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SUBREGIONAL WORKSHOP ON VALUATION AND INCENTIVE MEASURES FOR EASTERN EUROPE AND CENTRAL ASIA
Tbilisi, 29–31 May 2012

REPORT OF THE SUBREGIONAL WORKSHOP ON VALUATION AND INCENTIVE MEASURES FOR EASTERN EUROPE AND CENTRAL ASIA

I. INTRODUCTION

1. Further to requests by the Conference of the Parties at its tenth meeting, this workshop was one of a series of regional and sub-regional capacity building workshops which seeks to support countries in the region to make use of the approaches, methodologies and findings suggested by the global studies on the Economics of Ecosystems and Biodiversity (TEEB). The workshop sought to assist countries in the sub-region in integrating the values of biodiversity into relevant national and local policies, programmes and planning processes, thereby advancing the mainstreaming goal of the Strategic Plan, and in exchanging practical experiences on incentive measures (decisions X/2 and X/44). It was organized by the Secretariat of the Convention on Biological Diversity (SCBD), the United Nations Environment Programme (UNEP), through its Regional Office for Europe and its coordinating office on The Economics of Ecosystems and Biodiversity (TEEB), and the International Union for Conservation of Nature (IUCN), with financial support provided by the Governments of Japan and Sweden. The workshop was hosted by the Government of Georgia.

2. The specific objectives of the workshop were:

- To provide decision-makers in the region with economic arguments for the conservation and sustainable use of biodiversity, as well as with information on state-of-the-art tools that enhance the quality of decision-making processes regarding conservation and sustainable use, including on financial tools;
- To provide a platform for these decision-makers to exchange views and assess the applicability, needs for adaptation, and limitations of these arguments and tools in their countries, with a view to promote common understanding;
- To promote synergies and enhanced cooperation among relevant policy areas and sectors by mainstreaming biodiversity and ecosystem services;
- To support the revision and review or update of National Biodiversity Strategy and Action Plans (NBSAPs) in light of the new Strategic Plan for Biodiversity 2011-2020 (decision X/2, paragraph 3 (c)), in particular with regard to Aichi Targets 2 and 3, as well as other relevant Targets.

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3. The workshop was attended by government-nominated officials from Ministries of the Environment as well as from the finance, economic or development planning Ministries. National, regional and international organizations were also represented. The list of participants for the workshop can be found in Annex I to the present report. The workshop was conducted in English and Russian.

II. OPENING AND INTRODUCTION

4. The meeting was opened by the representative of the Executive Secretary, Mr. Markus Lehmann, at 9:00 a.m. on Tuesday, 29 May 2012.

5. Mr. Lehmann welcomed the participants and explained that this workshop is one in a series of workshops requested by the Conference of the Parties to support countries in making use of the findings of the TEEB studies with a view to better address the underlying reasons for biodiversity loss by mainstreaming biodiversity across economic sectors and society. He said that he would provide a full introduction into the objectives of the workshop after the welcome remarks, and subsequently gave the floor to Mr. George Khachidze, the Minister of Environment Protection of Georgia.

6. Mr. George Khachidze welcomed participants on behalf of the Government of Georgia and thanked the organizers of the workshop as well as donors for their generous financial support. He explained that the workshop would provide an opportunity for countries in the region to share experience on the implementation of the CBD regarding the use of valuation and incentive measures. He recalled that, further to an initiative of President Mikheil Saakashvili, Georgia had already committed to become a TEEB pilot country and, as a result, the Ministry of Environment Protection had recently entered into a partnership with UNEP and the WWF Caucasus Programme to develop a Scoping Study. He recalled the workshop to publicly launch the TEEB project and encourage the contribution of stakeholders, which had successfully taken place the day before. It is planned to have the first results of the study available in the last quarter of 2012. They will feed into the ongoing revision of Georgia's National Biodiversity Strategy and Action Plan in accordance with the Strategic Plan for Biodiversity 2011-2020 and its Aichi targets, with the revised NBSAP to include activities on the economics of ecosystems and biodiversity. In concluding, he expressed his hope that this workshop would provide another important step in this critical process.

7. Ms. Ivonne Higuero of UNEP recalled that UNEP acts as the secretariat of the Pan-European Biological and Landscape Strategy (PEBLDS) and, in this capacity, attaches great importance to the workshop in assisting countries in the region to implement the CBD and, in particular, the Strategic Plan for Biodiversity 2011-2020. In this context, and also within the framework of the new Pan-European 2020 Strategy for Biodiversity, she highlighted that UNEP will be working with governments on a number of biodiversity priorities for the pan-European region, including on the implementation of TEEB. She indicated that the workshop could inspire more countries in the region to express an interest in engaging in projects on the economics of ecosystems and biodiversity, with a view to ensure that the values of biodiversity and ecosystem services are better reflected in sectorial decision-making and national planning processes.

8. Ms. Nathalie Olsen of IUCN emphasized that nature can provide solutions to many of today's pressing problems, and stressed the importance of promoting nature-friendly and nature-based solutions so as to leave future generations with a world as diverse as the one we have today. In this regard, she underscored the ongoing commitment of IUCN and its regional office to assist countries in implementing effective policies, including in further promoting the wider application of the analytical and policy tools proposed in the TEEB studies.

