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**WORKSHOP ON INCENTIVE MEASURES FOR
THE CONSERVATION AND SUSTAINABLE
USE OF THE COMPONENTS OF
BIOLOGICAL DIVERSITY**

Montreal, 3-5 June 2003

**ELABORATION OF PROPOSALS FOR THE APPLICATION OF WAYS AND MEANS TO
REMOVE OR MITIGATE PERVERSE INCENTIVES***Note by the Executive Secretary***I. INTRODUCTION**

1. At its sixth meeting, the Conference of the Parties of the Convention on Biological Diversity requested “the Executive Secretary, in collaboration with relevant international organizations, to elaborate proposals for the application of ways and means to remove or mitigate perverse incentives, for consideration by the Subsidiary Body for Scientific, Technical and Technological Advice at a meeting prior to the seventh meeting of the Conference of the Parties” (decision VI/15, paragraph 7).

2. Further to that request, the Executive Secretary is convening a workshop to elaborate the proposals for the application of ways and means to remove or mitigate perverse incentives as requested by the Conference of the Parties. The present note is intended to serve as the main working document for this meeting. It is supplemented by an information document UNEP/CBD/WS-Incentives/2/INF/1 that provides additional information and a more extensive analysis on perverse incentives in selected economic sectors, with a view to extracting general conclusions for the elaboration of proposals for the application of ways and means to remove or mitigate such perverse incentives.

3. The present note builds on earlier work undertaken by the Executive Secretary on this issue. At its fourth meeting, the Conference of the Parties requested the Executive Secretary “to prepare in collaboration with the Organisation for Economic Co-operation and Development, The world Conservation Union (IUCN) and other relevant organizations, a background paper containing further analysis of the design and implementation of incentive measures for the conservation and sustainable use of biodiversity” and “to describe, in this document, ways and means to identify perverse incentives and possibilities to remove or mitigate their negative effects on biological diversity”. Pursuant to this request, the Executive Secretary prepared a note for the consideration of the Conference of the Parties at its fifth meeting (UNEP/CBD/COP/5/15), which gave special attention to perverse subsidies. In this document, the

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conversion of harmful subsidies into beneficial ones and the implementation of appropriate legal reform were identified as possible avenues for removing or mitigating perverse incentives.

4. The present note is structured as follows: section II reviews important conceptual distinctions and definitions of perverse incentives, focusing on environmentally harmful government subsidies, laws or customary practices governing resource use, and the persistence of environmental externalities; section III summarizes the key lessons of the sectoral analyses provided in the accompanying information document (UNEP/CBD/WS-Incentives/2/INF/1); section IV provides information on contributions and international processes that concentrate on the identification of strategies for the removal and mitigation of perverse incentives; section V builds on the synopses given in the earlier sections and presents draft proposals for the application of ways and means to remove or mitigate perverse incentives; AND SECTION vi presents recommendations for the Workshop in elaborating proposals for the application of ways and means to remove or mitigate perverse incentives.

II. CONCEPT AND DEFINITIONS

5. In line with the terminology previously used under the Convention on Biological Diversity, ^{1/} a perverse incentive is a policy or practice that encourages, either directly or indirectly, resource uses leading to the degradation of biological diversity. Hence, such policies or practices induce unsustainable behaviour that reduce biodiversity, often as unanticipated side effects as they were initially designed to attain other objectives. Several common types of perverse incentives are usually identified:

- (a) Environmentally harmful government subsidies;
- (b) Persistence of environmental externalities; and
- (c) Laws or customary practices governing resource use.

6. The non-internalization of environmental externalities is also often identified as a subsidy, given by the general public (represented by national governments) to specific producers and/or consumers. It will therefore also be discussed in the next section.

A. *Perverse subsidies*

1. *Subsidies in general*

7. A number of both broad and narrow subsidy definitions and classifications have been forwarded in the literature, some of which are summarized in IUCN/Bagri et al. (1999). ^{2/} For example, De Moor (1997) presents the following taxonomy of subsidies:

- (a) Budgetary subsidies, including both direct subsidies (e.g., grants or payments to consumers or producers) and the budgetary effect of tax policies (e.g., tax credits, exemptions, allowances, exclusions and deductions, rate relief, tax deferrals, preferential tax treatment);

^{1/} UNEP/CBD/COP/5/15, p. 11.

^{2/} Referring to Myers (1998: 3), Roodman (1997: 12), McNeely (1998: 198), De Moor (1997). The FAO Expert Consultation on Economic Incentives and Responsible Fisheries (Rome, 28 November – 1 December 2000) defined four sets of subsidies. The first set is the most restrictive, including only governmental transfers, while the other three are increasingly broader.

(b) Capita-cost subsidies (e.g., preferential loans, loan or liability guarantees, debt forgiveness);

(c) Public provision of goods and services below cost (e.g., the provision of infrastructure and complementary services and government research and development expenditures);

(d) Policies that create transfers through the market mechanism, including domestic-oriented policies (e.g., price regulation, quantity controls, government procurement policies, legislation) and trade-oriented policies (e.g., import and export tariffs and non-tariff barriers).

8. There is still some debate as to what exactly should be understood by a subsidy, that is, how broad a definition should be adopted. ^{3/} For instance, it is a matter of debate whether the non-internalization of external effects should also count as a subsidy. De Moor notes that, from a social or welfare economics perspective, the non-internalization of external effects would also qualify as subsidies. However, he also points to crucial differences and practical problems, and therefore recommends to not include the non-internalization of external effects in a subsidy taxonomy: ^{4/}

(a) Subsidies arise from active government interventions while externalities refer to the lack of governmental policy;

(b) The measurement of subsidies and external costs differs substantially; in particular, the valuation of external costs, by their very nature, involves large margins of uncertainty. Hence, the concept of subsidies and externalities differs considerably.

