Module 3
Mainstreaming Biodiversity
into Sectoral and Cross-Sectoral Strategies, Plans and Programs

Preliminary DRAFT for Consultation

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This module forms part of a seven-module NBSAP training package, which is currently being revised based on Parties' fourth national reports and NBSAPs, and recent COP decisions. The package is intended for national focal points and biodiversity planners and will be used in upcoming regional and sub-regional capacity building workshops on revising and updating NBSAPs. Each module will be made available on the CBD Secretariat's website (http://www.cbd.int/nbsap/training/) for consultation as it is revised. Your comments and input are welcome; please direct them to secretariat@cbd.int.

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Please note that the text of the modules are based, where relevant, on the draft decisions recommended by WGRI 3, pertaining to the revised Strategic Plan, NBSAPs and capacity building, and are thus provisional and contingent on the outcome of COP 10.

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2010 International Year of Biodiversity

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Introduction

This module provides an overview of mainstreaming and its importance for the implementation of the Convention on Biological Diversity, and gives practical guidance on how to approach this important task. The overarching message of the module is that mainstreaming is key to the implementation of the Convention and as such should be a central part of National Biodiversity Strategies and Action Plans (NBSAPs). The module also stresses that mainstreaming can be, and is being, achieved in many different ways, at different scales and within different tiers of government. At the national level, it is important to both learn from, and serve as an example and facilitator for mainstreaming in other tiers of government.

The **module starts out** explaining what mainstreaming is, and giving examples of what it means to mainstream biodiversity into sectoral and cross-sectoral strategies. **Section two** traces the process for developing and updating the NBSAP (described in Module 2), from the perspective of mainstreaming. The **third section** describes different entry points for mainstreaming including ones at the national, sub-national, regional, sectoral and local levels. The **fourth and final section** describes specific approaches and tools that can be used in mainstreaming. Among these are Strategic Environmental Assessment, spatial planning, the ecosystem approach and related approaches, and several financial and economic tools. **Throughout the module** examples and case studies are provided to illustrate and/or to provide more detail.

The module includes an activity to help users compile the knowledge and information that can be useful in the mainstreaming effort. It also provides an annotated list of resources organized by theme, where users can go for more information and guidance.

Box 1   CBD Mainstreaming Mandate

According to **Article 6b of the Convention**, Parties have an obligation to:
"Integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies."

In addition, COP V endorsed the **Ecosystem Approach**, which provides for the integrated management of land, water and living resources and promotes a balance in the achievement of the three objectives of the Convention, as the primary framework for action under the Convention.

The third edition of the **Global Biodiversity Outlook** reports that while addressing biodiversity loss requires addressing the underlying causes or indirect drivers of that decline, there has been insufficient integration of biodiversity issues into broader policies, strategies and programmes. It states that better decisions for biodiversity must be made at all levels and in all sectors, in particular the major economic sectors, with a key enabling role played by government.

Given the importance of mainstreaming, it is not surprising that it is one of the main thrusts of the new draft **Strategic Plan of the Convention for the post-2010 period**. **Strategic Goal A** is to: "Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society."

Targets 2, 3, and 4 of Strategic Goal A specify:

- **Target 2**: By 2020, the values of biodiversity are integrated by all countries in their national accounts, national and local strategies and planning processes, and by business, applying the ecosystem approach.
- **Target 3**: By 2020, subsidies harmful to biodiversity are eliminated, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied.
- **Target 4**: By 2020, Governments and stakeholders at all levels have formulated, and have begun to implement, sustainability plans to keep the use of resources within ecological limits.

1. What is Mainstreaming and Why is it Important?

Much depends on the ways in which we manage and use biodiversity: the survival of diverse genes, species and ecosystems, and their continued provision of ecosystem services; human well-being, in its broadest sense; and the economic survival of the economic sectors and of the people who count directly on the resources used and affected by these sectors. In the developing world, the ways in which biodiversity is managed and governed has crucial implications for the possibility of eradicating poverty.

In 2002 the Hague Ministerial Declaration stated that the most important lesson of the previous ten years was that **the objectives of the Convention would be impossible to meet until consideration of biodiversity is fully integrated into other sectors.**

"Mainstreaming" means just that: **the integration of the conservation and sustainable use of biodiversity in both cross-sectoral plans** such as sustainable development, poverty reduction, climate change adaptation/mitigation, trade and international cooperation, **and in sector-specific plans** such as agriculture, fisheries, forestry, mining, energy, tourism, transport and others. It implies changes in development models, strategies and paradigms.

