity benefits index” and accepted on the basis of best value for money. The Government of Australia has identified the following benefits of voluntary payment programs:

- Provide private landholders with the financial resources to undertake conservation activity
- Contracts may be varied to match different environmental and economic contexts, increasing the economic efficiency of the incentive instrument;
- Preserve landholder autonomy are likely to be perceived as fair, thereby lowering any enforcement costs.
- Biodiversity stewardship payments may be particularly well suited to managing threats to biodiversity that require active and ongoing monitoring and managements efforts from landholders, particularly in relation to outcomes that are difficult and costly to monitor.

Other programs are being developed including a national initiative modeled on Bush Tender with payments being made to private landholders for agreeing to undertake biodiversity conservation activities. The Australian Government is developing principles to guide the design and implementation of biodiversity stewardship programs and to ensure the efficiency and cost effectiveness of public funding, including:

- Allocation of biodiversity stewardship payments on the basis of best value for money, assessed in terms of the contribution of the landholders’ actions towards achieving public good biodiversity objectives.
- Avoiding payments for actions that are likely to be of net benefit to landholders, individually or as a group, or that are otherwise part of landholders’ legal obligations;
- Allocating payments on a competitive basis, by auctioning mechanisms, with all landholders who can contribute to the desired outcomes being eligible to participate in the program.

The submission states that the competitive conditions associated with the tender mechanisms help ensure that no unwarranted economic benefit is conferred on one production sector to the detriment of competing producers, either in Australia or overseas.

Source: Submission by the Government of Australia on decision VII/18 of the seventh meeting of the Conference of the Parties, on incentive measures.

1 21. The Bush Tender Programme in Australia (see box 6) provides a good example for *biodiversity*
2 *stewardship payments* that are granted to successful bidders in compensation for maintaining
3 biodiversity (see box 5 for the case study). *Auctioning mechanisms* as in the Australian case are useful
4 tools to increase the cost-efficiency of payment programmes and to avoid overcompensation, if some
5 conditions are met. They include: (i) a geographical scope which includes a sufficient amount of bidders,
6 thereby avoiding a problem of “thin” markets and subsequent poor competition, and (ii) tenders that are
7 awarded, to the extent feasible, on the basis of outcomes instead of concrete activities, because basing
8 awards on concrete activities will lead to inefficiencies if similar activities generate different
9 conservation benefits in different geographical areas.

10 22. A low take up by relevant actors under voluntary incentive programmes may also result if
11 maintaining their current biodiversity-harmful practices is artificially made attractive for them by other
12 governmental policies and programmes. The *removal of policies and programmes that generate*
13 *perverse incentives* will therefore be an important element to ensure policy coherence and increase the
14 effectiveness and cost-efficiency of monetary incentive programmes.

15 23. In the case of agriculture, for instance, a recent OECD report notes that, in a number of OECD
16 countries, agri-environmental policies and agricultural policies can be found to be pulling in opposite

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1 directions. ^{15/} Policies to redress environmental damage are sometimes implemented in the context of
2 production and input-linked support measures that contribute to environmental damage. The report notes
3 that “*the coexistence of such policies can make the attainment of environmental objectives less certain*
4 *and more costly that would otherwise be the case*” and concludes that “*the reform of agricultural*
5 *policies would assist the achievement of environmental objectives by correcting the government failures*
6 *that can complicate agri-environmental management*”. ^{16/}

7 24. On more general terms, monetary positive incentive measures that are based on payments entail a
8 wide range of environmental objectives and an equally wide range of possible designs. ^{17/} For instance,
9 in the context of agriculture, the performance of *agri-environmental programmes* in terms of the gains
10 for biodiversity, the cost to achieve those gains, and the distribution of such costs, largely depends of the
11 programme design and implementation as well as on the peculiarities of the agricultural regions targeted
12 by the programme and the general policy framework in place. It is often difficult to exactly assess the
13 performance of agri-environmental programmes for the conservation and improvement of biological
14 diversity. ^{18/}

15 25. Some empirical studies note positive results for biodiversity of agri-environmental programmes, ^{19/}
16 while others express more skepticism. ^{20/} For instance, with regard to high nature value farmland, a
17 recent study by the European Environmental Agency and the United Nations Environment Programme
18 concludes that, although no precise data are available on geographical spending patterns within countries,
19 the targeting of agri-environment measures at a European level seems far from optimal from a
20 biodiversity conservation perspective. The study points to recent research that shows that current agri-
21 environment schemes aimed at biodiversity are not necessarily effective and that their monitoring is
22 mostly insufficient, and recommends to improve the geographical targeting of payments with regard to
23 high nature value farmland. It also recognizes a great need for updated and refined data as well as for
24 sound comparative and analytical research into the effectiveness of individual agri-environment
25 schemes. ^{21/}

^{15/} The OECD notes that “*the effectiveness of payments has been compromised when they have been implemented together with more production-linked support policies associated with environmental problems.*” See OECD (2003c), 71.

^{16/} OECD (2003c), 76.

^{17/} Claasen et al. (2001), 1. In the case of agri-environmental programmes under the common agri-cultural policy of the European Union, the variety of agri-environment programmes is further increased by the fact that such programmes are administered on the national or even sub-national level. For instance, in France, biodiversity-related specifications figure prominently among the agri-environmental specifications in land management contracts with farmers. These include extensive grassland management by mowing (figuring in 63% of all contracts), hedgerow maintenance (30%), establishment of intermediate crops (20%), hedgerow planting (11%), extensive grassland management by compulsory grazing (11%), establishment of grassy areas through set-asides (10%) and ditch rehabilitation (10%). See Rougier (2002), 18. In the US, a number of agri-environmental programmes also relate to biodiversity (e.g., the wetland reserve programme, the wildlife habitat incentive programme); see Vasavada and Warmerdam (1998); Claasen et al (2001).

^{18/} Such methodological problems include: ill-defined biological goals, lack of scientific reference material on the relationship between biological processes and farming practices, the complexity of ecological workings and their resistance to change, the only partial influence of agriculture on these workings, and the difficulty of correlating agricultural and biological data on different scales. See Rougier (2002), 8, 15, EEA/UNEP (2004). The NAFTA Commission for Environment Cooperation (CEC) concludes that “*progress in honing non-pollution indicators capable of showing changes in biodiversity, forest cover, habitats and ecosystems remains less developed and certainly less quantitative than pollution-related indicators*” (CEC 2002).

^{19/} The European Commission’s Evaluation of Agri-Environmental Programmes, undertaken in 1998, recorded highly positive results for reduced input measures, especially organic farming, nature protection measures and maintenance of landscapes, but some difficulties with extensification, set-aside for 20 years, and public access, resulting in low take up (EC 1998).

^{20/} For example, Kleijn et al. (2001) note that management agreements were often not effective in protecting biodiversity or, in some instances, even led to unexpected adverse effects.

^{21/} EEA/UNEP (2004).

1 26. The Millennium Ecosystem Assessment, in its synthesis report on biodiversity, recognizes that “in
2 many countries, tax incentives, easements, tradable development permit programmes, and contractual
3 arrangements (such as between upstream landowners and those benefiting from watershed services) are
4 becoming more common and have often been shown to be useful for conserving land and ecosystem
5 services.”

6 2.2 Indirect approaches

7 27. **Payments under indirect approaches** are given to support activities or projects that are not designed
8 exclusively to conserve or promote the sustainable use of biodiversity, but have the side-effect of
9 contributing to these objectives, for instance, in the context of the **generation of markets for**
10 **biodiversity-related goods and services** or of **community-based natural resource management**
11 **programmes**. Examples include support to: conversion to organic farming, which is often hampered by
12 high start-up costs, conversion requirements, high costs of inputs or difficulties in obtaining organic
13 certification, ^{22/} programmes for the development of eco-tourism in specific biodiversity-rich regions, or
14 the marketing of other biodiversity-related goods and services such as, for instance, non-timber forest
15 resources.

16 28. Some voices argue that such indirect approaches may be less cost effective than the direct approaches
17 discussed above. ^{23/} Again, however, the concrete performance of an indirect mechanism will depend on
18 a number of factors, such as the programme design and implementation as well as the ecological, climate
19 and socio-economic peculiarities of the target region, as well as the general policy framework in place.

20 29. For instance, the promotion of organic farming by agri-environmental payments, undertaken by a
21 number of countries, is still surrounded by controversy. Recent literature reviews generally indicate that
22 organically managed fields and farms have greater biological diversity than conventionally managed
23 sites, and that organic farming generally shows superior environment performance. ^{24/} However, critics
24 argue that it may often be more cost-effective to provide relevant public goods by conventional
25 agriculture plus other agri-environmental measures, than by supporting organic farming. Furthermore, the
26 reduced productivity of organic farming is also said to potentially contribute to further pressure for land
27 conversion for agricultural purposes. ^{25/} In consequence, the need for robust, scientifically-based
28 indicators is frequently underlined to enable the assessment of impacts and the evaluation of tradeoffs
29 between different kinds of production systems. ^{26/}

30 30. In the context of indirect approaches and market creation, the WTO negotiations on paragraph 31
31 (iii) of the Doha Development Agenda may also become relevant for the marketing and international
32 trade of biodiversity-related goods and services in particular from developing countries. Under this
33 mandate, WTO Members are currently negotiating on the reduction or, as appropriate, elimination of
34 tariff and non-tariff barriers to environmental goods and services. Depending on the definition of
35 environmental goods and services that will eventually be adopted by the WTO, these negotiations may
36 also contribute to foster markets in biodiversity-related goods and services. Hence, the **removal or**
37 **reduction of trade tariffs for biodiversity-related goods** may act as a monetary positive incentive
38 measure for conservation and sustainable use of the associated biodiversity resources.

^{22/} FAO, 2003.

^{23/} Ferraro and Simpson 2000, Kiss, A., 2001, Ferraro and Kiss 2002. See also the Millennium Ecosystem Assessment, volume three, chapter 5.

^{24/} See Dabbert (2003), Bartram and Perkins (2003); Curry Report (2002), 88-89.

^{25/} See Bruulsema (2003).

^{26/} Vetterli et al (2003).