9. In introducing the background and objectives of the workshop, Mr. Lehmann (SCBD) recalled the adoption of the Strategic Plan for Biodiversity 2011-2020 by the tenth meeting of the Conference of the Parties to the Convention, in October 2010, and noted that the new Strategic Plan puts particular emphasis on addressing the underlying reasons for biodiversity loss by mainstreaming biodiversity across economic sectors and society. He noted the importance of economic approaches and methodologies as mainstreaming tools and the recent contribution of the global initiative on the Economics of Ecosystems and Biodiversity (TEEB) in raising awareness on the usefulness of such economic approaches. He recalled the pertinent requests of the Conference of the Parties to support countries in making use of the findings of these studies, including in their revisions of national biodiversity strategy and action plans with a view to align these, as appropriate, to the new Strategic Plan for Biodiversity. In this regard, he indicated that the workshop would serve (i) to present a general overview on the results and recommendations of TEEB project at the global level, (ii) to discuss how to implement TEEB in the context of the needs and circumstances of countries in the region, and (iii) to share experiences and lessons learned among participants on the use of the tools provided by environmental economics more generally, including valuation and incentive measures.

III. VALUATION: APPROACHES AND METHODOLOGIES

A. The valuation approach of the Economics of Ecosystems and Biodiversity (TEEB) initiative

10. Mr. Nicolas Bertrand of the UNEP TEEB Office presented an overview of the TEEB initiative. He detailed the process, timeline and outputs of the project, including its main reports which were published over 2010-2012. He indicated that the TEEB project had generated significant interest around the world and that the project was now moving into a new phase of implementation, to be further detailed on the last day of the workshop.

11. He recalled that the TEEB mandate, inspired by the Millennium Ecosystem Assessment (2005) and its emphasis on biodiversity and ecosystem services for human well-being as well as the Stern Review on the Economics of Climate Change (2006), originated at the G8+5 Environment Ministers meeting in Potsdam (2007) and eventually led to wide engagement, with several hundred contributors from across the globe. He recalled that public and private decision-makers are, typically, unable to recognize the long-term value of the services provided by nature and that, as a result, many decisions are taken based on incomplete information, with often a detrimental impact on biodiversity and ecosystems. He indicated that TEEB seeks to address this deficit by proposing a broad approach to recognize, demonstrate and capture these values. At the same time, he stressed that TEEB recognizes values beyond economic (or monetary) values, and that valuation results are meant to inform, but not replace decision making. He stressed that, although TEEB was concerned with the potential and challenges of valuation, it was equally concerned with more general biodiversity policy issues, for instance regarding subsidy reform or the establishment of protected areas.

12. He summarized the main conclusions of the TEEB studies in this regard and highlighted the importance of the Aichi targets of the Strategic Plan for Biodiversity 2011-2020 as a global policy framework to address these challenges in a systematic manner. He also highlighted how a number of findings and recommendations of the TEEB reports were beginning to be implemented around the world.

13. In the subsequent discussion, participants recognized the potential of the tools proposed by the TEEB studies to provide a critical contribution towards the more effective implementation of the Convention and the Strategic Plan for Biodiversity, and pointed to the need for additional capacity building in developing countries on the economics of ecosystems and biodiversity.

B. Valuation methodologies: valuation tools; experiences and approaches taken in the sub-region

14. Ms. Nathalie Olsen from IUCN presented an overview of different valuation methodologies and their applications. She explained that ecosystem valuation has now been practised for several decades and that, as a result, there have been significant developments in both the methodologies as well as the experiences of applying such methodologies around the world, including in developing countries. She noted that many best practice guides have already been developed.

15. Economic valuation is only concerned with a specific subset of the possible values people assign to biodiversity. She recalled that, due to the characteristics of many ecosystem services as public goods, they are not assigned any value in transactions, providing little incentive for the conservation of relevant ecosystems. In the cases where ecosystem services are traded and valued in markets, a discrepancy between private and social costs of providing the good may call for prices to be adjusted to take into account the relevant external costs. She explained that economic valuation seeks to make explicit and quantify the link between ecosystems, the services they provide, and their contribution to human well-being, following the typology of the Millennium Ecosystem Assessment. She stressed the need to understand what is being measured and, in this context, emphasized: (i) that an analysis of ecosystem services was concerned with the flows over time of services that come from the stock of natural capital; (ii) the importance of avoiding double counting; (iii) the need to consider the ethical issues surrounding the choice of discount rates; (iv) and the importance of understanding how valuation results may be used.

16. She reviewed four main uses of economic valuation, namely: (i) to determine the value of the total flow of benefits from ecosystems; (ii) to determine the net benefits of interventions that alter ecosystem conditions; (iii) identify the distribution of costs of benefits from ecosystems; (iv) to identify potential financing sources for conservation. She presented the Total Economic Value (TEV) framework which helps identify the full range of types of economic values that exist for ecosystems, including use value (direct use value, indirect use value, option value) and non-use value (existence value). In this context, she further examined the specific methodologies (direct valuation approaches, revealed preference methods, and stated preference methods) that may be appropriate to use in each case, their strengths and limitations. She also provided and illustrative case examples from around the world.