Mainstreaming is **not about creating parallel and artificial processes** and systems, but about integrating biodiversity into existing and/or new sectoral and cross-sectoral structures, processes and systems.

It is hoped that mainstreaming will help Parties **recognize the value of biodiversity** and ecosystem services and act to **maximize the positive and minimize the negative impacts** of human activities on biodiversity. Through mainstreaming, biodiversity concerns will be internalized into the way development efforts operate, shifting responsibility and ownership for conservation and sustainable use from solely the hands of the environment ministry/authority to those also of economic sectors. This **sharing of ownership and responsibility** presents the opportunity of freeing up resources

traditionally used by environment authorities to counter and neutralize damaging policies and actions, and of **substantially increasing the financial, human and technical capacity to implement the Convention**.

Box 2 provides some examples of what biodiversity mainstreaming may look like.

Mainstreaming should also be aimed at the integration of sectoral concerns, particularly with regard to the dependence of many of the world's poor on fisheries, forests and other ecosystems and their services, into biodiversity planning. Indeed, **a true mainstreaming is a mutual mainstreaming of biodiversity into development, <u>and vice-versa</u>**.

Box 2   What May Biodiversity Mainstreaming Look Like?

Biodiversity is explicitly integrated into sectoral and/or cross-sectoral:
✓   Policy documents
✓   Plans and actions
✓   Budgets
✓   Legislation
✓   Indicators and monitoring systems

Mainstreaming of biodiversity into sectors (and vice-versa) can include strategies to:

1) Reduce the negative impacts that the sector has on biodiversity.
In fisheries strategies this may involve actions to reduce by-catch or eliminate effects of fishing practices on sea bottom habitat. In agricultural strategies, it might involve minimizing the use, and optimizing the application of chemical fertilizers and pesticides so as to reduce negative impacts on groundwater, surrounding habitats and wildlife.

2) Enhance, or to restore biodiversity and ecosystem services
 This may involve establishing no-take zones in marine areas, drylands, forests or other productive ecosystems. In fisheries, when such zones are established in areas where fish spawn and feed, the areas provide local relief to the pressure on commonly harvested wild species. It might also involve the replanting and/or reintroduction of native plant and animal species to areas where they may have been depleted or lost.

3) Secure and promote local communities' access to and benefits from the use of biodiversity; and to enable their participation in the design and implementation of biodiversity management policies and practices. In forestry and fishery strategies this could involve reserving certain areas for exclusive use by local communities and indigenous people, the joint management of areas and/or species with such groups, and the clarification of resource access and tenure in areas where the erosion and overlap of customary and formal rights have left tenure unclear and insecure. Provided local communities and indigenous people manage these resources sustainably such strategies will have important results in terms of poverty reduction and human well being more broadly.

Ideally, **biodiversity policy should not be seen as independent of sectoral and cross-sectoral policies, but rather sectoral and cross-sectoral policies should be seen as the**

vehicles through which crucial biodiversity goals need to be attained while, and in order to maintain, and enhance human well-being. It is not surprising then that sectoral strategies can form important components of biodiversity strategies (see box 3 France's NBSAP).

Box 3   Sectoral Biodiversity Strategies Compose France's NBSAP

France's NBSAP is implemented through ten sectoral biodiversity action plans - Natural Heritage, Agriculture, International, Urbanism, Transport Infrastructure, Sea, Overseas Territories, Forests, Research, and Tourism - aiming to integrate sustainable biodiversity management and conservation into their economic and social activities within a sustainable development perspective. Each action plan is reviewed and updated every two years.

The sectoral action plans are coordinated by their corresponding ministry and are monitored by steering committees composed of the relevant authorities and stakeholders. A technical committee under the coordination of the Directorate of Water and Biodiversity of the Ministry of Ecology, Energy, Sustainable Development and the Sea brings together the technical leads of each of the action plans and ensures their implementation, the coherence of action, and the exchange of information.

This NBSAP, with its sectoral action plans has permitted most of France's important sectors to integrate biodiversity considerations into their operations.

Source: France's 4th National Report

The next section explains in more detail how mainstreaming can be built into the national biodiversity strategy and action plan.

2. Mainstreaming and the NBSAP

A country's **mainstreaming effort should be a central component of its national biodiversity strategy and action plan (regardless of the form the latter takes).** As such, it should be an integral part of national biodiversity planning.