1 31. At a recent WTO workshop on environmental goods, held in Geneva on 11 October 2004, a number
2 of WTO Members, especially from developing countries, expressed the view that the negotiations should
3 more reflect the special export interests of developing countries. In this connection, reference was also
4 made to environmentally preferable goods (“EPP”), whose trade liberalization would create more
5 important export opportunities for many developing countries (when compared for instance with the
6 liberalization of trade of high-tech clean-air technologies). As biodiversity-related goods would also
7 qualify as EPP, this discussion is of special interest to the CBD.

8 32. The examination of definitional aspects and of the scope of the environmental goods and services
9 negotiations was assigned to the Committee on Trade and Environment (CTE) in Special Session.
10 However, there is so far no consensus in the CTE whether and how to include EPP into a definition or
11 list of environment goods and services, with many Members expressing skepticism. One reason for this
12 skepticism is that the technical problems in defining environmental goods, and in providing practical
13 guidance for customs officials in identifying them at the border, are of particular relevance for EPP,
14 including the problem that the environmental preference for these goods will often be based on non-
15 product related processes and production methods and that it will therefore be difficult if not impossible
16 to distinguish them from “like products”. However, if these problems can be solved and biodiversity-
17 related goods and services included into the definition on environmental goods and services,^{27/} a
18 successful conclusion of this mandate may foster the creation or expansion of biodiversity markets and
19 thereby generate significant positive incentives for conservation and sustainable use of biodiversity.

20 33. Importantly, there are often substantial global benefits to the successful implementation of policies
21 and programmes for the conservation and sustainable use of biodiversity in developing countries. Put
22 otherwise, policies and programmes implemented by developing countries often generate substantial
23 positive spillovers on the international level.^{28/} They provide therefore important entry points for
24 international cooperation and/or finance in the design and implementation of *international positive*
25 *incentive measures*, with a view to reward the provision of these positive spillovers.^{29/}

26 34. For instance, *biodiversity-related official development assistance* (ODA) provides funds to
27 programmes or projects in developing countries with a strong focus on the implementation of the
28 objectives of the Convention. ODA commitments are reported by OECD member States to the OECD
29 Development Assistance Committee (DAC). Using a “biodiversity marker” jointly developed by the
30 OECD/DAC Secretariat and the Secretariat of the Convention on Biological Diversity, ODA activities
31 targeting the objectives of the Convention have been reported on between 1998 and 2000. The figures
32 reported were 1.09, 1.03 and 0.87 billion United States dollars, respectively. The annual average is of
33 \$995.1 million, or 2.7 per cent of total bilateral official development assistance. Biodiversity-related aid
34 represented a significant share of aid activities in forestry (65 per cent), general environmental protection
35 (32 per cent), fishing (26 per cent) and, to a lesser extent, water supply (9 per cent) and agriculture (7 per
36 cent). In value terms and calculated on the basis of the number of activities reported, biodiversity-related
37 aid seems to be fairly evenly distributed between Africa, Asia and Latin America.^{30/}

^{27/} UNCTAD proposes that certain categories of EPPs, for instance, “inherently environment-friendly products” that are not based on PPM-related criteria, could be included within the scope of the negotiations, provided this does not lead to new trade barriers and additional costs e.g. for certification. See *UNCTAD’s Work on Environmental Goods and Services: Briefing Note*. WTO document TN/TE/INF/7.

^{28/} Under the first example, benefits include the existence value attributed, by the population in developed countries, to many species in developing countries. Under the second example, benefits include the contribution of genetic information incorporated in traditional landraces to the breeding of modern crop varieties.

^{29/} The *Proposals for the Design and Implementation of Incentive Measures*, endorsed by the Conference of the Parties at its sixth meeting, provide a list of existing instruments, but also caution that the list is not comprehensive and that *inter alia* international incentive measures should also be considered in a similar fashion. See decision VI/15, annex 1, paragraph 37.

^{30/} See UNEP/CBD/SBSTTA/10/INF/22 for a more extensive discussion.

Box 7: Examples of non-monetary positive incentives for the conservation and sustainable use of biodiversity in some member States of the European Community

Czech Republic

- **Environmental education and public awareness.** Carried out through the National Programme and the following Action Plan for 2004-2006.
- **Environmental Awards.** “Award of the Minister of the Environment” awarded annually for a special contribution to the environment. The “Award Josef Vavrousek” awarded for the best University diploma thesis with an environmental focus. President’s award – State Decoration for merit in the field of the environment. An anti-environment award “Ropak” given to the man or company with the most environmentally unfriendly behaviour in the previous year.
- **Certification** – ISO certificates, especially ISO 14000 series.

The Netherlands

- **Covenants** within the food chain (e.g., supermarkets, food industry and farmers’ associations) of organic foods, promoting certification systems.
- **Procurement.** The Dutch Government is preparing a policy on sustainable procurement which may result in better market share of certified production.

Spain

- **Certification.** Coupled with environmental indicators for the promotion of responsible markets.

Source: Communication by the European Community on CBD Notification No 2004-038 – Decision VII/18: Incentive Measures, Submission of the European Community (EC) and its Member States. Brussels, 15 October, Annexes 2, 3, and 4.

1 35. Moreover, as the designated institutional structure to operate the financial mechanism of the
2 Convention, the *Global Environment Facility* (GEF) has emerged as a principal source of financial
3 assistance in direct response to guidance from the Conference of the Parties. Under its ‘incremental cost’
4 approach, the GEF provides funds to support the generation of global biodiversity-related benefits
5 through programmes and projects implemented in developing countries, and thus provides significant
6 monetary positive incentive measures to these countries. Since its operation as the financial mechanism
7 in 1994, the GEF has allocated US\$1.551 billion to biodiversity with a co-financing of US\$3.66 billion.

8 36. An important multilateral programme providing monetary support to the more indirect approach of
9 *creating and fostering biodiversity-related markets in developing countries* is the UNCTAD Biotrade
10 Initiative. This initiative seeks to promote trade in goods and services derived from the sustainable use of
11 biodiversity, including natural products used as inputs for cosmetics and pharmaceuticals, medicinal
12 plants, natural fibres and essential oils, among others. Country programmes are being developed in
13 Bolivia, Colombia, Ecuador, Peru and Venezuela. In addition, regional programmes promote the
14 dissemination of national experiences and knowledge at the regional level, develop regional activities,
15 and support regional cooperation. Currently, UNCTAD Biotrade is cooperating in two regional
16 programmes: the Andean Biotrade Programme with the Andean Development Corporation and the
17 Andean Community, as well as the Programme Bolsa Amazonia with the Brazilian non-governmental
18 organization POEMAR. ^{31/}

19 3. *Non-monetary incentive measures: Overview and analysis of*
20 *effectiveness, possible limitations and shortcomings*

21 37. Non-monetary incentive measures for conservation and sustainable use of biodiversity include, *inter*
22 *alia*, public policies such as education, research, and procurement; community recognition and
23 environmental awards, as well as the creation of markets for biodiversity-related goods and services
24 including through the establishment of certification and labeling schemes (see box 7 for examples

^{31/} See <http://www.biotrade.org>.

Box 8: Facts about Market Creation

- Description:** Markets can be created through the clear definition of property rights over resources or their use, and the allowance of trading in these rights.
- Advantages:** Result in the most efficient allocation of resources between competing users, and generates appropriate prices for them; low monitoring requirements.
- Disadvantages:** May be imperfect where there are (large) external effects and/or monopolies.
- Applicability:** When clearly defined property rights can be established and upheld for easily identifiable goods and services, transaction costs are low enough and interested parties are numerous enough to allow regular trade.

Source: OECD 1999: 80.

1 provided by different member States of the European Union). Furthermore, in many instances traditional
2 laws and practices also generate non-monetary incentives for the conservation and sustainable use of
3 biodiversity.

4 38. Governments and institutions spend large amounts of money every year procuring the goods and
5 services they require to operate. Policies that put in place so-called *green procurement* take
6 environmental aspects into consideration in public and institutional procurement. However, the
7 experience of the European Community in this area suggests that it may be difficult to introduce
8 biodiversity issues in a contract for buying goods services or works and that the most efficient way may
9 be to require compliance with relevant legislation or with the need to protect biodiversity when executing
10 a contract. ^{32/} It notes also that there are challenges associated with the fact that the contracting
11 authorities often lack the necessary environmental knowledge to include environmental elements into
12 their procurement procedures, and, moreover, that “green” products/services may still be more
13 expensive. ^{33/}

14 39. *Community recognition and environmental awards* are designed to encourage good corporate and
15 other governance favorable for the conservation and sustainable use of biodiversity. In addition to
16 examples in the European Community (see box 7), other Parties to the Convention also notified the
17 Secretariat that they use awards to reward environmental-friendly activities ^{34/} While awards usually
18 have a monetary component, the formal recognition by the community or society alone is an important
19 non-monetary incentive for the conservation and sustainable use of biodiversity.

20 40. *Creating markets* to promote conservation and sustainable use is an important tool to complement
21 other more traditional policies (see box 8). ^{35/} The creation of markets through the removal of barriers to
22 trading and the assignment of well-defined and stable property rights is based on the premise that rational
23 holders of these property rights will maximise the value of their resources over time and their
24 conservation would be better assured than under open access regimes where users often resort to short-
25 term exploitation on a first-come, first-serve basis. This reasoning is most easily applied to biodiversity
26 resources that contain private market value such as commercially valuable fish-stocks, or other
27 biodiversity resources such as timber and non-timber forest products. In fact, open access problems
28 and/or poor regulation have often meant that in the past, these markets were often associated with a
29 decline rather than the salvation of biodiversity. However, market creation is understood in this context
30 to include the value of biodiversity– that is, capturing non-market values through a process that converts

^{32/} Submission of the European Community

^{33/} EU submission.

^{34/} Submissions from the Islamic Republic of Iran and from Oman.

^{35/} OECD, 2003.

Box 9: A new Tweed from “Forest Sheep” Wool: Quality production and the use of sheep genetic resources for extensive pasturing

In the Mühlviertel region of Austria, a market creation project was initiated to preserve valuable pastures which were home to the Bohemian gentian (*Gentianella Bohemica*), a highly endangered plant, over 300 species of butterflies and over 200 species of grasses and herbs, most threatened with extinction. The best way to preserve such habitats is to use the pastures as grazing lands. However, in the past 50 years sheep husbandry has been almost completely abandoned in favour of dairy and dual usage cattle, and the pastures are used extensively for recreation, afforestation, and intensive agriculture.