17. In the subsequent discussions, participants raised a number of technical questions pertaining in particular to the choice of specific methodologies. It was clarified that, while using several methodologies may sometimes be needed in order to cover all relevant types of value, and may also help validate results, it is sometimes more appropriate, given resource constraints, to use a single methodology according to current best practice. This choice will ultimately depend on the issue at hand, including the diversity of the relevant ecosystem services, as well as the reason for conducting the valuation exercise and the resources available. The relationship between TEEB and sustainable development as well as the link between physical planning (including Strategic Environmental Impact Assessments) and economic valuation were also discussed.

18. Mr. Malkhaz Adeishvili, an independent consultant, presented an overview of recent valuation work in Georgia. In particular, he pointed to the findings of a World Bank contingent valuation study, undertaken in 2000, on the (WTP) of city dwellers in Georgia for biodiversity conservation. This study addressed also the willingness to pay of expatriates living in Georgia to access national parks in Georgia. In this context, he also reported on a cost-benefit analysis undertaken by the World Bank in 2001 in the context of the establishment of Kolkheti National Park. This study recommended the adoption of an alternative management approach with minimized the negative impacts on adjacent local communities resulting from use restrictions. He further referred to valuation projects undertaken as part of the Georgian Forest Development Project (World Bank, 2003); an economic valuation of the Tusheti National Park and of the Network of Georgian Protected Areas (UNDP/GEF, 2010); as well as a

valuation of the contribution of Borjomi-Kharagauli and Mtirala National Parks ecosystem services to economic growth and human well-being (WWF, 2011).

19. He mapped out the plans towards the preparation of a TEEB scoping study for Georgia and, in this context, pointed to a number of pertinent constraints in furthering the application of valuation in Georgia, namely: (i) a lack of knowledge and expertise, considering that the aforementioned studies were prepared by international experts, though with involvement of national experts; (ii) the realization that economic arguments can only be one aspect of a decision to establish protected areas and that other aspects may ultimately prevail, including political realities. In this context, he noted the potential role of protected areas to sequester carbon and hence act as a source of additional international funding, a feature that may garner further interest from policy makers in the future.

20. He further presented an introduction into the sectoral scenario analysis (SSA) methodology which formed the conceptual basis for two recent valuation studies undertaken in the country. He explained that the methodology aims to identify changes in sector productivities under two different scenarios (business as usual (BAU) or sustainable ecosystem management (SEM), thereby providing evidence of the economic contribution of ecosystems. He noted that the use of SSA can provide evidence of the contribution of ecosystems to the economy; inform policy makers and businesses of biodiversity and ecosystem risks and opportunities; assist government and stakeholders in integrating ecosystem values into policy, planning and investment; assess economic returns to financing sustainable ecosystems management; and show economic and development rationale to sustainable ecosystem management.

21. He presented a study undertaken on three selected protected areas in Georgia (Tusheti protected area system, and Borjomi-Kharagauli and Mtirala National Parks) which applied the SSA methodology and sought to illustrate the contribution of ecosystem services to development and human well-being. Referring to main information sources as including protected area management plans; existing socio-economic studies; local expertise; and existing statistical data, complemented by field visits, he noted the lack of scientific information on ecosystems services and their contribution to economic sectors, including the lack of time series data. Nevertheless, the study highlighted the significance of their contribution to development, poverty reduction; in particular through nature-related tourism, with local communities being activity engaged and benefitting from tourism activities; agriculture; freshwater supply; mineral water industry; maintenance of hydropower generation; and fisheries.

22. Participants subsequently sought, and received, clarifications on: (i) the choice of the sites covered by the studies above; (iii) robustness and the significance of the numbers obtained in the studies, as compared to macro-economic indicators such as GDP. Participants also highlighted the challenges associated with the financing of protected areas, and noted the importance of taking the circumstances of indigenous and local communities duly into consideration, including concerns with regard to the applicability of valuation methodologies.

23. Following the presentations, participants were invited to work on the following questions by table groups:

- Have valuation efforts/assessments already been undertaken in your countries? In what context and on which ecosystem services?

- What are the most important ecosystem services in your countries where you believe valuation would be useful?

- What are the priorities applying (economic) valuation in your country: Awareness-raising? Application within project appraisal (CBA/CEA)? Policy analysis? Other? In which areas do valuation approaches need strengthening, and what are the gaps/constraints/challenges?