Mainstreaming requires a sustained effort, over several years and on several fronts. Although mainstreaming *throughout* government and society is the ultimate goal, it is not likely that this will occur all at once. It is more likely that mainstreaming will occur irregularly within and across sectors and tiers of government with some sectors being more amenable than others. What is important is to **have a strategy with clear objectives, to sustain the effort, to seek strategic allies and champions, to learn from experience, and to identify milestones by which progress can be assessed along the way.**

The mainstreaming effort should take shape as and when the biodiversity strategy and action plan are developed and implemented**.** Like the development of the biodiversity

strategy, the mainstreaming effort requires that the first two steps of the biodiversity planning cycle be completed:

1.   Identifying and Engaging Stakeholders
2.   Assessment: Gathering and using information and knowledge

While considerations specific to mainstreaming are discussed below, more information on these steps can be found in Modules 2 (biodiversity planning) and 5 (stakeholders).

2.1   Identifying and Engaging Stakeholders

As discussed in Modules 2 and 5, a range of stakeholders from government, civil society, the scientific community, and the private sector should be involved in biodiversity planning.

Within government, those responsible for developing the NBSAP should seek the support of the Environment Ministry, Finance and Planning Ministries, Parliament (and/or Parliamentary committees), and/or the Judiciary. In addition to this, the mainstreaming effort must seek the support of ministries responsible for forests, agriculture, marine areas, mining, infrastructure, transport, tourism, international cooperation and/or trade depending on the specific circumstance of the country and the priorities for mainstreaming.

Mainstreaming also requires the participation of biodiversity experts and practitioners in the development, launching, implementation and monitoring of sectoral and cross-sectoral strategies. Biodiversity experts and practitioners should participate in these planning processes bringing in as much sector- relevant knowledge and information as possible, and should aim to raise decision-makers' and stakeholders' awareness of the linkages of the sector or economic activity with biodiversity. This will help to raise the profile of biodiversity issues enabling their inclusion in the outcomes of the planning process.

Within civil society, important stakeholders and potential allies will include national and international NGOs working in the country, UN representatives (and focal points) and development agency staff working in the country, persons in charge of in-country donor coordination, environmental groups, academics and research institutes, professional and/or business associations, labour groups, and chambers of commerce. It is also important to identify which other actors are attempting to mainstream other issues into government processes, and to seek potential synergies with them. Some of these of particular relevance to biodiversity may include efforts to mainstream the environment (more generally including climate change), the MDGs, Strategic Environmental Assessment, and gender.

Some stakeholders (groups or individuals) can be/come important allies in the mainstreaming effort. It is important to identify, approach and engage these actors. Box 4 lists the main stakeholders that could be approached for the mainstreaming of

biodiversity concerns into agriculture. More information on stakeholder engagement, including how to identify and ensure that all relevant actors are included, can be found in Module 5.

Box 4   Possible Stakeholders in Mainstreaming Biodiversity into Agriculture

Possible stakeholders in mainstreaming biodiversity into agriculture may include the following:
- Ministry of Environment,
- Ministry of Agriculture,
- Public and private agricultural research bodies,
- Agricultural extension agencies,
- Agricultural colleges or training establishments,
- The national focal point(s) for FAO-related matters, including for the International Treaty on Plant Genetic Resources for Food and Agriculture,
- Agro-biotechnology industry associations,
- University or other research bodies,
- Associations of peasants or small farmers,
- Agribusiness associations,
- Indigenous and local community associations,
- Agricultural economists,
- Germplasm and seed bank managers,
- Specialist non-governmental organizations,
- Associations of bee-keepers or other sectors relating to pollinators,
- Plant and animal breeding bodies,
- CBD national focal point for ABS (access to genetic resources and benefit sharing) matters.

These are only the 'direct' agricultural stakeholders. However, given that the agricultural sector in most countries plays an important role in food security, foreign trade and export earnings, and is often supported by policies for agricultural credit, land reform, education and vocational training, and science and technology, relevant stakeholders in this case should be taken to include not just those directly involved in agricultural biodiversity issues, but the full range of organizations whose mandates relate to the issue.

These could include ministries and government agencies relating to health, trade and commerce, planning and finance, education and training, science and technology and others. It also includes those civil society sectors that work on these issues, for example, rural credit unions, organizations working on health and nutrition issues, economists and analysts with expertise in identifying new markets for traditional products of agricultural biodiversity, and others.

2.2   Assessment: Gathering and Using Information and Knowledge

Efforts to mainstream biodiversity will rely heavily on country specific knowledge and information. This information will be <u>important in order to prioritize entry points and in order to develop an effective communication strategy for mainstreaming</u>. Which parts of

this information will be most useful will depend on the country- and location- specific circumstances, and on the priorities set for the mainstreaming effort.