This project sought out a suitable breed of sheep to reclaim the pastures, itself endangered – the “Forest Sheep”. In order to make it worth while for breeders to invest in breeding these sheep the project sought to market their wool, which is of a high quality, tweedy nature.

After nearly 10 years of the project the *Bohemian gentian* has begun to return to the grazed areas and the numbers of breeders of “Forest Sheep” has grown from 30 to 60.

A number of lessons can be drawn from the success of this project:

- The value of the wool as a product is critical to changing the attitudes of the breeders with respect to gene conservation
- Subsidies alone will not prevent the extinction of a breed. Besides a coherent breeding program to maintain genetic diversity within the breed and to minimize inbreeding a market for the products, however small and regional, has to be created.
- Funding for animal breeding gene conservation schemes has to be planned in breeding generations. A minimum of five breeding generations (in this case 3.6 years each) is considered necessary to save a breed from extinction. If such a project stops too early or too suddenly, the whole enterprise could collapse and the funds would be wasted.
- Gene conservation is effectively built around *in situ* conservation.
- It is important to create a network to tackle the problem from all sides simultaneously and there must be good dissemination of information among interested parties including government and NGOs. Governments have a key role to play in encouraging relevant parties, facilitating technical and financial support serving as a coordinator and a clearing-house for information.

Source: Berger, Beate. 2003. “A new Tweed from “Forest Sheep” Wool: Quality production and the use of a sheep genetic resource for extensive pasturing”. Department for Biodiversity of the Institute for Organic Farming and Biodiversity. Federal research Institute for Agriculture in Alpine Regions. Austria.

1 non-market values into real financial or resource flows. ^{36/} For example, in the case of development of
2 markets for eco-tourism or nature tourism, which relies on the health of complete ecosystems as a vital
3 input, there is a long-term commercial interest in the conservation and sustainable use of biodiversity
4 resources.

5 41. Box 9 presents an example where a new market was developed for tweed made from the wool of
6 endangered sheep, using land that was suffering from biodiversity loss. It illustrates the importance of
7 effective dissemination of information in such an endeavour, along with the recognition of the
8 biodiversity values of the products and the importance of market creation as a complementary incentive
9 measure where traditional measures such as support payments may not have been effective alone.
10 Furthermore, the importance of disseminating information needs to be underlined -- certification and
11 labeling schemes can play an important role in this context to assist consumers in their choice of whether
12 to support these markets in biodiversity-friendly goods and services. ^{37/}

13 42. **Certification and labeling** are important non-monetary incentives from the perspective of providing
14 consumers with information, and may in many cases be a key element in the development of markets for
15 biodiversity goods and services that are produced in a sustainable way. Product certification and eco-

^{36/} OECD, 2003.

^{37/} See also IUCN memo, 31 October 2002.

1 labels provide consumers, retailers and policy makers with information about the environmental
2 characteristics and impacts of labelled products and services. This allows purchasers to make informed
3 choices about the goods and services they buy and signal their preferences to manufacturers and service
4 providers. In this respect they are also important for the successful creation of markets for goods and
5 services that conserve biodiversity and promote sustainable, because such creation depends in part on the
6 availability of reliable information.

7 43. In some cases consumers are even willing to pay higher prices for products that are more
8 environmentally friendly than others. This is particularly true in regions where individuals are
9 environmentally aware, have relatively high incomes and are responsive to activities by non-
10 governmental organizations, consumer groups and the media. ^{38/} However, these markets remain
11 relatively small niche markets for the moment and several studies suggest that the willingness to pay
12 premium prices is often modest and more contingent on perceived positive health effects than
13 environmental benefits. ^{39/}

14 44. Another obstacle to the development of labeling for environmentally preferable products, or
15 specifically for goods and services that promote the conservation and sustainable use of biodiversity, is a
16 lack of prominence of any one label. Even in relatively well established areas such as eco-tourism,
17 certification for nature-based tourism is not fully developed with various standards being implemented by
18 governments and non-governmental organizations. ^{40/} This proliferation of schemes from governments
19 and civil society actors is confusing for consumers.

20 45. Many resources under open access have typically been managed through regulations. However, in
21 some cases governments have also used additional economic instruments that grant specific use rights
22 and, by permitting the trade of these rights, created markets to enhance cost-efficiency. For instance, the
23 assignment of well-defined property rights has been employed in connection with the management of
24 commercial fish stocks in the form of *individually transferable quotas* (ITQs) (see box 10), as well as
25 private ownership of forested lands. ITQs in fisheries can be used to mitigate the impacts of commercial
26 fishing on the fish stock and in marine ecosystems.

27 46. While market creation has often proved to be an effective means for the conservation and sustainable
28 use of biodiversity, a number of crucial conditions need to be met, and limitations also exist (see box 11
29 for some lessons learned from practical experiences). In particular, the incentive for the owners to
30 sustainably manage their resources extends only to the privately appropriable elements of biodiversity.
31 Existence values of species that are not commercially valuable and the surrounding ecosystem will not be
32 taken into account without further regulations or other incentive measures. Precisely because many of
33 the benefits of biodiversity are not privately appropriable, and these benefits often represent significant
34 public goods, full benefits for conservation and sustainable use are often not achieved without the
35 application of additional regulations or other types of incentive measures.

36 47. The Millennium Ecosystem Assessment, in its synthesis report on biodiversity, recognizes that more
37 market-oriented approaches show considerable promise, but that “*many challenges remain, such as the*
38 *difficulty of obtaining the information needed to ensure that the buyers are indeed obtaining the services*
39 *that they are paying for and the need to establish underlying institutional frameworks required for*
40 *markets to work and ensure benefits are distributed in an equitable manner. Market reforms can be made*

^{38/} OECD, 2003.

^{39/} For example, while eco-labelled goods will typically achieve premiums of between 1% and 4%, organic foods, which are perceived by consumers as delivering health benefits, can achieve premiums of up to 15% in the United States and Europe. Vangelis, 2002.

^{40/} OECD, 2003.

Box 10: Individual Transferable Quotas (ITQs) for fisheries management

Fisheries are often open-access resources where the social costs of over-fishing are not internalized in the fishing activity. Under open access, fishing effort will tend to increase past the point of maximizing fishing income to the point where all positive profits to be garnered as rent from the resource are dissipated. As this may not occur until a harvest level above the maximum sustainable yield, this can lead to over-fishing of the target species and even the collapse of the commercial industry. Therefore, measures to restrict fishing activities are often necessary.

The essential cause of this pressure is the non-existence of property rights over fisheries resources, but assigning property rights over marine areas is generally not feasible (except with stationary species such as shellfish beds). However, rights can be assigned over the harvesting of the commercial species, in form a quota which guarantee the holder the right to harvest a certain percentage of the total allowable catch for the season. If quota are made tradable, fishermen can trade them in accordance with their individual preferences and costs, which will minimize the cost of reducing the allowable catch to sustainable levels. The mechanism of defining a total allowable catch and splitting it into tradable quota is also sometimes referred to as a "cap-and-trade" approach.

A case study on ITQs produced for the OECD found that while the allocation of individual, tradable quota for the use of fish stocks can be an effective measure for managing the target species, ITQs by themselves might not be sufficient to protect other species or the surrounding ecosystem. Where ITQs are used to allocate fishing rights to a particular species, complementary measures are often necessary to conserve and sustainably use the surrounding ecosystem. A particular problem with has to addressed is high-grading, the practice of discarding the smaller, often young fish and keeping only the high-grade ones to count against the quota. This can be addressed by measures such as observers, mandatory landings, improved gear selectivity and prohibitions.

Thus while ITQs can be a valuable incentive for increasing fishery profits while harvesting sustainable levels of particular fish species, they are most effective when accompanied by other enforcement and regulatory measures, such as limits of days at sea, number of size of gear until, and conditions on gear and vessels – to ensure their social and environmental compatibility.

Source: Adapted from OECD 1999, based on Gudmundsson et al., 1998.

1 *to work better, and in a world of decentralized decision-making, improving market mechanisms may be*
2 *essential to both sustain able use and conservation.”* ^{41/}

3 48. As the example of individual tradable quota in fisheries management shows, regulations and/or
4 access restrictions are often an integral part of the overall regulatory package under a “cap-and-trade”
5 approach. This observation reinforces the idea that incentive measures are generally most effective when
6 implemented as part of a complete package that might contain both positive incentives and regulations as
7 well as other types of incentive measures.

8 49. *Traditional laws and practices which generate positive incentives* is a broad topic considering there
9 are over 370 million indigenous peoples and thousands of different groups with different laws and
10 customs. Aboriginal groups have their own specific cultural and spiritual ties and beliefs that affect their
11 relationship with the land, and this relationship is non-transferable. It is very difficult, therefore, to
12 generalize about the impacts of traditional laws and practices on the conservation and sustainable use of
13 biodiversity.

14 50. However, there are examples where traditional laws and practices include behaviour that inherently
15 contributes to the conservation or sustainable use of biodiversity. Many of the areas in the world with
16 highest biodiversity are inhabited by indigenous and traditional peoples who typically view themselves as
17 guardians and stewards of nature. Their view that they are an inalienable part of nature is reflected in
18 their relationship with the land.^{42/} The direct links with the land and a fundamental obligation to

^{41/} Millennium Ecosystem Assessment (2005), page 11.

^{42/} Posey, Darrell Addison. 1999. *Cultural and Spiritual Values of Biodiversity*. A Complementary Contribution to the Global Biodiversity Assessment. United Nations Environment Programme. Intermediate Technology Publications.

Box 11: Market Creation: Some Lessons from Experience

- One size does not fit all.
- Identify the benefits being provided clearly.
- Understand the links between ecosystems and services.
- Begin from the demand side, not the supply side.
- Monitor effectiveness.
- Design flexible business models.
- Ensure that the poor can participate.
- Secure property rights.
- Support co-operative institutions.
- Identify products that the poor can sell.
- Provide access to start-up finance.