2. *Perverse subsidies*

9. It is generally recognized that subsidies are introduced to serve legitimate governmental objectives and are therefore not “bad” as such, although they may sometimes reveal to not be very effective in attaining these objectives. ^{5/} However, subsidies that have a significant negative impact on efforts to conserve or sustainably use biological resources can be considered “biodiversity-perverse”. IUCN/Bagri et al (1999) present a wide range of reasons why subsidies can be considered to generate perverse impacts on biodiversity. Beyond the fact that subsidies often directly encourage behaviours that lead to biodiversity loss, other, more indirect effects may also exist. For instance;

(a) Subsidies may also drain scarce public finances that could have been used to conserve biodiversity;

(b) Subsidies often favour well-connected groups while putting less influential groups – many of whom are dependent on biological resources – at a disadvantage.

10. While recognizing the importance of such indirect effects, the remainder of this note will restrict its attention to the direct perverse effects of subsidies. Section III below will present key lessons emanating from the analysis of perverse subsidies in two sectors that are key for the conservation and

^{3/} See section IV below, for further details on recent discussions at the OECD.

^{4/} Participants in a recent OECD workshop on environmentally harmful subsidies, held 7-8 November 2002, also endorsed this approach to track externalities separately. See OECD (2002b) and section IV below for further information.

^{5/} See, e.g., De Moor (1997), chapter 7, p. 1. See also Steenblich (1999), Section II, for a discussion of possible shortcomings and reasons for the persistence of subsidies.

sustainable use of biodiversity, namely, the fishery and agricultural sectors. The full analyses can be found in document UNEP/CBD/WS-Incentives/2/INF/1.

B. Persistence of environmental externalities

11. The present note will address the “application of ways and means to remove or mitigate perverse incentives” (decision VI/15, paragraph 7). With regard to the non-internalization of environmental externalities (or “external effects”), the application of such ways and means would refer to the design and implementation of incentive measures, for which policy guidance was recently endorsed by the Conference of the Parties in the form of the “Proposals for the design and implementation of incentive measures” (decision VI/15, annex I).

12. For this reason, the non-internalization of environmental externalities shall not be considered in the remainder of this note. However, it has to be noted that some governmental policies may contribute to the non-internalization of environmental externalities. For instance, it is widely recognized that incentives to overuse natural resources often stem from the absence of well defined property rights at the appropriate level (i.e. private or communal rights). Importantly, such property rights systems may be inscribed in local customary law or cultural traditions. Ill-adapted formal government policies may weaken such traditional right systems and may therefore contribute to impede their effectiveness in internalizing the negative externalities resulting from the use of the resource. Such governmental policies would clearly generate perverse incentives for the conservation and sustainable use of biodiversity, and therefore need to be included into the analysis.

C. Laws or customary practice

13. Considerably less conceptual and analytical work has been undertaken on the role of law and customary practices that generate perverse incentives for the conservation and sustainable use of biological diversity. Anecdotal evidence, however, suggests that such perverse incentives may be widespread. For instance, reference is often made to beneficial-use laws that require lands users to make productive use of water and forest resources in order to secure their entitlement. Furthermore, the clearing of land may also be rooted in customary law, to indicate the claim made to the area. Section III below summarizes the key lessons emanating from an analysis of the role of law and customary practice in generating perverse incentives for the conservation and sustainable use of forests. Again, the full analysis can be found in document UNEP/CBD/WS-Incentives/2/INF/1.

14. Important differences exist between formal law and customary practices that generate perverse incentives with regard to the possible ways and means for their removal. While formal law can, in principle, be removed easily, this is not so for practices that are deeply rooted in customs or cultural traditions. For this reason, the draft proposals for the application of ways and means to remove or mitigate perverse incentives, presented in section V, will also differentiate between *policies* and *practices*:

(a) The term policy shall refer to the combination of a set of operational targets and a related set of legal, administrative and/or economic tools that are implemented by central, regional or local governments to attain a set of underlying objectives. For the purpose of the proposals, the term policy shall also include plans and programmes. Hence, the term includes both subsidies (as economic tools) and formal law (as legal tools);

(b) The term practice shall refer to any activity undertaken by individuals, companies and governments that is based on customary law, social norms or cultural traditions.

III. KEY LESSONS FROM ANALYSES OF SELECTED ECONOMIC SECTORS

15. This section summarizes key lessons for the elaboration of proposals for the application of ways and means to remove or mitigate perverse incentives. These lessons derive emanate from a more extensive analysis of perverse incentives in key economic sectors. This analysis is given in document UNEP/CBD/WS-Incentives/2/INF/1. The economic sectors reviewed in this complementary note were selected with a view to provide practical examples for both types of policies and practices that generate perverse incentives, and to focus on those sectors that gained special prominence in international discussions and processes. While sub-sections A and B below summarize key lessons with regard to perverse subsidies in the fishery and agriculture sectors, sub-section C summarizes key lessons with regard to the role of laws and customary practices in generating perverse incentives for the conservation and sustainable use of biodiversity in the forest sector.

A. *Fisheries: key lessons for the elaboration of proposals to remove or mitigate perverse incentives*

16. Fishery subsidies mainly work as input subsidies. Several subsidies can be identified that have an expansive effect of fishing fleet capacity. In the absence of further governmental interventions, such subsidies, through the expansive effect on catch capacity, generate incentives to overexploit fish stocks. This pressure on the resource base results under both private property and unregulated open access.