24. The following examples were reported in plenary:

- The use of valuation was highlighted in the context of the hunting law in Tajikistan, where revenues from fees for hunting permit are earmarked for the conservation of wild ram. It was estimated that the loss of a single specimen would cost 25,000 to 35,000 US Dollars. Based on these estimates, the authorities were able to calibrate hunting fees accordingly. The revenue is used to restore highland pastures.
- The Moldova forestry agency is currently implementing a soil conservation project through reforestation. One hundred years ago 30 percent of the country was occupied by forests but now it is down to 9 percent. The objective is to increase coverage to 15 percent by 2020. The monitoring will be carried out based on carbon sequestration, soil preservation and biodiversity conservation indicators. The total investment of 28 million US Dollars will be spent over five years and the income is from sales of forest products and carbon quotas.
- In Ukraine and Armenia, an analysis of existing legislative frameworks and policies would help to determine where Payments for Ecosystem Services schemes could be applied. The following for applying valuation were suggested as priorities: (i) for raising public awareness, including via information campaigns; (ii) to explain the role of ecosystems in livelihoods and the benefits derived from ecosystem services; (iii) application in cost-benefit analysis; (iv) quota setting and use of economic instruments; as well as (v) policy analysis. As an example of the role of ecosystem services in the Carpathians, deforestation and soil loss were contributing to landslides and mudflows.
- In the case of Albania and Georgia, it was suggested that economic valuation could be particularly useful: (i) in the context of disaster mitigation (comparing the conservation of relevant ecosystems with possible losses which may result from a mud slide or other disasters); (ii) agriculture (to assess the economic benefits from the conservation of green cover for grazing, to understand the economic value of pollinators, soil fertility); (iii) the provision of drinking water, water for irrigation and hydropower; (iv) the establishment of new protected areas and the management plans of existing protected areas; (v) the potential for carbon sequestration. Economic valuation could be a particularly useful tool at different spatial levels, including for local governments, and that this could be integrated into regional development plans. The importance of mainstreaming valuation in policy planning at the national level, including in sectors such as forestry, agriculture, energy, tourism, was also stressed. In addition, if valuation is done at the local level it can become part of regional development plans and result in policies favourable to the conservation of biodiversity and ecosystem services.

C. Scenario development and appraising Nature's benefits: the TEEB "stepwise approach"

25. Mr. Markus Lehmann (SCBD) presented the "stepwise approach" to appraising nature's benefits, as presented in *A Quick Guide to TEEB for Local and Regional Policy Makers* (2010). He explained that this approach is needs-driven, implying that appraisal methods would be chosen and adapted in accordance to the needs of decision makers. It is critical to agree on these needs at the beginning of the process. The individual steps are thus:

- Step 1: Agreement amongst all relevant stakeholders on the decision-making problem at hand;
- Step 2: Define which ecosystem services are most relevant in this context (e.g. if the agreed problem is deforestation, what are the key forest ecosystem services problems, and which ones are under threat?);

- Step 3: Define information needs and select appropriate methods. He cautioned that sophisticated methodologies are not necessarily the best ones in a specific context. Expectations need to be communicated clearly to valuation experts, and decision makers need to be clear what they want to know;
- Step 4: Undertake the actual assessment of ecosystem services, possibly, but not necessarily, by monetary valuation;
- Step 5: Look at possible policy responses and the policy instruments at hand;
- Step 6: Assess distributional impacts and implications for poverty alleviation.

26. He explained the application of the stepwise approach by providing specific case examples on export promotion and wetland management. In concluding, he recommended to: (i) gear the ecosystem service assessment to a particular issue/problem; (ii) connect it to potential policy responses and do not just focus on the data; (iii) pay attention to affected rights and to social impacts of ecosystem service changes, including in designing policy responses. As valuation exercises can be constructed in various ways, policymakers need to be involved in guiding the process, understanding what is being measured and valued, and communicate assumptions and what the results can tell. Keeping values disaggregated will frequently be more useful for stakeholders, whose full and early involvement is also critical.

27. After the presentations, participants were invited to work in table groups and apply the approach presented to a specific decision making problem of their own choice. Specifically, each group was invited to develop answers to the following questions:

- Discuss and agree on decision making problem and possible stylized scenarios;
- Identify the most important ecosystem services associated with the case;
- Develop the scenarios in semi-quantitative terms; and
- If time allows, list the most meaningful indicators.

28. A summary of the cases and associated scenarios developed by the table groups is provided in Annex II.

29. In closing the segment of the workshop on valuation, a questionnaire was distributed to all participants to help with the mapping of ongoing and interest in the development of TEEB related plans and projects. Results of the survey are summarized in annex III.

III. REDIRECTING INCENTIVES

A. Addressing incentives harmful for biodiversity: global perspectives and experiences in the region

30. Mr. Markus Lehmann (CBD Secretariat) introduced the item by referring to Aichi target 3 of the Strategic Plan for Biodiversity 2011-2020, which commits Parties to eliminate, phase out or reform incentives which are harmful for biodiversity by 2020 and to promote positive incentive measures for the conservation and sustainable use of biodiversity, consistent and in harmony with the Convention and other international obligations, and in line with socio-economic conditions of countries. He explained that, under the Convention, harmful incentives are conceptualized as emanating from policies or practices that induce unsustainable behaviour that is harmful to biodiversity, often as unanticipated (and unintended) side effects of policies designed to attain other objectives. They can even result from some environmental policies.