Source: Submission by IUCN – The World Conservation Union. 2002, communication re. request for information on incentive measures. 31 October.

maintain this connection from the core of individual and group identity, as the conservation of nature cannot be separated from their own survival as individuals, societies or cultures. ^{43/}.

51. Traditional law and practices may have applications that directly promote the conservation and sustainable use of biodiversity. For example, sacred sites act as conservation areas for vital water sources and also for individual species by restricting access and behaviour. Moreover, traditional technologies such as

15
16
17 fire use were part of extremely sophisticated systems that shaped and maintained the balance of
18 vegetation and wildlife. In many arid regions, the decline of fire management and the loss of sacred sites
19 that resulted when aboriginal peoples were centralized into settlements led to the rapid decline of
20 mammals. ^{44/} As with landholders generally, local communities are more likely to employ
21 environmentally sustainable practices when they enjoy territorial security and local autonomy. ^{45/}

22 52. Another concrete case is the totems that are assigned to individual clan group of Australian
23 Aboriginal peoples. A totem is usually a species living in the tribal territory. As an Australian clan
24 cannot eat their totem, it is protected in their area of territorial responsibility. In consequence, the tribal
25 territory constitutes a web of protected areas for the different totem assigned to the individual clans of the
26 tribe. It has to be borne in mind, however, that this incentive effect does not exist for all indigenous
27 peoples knowing similar concepts of totems. In North America for instance, clans are often allowed to eat
28 their totem animals and other forms of sustainable use are put into place.

29 **4. Requirements for successful application of positive incentive measures**

30 53. The evidence suggests that the application of positive incentive measures often requires the
31 complementary application of regulations or other instruments such as tax incentives to operate in an
32 effective and cost-efficient manner. Hence, they need to be embedded in a coherent overall policy
33 framework providing a *mix of measures*. For instance, regulations need to define the targets, baseline
34 standards or benchmarks that can act as reference levels for the eligibility of incentive payments (see
35 paragraph 56). In the creation of market for biodiversity-related goods and services, monetary and non-
36 monetary measures are often applied in a closely synchronized manner. And finally, as explained above,
37 the removal of policies and programmes that generate perverse incentives will often be a crucial
38 precondition for the effectiveness and cost-efficiency of monetary positive incentive measures.

39 54. Defining *priorities* is necessary for effectively using monetary incentive measures for the
40 conservation and sustainable use of biodiversity. The top priority for any positive incentive measure is to
41 slow, halt or reverse the process of loss of natural habitat. Given that it is not possible to apply them

^{43/} Posey, 1999.

^{44/} Sultan, Craig and Ross 1997 in Posey 1999.

^{45/} Posey, 1999.

1 everywhere biodiversity is being degraded, direct payments should in general be targeted to areas that are
2 most valuable from a biodiversity perspective. ^{46/}

3 **55. Tailored approaches** are needed to encourage and reward holders and/or users of biodiversity
4 resources for achieving conservation and sustainable use under varying local circumstances. For
5 example, while a revolving fund may be most appropriate for financing land purchase in priority areas,
6 biodiversity stewardship payments may be particularly well-suited to managing threats to biodiversity
7 that require active and ongoing monitoring and management efforts from landholders, particularly in
8 relation to outcomes that are difficult and costly to monitor.

9 **56.** Particular attention needs to be given to **defining clear targets, baseline standards or benchmarks,**
10 as reference levels for the eligibility of payments. The World Bank also underlines that payments need to
11 be targeted, because environmental services depend on both the kind of land use as well as its location
12 and, in consequence, an undifferentiated payment system that pays everyone the same will be much more
13 expensive than a targeted scheme and will also make it difficult to tailor interventions to the particular
14 requirements of given situations. However, the Bank also cautions that there is clearly a trade-off
15 between the benefits of a targeted scheme and its administrative costs. ^{47/} Real-world examples of efforts
16 that seek to meet this condition are the Codes for Good Agricultural Practice defined by the Member
17 States of the European Community or the biodiversity benefits index defined in the Australian Bush
18 Tender Trial.

19 **57.** Effective benchmarking would ensure that incentive payments are as targeted as possible. For
20 instance, it has been pointed out that deadweight effects might result in particular from programmes that
21 seek to maintain existing environmentally-friendly practices, because it is difficult to identify the cases in
22 which farmers would indeed switch to less environmentally-friendly practices without the programme,
23 that is, to distinguish these cases from the cases in which farmers merely threaten to do so in order to
24 receive payments (the so-called rent-seeking behaviour). Stringent but realistic baseline standards would
25 help to alleviate this problem. A comprehensive set of specific, measurable and time-driven targets and
26 associated indicators would also minimize the risk of unexpected reactions by the target actors of the
27 programme, with possibly adverse consequences for biodiversity (“you get what you pay for”).

28 **58.** The successful application in particular of monetary incentive measures requires **appropriate**
29 **institutional structures** that can monitor the ecosystem status, set priorities, resolve conflict, coordinate
30 individual behaviour, and allocate and enforce rights and responsibilities. ^{48/} For example, provisions
31 contained in covenants and easements need to be enforced through appropriate legislation. Institutional
32 **capacity building** would be needed in developing countries where existing institutions prove to be
33 deficient. In Australia, the Revolving Fund (see box 3) would probably not have worked if the Heritage
34 Trust had not already been in place. The case also illustrates the potential benefits of employing
35 institutions that are independent of government, which tend to be trusted by resource users and owners,
36 and can often even obtain a better purchase price for land than can governments.

37 **59.** The successful design, application and implementation of monetary incentive measures require the
38 **effective cooperation among all relevant stakeholders.** This includes all appropriate levels of
39 government and government departments, and also includes cooperative work with and among other
40 stakeholders, including not only the owners and/or current users of biodiversity resources, but also the
41 beneficiaries of ecosystem services, the private sector, non-governmental organisations, and local
42 communities including indigenous and traditional communities. Cooperation can enhance synergy
43 between different governmental and non-governmental policies and programmes as well as between

^{46/} OECD 1996, Kiss, A. 2001.

^{47/} See *Developing Systems of Environmental Services Payments That Work*, at <http://www.worldbank.org/>.

^{48/} Ferraro and Simpson 2000.

1 governmental policies and programmes and traditional laws and practices that generate positive
2 incentives, and can also contribute to the mobilization of funding.

3 60. The case from New Zealand (see box 2) provides a clear example of the need for government
4 agencies and NGOs to work cooperatively on biodiversity protection projects by virtue, in part, of the
5 different skills each group has to offer. Because of their diverse statutory roles, government bodies do not
6 always have the staff to divert resources to the assessment of biodiversity in specific areas that may come
7 on to the real estate market. NGOs tend to have more flexibility with their staffing resources. All bodies
8 need to continually monitor prospective lands for biodiversity conservation to assess the best time to
9 execute protective measure and the best mix of resources necessary to achieve this. In the Australian
10 experience (see box 3), one important factor in conducting the work of the Trust is encouraging the
11 involvement and participation of the local communities where land has been purchased and covenanted.

12 61. Similarly, the Brazilian experience in bringing about a successful change in tax policy for protected
13 areas (see box 5) required cooperation between municipal, state and national government bodies and was
14 contingent of these levels of government working together effectively and consulting with relevant
15 stakeholders, and may provide a good example for successful policy integration.

16 62. People are more willing to take voluntary action, and are willing to pay more for conservation when
17 they have an improved understanding of the biodiversity resources under threat and why their existence
18 may be important.^{49/} Furthermore, such an understanding needs to be rooted in society's values and
19 beliefs in order to use community or society recognition as a tool for rewarding environmentally-friendly
20 activities. In consequence, *raising awareness and disseminating information* is one of the most
21 important components associated in particular with the success of non-monetary positive incentives for
22 the conservation and sustainable use of biodiversity.

23 63. Assessing the values of the targeted biodiversity resource by applying *valuation tools* or *strategic*
24 *impact assessment methodologies* may also contribute to raising awareness and thereby improve the
25 effectiveness of non-monetary-positive incentive measures. Their application would also improve
26 decision-making by providing critical information for the calibration and fine-tuning in particular of
27 monetary positive incentive measures. *Capacity building* to this end should be undertaken as appropriate.

28 64. In particular, the access of consumers to reliable information is vital for market creation to succeed
29 as an instrument to protect biodiversity.^{50/} *Voluntary certification and labelling schemes* are possible
30 tools to increase awareness and foster decision-making that prioritises biodiversity-friendly goods and
31 services. Non-governmental organizations can also play an important role in raising environmental
32 awareness. *Capacity building* should be undertaken for small and medium-sized producers in particular
33 in developing countries with a view make them aware of, and enable them to take advantage of, potential
34 market opportunities that support the conservation and sustainable use of biodiversity.

35 65. New policies and programmes for the conservation and sustainable use of biodiversity, including
36 positive incentive measure, need to ensure *consistency with the existing value and belief systems* of
37 resource users and owners including local communities. In particular, the traditional laws and practices
38 of local and indigenous communities may in many cases generate important non-monetary incentives for
39 conservation and sustainable use of biodiversity. In these cases, new policies and programmes should
40 build upon these traditional laws and practices and seek to foster the incentives generated by them, rather
41 than implementing redundant or, worse, contradictory incentive measures.

^{49/} OECD, 1996.

^{50/} OECD, 2003.

1 66. Sufficient *funding* is arguably the most straightforward precondition for the effective
2 implementation of monetary positive incentive measures. It has frequently been noted that voluntary
3 programmes suffered from poor take up because the payments under the programme were too low to
4 substantially change the incentives of target actors. ^{51/} In consequence, effective direct payment
5 approaches can be very expensive. A number of the policy measures and mechanisms that can be
6 identified to increase the effectiveness as well as cost-efficiency of positive incentive measures can also
7 contribute to minimize the funds needed for an effective implementation of monetary programmes.

8 67. A low take up by relevant actors under voluntary incentive programmes may also result if
9 maintaining their current biodiversity-harmful practices is artificially made attractive for them by other
10 governmental policies and programmes. The *removal of policies and programmes that generate*
11 *perverse incentives* will therefore be an important element to ensure policy coherence and increase the
12 effectiveness and cost-efficiency of monetary incentive programmes.