17. Two mechanisms played a major role in discussions on how to mitigate the perverse impacts of fisheries subsidies.

(a) First, additional regulation could be introduced, that is, a fishery-management system based on total allowable catch (TAC) could be implemented;

(b) Second, subsidies could be granted to remove the adverse impacts of some subsidies on catch capacity and subsequent resource overuse (decommissioning schemes).

18. Several limitations were identified to the approach of using additional legislation to mitigate the perverse impact of subsidies through additional regulation. They include:

(a) Indicator and measurement problems;

(b) Monitoring and enforcement problems (are especially serious in the case of fisheries given the number of fishing vessels in a typical fishery and the nature of the resource);

(c) Adaptive behavior of fishermen;

(d) Political-economy considerations.

19. With regard to subsidies intended to incite the removal of excess fleet capacity, a number of key preconditions were identified in the debate which may limit their use:

(a) The role of the overall subsidy framework is crucial. Unless perverse subsidies are simultaneously removed, the effectiveness of decommissioning schemes will be impaired;

(b) Careful design of the decommissioning scheme, including the proper specification of eligibility conditions, is also important to avoid the generation of further adverse incentives;

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(c) The strategic behaviour of rational fishermen seriously impedes the long-term effectiveness of decommissioning schemes. Their use should therefore be restricted to a transitional period of time.

B. Agriculture: key lessons for the elaboration of proposals to remove or mitigate perverse incentives

20. An important part of agricultural subsidies comes in the form of domestic support measures. According to WTO practice, these can be categorized into trade-distorting (Amber Box) domestic support measures that are coupled to agricultural output and prices (e.g., direct price support, input subsidies), into partially decoupled Blue Box measures (area and head payments), and into decoupled Green Box support measures (e.g., direct income support, payments under environmental programmes).

21. Trade-distorting Amber Box support measures have an expansive effect on domestic agricultural production and, because of subsequent changes in land use and the level of intensification, often have a negative effect on agricultural biodiversity. Conversely, it appears that the effects of removing such policies on agricultural biodiversity would be mostly positive. It can therefore be concluded that such policies often fall under the category of perverse incentives for biodiversity conservation and sustainable use, whose further reduction may be warranted.

22. Because of incomplete decouplement, both an increase of Green Box measures and of (partially decoupled) Blue Box measures would lead to some expansive effect on agricultural production, with subsequent negative impacts on biodiversity. However, such effects are more indirect than under Amber Box measures, and furthermore, such effects would smaller the more decoupled the measures under consideration. It can therefore be expected that a trade-distorting expansion of agricultural production and subsequent negative impacts on agro-biodiversity are less important under such measures, especially so under Green Box measures.

23. In consequence, the “re-instrumentation” or conversion of domestic support from Amber to Blue and Green Boxes measures that happened pursuant to the Uruguay Round agreement on Agriculture appears to be another important means to at least partially remove the perverse incentives stemming from Amber Box domestic support measures.

24. Furthermore, the fact that such re-instrumentation happened pursuant to the implementation of the Uruguay Round Agreement on Agriculture underlines the importance of international legal instruments for coordinated, multilateral action on perverse subsidies and their removal. It is sometimes said that unilateral policy reforms to remove perverse subsidies may not be feasible for large democracies with diverse constituencies, because, for instance, domestic industries fear losing competitiveness pursuant to such removal and put up political resistance. In such cases, coordinated action at the international level may be a key precondition to effectively remove such policies. ^{6/}

25. In addition, the introduction of regulatory requirements on agricultural practices and production methods, that is, of agri-environmental performance or practice standards, appears to be a means to mitigate the perverse incentives stemming from specific domestic support measures. Several possible limitations were identified to such an approach. They include:

- (a) The land and property rights of farmers;

^{6/} See Steenblich (1999), section III, for further discussion.

(b) Indicator and measurement problems.

26. It is argued that, in some cases, the removal of Amber Box support policies may generate negative effects for biological diversity. The contraction of agricultural land, to be expected further to a removal of Amber Box support in implementing countries, is said to have rather negative impacts if previous production relied on traditional, extensive farming practices that are important for creating and maintaining semi-natural areas with high levels of biodiversity. In such cases, additional policy measures may be warranted further to the removal of Amber Box policies, for instance, the implementation of well-designed and targeted agri-environmental programmes that may include payments to farmers for biodiversity-related ecosystem services.

C. *Forestry: key lessons for the elaboration of proposals to remove or mitigate perverse incentives*

27. The loss of biodiversity may be caused by a complex interaction of several root factors. In consequence, the identification of perverse incentives resulting from legal provisions or customary practice is often difficult, as their extent may often crucially depend on the design and degree of implementation and enforcement of other policies.

28. The removal of laws that generate perverse incentives may be not sufficient to halt the loss of natural forests if other macro-economic and sectoral policies and key socio-economic causal factors for deforestation remain unchanged.

29. Conversely, in such circumstances, it will be difficult to prove the necessity to remove such laws, as their abolishment will not lead to improvements as long as these other policies and socio-economic factors are not changed.

30. Even while laws that generate perverse incentives can, in principle, often be easily removed, the effectiveness of their removal may be impaired because viable alternatives are not available or because of a general lack of monitoring and enforcement capacity of the state.