Box 5 outlines the types of information that can be useful for mainstreaming. Much of this information and knowledge will already form part of the national biodiversity assessment. Other parts will need to be sought. An important source will be the expertise and experience of stakeholders; and the generation and compilation of this knowledge can be considered an important part of a mainstreaming effort (Activity 1, at the end of this module, can help to generate and/or to collect the information that will be useful in the mainstreaming effort).

Although it is important to compile this information, action should not wait until all the necessary information and knowledge exists. In the mean time:

- The links between biodiversity and the policy area in question can be presented without quantifying the degree, extent or value of the link. Box 6 gives an example of how the links between agriculture and biodiversity can be demonstrated without recourse to specific, quantified information.
- Examples and case studies from other countries which have done valuation studies of particular relevance to the mainstreaming effort or which have undertaken specific efforts for mainstreaming can be used to illustrate what is possible. When using examples from other countries it is important to keep in mind however that ecosystem service values, particularly those relating to local benefits, are context specific.

Box 5   Types of Information That can be Useful for Mainstreaming

- The country's biodiversity components, their status and trends, and the main drivers determining the status and trends. Most of this information will already exist in the country's previous biodiversity assessment and in their 4th National Report.

- Information on the links between biodiversity and human well-being in the country

The economic value of the country's biodiversity. Including:
- The value of the goods and services provided by biodiversity (such as pollination, water purification, food provision, soil retention etc.)
- The long term revenue that can potentially be generated through biodiversity-related businesses such as tourism, fishing, and others that are conducted in an ecologically and socially sustainable manner
- The present and possible future costs to society of biodiversity loss
- The possible savings to governments and society of averted loss of biodiversity and ecosystem services

The linkages between biodiversity and human well-being
Some of this information will already exist in the country's biodiversity assessment and in the 4th National Reports to the CBD. It can be complemented by studies on specific

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components of biodiversity and aspects of well-being. It can include information/ knowledge on how different stakeholders use and benefit from biodiversity.

The linkages between biodiversity and specific sectors. Including:
- How each sector uses and benefits from biodiversity and ecosystem services
- How the sector impacts on biodiversity and ecosystem services (currently and in the future, here and on a broader scale)(within the sector and in other sectors)(i.e. the tradeoffs implicit in this sector's development).
- Any sector-specific biodiversity-relevant knowledge and information (including traditional knowledge, practices, and governance) that can be used to reach NBSAP goals

How the policy area targeted for mainstreaming (be it a sector, or a national level process) functions.
This will include the legislation and policies in place (including any previous attempts to mainstream biodiversity or environmental issues), the interactions with other policy processes, how the policy making process unfolds, at what stages of this process stakeholders are encouraged to participate.

Who the main actors and stakeholders are in the policy area targeted for mainstreaming
Civil society groups, academics and research institutes, donors, key people whose buy-in is important, specific persons who could "champion" the cause within their institution.

Alternative policy options relevant to the targeted sector or policy area
Including the specific benefits and costs associated with each. This information will be very difficult to come-by before the mainstreaming effort begins. It may be, rather, the product of multi-stakeholder engagement in the mainstreaming effort and will thus only be available later in the mainstreaming process. However generating this information in a credible and legitimate form can be crucial to mainstreaming.

Box 6   Relationship Between Agriculture and Biodiversity

- **Use of, and benefits from ecosystem services** - water, soil nutrients, soil structure, airborne nutrients, crop genetic and species diversity, pollination, decomposition...

- **Possible impacts on biodiversity and ecosystem services** - nutrient pollution in runoff water, depletion of soil fertility, depletion of water, erosion of crop genetic diversity, deforestation, use of fossil fuels, eviction of beneficial avian and insect diversity...

- **Elements of human well-being affected by use and impacts -** food security, health, livelihoods, social relations, cultural and spiritual values, aesthetic values,...

- **Potential modifications to current/damaging practices** - reduce/eliminate use of chemical inputs, reduce tillage, introduce integrated pest management, multi-crop, increase genetic diversity

Understanding these interactions between a sector and biodiversity and ecosystem services, and communicating this information to stakeholders are key to mainstreaming

Once the relevant stakeholders have been identified and engaged, and the available information has been consolidated, it is time to develop the strategy and action plan.