13 68. The use of *market mechanisms*, such as the competitive bidding procedure of the Australian Bush
14 Tender trial programme, is another important tool to increase the cost-efficiency of payment programmes
15 and to avoid overcompensation, if there is a sufficient amount of potential bidders, and if the tenders are
16 awarded on the basis of outcomes instead of concrete activities. Under the BushTender trial, bids were
17 sought from landholders for entering into contracts to undertake a range of vegetation management
18 actions. The bids were evaluated using a ‘biodiversity benefits index’ and accepted on the basis of best
19 value for money. According to the Australian government, the competitive conditions associated with the
20 tender mechanism help ensure that no unwarranted economic benefit is conferred on one production
21 sector to the detriment of competing producers, either in Australia or overseas (see box 3).

22 69. The case from New Zealand (see box 2) points to the important role *non-governmental*
23 *organizations* can play in the mobilization of funds. Another prominent example is the Nature
24 Conservancy, a non-governmental organization that, with an annual budget of over US-\$ 700 million,
25 almost exclusively operates through land purchases and easements. ^{52/}

26 70. In a number of cases, the *direct beneficiaries of specific ecological services* can be clearly identified
27 and can then possibly be mobilized as a funding source. Examples include a number of recent World
28 Bank initiatives on payments for ecological services, such as a few municipalities downstream of El
29 Imposible National Park in El Salvador that have agreed to make a financial contribution to park
30 management as payment for watershed services, or the many water user groups in Colombia that pay for
31 watershed services, sometimes by buying the entire upper watershed. ^{53/}

32 71. *Cooperation among relevant governmental agencies* at all levels can enhance synergy between
33 positive incentive measures for the conservation and sustainable use of biodiversity and other
34 governmental policies and programmes. To implement mechanisms that ensure the effective cooperation
35 among these governmental institutions will therefore be an important contribution to successful *policy*
36 *integration*.

37 72. The effective application of monetary incentives also assumes that *property rights* in land – not
38 necessarily private rights – are clearly established. Covenants and conservation easements are a more
39 appropriate tool where land is privately owned, either by individuals or by corporations, than when it is
40 held communally and/or without legal title. In communal settings there must first be a reasonably
41 effective, legally recognized organization structure to negotiate and implement contractual arrangements.
42 In some cases there may be unintended social or other consequences if land is dedicated to conservation

^{51/} See, e.g., EC (1998).

^{52/} See Ferraro and Kiss 2002 for a brief discussion and references.

^{53/} See *Paying for Systems of Environmental Service Payments*, available at <http://www.worldbank.org/>.

1 whereby, for example, some land users may become de facto dispossessed if their use was not previously
2 formally recognized by a legal title. 54/ Such distributional side-effects should be fully taken into account
3 when designing and implementing support programmes.

4 73. The substantial global benefits that result from the successful implementation of policies and
5 programmes for the conservation and sustainable use of biodiversity in developing countries provide
6 important entry points for international cooperation and/or finance in the design and implementation of
7 *international positive incentive measures*, with a view to reward the provision of these positive
8 spillovers.

9 74. Governments that implement incentive measures for the conservation and sustainable use of
10 biodiversity need to ensure their *consistency with their international obligations*. For instance, as
11 regards monetary incentive measures and, in particular, payments under agri-environment programmes,
12 they may need to ensure consistency, as applicable, with the Agreement on Agriculture of the WTO. The
13 Agreement disciplines the so-called domestic support provided to agricultural producers while also
14 granting exemptions to the reduction commitments for domestic agricultural policies that provide support
15 for specific goals, provided they meet certain criteria in the Agreement. Under the Agreement's so-called
16 "green box" for domestic support, payments under environmental programmes are considered to have no,
17 or at most minimally, trade distorting effects or effects on production, and are therefore exempt from
18 reduction commitments, provided that (i) the eligibility for such payments shall be determined as part of
19 a clearly defined government environmental or conservation programme and be dependent on the
20 fulfillment of specific conditions under the government programme, including conditions related to
21 production methods or inputs; and that (ii) the amount of payment shall be limited to the extra costs or
22 loss of income involved in complying with the government programme. 55/

23 75. Mandated by Article 20 of the Agreement and reconfirmed by the Declaration of Trade Ministers in
24 Doha, in 2001, agricultural negotiations are now under way at the WTO. According to the framework for
25 these negotiations that was agreed on by WTO Members in July 2004, green box criteria will be
26 reviewed and clarified with a view to ensuring that green box measures have no, or at most minimal,
27 trade-distorting effects or effects on production. The framework also observes that "*such a review and
28 clarification will need to ensure that the basic concepts, principles and effectiveness of the Green Box
29 remain and take due account of non-trade concerns*", which would include environmental concerns. 56/

30 **5. Conclusions**

31 76. This note explored a range of new and existing monetary and non-monetary positive incentive
32 measures for the conservation and sustainable use of biodiversity with a view to illustrate their
33 application and to derive elements that contribute to the success and or limitations of these measures. The
34 analysis feeds into the note by the Executive Secretary on the proposals on the application of positive
35 incentives and their integration into relevant policies, programmes or strategies, presented in document
36 UNEP/CBD/SBSTTA/11/8.

37 77. The note frequently underlined that positive incentives will often not be effective if implemented in
38 isolation. As with incentive measures generally, they are most usefully applied to address the underlying
39 causes of biodiversity loss when combined with traditional regulations and/or economic instruments.
40 They should be flexible and tailored to specific capacities and priorities, and should be applied in a
41 context that includes an appropriate legal framework as well as an institutional context that supports

54/ Kiss, A. 2001.

55/ Annex 2, paragraph 12 of the Agreement on Agriculture.

56/ WT/L/579, Annex A, paragraph 16.

- 1 policy integration and the active participation of all relevant stakeholders. There is a need for capacity
2 building in cases where the institutional framework is deficient.
- 3 78. Moreover, it is important in the context of this note to develop a comprehensive understanding of
4 biodiversity values and related market opportunities. This is important in terms of raising awareness,
5 setting priorities, and also in terms of identifying the most cost-effective mechanisms to employ, or to
6 help design markets for biodiversity supporting goods and services.

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DRAFT FOR PEER REVIEW

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1 SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL
2 AND TECHNOLOGICAL ADVICE
3 Eleventh meeting
4 Montreal, 28 November – 2 December 2005
5 Item 5.3 (a) of the provisional agenda*

6 **INCENTIVE MEASURES**

7 **PROPOSALS ON THE APPLICATION OF POSITIVE INCENTIVE MEASURES AND THEIR**
8 **INTEGRATION INTO RELEVANT PROGRAMMES, POLICIES OR STRATEGIES**

9 *Note by the Executive Secretary*

10 **DRAFT FOR PEER REVIEW – DO NOT QUOTE**

11 **1. Introduction**

12 1. In paragraph 11 of decision VII/18, on incentive measures, the Conference of the Parties requested
13 the Executive Secretary “*to prepare, in cooperation with the OECD and other relevant international*
14 *organizations, an analysis of existing and new instruments that provide positive incentives, including*
15 *traditional laws and practices which generate positive incentives, their interaction with other policy*
16 *measures and their effectiveness, including their requirements for successful application, possible*
17 *limitations and shortcomings, and to develop proposals on the application of such positive incentive*
18 *measures and their integration into relevant policies, programmes or strategies, for consideration by the*
19 *Subsidiary Body for Scientific, Technical and Technological Advice at a meeting prior to the eighth*
20 *meeting of the Conference of the Parties.*”

21 2. Pursuant to this request, this note presents a synthesis of the requested analysis and, in an annex, the
22 proposals on the application of such positive incentive measures and their integration into relevant
23 policies, programmes or strategies. The full analysis of existing and new instruments that provide
24 positive incentives for the conservation and sustainable use of biodiversity, as requested by decision
25 VII/18, is given in document UNEP/CBD/SBSTTA/11/INF/xxx.

26 3. By paragraph 8 of the same decision, the Conference of the Parties invited Parties, governments and
27 international organizations to submit case-studies, best practices and other information inter alia on “*the*
28 *use of non-monetary positive incentive measures for the conservation and sustainable use of biodiversity*”

* UNEP/CBD/SBSTTA/11/1.

/...

1 *as an initial step in the ongoing examination of incentive measures, including traditional laws and*
2 *practices which generate positive incentives.”* The Executive Secretary communicated this invitation to
3 Parties, governments and relevant organizations by notifications 076/2004 and 077/2004 as well as
4 026/2005 and 028/2005. Pertinent submissions received further to this invitation were taken into
5 consideration in the preparation of the analysis summarized in the present note. In addition, the broad
6 literature on this topic was also taken into consideration. Particular attention was given to extracting
7 lessons from practical, case-study-oriented material.

8 4. Like other types of incentive measures, positive incentive measures seek to address a fundamental
9 underlying cause of biodiversity loss – the fact that those in a position to preserve biodiversity and use
10 biodiversity resource in a sustainable manner often lack sufficient incentives to do so. This lack of
11 incentives is exacerbated by the fact that the benefits of activities that destroy or degrade biodiversity
12 tend to be short-term, direct, and easily captured by individuals while the benefits of conserving
13 biodiversity tend to be long-term, indirect and diffuse, accruing not only to individuals but also to
14 societies-at-large.

15 5. In this context, the proposals for the design and implementation of incentive measures, endorsed by
16 the sixth meeting of the Conference of the Parties, have already underlined that positive incentives can
17 influence decision-making by recognizing and rewarding activities that are carried out for conservation
18 and sustainable use biodiversity. 1/

19 **2. *Synthesis of the analysis of effectiveness, possible limitations and***
20 ***shortcomings of positive incentive measures***

21 6. The review of the submissions and of the literature 2/ showed that there is a wide range of positive
22 incentive measures available to encourage the conservation and sustainable use of biodiversity. There are
23 a number of successful examples of the application of positive incentive measures, in particular when
24 instruments are clear and targeted in their purpose, are cost-effective, and processes for their design and
25 implementation are participatory. In all cases there is an important linkage between the success of
26 specific policies and levels of information and awareness within governments, among stakeholders and
27 with respect to civil society more broadly.