31. There are many examples of harmful incentives. As regard harmful subsidies, they generally fall into two different categories types: (i) production subsidies that reduce input costs or increase revenue;

and (ii) consumer subsidies leading to the below-cost pricing for the use of natural resources. Other harmful incentives can also result from some laws or regulations governing resource use, such as beneficial-use laws. He subsequently provided a number of case examples.

32. He noted that careful policy assessments are typically frequently need to identify harmful incentives as a precondition for their elimination, phase out, or reform. In undertaking pertinent assessments, a multi-criteria, holistic approach would be useful which would also include the cost-effectiveness and the social effects of subsidies (such as distributional impacts).

33. He summarized key lessons learned from the analytical work already being undertaken on the removal or reform of harmful incentives including subsidies, namely: (i) the need for strong leadership and a broad support coalition involving key stakeholders; (ii) the use of a 'whole-government' approach as a critical success factor; (iii) the identification of relevant interests and how to address their preccupations; (iii) the design and implementation of suitable adaptation policies; (iv) Funding for policies/compensatory packages that offset negative social impacts; (v) improving transparency and enabling informed public debate; (vi) the smart use of political windows of opportunity.

34. In concluding, he underlined that the choice of policy packages for elimination, phase out and/or reform is much context-dependent, and this is therefore an important area of future work. For new policies, the use of strategic impact assessment is recommended. UNEP has developed a set of minimum criteria for new subsidies which would also be useful to consider.

35. In the subsequent discussion, participants took particular interest in the social issues associated with subsidy reforms, such as the potential adverse impacts on the poor that are associated with the removal or reform of fuel subsidies (e.g., through reliance on public transportation, home heating).

36. Mrs. Ekaterine Otarashvili, coordinator in Georgia of the Forest Law Enforcement and Governance Programme of the European Neighbourhood Policy Initiative (ENPI-FLEG), presented a case on how to address harmful incentives in Georgia. Recalling the very important ecological, social and economic role of forests in the Caucasus region, she reviewed the findings of an assessment of the economic and social impacts of unsustainable forest practices and illegal logging. In four forest-dependant pilot areas, a survey was conducted allowing for the identification of the factors causing illegal logging by local populations. The survey also identified a number of small scale projects which, by aiming to develop economic alternatives, may be viewed as positive incentives. Some of these projects were subsequently implemented, such as bee-keeping projects in the villages of Sakire and Tadzrisi.

37. Participants (i) further discussed the sustainability features of some of the recommended projects (such as charcoal production); (ii) referred to examples of positive incentives in other countries; and (iii) highlighted the potential of, and associated challenges with, community based forest management in the context of the region.

B. Promoting positive incentive measures: global perspectives and experiences in the region

38. Ms. Nathalie Olsen (IUCN) provided an overview on positive incentive measures, focusing on direct and indirect measures. Direct approaches are monetary incentives to reward producers for biodiversity friendly outcomes or to avoid biodiversity harmful outcomes. They include Payments for Ecosystem Services (PES), charges, taxes, and user fees. Developing direct incentives involve creating markets that did not previously exist. She cited the example of market creation in the case of climate change; reviewed the potential, challenges and current developments in the creation of markets for biodiversity offsets;

reviewed trends in PES schemes around the world, including the Danube PES project implemented by WWF with funding from UNEP-GEF and the European Commission. In the context of PES, she stressed, in particular, that these do not necessarily rely on cash payments but can use in-kind contributions.

39. Indirect approaches include non-monetary measures such as support for certification and labelling of products produced in a biodiversity friendly manner, the market promotion of biodiversity based goods and services such as eco-tourism, green public procurement and the removal of trade barriers. It is an attempt to correct prices in markets that exist but where prices do not reflect the full social costs of production. They rely on consumers being willing to pay more for goods if the producer can document how these goods are produced and that they have positive benefits on biodiversity and ecosystem services. In this context, she highlighted the increasing reliance on certification in timber, sustainable agriculture, sustainable fisheries, tourism; and reviewed the potential for community based resource management.

40. Participants discussed funding for payment schemes, noting (i) that funding through dedicated funds may have advantages over funding through government budgets; (ii) relevance of the polluter pays principle for funding positive incentive measures. They also: (i) discussed incentives within and funding of certification schemes; (ii) sought clarification on participation in PES schemes (whether they are always voluntary); (iii) highlighted the positive role of ecosystems in generating local income, pointing to successful cases in countries of the region; (iii) underlined the importance of stakeholder involvement for the success of positive incentive measures; (iv) pros and cons of cash payments versus in-kind compensation.

41. Ms. Mariam Kimerizde from Georgia presented, as an additional example of positive incentives, eco-compensation measures undertaken in Georgia in the context of the construction of a major gas pipeline. Construction of the pipeline led to considerable impacts on forests and associated biodiversity, and was made contingent on payment of eco-compensation to be calculated in accordance with best practice. She explained the habitat-hector methodology applied for calculating the scope of compensation, under the general requirement of no-net loss. Habitat scores are assigned for each habitat type (ecological vegetation classes) based on a benchmark in order to calculate habitat-hectares. Maturity of forests is a major determinant of habitat scores as the ecological value of forests increases over time. She highlighted the growing attention paid by international financial institutions to biodiversity offsets.