IV. GUIDANCE FOR THE APPLICATION OF WAYS AND MEANS TO REMOVE OR MITIGATE PERVERSE INCENTIVES

31. While there are a large number of analytical contributions on the role of specific policies and practices in generating environmentally perverse incentives, especially on environmentally perverse subsidies, practical proposals on how to remove such policies and practices or to mitigate their perverse impacts are scarce. This section provides some selected information on recent initiatives that seek to go beyond the analytical work and identify strategies to remove policies and practices that generate perverse incentive or to mitigate their perverse impacts.

A. *Institute for Research on Public Expenditure/Earth Council*

32. A recent study on perverse subsidies prepared by the Institute for Research on Public Expenditures and commissioned by the Earth Council with the support of the Government of the Netherlands and the World Bank provides proposals for strategies to overcome barriers to subsidy reform, based on sectoral analyses of government policies (energy, road transport, water and agriculture). ^{2/}

^{2/} De Moor, A. (1996): Perverse Incentives – Subsidies and Sustainable Development: key issues and reform strategies. Institute for Research on Public Expenditure, The Hague, the Netherlands, chapter 7.

While not focusing on biodiversity, the study offers important insights with regard to the application of ways and means to remove or mitigate perverse incentives.

33. In general, the study recognizes that subsidy policies are introduced to stimulate (rural) economic development or growth; to protect (sectoral) employment and investments; to safeguard domestic supply and reduce external dependency; to reduce poverty or to support the poor and to provide access to basic living conditions. Only the analysis of the form and incidence of subsidies in each sector can reveal their purpose and their effectiveness in attaining this purpose. To minimize the perverse incentives of subsidies, sectoral objectives can often best be addressed by *direct support* measures, which have the smallest economic costs and leakages.

34. The study argues that, in many cases, subsidies provide disincentives to sustainable development while denying the poor the benefits that better deployment of these resources could produce. At a time when new funding is becoming more and more difficult to come by, the study argues that removing perverse subsidies offers large potential for the redeployment of existing resources to provide positive incentives and support for sustainable development while improving economic efficiency and competitiveness.

35. The study identifies a number of obstacles to the development of alternatives to existing subsidies. Such obstacles include: opposition from vested interests and stakeholders; distributional consequences; entitlements; uncertainty; international considerations; lack of (foreign) assistance; administrative, institutional and skill barriers. These suggestions were taken into consideration in the draft proposals for the application of ways and means to remove or mitigate perverse incentives, presented in section V below.

36. The study offers a number of activities that could be undertaken to overcome barriers to subsidy reform. The main strategies are: to create more transparency in subsidy policies; develop an alternative policy that better addresses and targets the same objective and compensates losers; buy out existing stakeholders; initiate comprehensive economic reform; introduce a burden of proof on subsidy providers; set up retraining and educational programs and use crises to question and expose subsidy policies. Again, these suggestions were taken into account in the draft proposals for the application of ways and means to remove or mitigate perverse incentives, presented in section 5 below.

B. Organisation for Economic Co-operation and Development (OECD)

37. OECD §/ has established an Ad Hoc Group on Sustainable Development to, among other tasks, “identify how obstacles to policy reforms, in particular to the better use of market-based instruments and to the reduction of environmentally harmful subsidies, can be overcome, and deepen its analytical work on these instruments”. Work on environmentally perverse subsidies is carried out by the OECD Council, as well as its committees and subsidiary bodies. This work focuses on the following sectors: agriculture, energy, fisheries, manufacturing industries and services, shipbuilding, steel, transport, water and cross-cutting areas of work.

38. The OECD Committee for Agriculture has been examining the effects of support to agriculture in the context of agricultural policy reform. Indicators of support were developed through the quantification of producer subsidy equivalents and consumer subsidy equivalents, a database of assistance to agriculture was established based on that method, and annual reports have been given on the development of agricultural support. Numerous analyses of the effects of subsidies and of policy reforms have been

§/ See OECD (2002a) for further information.

undertaken, for instance, on the environmental effects of simultaneously eliminating all agricultural subsidies in OECD regions and imposing a tax on agrochemical use.

39. The OECD Fisheries Committee has published information collected on financial support to the fishing industry and continues providing updated estimates of government financial transfers. Presently, the Committee is finalizing the three-year study of fisheries market liberalization focusing on the effect of trade liberalization on supply under selected fisheries-management regimes (including reform of subsidies). The Committee also prepared a report on results of a survey of fisheries management costs sent to members and of analysis of the links between fisheries services costs and fisheries management. Current work of the Committee is focused on market liberalization, which includes work on government financial transfer to fisheries.

40. The OECD Workshop on Environmentally Harmful Subsidies ^{2/} held in November 2002 brought together a hundred subsidy experts from the OECD, its member countries, international and non-governmental organizations and academics. Its purpose was to develop further understanding of the methodologies used in subsidy measurement, identify information and analytical gaps standing in the way of progress and define a further work on environmentally harmful subsidies.

41. At the Workshop, various measurement concepts and definitions of subsidies were reviewed. Common elements in subsidy measurements are needed to increase transparency and improve comparison over time and between sectors. The Workshop recognized that, in order to determine whether subsidies are harmful for the environment (or their removal is beneficial), the economic characteristics of the sector in question and the regulatory/management framework in place to protect the environment/resource need to be taken into consideration.