2.3   Putting Mainstreaming Content into the Biodiversity Strategy

When thinking about mainstreaming, those developing the national biodiversity strategy should think about ***where the country wants to go*** in terms of mainstreaming biodiversity **and** ***which route it will take to get there***. (The strategy component of the NBSAP is described in detail in step 3 of the 7-step process explained in module 2). The mainstreaming content will depend on the degree of buy-in of the actors and decision makers in the sectors targeted for mainstreaming.

In cases where there is little, partial or no buy-in, mainstreaming content must be geared towards gaining the attention and interest, informing and raising awareness, and engaging sectoral actors and decision makers. Even if these actors are not immediately convinced of the need or the benefits of biodiversity mainstreaming, the first step is to open the door for dialogue and information exchange and this can form a legitimate strategy element for an NBSAP (the next section will discuss relevant items for the action plan)

In cases where there is some buy-in on the part of sectoral and cross-sectoral actors and decision makers, strategy elements could be geared towards securing this interest and support with the aim that it will soon translate into ownership and political will, and eventually into concrete action.

In cases where there is already substantial or full buy-in, biodiversity mainstreaming strategy elements in the NBSAP should mirror (be the same as) those of the relevant sectors and/or plans. It is in these situations where the need for a mainstreaming content in the NBSAP may become less necessary as sector-specific biodiversity planning will presumably be integrated into the relevant sectoral and cross-sectoral planning processes. It will still be necessary however to monitor and evaluate the effectiveness of these planning processes in conserving biodiversity components and ecosystem services, to ensure their coherence with other such plans (and with national biodiversity priorities), and to provide guidance and backstopping on biodiversity issues.

Mainstreaming content may consist of:

- The **goals and objectives** (and preferably **targets**) expected to be achieved through mainstreaming. These may be among the goals and objectives of the overall NBSAP. Mainstreaming goals and objectives will be informed by the information gathered in the biodiversity assessment.
    (e.g. Engaging the Ministry of Tourism, Forestry, Fisheries… in a dialogue on the interactions of the sector with biodiversity, Getting the Ministry of Tourism, Forestry, Fisheries…on board, the sustainability of national fisheries, a reduction

in allowable fish-catch levels, the restoration of healthy forest ecosystems, the protection of sustainable rural livelihoods in a particular ecosystem etc.)

- The **target "entry points":** priority sector(s) and policies, plans, programs that will be targeted for mainstreaming.
  (e.g. The National Fisheries Policy, the National Poverty Reduction Strategy)

Identifying, Understanding and Prioritizing Entry Points

While the CBD strategic goal on mainstreaming aims at integrating biodiversity considerations *throughout* government and society, mainstreaming may start at different scales and levels of government, and/or in specific sectors and geographic areas including:

- ✓ National level plans/programs/strategies
- ✓ Sub-national level plans/programs/strategies
- ✓ Regional plans/programs/strategies
- ✓ Sector plans/programs/strategies
- ✓ Area-based management initiatives (marine areas, coastal zones, watersheds...)

Each of these is discussed in further detail in section 3 of this Module and case studies are presented illustrating each.

Being a **national instrument, the entry points of particular importance for the NBSAP are those at the national level** (i.e. national level plans and sector plans). Sub-national and area-based plans are relevant and useful here to the extent that they can motivate and serve as models for mainstreaming at higher tiers of government, and/or to the extent that national level legislation or policies can enable and/or motivate mainstreaming in lower tiers of government.

The identification and prioritization of "entry points" that will provide an opportunity for inclusion of biodiversity and ecosystem services into plans, policies, and operating processes is crucial. There is no single way to choose entry points for mainstreaming, and no one factor that promises success in a particular entry point. However it is important to *choose* and *prioritize* **entry points** because mainstreaming efforts that attempt to mainstream everywhere, at once, may be overambitious. Box 7 provides some points to consider in choosing among entry points.

Box 7   Choosing Entry Points for a Mainstreaming Effort

Some criteria for choosing and prioritizing entry points can include:

- Those where the links between biodiversity (conservation and sustainable use) and human well-being are most easily demonstrated and communicated - i.e. most obvious links or where public awareness is greatest.

- Those where the links are the greatest - i.e. the greatest potential benefit to be derived from mainstreaming. Also, conversely, those where a lack of mainstreaming may have the greatest potential negative impacts.
- Those where there is a potential "champion" to take on the cause and/or where there is substantial interest in sustainability.
- Those who's timing creates an opportunity.