28 7. The Millennium Ecosystem Assessment, in its Biodiversity Synthesis Report, has also recognized
29 that positive incentive measures such as payments and markets for biodiversity and ecosystem services
30 have been partly successful and could be further strengthened. 3/

31 8. Despite progress in the application of positive incentive measures, challenges remain. In some cases
32 instruments are relatively expensive to adopt, monitor and enforce, are inflexible, are poorly targeted or
33 are not appropriate when information is lacking, markets are imperfect, institutions are undeveloped or
34 capacity is poor.

35 9. In accordance with paragraph 8 of decision VII/18, the analysis provided in document
36 UNEP/CBD/SBSTTA/11/INF/xxx differentiated between *monetary* and *non-monetary* incentive
37 measures, while bearing in mind that this distinction is in a number of cases not clear-cut. For instance,
38 the creation of markets for biodiversity-related goods and services often relies both on monetary and non-
39 monetary measures.

1/ See decision VI/15, Annex I, paragraph (36) (h).
2/ See document UNEP/CBD/SBSTTA/11/INF/xxx.
3/ Millennium Ecosystem Assessment (2005), page 11

- 1 • **Conservation concessions** by which conservation organizations bid against logging
2 companies to win logging concessions and take them off the market with conservation
3 purposes.
- 4 15. **Revolving funds** could be considered as innovative mechanisms to reduce the level of monies that
5 need to be available on a permanent, long-term basis to purchase and protect biodiversity-rich lands and
6 important habitats.
- 7 16. Substantial monitoring and enforcement costs are associated to ensure compliance in particular with
8 easements and covenants once they are established, in particular if payments are frontloaded into the first
9 few years of the easement. Ongoing payments, however, may need a substantial administrative overhead,
10 which is why it is suggested that, when diverting agricultural land from certain intensive uses, the
11 outright purchase may be more cost-effective than payments in perpetuity.
- 12 17. The biodiversity-related benefits of such programmes clearly increase with the length of time land is
13 removed from productive uses, a feature that may limit the effectiveness of some programmes.
14 Additional nature management strategies that take the context of the specific ecosystem fully into
15 account will be needed in order to restore the areas in a targeted and effective way. A careful selection of
16 eligible areas in target regions will often be necessary to avoid the designation of tiny, fragmented land
17 set-asides scattered among highly intensified agricultural lands.
- 18 18. **Incentive payments under direct approaches** typically involve cost-sharing and management
19 agreements, whereby payments are made to reimburse landholders for the incremental cost of providing
20 non-marketable biodiversity services. In return for the payment, users of the biodiversity resource agree
21 to contribute to the maintenance of biodiversity. Such incentive payments are, in many developed
22 countries, part of policies and programmes that seek to improve the environmental performance in sectors
23 such as agriculture, forestry, or fisheries. Moreover, they are also to some extent used in developing
24 countries, possibly under the ‘payments for ecological services’ paradigm explained earlier. Examples
25 include: payments for wildlife and wildlife habitat conservation, such as compensation of crop losses due
26 to foraging wildlife, conservation leases for wildlife migration corridors, performance payments for
27 endangered species; payments for the use of endangered local varieties; payments for the improved
28 provision of ecosystem services such as for instance the hydrological services provided by forests.
- 29 19. The use of **markets mechanisms** such as competitive bidding processes can be identified as a means
30 to ensure the cost-efficiency of payments and to avoid overcompensation, provided that some conditions
31 are met, such as: (i) a sufficient amount of potential bidders, and (ii) tenders that are awarded on the basis
32 of outcomes instead of concrete activities.
- 33 20. The **removal of policies and programmes that generate perverse incentives** is another important
34 element to increase the effectiveness and cost-efficiency of monetary incentive programmes, and to
35 enhance policy coherence. A low take up by relevant actors under voluntary incentive programmes may
36 result if maintaining their current biodiversity-harmful practices is artificially made attractive for them by
37 other governmental policies and programmes.
- 38 21. Monetary positive incentive measures generally entail a wide range of environmental objectives and
39 an equally wide range of possible designs, which is why it is very difficult to give a general assessment
40 of the effectiveness and cost-efficiency of payment programmes. For instance, in the context of
41 agriculture, the performance of **agri-environmental programmes** in terms of the gains for biodiversity,
42 the cost to achieve those gains, and the distribution of such costs, are said to largely depend on the
43 programme design and implementation as well as on the peculiarities of the agricultural regions targeted
44 by the programme and the general policy framework in place. While a number of empirical studies note
45 positive results for biodiversity of agri-environmental programmes, others express more skepticism with

1 regard to the effectiveness of agri-environment programmes aimed at biodiversity, and call for (i)
2 improved geographical targeting of payments with regard to high nature value farmland; (ii) updated and
3 refined indicators and data; (iii) improved monitoring; and (iv) comparative analysis of the effectiveness
4 of individual agri-environment schemes.

5 *Indirect approaches*

6 22. *Payments under indirect approaches* are given to support activities or projects that are not designed
7 exclusively to conserve or promote the sustainable use of biodiversity, but have the side-effect of
8 contributing to these objectives, for instance, in the context of the *generation of markets for*
9 *biodiversity-related goods and services* or of *community-based natural resource management*
10 *programmes*. Examples include support to: conversion to organic farming, programmes for the
11 development of community-centered eco-tourism in specific regions with high biodiversity or wildlife, or
12 the marketing of other biodiversity-related goods and services such as, for instance, non-timber forest
13 resources.

14 23. Some voices argue that such indirect approaches are less cost effective than the direct approaches
15 discussed above. Again, however, the concrete performance of an indirect mechanism will depend on a
16 number of factors (see paragraph 21 above).

17 24. Consider the promotion of organic farming as a concrete example. Support is given to this effect by a
18 number of countries, but still surrounded by controversy. Recent literature reviews generally indicate that
19 organically managed fields and farms have greater biological diversity than conventionally managed
20 sites, and that organic farming generally shows superior environment performance. However, critics
21 argue that it may often be more cost-effective to provide relevant public goods by conventional
22 agriculture plus other agri-environmental measures, than by supporting organic farming. Furthermore, the
23 reduced productivity of organic farming is also said to potentially contribute to further pressure for land
24 conversion for agricultural purposes.

25 25. The *removal or reduction of tariffs for biodiversity-related goods* may act as a monetary positive
26 incentive measure for conservation and sustainable use of the associated biodiversity resources. There is
27 a link in this respect to the ongoing negotiations at the WTO negotiations on paragraph 31 (iii) of the
28 Doha Development Agenda, on the reduction or, as appropriate, elimination of tariff and non-tariff
29 barriers to environmental goods and services. Depending on whether the definition of environmental
30 goods and services that will eventually be adopted by the WTO will also include biodiversity-related
31 goods and services, such elimination would also contribute to foster markets in such goods and services,
32 in particular in developing countries.

33 26. Biodiversity-related goods are part of the so-called environmentally preferable goods, whose trade
34 liberalization would create important export opportunities for many developing countries. However, there
35 is so far no consensus on whether and how to include environmentally preferable goods into a definition
36 or list of environment goods and services. Many WTO Members' concerns about the technical problems
37 in defining environmental goods are of particular relevance for environmentally preferable goods,
38 including the problem that the environmental preference for these goods will often be based on non-
39 product related processes and production methods and that it will therefore be difficult if not impossible
40 to distinguish them from "like products".

41 27. Importantly, there are often substantial global benefits to the successful implementation of policies
42 and programmes for the conservation and sustainable use of biodiversity in developing countries. They
43 provide therefore important entry points for international cooperation and/or finance in the design and
44 implementation of *international positive incentive measures*, with a view to reward the provision of

1 these positive spillovers.^{5/} Reference can be made in this context to unilateral *biodiversity-related*
2 *official development assistance* (ODA) as well as to multilateral funding such as provided by the *Global*
3 *Environment Facility* (GEF). Furthermore, an important multilateral programme providing monetary
4 support to the indirect approach of creating and fostering biodiversity-related markets in developing
5 countries is the UNCTAD Biotrade Initiative.

6 2.2 *Non-monetary positive incentive measures*

7 28. Non-monetary incentive measures for conservation and sustainable use of biodiversity include, *inter*
8 *alia*:

- 9 • public policies such as *education, research, and procurement*;
- 10 • *community recognition and environmental awards*; as well as
- 11 • measures taken in the context of *market creation* for biodiversity-related goods and services
12 including through the establishment of certification and labeling schemes.

13 29. Furthermore, in many instances *traditional laws and practices* also generate non-monetary incentives
14 for the conservation and sustainable use of biodiversity.

15 30. Policies that put in place so-called *green procurement* take environmental aspects into consideration
16 in public and institutional procurement. It is said, however, that it may be difficult to introduce
17 biodiversity issues in a contract for buying goods services or works. Reference is made to the lack of
18 environmental knowledge on the side of contracting authorities, which may limit the inclusion of
19 environmental elements into their procurement procedures, and, moreover, to the fact that green
20 products/services may often be more expensive.

21 31. *Community recognition and environmental awards* are designed to encourage good corporate and
22 other governance favorable for the conservation and sustainable use of biodiversity, and are used by a
23 number of Parties to the Convention. While awards usually have a monetary component, the formal
24 recognition by the community or society alone is an important non-monetary incentive for the
25 conservation and sustainable use of biodiversity.

26 32. *Certification and labeling* are important non-monetary incentives from the perspective of providing
27 consumers with biodiversity information, and may in many cases be a key element in the development of
28 *markets for biodiversity goods and services* that are produced in a sustainable way. However, the fact
29 that these markets remain relatively small niche markets for the moment, and the fact that there is in
30 many cases a confusing proliferation of labels puts limitations to the effectiveness of this approach.

31 33. In a number of cases governments have also used market mechanisms in the management of open-
32 access resources. By granting specific use rights and, by permitting the trade of these rights, they created
33 markets on the allowed resource uses that enhanced cost-efficiency. For instance, the assignment of well-
34 defined property rights has been employed in connection with the management of commercial fish stocks
35 in the form of *individually transferable quotas* (ITQs) as well as private ownership of forested lands.
36 ITQs in fisheries can be used to mitigate the impacts of commercial fishing on the fish stock and in
37 marine ecosystems.