42. Beyond empirical and analytical issues, the Workshop also considered proposals on how to identify the need for policy action to remove environmentally perverse subsidies. A checklist approach was presented in this regard. This checklist consists of a series of questions ranking the options for subsidy removal according to its possible environmental impacts, examining the way subsidies interact with the regulatory and resource management frameworks, testing whether the subsidy operates in a way that leads to an increase in production process with negative environmental impacts and assessing if this is avoidable. More specifically, the checklist includes the following questions: Is the policy filter for mitigation of perverse impacts effective? Are benign alternatives available? Does conditionality lead to higher production? Does the society value the environmental variables? Is financing of the subsidy problematic? The OECD will use this checklist concept in its preparation of the report on environmentally harmful subsidies. This major report on the cross-OECD project on perverse subsidies is due to be produced for the OECD Council of Ministers by Spring 2004. The checklist approach inspired the draft proposals for the application of ways and means to remove or mitigate perverse incentives, presented in section V of the present note.

43. Further work to be carried out by the OECD will focus on developing a transparent framework for classification of subsidies and subsidy indicators. The overall objective is to develop tools to help member countries to phase out/reform subsidies, to carry out case-studies to evaluate their environmental impacts and to review possible policy options.

^{2/} See OECD (2002b) for further information on this workshop, or <http://www1.oecd.org/agr/ehsw/>.

V. DRAFT PROPOSALS FOR THE APPLICATION OF WAYS AND MEANS TO REMOVE OR MITIGATE PERVERSE INCENTIVES

A. General considerations

44. For the purpose of these indicative guidelines, the term *policy* shall refer to the combination of a set of operational targets and a related set of legal, administrative and/or economic tools that are implemented by central, regional or local governments to attain a set of underlying objectives. The term *policy* shall also include plans and programmes. The term *practice* shall refer to any activity undertaken by individuals, companies and governments that is based on customary law, social norms or cultural traditions.

45. A *perverse incentive* emanates from policies or practices that encourage, either directly or indirectly, resource uses leading to the degradation of biological diversity. The removal of such policies or practices or the mitigation of their perverse effects is therefore warranted to further the conservation and sustainable use of biological diversity.

46. Three ideal phases can be identified in the process of removing such policies or practices or in mitigating their perverse effects on biological diversity:

- (a) The identification of policies or practices that generate perverse incentives;
- (b) The design and implementation of appropriate reform policies;
- (c) The monitoring, enforcement and evaluation of these reform policies.

47. The following sections provide indicative guidance, along these three phases, on the application of ways and means to remove policies or practices generating perverse incentives.

B. Identification of policies or practices that generate perverse incentives

1. Principles for identifying policies and practices that generate perverse incentives

48. *Analysis of underlying causes of biodiversity loss.* Not every single policy measure and, in particular, not every subsidy, leads to adverse effects for biodiversity. A thorough study of the proximate and underlying causes of biodiversity decline is therefore essential to properly and comprehensively identify any specific policies or practices and their interaction that are responsible for such decline.

49. *Interaction between policies and practices, and with other root causes.* The study should take fully into account that the loss of biodiversity may be caused by a complex interaction of several root factors. In consequence, the identification of perverse incentives resulting from specific policies and practices is often difficult, as their extent may crucially depend on the design and degree of implementation and enforcement of other policies, and on other socio-economic root causes. The removal of such policies and practices, although necessary, may not be sufficient to halt the loss of biodiversity if other macro-economic and sectoral policies and key socio-economic reasons remain unchanged.

50. *Identification of perverse practices.* Special analytical care is warranted if practices are held accountable for adverse impacts on biological diversity. Such practices are difficult to remove as they are rooted in cultural traditions or customary law. However, perverse incentives often result from an intricate interplay between customary law or cultural traditions and ill-adapted formal policies. In such cases, it may

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be too hasty to conclude that such practices need to be removed or changed, as the removal or improved adaptation of formal policies may offer better opportunities for an effective policy intervention.

51. *Scope of perverse incentives.* In some instances, policies and practices may generate perverse incentives only under specific local conditions and socio-economic circumstances, while they may prove to be neutral or even favourable for biological diversity under other conditions and circumstances. The study should therefore seek to identify and quantify, whenever feasible and appropriate, the *scope* and *extent* to which such policies and practices adversely affect biodiversity, as this information is important for prioritization and for choosing the appropriate policy response.

52. *Differentiate policy objectives, operational targets, and tools.* Policies that induce unsustainable behavior are often designed to attain legitimate objectives. Biodiversity decline usually comes as an un-anticipated side-effect of such policies. In particular, subsidies have often been introduced for good and sound purposes. However, the operational targets of the policy and the tools that are used to attain these targets are not always appropriate to meet the proclaimed objectives. Furthermore, the policy objectives, even while initially good and sound, may no longer be valid. Once a specific policy is identified in generating perverse incentives, further analytical work should therefore differentiate the underlying objectives, operational targets and the specific policy tools used, in order to identify the appropriate entry point for policy reform.

53. *Identification of all relevant costs and benefits.* The identification of all relevant costs and benefits for society from removing or mitigating policies or practices that generate perverse incentive is key for a well-informed policy choice. Hence, the assessment should not only include the direct, tangible costs and benefits, but also the intangible costs and benefits for society as a whole. The use of appropriate valuation tools should be considered, if feasible and appropriate. Furthermore, when assessing the merits of mitigation policies, the following cost components should also be taken into consideration: compliance costs, monitoring and enforcement costs, administrative costs and costs of change management.

54. *Identification of obstacles for policy reform.* The following elements should also be identified, as they are crucial for the design of implementable policy responses:

(a) Relevant obstacles for the removal of policies and practices generating perverse incentives, such as distributional issues, entrenched interests and entitlements, cultural traditions, international considerations;

(b) Relevant obstacles for the implementation of policies that mitigate such perverse incentives, such as international obligations, lack of funds or lack of administrative and/or institutional capacity.