Timing

Entry points are not only about **where** to start, but also about **when** to attempt mainstreaming; and timing can make or break an entry point. Like NBSAPs, national, sub-national, and sectoral plans and programmes are usually evolving processes, requiring periodic assessment and update. These periodic updates can provide an opportunity for biodiversity experts to become involved in the redrafting and review processes, and for biodiversity concerns to be mainstreamed into the action plans and programmes. Promising opportunities can emerge:

- When a sector law, strategy is being revised/established.
- When sectoral guidelines are being revised/established.
- When an area of importance for biodiversity is being zoned, or its use designation is being established or changed.
- When there is a change of government and/or policy.
- When sectoral, sub-national and national budget requests and budgets are being prepared.
- After a crisis/ natural hazard/ conflict as part of rebuilding, recuperation, recovery: political leaders and the general public may become more aware and convinced of need for change.
- When a county is being considered for donor funds (e.g. when UN Country Assessment is being updated, Country Environment Analysis is being done...)
- When a country's development is being reviewed (i.e. in annual joint reviews between developing country governments and donors).

Having gathered credible, convincing, and sector specific information at the time when an entry point's timing is right is important.

2.4   Putting Mainstreaming into the Biodiversity Action Plan

The mainstreaming content of the action plan will consist of **the actions that will be implemented** in the timeframe of implementation of the NBSAP in order to achieve the mainstreaming goals and objectives. It will also include **who** will implement these actions, **where** and **when** they will be implemented, and **how** they will be implemented. (The action plan of the NBSAP is described in detail in step 4 of the 7-step process explained in Module 2).

Like the strategy elements discussed above, the activities prioritized for mainstreaming under the biodiversity action plan will depend on the degree of buy-in of the relevant

actors and decision-makers in the prioritized entry-points. The development of sector specific legislation and policies and the application of tools and approaches such as strategic environmental assessment and others will only be feasible if these actors have already agreed to include biodiversity in their activities and have the political will to see them through. **In earlier stages of mainstreaming** where relevant sectoral and cross-sectoral actors and decision makers have yet to become convinced and engaged, mainstreaming activities in the action plan should be limited to actions aimed at attaining that buy-in. These will invariably be targeted communication, education and public awareness (CEPA) activities (Module 7 addresses this aspect of biodiversity planning).

In the intermediate stages of mainstreaming where there is some buy-in, activities may be geared towards deepening the relevant actors' understanding of the issues, and developing the capacity of sectoral officials to meaningfully and effectively integrate biodiversity issues in their planning processes.

The action plan can include:

- **Legislation** that will be put in place to integrate biodiversity considerations into sectoral activities.
    (e.g. Inclusion of biodiversity in the nation's constitution, Law requiring all new infrastructure and tourism developments to undergo biodiversity inclusive Environmental Impact Assessments, law limiting the use of fertilizers and pesticides upstream from important conservation areas, environmental fiscal reforms, bio-trade legislation…)

- **Institutional arrangements** that will be put in place (or that already exist and will be used) to facilitate the mainstreaming effort.
    (e.g. An inter-ministerial working group on biodiversity, a public-private partnership for conservation, a multi-stakeholder alliances at national, sub-national levels, inter-institutional arrangement for trans-boundary management or across district or municipalities borders., …)

- **Approaches and tools** that will be used to integrate biodiversity into sectoral plans, policies and programs.
    (These are listed and discussed in more detail in section 4 of this Module)

- **Communication and public awareness activities** that will be targeted to different stakeholders in order to gain support for mainstreaming. These will form part of the broader NBSAP communication strategy and will deliver a strong and clear message about the importance of biodiversity to well-functioning economic sectors, livelihoods, and national development. Messages will need to be very well targeted to policy area in question and grounded in solid evidence. The information gathered during the assessment stage of biodiversity planning, and particularly that gathered in light of the mainstreaming effort, will be crucial in this respect. (More information about developing a communications strategy can be found in Module 7).

- **Research** that will be carried out to fill gaps in country-specific knowledge regarding biodiversity and human well-being, economic sectors, and development. These could include valuation activities for biodiversity and ecosystem services affected by sectoral and cross-sectoral plans and activities.

- **Capacity building** for relevant sectoral and cross-sectoral actors on biodiversity, ecosystem services, and human well-being; and on tools, approaches and measures that can be used to integrate biodiversity into sectoral strategies, plans, policies and programs.

- **Indicators** that will be used to assess progress
   (e.g. Number of sectoral ministries represented on biodiversity planning committee, number of sectoral strategic plans that integrate biodiversity concerns, actions taken by actors other than the environment ministry/authority to implement the convention…)

The implementation of the plan of action will inevitably create opportunities for integrating economic sectors into the biodiversity planning process. A crucial task of the NBSAP managers and implementers is to proactively pursue such opportunities (even if they are not part of the plan) and to interest and bring into the process those governmental, private sector and civil society bodies that operate in economic or policy sectors that depend, and have an impact, on biodiversity.