^{5/} The *Proposals for the Design and Implementation of Incentive Measures*, endorsed by the Conference of the Parties at its sixth meeting, provide a list of existing instruments, but also caution that the list is not comprehensive and that *inter alia* international incentive measures should also be considered in a similar fashion. See decision VI/15, annex 1, paragraph 37.

1 34. While market creation has often proved to be an effective means for the conservation and sustainable
2 use of biodiversity, a number of crucial conditions need to be met, and limitations also exist. In
3 particular, the incentive for the owners to sustainably manage their resources extends only to the
4 privately appropriable elements of biodiversity. As many of the benefits of biodiversity are not privately
5 appropriable, and these benefits often represent significant public goods, full benefits for conservation
6 and sustainable use are often not achieved without the application of additional regulations or other types
7 of incentive measures.

8 *Traditional laws and practices that generate positive incentives*

9 35. Traditional laws and practices that generate positive incentives is a broad topic considering there are
10 over 370 million indigenous peoples and thousands of different groups with different laws and customs.
11 Aboriginal groups have their own specific cultural and spiritual ties and beliefs that affect their
12 relationship with the land, and this relationship is non-transferable. It is very difficult, therefore, to
13 generalize about the impacts of traditional laws and practices on the conservation and sustainable use of
14 biodiversity.

15 36. However, there are many examples where traditional laws and practices include behaviour that
16 inherently contributes to the conservation or sustainable use of biodiversity. Many of the areas in the
17 world with highest biodiversity are inhabited by indigenous and traditional peoples who typically view
18 themselves as guardians and stewards of nature. Moreover, traditional law and practices may have
19 applications that directly promote the conservation and sustainable use of biodiversity. For example:

- 20 • Sacred sites act as conservation areas for vital water sources and also for individual species by
21 restricting access and behaviour;
- 22 • Areas under territorial responsibility of a specific clan may act as protected areas for the
23 totem species of this clan;
- 24 • Traditional technologies such as fire use are part of extremely sophisticated systems that
25 shaped and maintained the balance of vegetation and wildlife.

26 37. As with landholders generally, local communities are more likely to employ environmentally
27 sustainable practices when they enjoy territorial security and local autonomy. Conversely, insecure
28 property and use rights may act as limitations for traditional law and practices to generate positive
29 incentives for conservation and sustainable use of biodiversity.

30 **4. *Synthesis of requirements for successful application of positive incentive measures***

31 38. The evidence suggests that the application of positive incentive measures often require the
32 complementary application of regulations or other instruments such as tax incentives to operate in an
33 effective and cost-efficient manner. Hence, they need to be embedded in a coherent overall policy
34 framework providing a *mix of measures*. For instance, regulations need to define the targets, baseline
35 standards or benchmarks that can act as reference levels for the eligibility of incentive payments. In the
36 creation of market for biodiversity-related goods and services, monetary and non-monetary measures are
37 often applied in a closely synchronized manner. And finally, the removal of policies and programmes that
38 generate perverse incentives will often be a crucial precondition for the effectiveness and cost-efficiency
39 of monetary positive incentive measures.

40 39. Defining *priorities* is necessary for identifying appropriate monetary incentives for the conservation
41 and sustainable use of biodiversity. The top priority for any positive incentive measure is to slow, halt or

1 reverse the process of loss of biodiversity. In general, direct payments should be targeted to achieve
2 outcomes that are most valuable from a biodiversity perspective.

3 40. **Flexible approaches** are needed for a tailored approach to encouraging and rewarding holders and/or
4 users of biodiversity resources for achieving conservation and sustainable use under varying local
5 circumstances.

6 41. Particular attention needs to be given to **defining clear objectives and targets** as reference levels for
7 the eligibility of payments. Environmental services depend on both the kind of land use as well as its
8 location and, in consequence, an undifferentiated payment system that pays everyone the same will be
9 much more expensive than a targeted scheme and will also make it difficult to tailor interventions to the
10 particular requirements of given situations. However, there is clearly a trade-off between the benefits of a
11 targeted scheme and its administrative costs.

12 42. Effective **baseline standards or benchmarks, and associated indicators** would ensure that incentive
13 payments are as targeted as possible. For instance, it has been pointed out that deadweight effects might
14 result in particular from programmes that seek to maintain existing environmentally-friendly practices,
15 because it is difficult to identify the cases in which farmers would indeed switch to less environmentally-
16 friendly practices without the programme, that is, to distinguish these cases from the cases in which
17 farmers merely threaten to do so in order to receive payments (the so-called rent-seeking behaviour).
18 Stringent but realistic baseline standards would help to alleviate this problem. A comprehensive set of
19 specific, measurable and time-driven targets and associated indicators would also minimize the risk of
20 unexpected reactions by the target actors of the programme, with possibly adverse consequences for
21 biodiversity (“you get what you pay for”).

22 43. The successful application in particular of monetary incentives measures requires **appropriate**
23 **institutional structures** that can monitor the ecosystem status, set priorities, resolve conflict, coordinate
24 individual behaviour, and allocate and enforce rights and responsibilities. For example, provisions
25 contained in covenants and easements need to be enforced through appropriate legislation. Institutional
26 **capacity building** would be needed in developing countries where existing institutions prove to be
27 deficient.

28 44. The successful design, application and implementation of monetary incentive measures require the
29 **effective cooperation among all relevant stakeholders and indigenous and local communities**. This
30 includes all appropriate levels of government and government departments, and also includes cooperative
31 work with and among other stakeholders, including not only the owners and/or current users of
32 biodiversity resources, but also the beneficiaries of ecosystem services, the private sector, non-
33 governmental organisations, and local communities including indigenous and traditional communities.

34 45. People are more willing to take voluntary action, and are willing to pay more for conservation when
35 they have an improved understanding of the biodiversity resources under threat and why their existence
36 may be important. Furthermore, such an understanding needs to be rooted in society’s values and beliefs
37 in order to use community or society recognition as a tool for rewarding environmentally-friendly
38 activities. In consequence, **raising awareness and disseminating information** is one of the most
39 important components associated in particular with the success of non-monetary positive incentives for
40 the conservation and sustainable use of biodiversity. Non-governmental organizations can also play an
41 important role in raising environmental awareness.

42 46. Assessing the values of the targeted biodiversity resource by applying **valuation tools** or **strategic**
43 **impact assessment** may also contribute to raising awareness and thereby improve the effectiveness of
44 non-monetary-positive incentive measures. Their wider application would also improve decision-making

1 by providing critical information for the calibration and fine-tuning in particular of monetary positive
2 incentive measures. *Capacity building* to this end should be undertaken as appropriate.

3 47. In particular, the access of consumers to reliable information is vital for market creation to succeed
4 as an instrument to protect biodiversity. Voluntary certification and labeling schemes are possible tools
5 to increase awareness and foster decision-making that prioritises biodiversity-friendly goods and
6 services. *Capacity building* should be undertaken for small and medium-sized producers in particular in
7 developing countries with a view make them aware of, and enable them to take advantage of, potential
8 market opportunities that support the conservation and sustainable use of biodiversity.

9 48. New policies and programmes for the conservation and sustainable use of biodiversity, including
10 positive incentive measure, need to ensure *consistency with the existing value and belief systems* of
11 resource users and owners including local communities. In particular, the traditional laws and practices
12 of local and indigenous communities may in many cases generate important non-monetary incentives for
13 conservation and sustainable use of biodiversity. In these cases, new policies and programmes should
14 build upon these value and belief systems and/or traditional laws and practices and seek to foster the
15 incentives generated by them through *community recognition*, rather than implementing redundant or,
16 worse, contradictory incentive measures.

17 49. Sufficient *funding* is arguably the most straightforward precondition for the effective
18 implementation of monetary positive incentive measures. It has frequently been noted that voluntary
19 programmes suffered from poor take up because the payments under the programme were too low to
20 substantially change the incentives of target actors. In consequence, effective direct payment approaches
21 can be very expensive.

22 50. *Non-governmental organizations* can play an important role in the mobilization of funds. In a
23 number of cases, the *direct beneficiaries of specific ecological services* can be clearly identified and can
24 then possibly be mobilized as a funding source.

25 51. The use of *market mechanisms* such as competitive bidding procedures is an important tool to
26 increase the cost-efficiency of payment programmes and to avoid overcompensation, if local conditions
27 permit. The *removal of policies and programmes that generate perverse incentives* can also increase the
28 effectiveness and cost-efficiency of monetary incentive programmes, and enhance policy coherence.

29 52. *Cooperation among relevant governmental agencies* at all levels can enhance synergy between
30 positive incentive measures for the conservation and sustainable use of biodiversity and other
31 governmental policies and programmes. To implement mechanisms that ensure the effective cooperation
32 among these governmental institutions will therefore be an important contribution to successful *policy*
33 *integration*.

34 53. The effective application of monetary incentives also assumes that *property rights* in land – not
35 necessarily private rights – are clearly established. In consequence, policies, programmes and strategies
36 pertaining to land and property rights are another important area for policy integration.

37 54. In some cases there may be unintended social or other consequences if land is dedicated to
38 conservation whereby, for example, some land users may become de facto dispossessed if their use was
39 not previously formally recognized by a legal title. Such *distributional side effects* should be fully taken
40 into account when designing and implementing support programmes.

41 55. By increasing the effectiveness and cost-efficiency of monetary incentive programmes, the *removal*
42 *of policies that generate perverse incentives* is another important element for enhancing policy
43 coherence.

- 1 56. Governments that implement incentive measures for the conservation and sustainable use of
2 biodiversity need to ensure their *consistency with international obligations*. For instance, as regards
3 monetary incentive measures, they may need to ensure that payments under agri-environment
4 programmes fulfill the criteria of the WTO Agreement on Agriculture, as applicable, for exemption from
5 its reduction commitments on domestic support policies.
- 6 57. The substantial global benefits that result from the successful implementation of policies and
7 programmes for the conservation and sustainable use of biodiversity in developing countries provide
8 important entry points for international cooperation and/or finance in the design and implementation of
9 *international positive incentive measures*, with a view to reward the provision of these positive
10 spillovers.