IV. ECONOMIC APPROACHES AS A TOOL FOR BIODIVERSITY MAINSTREAMING: THE WAY AHEAD

42. Mr. Markus Lehmann (SCBD) presented how the TEEB work, as well as work on valuation and incentive measures more generally, is integrated in the Strategic Plan for Biodiversity 2011-2020, making particular reference to Achi targets two and three, and mapped out a number of options of how incorporate strengthened work on these issues in revised national biodiversity strategy and action plans (NBSAPs). He recalled that COP-10 urged Parties to review and, as appropriate, revise and update, NBSAPs to reflect new Strategic Plan and its Aichi targets. He also recalled that, in preparation for COP-10, an analysis had been undertaken by the UN University which highlighted that many NBSAPs did not adequately address the underlying causes of biodiversity loss, and that the new Strategic Plan put accordingly more emphasis on mainstreaming biodiversity across economic sectors and society. Recognizing that the TEEB approach is an important tool for mainstreaming biodiversity and integrating values into relevant strategies and national policy processes, he presented, in concluding, a number of options on how to integrate pertinent activities into revised NBSAPs.

Further to this presentation, participants discussed, in table groups, options on how to 'translate' Aichi targets two and three into national policies, by focusing on the following questions:

1. Which plans, policies or strategies are in particular need to incorporate values of biodiversity and ecosystem services? Are these upcoming for review soon? What could be important next steps in order to achieve this?

2. Incentives, including subsidies, with harmful effects on biodiversity: what could be priority candidates for elimination, phase out or reform?

3. Which areas or sectors have high potential, or should have high priority, for introducing or strengthening positive incentive measures for conservation and sustainable use?

43. A synopsis of the work of the table groups is provided in Annex IV.

44. Mr. Nicolas Bertrand (UNEP) presented the current programme and associated activities to support countries in making use of the results of the global studies on the Economics of Ecosystems and Biodiversity ("TEEB Phase III"). He explained that TEEB Phase III has three operative components: (i) development of additional guidance and provision of training; (ii) promotion of outreach and communications; (iii) facilitating TEEB implementation at the national level. He also mentioned that, in addition, several sectoral studies were underway, including on water and wetlands as well as oceans.

45. With regard to national TEEB national studies, he noted that some countries have already started this process, and that interest has been shown by others. He also cited several initiatives underway in the business community, including by individual companies, in specific sectors, or by cross-sectoral initiatives. The UNEP TEEB Office can provide guidance via the TEEB network of experts in order to build national, regional and local government capacity and to support the production of national-level economic assessments. Support could be provided, subject to funding, to: (i) facilitate design and implementation of TEEB projects at the national and local levels; (ii) connect projects to each other and/or to funding options; (iii) support new initiatives in the business world; (iv) assist in the translation of the reports into policy.

V. EVALUATION AND CLOSURE OF THE WORKSHOP

46. Participants were invited to complete a workshop evaluation questionnaire. A statistical synopsis of the results of the survey is provided in Annex IV.

47. After the usual exchange of courtesies, the workshop was officially closed at 5 P. M. on Thursday, 31 May, 2012.

ANNEX I

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ANNEX II

Summary of group work on the TEEB stepwise approach

Group 1: Ski tourism development in protected areas

The group examined the proposed redevelopment of a ski resort situated in a national park. In addition to ski tourism, forest-related provisioning and regulating services and ecotourism were identified as being relevant. The business-as-usual scenario would assume ongoing underinvestment into the resort. Other scenarios identified are: (i) the intensive approach, including the establisment of new slopes and the construction of new chairlifts and accommodation, and (ii) moderate modernisation, including the upgrading of existing chairlifts, no new slope, the improved usage of local guesthouses and the additional promotion of ecotourism. Under the first scenario, ski tourism would remain unchanged or possibly decline, while other services from forests would increase (as less tourists frequent the area), and ecotourism remain unchanged (as existing guesthouses are not visited). Under the second scenario, ski tourism would be strongly increased (owing to massive influx of visitors), forest-related services would decrease strongly (owing to strong pressure from tourist influx), and eco-tourism would also be negative (as guests would favour modern accommodation). The third scenario would lead to additional ski tourism, unchanged forest services (as no new slopes would be constructed), and increased eco-tourism.

	ES I Ski tourism	ES II Forestry	ES III Ecotourism
SC I BAU Old hotels	0 / + (?)	+	0
SC II New accomodation& new chairlift with slopes	+ + +	- -	- -
SC III Modernisation of a chairlift with improvement of usage of local guest houses	+ +	0 +	+

Group 2: Addressing wetlands degradation

The group examined land use policy options for degraded wetlands: a complete conversion for agricultural purposes or wetland restoration as an alternative option. Possible ecosystem services include: agricultural produce as an important provisioning service (becoming relevant under the conversion scenario); ecotourism; water purification; and fishery (becoming relevant under the restoration scenario). Under land conversion for agricultural purposes, there would be a marked increase in food production but little in terms of other services and with a negative impact on biodiversity, while wetland restoration and its subsequent conservation as a protected area would allow for some use in a sustainable manner

(ecotourism, food provision in form of fisheries, and hydrological services) to support the livelihoods of local communities.