2.5 Implementation of Mainstreaming Activities

Once the national biodiversity strategy and action plan have been developed, it is time to implement the NBSAP. In cases where the relevant ministries and authorities have bought into the NBSAP and participated in its development, implementation of activities within their sector will be largely in their hands. In earlier stages of mainstreaming where relevant ministries have yet to become convinced and engaged, responsibility for implementation will lie mostly with the NBSAP working group and other interested stakeholders. (More on implementation of the NBSAP can be found in step 5 of the 7-step process explained in Module 2).

The final two steps of the seven-step biodiversity planning process -monitoring and evaluation and, reporting - are discussed in Module 2. The following section discusses the possible entry points in which biodiversity planners could attempt to advocate for the integration of biodiversity concerns.

3. Entry Points for Mainstreaming

3.1 National Strategies, Plans, Programs

Mainstreaming at the national level involves the inclusion of biodiversity concerns in policies and processes touching on several sectors and activities with national and society-wide impact. While mainstreaming at this level will be the most effective in promoting the integration of biodiversity concerns into specific sectors and in different tiers of government, it may be the most difficult to achieve. Success may be contingent on the endorsement of the NBSAP and of its principles at high levels of government (i.e. head of government, cabinet or council of ministers, inter-ministerial working groups, high-level committees).

The most likely entry points for such mainstreaming include:

•National constitutions
•National economic and development plans, National Sustainable Development Strategies, Five or Ten-year Development Plans
• Poverty Reduction Strategies, plans to meet the Millennium Development Goals (see box 8)
• Decentralized plans
• National spatial and/or land use plans
• Climate change adaptation and mitigation plans / Disaster prevention plans
• Trade policies (see box 9)
•International cooperation policies, Country Assistance Strategies/Plans, General Budget Support arrangements (thematic and sector working groups, technical working group on budget, performance assessment framework)
•Fiscal reforms

BOX 8   Integration of Environment into Benin's Growth Strategy for Poverty Reduction

Benin's second Poverty Reduction Strategy (*Stratégie de Croissance pour la Réduction de la Pauvreté - SCRP*) places the environment among five thematic pillars that it is hoped will enable Benin's transformation into an emerging economy by the year 2011. A particularly important aspect of this SCRP, from a biodiversity perspective, is the decision to use Strategic Environmental Assessment (SEA) to integrate environmental considerations into all relevant plans, programs and projects emanating from the SCRP. The "greening" of Benin's SCRP took place in two phases. The first consisted of the creation of nine thematic working groups covering all major areas of action under the SCRP in order to ensure the participation of relevant stakeholders. One of these groups was on the environment and it had the responsibility of reviewing the thematic reports prepared by each of the other eight groups to ensure that environmental concerns were adequately integrated into each. The result of this phase was the identification and prioritization of the environmental issues and challenges at hand.

The second phase consisted of: an analysis of the coherence of the environmental priorities with the National Development Plan and with existing environmental policies such

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as the National Environmental Management Program (PNGE); the elaboration of various development scenarios with an environmental analysis done for each; the integration of environmental action points into each of the thematic pillars of the SCRP; and the development of environmental monitoring indicators.

Among the preliminary results of "greening" Benin's SCRP are:
- A diagnosis of the environmental situation of Benin
- The identification of environmental priorities of the SCRP
- An increase in the environmental credibility of the SCRP
- Greater coherence between existing environmental policy and the SCRP
- Integration of environmental measures into the five strategic pillars of the SCRP
- A notable increase in the provisional budget for environmental protection from 2.5 in 2007 to 9.1 million CFA Francs in 2009.

Sources: Presentation by representative from Benin at Regional and Sub-Regional Capacity-Development Workshop on Implementing NBSAPs and Mainstreaming Biodiversity; Benin: Poverty Reduction Strategy Paper, 2008

Box 9   Mainstreaming Environment into Trade: The Dutch Sustainable Trade Initiative

Recognising the country's characteristic as a small trade-intensive nation with a large ecological footprint, the government of the Netherlands has made the shift to sustainable supply chains a priority. Accordingly, sustainable trade has also become one among five strategic priorities of the country's second NBSAP (2008-2012). In the long term, the goal is that all raw materials from natural resources or from nature that are used in the Netherlands – whether they are obtained in the Netherlands or abroad – will be produced sustainably.