2. *Ways and means to identify policies and practices that generate perverse incentives*

55. *Strategic environmental assessment.* Elements of strategic environmental assessment (SEA) procedures could be used, if appropriate, as a means to identify policies and practices that generate perverse incentives. In this regard, the Guidelines for Incorporating Biodiversity-related Issues into Environmental Impact Assessment Legislation and/or Processes and in Strategic Environmental Assessment (decision VI/7, annex) could be taken into consideration. While mainly used for *proposed* policies, SEA procedures provide useful guidance on how to design and conduct research to identify perverse incentives for biodiversity conservation and sustainable use that emanate from *existing* policies. In particular, the following steps emerge as possible means of assessing policies and practices with regard to potential perverse incentives:

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(a) Screening to determine which policies or practices require full or partial study with regard to possible perverse incentives;

(b) Scoping to identify which potential impacts on biological diversity are relevant to address, and to derive terms of reference for the actual study;

(c) The actual study to identify the perverse incentives for biodiversity conservation and sustainable use emanating from policies and practices, taking into account those impacts that result from the interaction of different policies and practices;

(d) The identification of possible action to remove or mitigate perverse incentives;

(e) The identification of possible reform obstacles;

(f) Pursuant to the design and implementation of reform policies, monitoring and evaluating the implementation of such reform policies, to ensure that unpredicted outcomes and failed mitigation measures are identified and addressed in a timely fashion.

56. *Transparency.* Perverse incentives are often difficult to detect, because the negative impacts on biodiversity are usually an indirect by-product of policies aiming at other goals, and because they may result from an intricate interaction between different policies or practices. Ensuring that the process of assessing policies and practices is conducted in a transparent manner will contribute to ensure that all relevant stakeholders are well-informed about the process and its outcomes. This is an important precondition for effective stakeholder involvement.

57. *Stakeholder involvement.* The involvement of all relevant stakeholders is an important element in identifying policies or practices that generate perverse incentives. The direct benefits of policies often go to well-organized societal actors, while the costs of these policies, e.g., the loss of ecosystem services due to biodiversity decline, are borne by the wider public or by diffuse and/or powerless groups. Such groups, however, may be able to forward additional important information and to point to possible shortcomings in the conclusions of the assessment. It should therefore be ensured, through appropriate mechanisms of leveling the playing field for all stakeholders, that such groups are fully involved in the identification phase. A balanced representation of stakeholders in the process of gathering and analysing information will contribute to properly and comprehensively identify both the benefits of individual policies and their possible shortcomings.

58. *Capacity-building.* In developing countries and countries with economies in transition, lack of institutional and administrative capacity to design and conduct appropriate assessment studies is often a serious impediment to identifying policies and practices that generate perverse incentives. Capacity-building, supported by relevant national, regional and international organizations, is therefore an important prerequisite in successfully removing or mitigating policies and practices that generate perverse incentives.

C. Design and implementation of appropriate reform policies

1. Guidelines for the choice of reform policies

59. *Possible political action.* The following is an indicative list of possible political action once specific policies and practices are identified as generating perverse incentives for the conservation and sustainable use of biological diversity:

(a) Removal of the policy or practice;

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(b) Removal of the policy or practice and its replacement with another policy or practice that attains the same objectives, but without or with fewer perverse impacts on biological diversity (re-instrumentation);

(c) Removal of the policy or practice and the additional introduction of policies that mitigate the loss of positive impacts on biological diversity;

(d) Removal of the policy or practice, combined with measures to overcome obstacles for policy reform;

(e) Introduction of policies that mitigate the perverse impacts on biodiversity of policies and programmes, possibly including policies that address relevant obstacles.

60. The following paragraphs provide an indicative list of conditions as to which political action could be chosen pursuant to the identification of policies or practices that generate perverse incentives. Some conditions make reference to costs and/or benefits. It is important to note that the policy choice should be based not only on the direct, tangible costs and benefits, but also on an assessment of the intangible costs and benefits for society as a whole. Furthermore, the assessment should also include components such as compliance costs, monitoring and enforcement costs, administrative costs and the costs of change management, if appropriate.

61. *Removal of policies.* The removal of policies could be considered when the following conditions are met:

(a) The analysis may reveal that a policy generating perverse incentives was introduced under circumstances that no longer prevail. As a consequence, the policy objectives may no longer be valid. For instance, the objective of providing support to companies whose sector undergoes a period of economic crisis would no longer be valid after the recovery or the successful restructuring of this sector;

(b) In other cases, the policy objective may still be valid. The analysis may show, however, that perverse incentives would be generated under any policy to attain this objective, that is, under any operational target and policy tool chosen. In such cases, the removal of the policy should be considered if the costs for society of effective mitigation policies would be higher than the net societal benefits foregone when the policy is removed.

62. *Removal of practices.* The removal of practices that generate perverse incentives should be considered if a careful analysis of their interplay with formal policies reveals that such practices are indeed the appropriate target for reform policies. Such practices are difficult and costly to remove, because of the very fact that they are rooted in cultural traditions or customary law. Their removal should be considered if the cost of relevant awareness-raising and education programmes is lower than the cost of effective mitigation policies.

63. *Re-instrumentation.* In other cases, the policy objective may still be valid and legitimate, and the perverse incentives emanating from the policy could be substantially lowered or avoided if other operational targets and tools would be used. In such instances, the removal of the policy and its replacement by a policy with fewer or no perverse impacts should be considered. Special care should be given to identify and implement those operational targets and related tools that generate the least or no adverse impact on biological diversity.