	ES 1 Biodiv. Ecotourism	ES2 Food Security/Production agriculture, fisheries	ES 3 Water purification
Sc I (BAU)	-	+ + (?)	-
Sc II (Corn prod.)	-	+ + -	- -
SC III PA/wetland restoration	+ +	+ + +	+ +

Group 3: Implementing more sustainable logging

The group examined options to address the impacts of logging on a dammed river providing irrigation and drinking water as well as hydropower and wood products. Under the business-as-usual scenario, unsustainable logging leads to an ongoing and increasing problem of erosion and, subsequently, significant sedimentation. Under the second scenario, commercial logging is stopped (but not small scale subsistence cutting) leading to increased provision of drinking and irrigation water as well as increased hydro production. A sustainable management scenario envisages sustainable commercial logging and the development of alternative livelihood options, such as hunting reserves and increased agriculture.

	ES 1 Drinking & Irrigation	ES2 Hydro	ES 3 Wood production
Sc I (BAU)	0	0	+ + +
Sc II Stop commercial cuts	+ +	+	- - / +
SC III Sustainable management Develop alternative economical activities Hunting reserves Agriculture	+ +	+	+ +

Group 4: Mitigating impacts of dam construction

The group examined construction of a dam with a focus on the provision of aquaculture, hunting and drinking water and irrigation as main relevant ecosystem services. One scenario envisages the modernisation of the water system (building the dam and nothing else) while an alternative a second scenario foresees additional mitigation measures (including fish ladders and reforestation to act as a sound barrier). A more details synopsis of the relevant ecosystem services and their level under different scenarios is provided below.

The effect of the construction of hydropower plants on the river ecosystem

Advantages/ disadvantages **Scenarios**	**Fish product**	**Shore erosion**	**Noise**
Basic option (before construction)	15-30 kg/ha	None	None
Basic option without consideration for ecosystem services	>70 kg/ha	Exists, compensated by fish products (+)	Exists, no compensation
Taken into consideration	>20 cwt/ha	Exists, compensated by fish products (+++)	Exists, compensated through tree planting (forestation) (→population health→food (mushrooms, etc))

Relevant ecosystem services:

- quality drinking water
- recreation/tourism
- aquaculture
- water supply for farming needs and food industry

Municipal Water Use:

As is:
(+) benefits for water providing companies
(+) water provision for the population
(+) hygiene, household amenities
(-) water loss (decayed equipment)
(-) reduction in quality + (pressure??)
(-) uneconomic use of water by the population
(-) water pollution (runoff)
(-) deterioration of water and biodiversity

Technology modernization:

(+) ↓water loss
(+) ↑water purification (runoff)
(+) ↑population health
(+) ↑number of working places
(+) improvement of water quality & conservation of biodiversity
(-) high prices for equipment
(-) expense of qualified engineers
(-) ↑payments for water
(+) ↑monitoring of water usage

Technology modernization & rational water use:

(+) ecosystems restoration
(+) ecotourism development
(+) aquaculture development
(+) decrease in spending for obtaining quality water
(+) ↑population health, decrease in health care spending
(+) ↓greenhouse effect
(-) expense of equipment/staff (engineers)
(+) ↑quantity of working places
(+) ↑use of silt deposits for farming

Costs ↓	**1. BAU**	**2. Modern.**	**3. Modern + Management**
Quality drinking water	(-) (-)	(+) (+)	(+) (+)
Recreation/tourism	(-)	(+)	(+) (+)
Aquaculture	(-)	(+)	(+) (+) (+)
Water supply for farming needs & food industry	(-)	(+)	(+) (+)

ANNEX III

Survey on TEEB national plans and projects

- 12 surveys were completed.
- Out of these 12 surveys, it was noted that five countries had already initiated TEEB related activities (Croatia, Serbia, Belarus, Turkmenistan and Macedonia) while one country (Albania) is planning to undertake a TEEB study in the near future.
- Three out of five of these projects have requested specific assistance from the UNEP-TEEB Office for technical support and capacity building as well as being connected with experts to help with the elaboration of TEEB studies.
- Other TEEB-related activities include: protected area management in Belarus, valuation of forests in Serbia, valuation studies of ecosystem services various protected areas in Croatia and in Turkmenistan, a valuation study of ecosystem services in one of the largest mountain areas of the Balkans, Macedonia.
- For those countries that did not have TEEB plans or projects underway (or any that the representatives were aware of), necessary funding as well as in-country capacity or skills were identified as main obstacles or constraints. However, many of these countries that currently do not have TEEB plans or projects would be interested in conducting one in the future, particularly a TEEB scoping study, a biophysical assessment and valuation of model sites as well as a comprehensive TEEB scoping study (indicated by Tajikistan).

ANNEX IV

Summary of group work on implementation of Aichi targets two and three

1. Which plans, policies or strategies are in particular need to incorporate values of biodiversity and ecosystem services? Are these upcoming for review soon? What could be important next steps in order to achieve this?