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Annex

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**PROPOSALS ON THE APPLICATION OF POSITIVE INCENTIVE MEASURES AND THEIR
INTEGRATION INTO RELEVANT PROGRAMMES, POLICIES OR STRATEGIES**

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1. **Scope of proposals.** The present proposals amend and further specify the Proposals for the Design and Implementation of Incentive Measures endorsed by the Conference of the Parties to the Convention on Biological Diversity at its sixth meeting, by giving focus to the application of positive incentive measures and their integration into relevant programmes, policies or strategies while bearing in mind that the Proposals for the Design and Implementation of Incentive Measures also apply to positive incentive measures for the conservation and sustainable use of biological diversity.

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2. **Purpose of positive incentive measures.** Positive incentive measures can influence decision-making by recognizing and rewarding activities that are carried out for conservation and sustainable use biodiversity, through monetary and non-monetary means.

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3. **Application of monetary positive incentive measures.** Monetary positive incentives could be applied in situations where desirable activities would not be undertaken without financial support, or to create a differential in favour of such activities where it is not feasible to discourage the undesirable alternatives through other measures.

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A. Design of positive incentive measures

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4. **A package of measures.** A package of a wide range of instruments to will often be necessary to effectively address underlying causes of biodiversity loss. The application of positive incentive measures often requires the complementary application of regulations or other instruments to operate in a cost-effective manner.

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5. **Targeting and flexibility.** Positive incentive measures should be targeted to achieve outcomes that are most valuable from a biodiversity perspective. Therefore, instruments should be flexible enough to be adapted to address different priorities and specific circumstances; one size does not fit all. In all cases, the geographical scope of the measure should be matched with the spatial dimension of the biodiversity management problem.

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6. **Specify clear objectives, targets, and indicators.** Objectives, targets, and indicators should be consistent with the Convention on Biodiversity. To the extent feasible, positive incentive measures should have targets that are clear, be time-driven and based on analysis of their effects. Indicators can facilitate the evaluation of incentive measures and provide useful information in determining the need for corrective action.

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7. **Specify baseline standards or benchmarks.** Outcome-oriented baseline standards or benchmarks can act as reference levels for the eligibility to the measure and will thus contribute to its cost-effectiveness. To the extent feasible, monetary positive incentive measures should therefore be based on such baselines or benchmarks.

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8. **Consider traditional law and practices.** The traditional law and practices of indigenous and local communities often generate important non-monetary incentives for the conservation and sustainable use of biodiversity. In these cases, any new incentive measure should synergize with and build upon these traditional laws and practices by encouraging their wider application.

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1 9. **Complementary market mechanisms.** Under certain conditions, market mechanisms such as
2 competitive bidding procedures are effective tools to increase the cost-efficiency of monetary positive
3 incentive measures and to avoid overcompensation. If local conditions permit, the complementary use of
4 such mechanisms could therefore be taken into consideration.

5 **B. Institutional requirements**

6 10. **Development or improvement of institutions.** The effective implementation of positive incentive
7 measures often presumes the existence of a specific institutional context in which they can be
8 successfully implemented. In particular, their successful implementation requires institutions that can,
9 *inter alia*, monitor ecosystem health, resolve conflict, coordinate individual behaviour and allocate and
10 enforce rights and responsibilities. Attention should be placed on developing appropriate institutional
11 structures to design, implement and, where necessary, monitor and enforce positive incentive measures.

12 11. **Involvement of stakeholders as well as indigenous and local communities.** Institutions should
13 have mechanisms in place that ensure the full and effective involvement of relevant stakeholders as well
14 as indigenous and local communities in the design, implementation and monitoring of incentive
15 measures. These mechanisms should also include consultative processes among relevant governmental
16 institutions to ensure effective cooperation and policy integration between different branches and levels
17 of government.

18 12. **Identification of relevant experts and stakeholders.** In addition to relevant governmental entities
19 and policy makers, experts and scientists, stakeholders should include representatives of the private
20 sector and relevant non-governmental organizations.

21 13. **Role of non-governmental organizations.** An informed and effective non-governmental sector can
22 play an important role in identifying opportunities for conservation and sustainable use, and in
23 encouraging or initiating the design and implementation of positive incentive measures, independently
24 from and/or in cooperation with government institutions.

25 14. **Transparency.** The institutions that design and implement positive incentive measures should
26 operate in a transparent manner. The dissemination of pertinent information plays a key role for the
27 effective implementation of positive incentive measures for conservation and sustainable use and, by
28 raising awareness, will be an important incentive measure in itself.

29 **C. Awareness-raising and the generation and sharing of information**

30 15. **The importance of information and awareness.** The role of information is vital in raising public
31 awareness of biodiversity values and management problems. Raising awareness by providing such
32 information can act as a positive incentive measure in its own right and will also be a key precondition
33 for the effective and targeted implementation of other measures for the conservation and sustainable use
34 of biodiversity.

35 16. **Raising awareness of biodiversity values and systems.** Instruments such as environmental impact
36 assessment, strategic environmental assessments and valuation techniques should be further developed
37 and applied with a view to assess and understand biodiversity values and functions under differing local
38 circumstances and capacity preconditions, and to therefore contribute to raise awareness on biodiversity
39 values and functions.

40 17. **Information systems for market creation.** The marketing of goods and services that support the
41 conservation and sustainable use of biodiversity should be further encouraged, such as through the
42 development, enhancement and wider application of voluntary instruments that promote information on

1 biodiversity in consumer decisions, including, as appropriate, voluntary standards, voluntary certification
2 and labeling schemes, or awareness campaigns. It should be borne in mind that these instruments should
3 not erect new hurdles for market access for, or put onerous costs on, producers, in particular in
4 developing countries.

5 **18. Community recognition.** In many cases, the existing value and belief system of domestic societies
6 as well as of local and indigenous communities offers important entry points for the generation of
7 incentives for conservation and sustainable use of biodiversity. In these cases, this lever could be used by
8 disseminating information on environmental best practices through environmental awards and prizes,
9 thereby supporting community recognition of environmental excellence.

10 ***D. Financing***

11 **19. Adequate funding.** Adequate funding, including start-up funding, as appropriate, should be ensured
12 for the design and implementation of positive incentive measures, and in particular of monetary positive
13 incentive measures, as well as for effective management, monitoring and enforcement, and for capacity
14 building.

15 **20. Cost-effectiveness.** Due consideration should be given to ensure the cost-effectiveness of positive
16 incentive measures, and in particular of monetary positive incentive measures that involve the use of
17 public funds. To ensure cost-effectiveness of the measure, a number of mutually not exclusive activities
18 could be envisaged:

19 (a) Comparative research could be undertaken into the relative cost-effectiveness of the different
20 policy options that at hand for addressing a specific biodiversity management problem, prior to decision-
21 making, in order to choose the best option;

22 (b) Using complementary market mechanism such as competitive bidding procedures can
23 increase cost-effectiveness and reduce the prospect of overcompensation, and their application should
24 therefore be considered if local conditions permit;

25 (c) A low take up by relevant actors under voluntary incentive programmes may result if
26 maintaining their current biodiversity-harmful activities is artificially made attractive for them by other
27 governmental policies and programmes. The simultaneous removal of policies and programmes that
28 generate perverse incentives, to the extent possible, should therefore be taken into consideration;

29 (d) Consideration should be given to the development of innovative funding mechanisms such
30 as, for instance, revolving funds or public-private partnerships, possibly with involvement and financial
31 contributions from non-governmental organization and/or from any direct beneficiaries of specific
32 ecosystem services.

33 ***E. Scientific, technical and human capacity building***

34 **21. Realising the potential value of biodiversity resources.** It is important to build scientific, technical
35 and human capacity, including through training and education, to promote expertise in, and
36 understanding of, the potential value of domestic biodiversity resources and the design and
37 implementation of positive incentive measures, such as market creation, that allow the realization of
38 these biodiversity values.

39 **22. Training and education for local producers.** Consideration could be given to implement training
40 and education programmes for small and medium-sized producers, with a view to make them aware of,
41 and enable them to take advantage of, potential market opportunities that support the conservation and

1 sustainable use of biodiversity. These programmes could also include capacity building and financing for
2 the development and voluntary certification of “biodiversity friendly” products.

3 **23. Capacity building for non-governmental organizations.** Consideration could be given to the need
4 for strong and effective non-governmental organizations with the expertise to act as cooperative partners
5 and assist governments and others through research and policy recommendations as well through the
6 design and implementation of positive incentive measures.

7 *F. Policy integration*

8 **24. Policy integration.** Policy integration should be undertaken with a view to ensure synergy and
9 consistency between positive incentive measures for conservation and sustainable use of biodiversity and
10 other policies, programmes and strategies, for instance, by avoiding the duplication of activities or by
11 ensuring that existing policies, programmes and strategies do not contradict the measures, and should
12 thereby contribute to the cost-effectiveness of positive incentive measures.

13 **25. Mechanisms for consultation and cooperation.** The establishment of formal channels and
14 mechanisms for consultation and cooperation among relevant governmental institutions is an important
15 means to ensure effective policy integration between different branches and levels of government.

16 **26. Well-defined land and property rights.** Policies, programmes and strategies pertaining to land and
17 property rights are an important area for policy integration. Well-defined land and property rights are an
18 important factor in the successful implementation of both monetary and non-monetary positive incentive
19 measures such as direct payments or market creation efforts.

20 **27. Distributional effects.** Any effect on income distribution and poverty alleviation should be taken
21 into consideration when designing and implementing positive incentive measures.

22 **28. Removal of policies that generate perverse incentives** The removal of policies that generate
23 perverse incentives, to the extent possible, will enhance the cost-effectiveness of positive incentive
24 measures and will therefore be a key element of an effective policy integration strategy.

25 **29. International incentive measures.** In order to generate and strengthen international incentives for
26 the conservation and sustainable use of biodiversity, further efforts to integrate biodiversity
27 considerations into bi- and multilateral funding processes and development programmes and strategies
28 should be undertaken.

29 **30. Consistency with international obligations.** The implementation of positive incentive measures
30 should take place in a manner that is consistent with international obligations.

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