64. *Removal and mitigation.* In some cases, policies and practices may generate perverse incentives under specific local conditions and socio-economic circumstances, while they may even be favorable for biological diversity under other conditions and circumstances. In these cases, the removal of these policies and practices should still be envisaged if the overall effect on biological diversity is mainly negative. Additional, well targeted policies could be introduced to mitigate for any negative effect of such removal.

65. *Removal and overcoming of obstacles.* Substantial obstacles may sometimes hinder the removal of policies and practices. Additional policies to overcome such obstacles could be introduced if the associated costs are lower than the costs of effective mitigation. The choice of the appropriate policy would clearly depend on the relevant obstacle identified:

(a) *Distributional issues.* In some cases, the removal of policies or practices may have an adverse side-effect on the income of the poor. Additional well-targeted income policies could be implemented to compensate this adverse effect;

(b) *Entrenched interest and entitlements.* In most cases, some groups or individuals will lose pursuant to the removal of policies or practices. Such groups or individuals will put up political resistance against such reform even they do not belong to the poor and disadvantaged segments of society. Additional policy measures may be warranted to overcome their resistance. Such measures may include awareness-raising and education programmes as well as measures to increase transparency for the wider public with regard to the adverse impact of policies and practices, thereby shifting the burden of proof onto those groups opposing political reform. Compensatory policies to buy-out such stakeholders should only be considered as a last resort;

(c) *Cultural traditions.* The removal of practices generating perverse incentives is particularly difficult if they are deeply rooted in cultural beliefs, customs and traditions. Awareness-raising and education programmes can be appropriate means to overcome such obstacles;

(d) *International considerations.* Governments may refrain from removing some policies that generate perverse incentives if domestic industries fear to lose competitiveness pursuant to such removal. Such arguments become more important in a globalized world of increased international trade and capital flows. Furthermore, adverse effects on biodiversity may reach beyond national boundaries. In such cases, international cooperation to remove such policies in a coordinated, synchronized way may be warranted.

66. *Mitigation.* If the removal of policies or practices is not feasible or too costly, the mitigation of their perverse effects on biodiversity, through appropriate means, may be warranted. More specifically, the introduction of such mitigation policies should be considered if

(a) The cost for society of removing policies and practices, including foregone benefits, would be higher than the cost of effective mitigation policies;

(b) The cost for society of replacing the policy by a policy serving the same objective with less of no perverse impacts would be higher than the cost of effective mitigation policies;

(c) The cost for society of overcoming obstacles to the removal of policies and practices are higher than the cost of effective mitigation policies.

2. *Ways and means to remove or mitigate perverse incentives*

(a) *Ways and means of general importance*

67. *National guidelines.* Guidelines that are adopted by competent national authorities will be an important indirect means to effectively remove or mitigate perverse incentives. Guidelines that are well adapted to national needs and circumstances may serve to structure and inform the national process of identifying as well as removing or mitigating policies and practices that generate perverse incentives. If made publicly available, they may serve as a benchmark against which the general public can gauge the effectiveness of the reform process.

68. *Awareness-raising and education programmes.* The very fact that practices that generate perverse incentives are rooted in customary law, social norms or cultural traditions implies that considerable obstacles exist to their removal, obstacles that are beyond the immediate reach of formal policy-making. The more indirect approach of awareness-raising and education may therefore be a particularly important means in removing such practices. However, awareness-raising and education programmes will also be an important element in successfully removing policies or introducing mitigation policies, to overcome the resistance of powerful groups opposing their removal.

69. *Transparency.* Creating transparency with regard to the intermediate and final outcomes of the assessment study, that is, with regard to the objectives, costs, and possible negative impacts of policies and practices will contribute to clarifying the implicit choices and priorities and will expose irresponsible policies and practices to the wider public. Transparency will therefore be an important element of a successful programme to raise awareness of these issues. As a consequence, it will also increase the political costs of irresponsible policies and generate political rewards for appropriate action.

70. *Stakeholder involvement.* The removal of policies or practices that generate perverse incentives is often opposed by influential groups or individuals that profit from these policies or practices. Even when it is not the proclaimed objective of a policy to support such groups or individuals, its removal may be at risk because of their influence. In contrast, the costs of these policies, e.g., the loss of ecosystem services due to biodiversity decline, are borne by the wider public or by diffuse and/or powerless groups. The empowerment and involvement of such groups during the design and implementation phase, through appropriate mechanisms of leveling the playing field for all stakeholders, is therefore another important means to ensure that appropriate policy responses are implemented.

71. *Capacity-building.* In developing countries and countries with economies in transition, lack of institutional and administrative capacity is often a serious impediment to removing or mitigating perverse incentives. While some policies that generate perverse incentives can, in principle, be easily removed, the removal of practices or the implementation of successful mitigation policies may require substantial institutional and administrative capacity. Capacity-building, supported by relevant national, regional and international organizations, is therefore a key precondition in successfully removing or mitigating policies and practices that generate perverse incentives for the conservation and sustainable use of biological diversity. Funding should be ensured for capacity-building.

72. *International cooperation.* International cooperation is needed when the negative effects on biodiversity of national or international policies stretch beyond national boundaries. Furthermore, fears of losing international competitiveness may also impede unilateral action in removing policies or practices with negative impacts on biodiversity. In such cases, international cooperation may be warranted to remove such policies in a coordinated, synchronized way.