2. Incentives, including subsidies, with harmful effects on biodiversity: what could be priority candidates for elimination, phase out or reform?

3. Which areas or sectors have high potential, or should have high priority, for introducing or strengthening positive incentive measures for conservation and sustainable use?

Group 1

1) Biodiversity strategy + strategy on sustainable usage of natural resources NEAP + strategy of sustainable development + poverty eradications strategy
Energy and water and tourism strategy
Environment investment strategy
Physical and urban plans
Strategy for sustainable forest management
Rural development strategy
Agro environmental policies
Fishery strategy
Public awareness strategy
Natural climate change communications

2) Small scale hydropower production
Intensive agriculture in production of biofuel and biomass
Subsidies for usage of fertilizers
Wind power farms
Incentives for planting non-native tree species

3) Agriculture (introducing agri-environment measures)
Energy (solar, wind)
Aquaculture (carp pounds)
Forestry (management.)
Ecotourism
Food production

Group 2

1) NBSAP
Forest strategy
NEAP
Energy Development
Agriculture Development
Development of marine PA
Climate Change mitigation adaptation strategy
Ecoregion conservation plan
Management plans of PA

2) liberal environmental regulations
example of marine turtle protection project (PES scheme was introduced for fishermen to release turtles caught as by-catch to temporarily support awareness-raising ; fishermen threatened to start killing turtles after the project ended)
review economic incentives to investors including free provision of land

3) Sustainable forest management
energy (hydropower)
agriculture
water
pasture management

Group 3

1) National Biodiversity Strategy and Action Plan
NEAP 2013 +
Regional and subregional plans
Sectorial programme

2) agriculture
   - subsidies for fertilizers (pesticides including impacts on human health)
   - water subsidies (below cost pricing)

   forestry
   (impacts of indigenous communities)

   protected areas
   (infrastructure restoration programme to pay more attention paid to environmentalimpacts)

   Forestry
   (companies to provide alternative livelihoods for local people)

   Agriculture
   (support for organic production and utilization of green technology)

   Protected Area
   (support for sustainable infrastructure and for wetland restoration)

Group 4

1) All plans/strategies related to the use of natural resources at the national level (development plans, economic strategies…for establishment of protected areas (PA)

2) Agriculture:
   - subsidies for electricity payments used for the irrigation of fields
   - subsidies for the use of chemical fertilizers (irrational use)
   - subsidies for the farmers to purchase seeds (→invasive species)

   Forestry:
   - compensation for the exemption of the forest lands from the state users (→ such lands are easily given away for non-agricultural purposes)

Energy sector:
- subsidies to build hydropower plants (→deforestation)
- "green fees" for electricity (→small hydropower plants)

3) Eco-tourism:
   - organic farming
   - aquaculture
   - alternative energy

Group 5

1) (a) national strategies/plans
   (b) areas: PA, flora & fauna, etc.
   (c) state programmes such as for agriculture, hydropower

2) Removal or phase out of harmful incentives

3) To optimize of resource use in key sectors
   - livestock maintenance, agriculture, forestry, etc → ensure that ecological limits are respected

   To undertake landfill inventory and to encourage separate collection of waste
   To support establishment of land cadasters and land use plans

ANNEX V

WORKSHOP EVALUATION

- 27 workshop evaluation questionnaires were completed.
- Three quarters of participants indicated to have had medium to high knowledge of the economics of ecosystems and biodiversity prior to the workshop while one quarter indicated to have had relatively low knowledge.
- 26 out of the 27 questionnaires stated that the course had met expectations. One participant said that it had not as it was felt that the course was not interactive enough, that they were also still unsure about TEEB concepts and were not sure what to do next.
- The most useful parts of the course identified were: the TEEB "approach"; valuation methodologies; exchange of regional experiences and case studies; positive and harmful incentives; and practical exercises to consolidate the learning experience.
- The survey indicated that participants had gained a deeper insight into the steps/process/tools required for conducting and/or commissioning a TEEB study, particularly through the exchange of regional and indeed national experiences, and now had a stronger understanding of the importance of capturing ecosystem service values for improved decision making. They also noted their appreciation of the use of TEEB in NBSAP revisions.
- A key limitation of the workshop that was noted was the brevity of the course considering the complexity of the information that was being delivered. They would have preferred to have a longer course that could cover these topics in more depth and perhaps have the possibility of attending a one day/half day field trip.
- Participants would like to receive more training on not only the valuation tools themselves but also on their practical application in real life contexts, perhaps with the demonstration of their use using regional examples. They would also like to receive more in depth training on perverse and positive incentives, the financing of TEEB, TEEB for business and TEEB in the agriculture sector
- Suggestions for course improvements:
    - to have focal points from other Rio conventions - UNCCD and UNFCC to be included in future workshops which could provide a platform for joint implementation,
    - to have representatives from different stakeholder groups including those from the finance/development sector and from indigenous communities to allow for a strengthening among and between these stakeholder groups,
    - to elaborate more on real life case studies and lessons learnt from these.

- The general ratings of the workshop were good to excellent. Some participants noted that the course material/handouts need to be improved upon and the pace of the course needs to be slowed down or lengthened.