(b) *Ways and means for removal*

73. *Use synergies from re-instrumentation.* In the case of legitimate and valid policy objectives, re-instrumentation, that is, the application of operational targets and related tools that attain the same objective with less or no adverse impacts on biological diversity, may often be a particularly effective way of removing policies that generate perverse incentives for the conservation and sustainable use of biodiversity.

74. *Compensatory policies.* The use of compensatory policies could be considered in two cases:

(a) If the removal of policies or practices will have an adverse effect on distributional objectives, additional, well targeted income policies could be implemented to compensate poor or disadvantaged groups for their income loss pursuant to the removal. Necessary funds could be collected from those members of society that profit most from biodiversity conservation;

(b) Compensatory policies could also be considered to buy-out stakeholders that unfold political resistance against the removal of policies. If such stakeholders do not belong to the poor and disadvantaged segments of society, such compensatory policies should only be used as a last resort.

(c) *Ways and means for mitigation*

75. *Regulation.* In some instances, the introduction of additional regulation may be an effective means to mitigate the perverse impacts on biodiversity, provided that a number of preconditions are met. Such preconditions include:

(a) The existence of well defined, comprehensive and measurable performance indicators;

(b) Manageable monitoring and enforcement costs;

(c) Regulations that can be designed in a comprehensive way so as to avoid adaptive behaviour of target groups, leading to secondary adverse effects on biological diversity.

76. *Overcoming obstacles to mitigation through regulation.* It should be borne in mind that the very obstacles that prevent the removal of policies may also impede the effective mitigation of their perverse effects. For instance, the incentive of target groups not to comply with the regulation may be especially high if the policy generating the perverse incentive remains in place unchanged. Therefore, awareness-raising, transparency and stakeholder involvement are important elements of effective regulatory policies to mitigate perverse incentives.

77. *Positive incentive measures.* The introduction of additional positive incentive measures is another possible means to mitigate the perverse impacts of some policies and practices. In addition to the preconditions enumerated in paragraph 75, a number of other *caveats* should be taken into consideration when using positive incentive measures.

(a) If policies having perverse impacts on biodiversity remain unchanged, the cost of using positive incentives for mitigating these impacts will be especially high, which, in turn, will impair the efficiency of using this instrument. Prior to using positive incentives, such policies should therefore be removed to the extent possible, through the means enumerated above;

(b) As explained in paragraph 64, policies and practices that generate perverse incentives in most circumstances may have a favorable impact on biological diversity in some circumstances. In such

cases, the use of positive incentive measures could be considered to mitigate the negative effect of removing these policies and practices;

(c) The careful design of the incentive measure, including the proper specification of eligibility conditions, is especially important in the case of positive incentive measures to avoid the generation of secondary adverse effects on biological diversity;

(d) In some cases, the strategic behaviour of rational recipients will impede the long-term effectiveness of positive incentive measures. In such cases, their use should be restricted to a transitional period of time through appropriate legal means such as sunset legislation;

(e) Lack of funds and/or unwarranted distributional consequences may limit the use of positive incentive measures.

78. *Negative incentive measures.* The use of negative incentive measures could also be considered to mitigate the perverse impacts of some policies and practices. In addition to the preconditions enumerated in paragraph 75, political resistance will often be especially severe if negative incentive measures are to be introduced. Therefore, awareness-raising, transparency and stakeholder involvement are key elements of a successful introduction of negative incentive measures to mitigate perverse incentives.

79. *Guidance on the use of incentive measures.* Further guidance with regard to the design and implementation of incentive measures is given in 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 (decision VI/15, annex I).

D. Monitoring, enforcement and evaluation of reform policies

80. *Capacity-building.* The ultimate success of the chosen reform policy is contingent upon successful monitoring, enforcement and evaluation of its impact, including unanticipated side-effects, failed mitigation measures and other shortcomings, and therefore depends on sufficient institutional and administrative capacity.

81. *Indicators and information systems.* The development and application of sound impact indicators is a crucial precondition to the useful evaluation of the reform policies. It should also be considered to introduce appropriate information systems, in order to facilitate the process of monitoring and enforcing reform policies.

82. *Stakeholder involvement.* Even after the design and implementation of reform policies, relevant stakeholders should be involved to ensure their feedback on unanticipated side-effects, failed mitigation measures and other shortcomings, and to ensure that such shortcomings are addressed in a timely fashion.

83. *Transparency.* Further dissemination of information can play a key role in building and maintaining public support for the policy, and can thereby contribute to lower monitoring and enforcement costs for public authorities.

VI. RECOMMENDATIONS

84. The Workshop is invited to use the draft proposals contained in section V above as a basis for the elaboration of proposals for the application of ways and means to remove or mitigate perverse incentives.

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85. In submitting these proposals to the Subsidiary Body for Scientific, Technical and Technological Advice for consideration at its ninth meeting, the Workshop may wish to underline that these proposals provide important further guidance on the application of principles 2 and 3 of the Principles and Practical Implementation Guidelines for the Sustainable Use of Biological Diversity, that are also to be considered by the Subsidiary Body for Scientific, Technical and Technological Advice at its ninth meeting. Principle 2 underlines the importance of supportive incentives, policies, laws, and institutions at all levels of governance, and principle 3 calls for the identification and removal or adjustment of national and international policies, laws and regulations that distort markets, promote habitat alteration or destruction, and unsustainable use.

86. The Workshop may also wish to recommend, in connection with the further implementation of the programme of work on incentive measures under the Convention, that further work should be undertaken on the use of valuation tools for the conservation and sustainable use of biodiversity, including genetic resources, as a key component in assessing the extent and scope of the negative impacts of specific policies and practices on the conservation and sustainable use of biological diversity.

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