In order to achieve this, the government has set up the Initiative for Sustainable Trade (IDH), a multi-stakeholder and inter-ministerial initiative under the auspices of the Ministry of Foreign Affairs for Development Cooperation. Businesses, trade unions, NGOs, and the Ministries of Development Cooperation, Economic Affairs and Agriculture, Nature and Food Quality acknowledged the necessity of joining forces in stimulating sustainable trade.

Financing is mainly through the Ministry of Development Cooperation but IDH is supported by all ministries. In 2008 IDH started programmes in tropical timber, soy, natural stone, tourism, tea and cocoa. Now there are also programmes on aquaculture and cotton and plans for more sectors.

Source: Netherlands NBSAP; Accelerating and Upscaling Sustainable Trade - IDH Brochure

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3.2 Sub-National Level Strategies, Plans, Programs

Sub-national strategies, plans and programs are a particularly important entry-point for mainstreaming as decisions at this level are likely to have more direct impacts on ecosystems than decisions at the national level. The greater proximity of sub-national government structures to action on the ground has been one of the rationales behind some

national government's devolution, or decentralization, of natural resource management authority to lower levels of government. Several countries have either required or promoted the development of sub-national biodiversity strategies and action plans. (see box 10 sub national BSAPs). Also important are mainstreaming efforts within existing or newly created sub-national level strategies and plans. Likely entry points for mainstreaming at the sub-national level are similar to those of the national level listed above. (Box 11 gives the example of the State of Acre, Brazil.)

Another subset of sub-national strategies, plans and programs includes arrangements whereby **local communities and/or indigenous people are recognized as the custodians of certain territories and/or resources**. These arrangements vary widely depending on specific contexts but may include co-management arrangements between these groups and sub-national or national governments, the recognition of autonomous or semi-autonomous territories and their management by local people, among others. Often such arrangements are made aiming at both conservation and socio-economic goals. (see box 12 Namibia's conservancies)

It is important to keep in mind that the biodiversity components and ecosystem services managed within a sub-region of a country exist in complex biological, social, economic and legal relations with biodiversity components and ecosystem services at larger and at smaller scales. **Conflicting goals for the use of ecosystem services will require vertical coordination between levels of government** in order to be reconciled in ways that render the highest sustainable societal benefits.

Box 10   Sub-national Biodiversity Strategies and Action Plans

In the **UK**, all local authorities are required to demonstrate that they are integrating biodiversity conservation into their relevant service areas. This **"biodiversity duty",** enacted by parliament, also encourages local authorities to create local biodiversity action plans and has developed guidance for local authorities in this respect.

In the **US**, the Coastal Zone Management Act encourages states to preserve, protect, develop, and where possible, restore or enhance valuable natural coastal resources including ecosystems and the fish and wildlife using them. It provides states with financial and other incentives to develop **Special Area Management Plans** for natural resource protection and reasonable coastal-dependent economic growth.

In order to prepare its NBSAP, **Peru** created Regional Technical Committees in most of the country. These committees held participatory processes with relevant local institutions in order to propose **regional and local strategies and action plans** that would later feed into the NBSAP. The result of this process has been the development of regional and local strategies such as the Estrategia Regional de la Diversidad Biológica Amazónica (ERDBA) and Provincial strategies such as the Ucayali and Madre de Dios Biodiversity Strategies and Action Plans.

Other countries with sub-national biodiversity strategies and action plans include **Indonesia, China, and Pakistan** where these strategies were developed in line with programs of

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decentralization and increased regional autonomy; **India and Mexico** which both have state and provincial plans, and **Uganda** that has plans at the district level.

Box 11 Ecological-Economic Zoning in the Brazilian State of Acre

Ecological-Economic Zoning (ZEE) is a land-use planning process used in Brazil in order to conserve the environment while guaranteeing sustainable economic development, and an improvement in the population's well-being. The State of Acre created its Ecological-Economic Zoning Program in 1999. The first ZEE phase was notable for its inclusion of diverse societal groups, and for addressing issues that have frequently been marginalized from ZEE programs in other parts of the country such as agro-forestry potential, biodiversity and ecological services, traditional populations' territories, socio-environmental conflicts, and potential of non-timber forest products. Results of the first phase include a new paradigm of land zoning in the state through the development of a state land reform program and the institutionalization of integral conservation units, indigenous lands, extractive reserves, and state and national forests. The first phase also saw the creation of the state Law on Water Resources and the State Forestry Law. Also, guidelines were established for state investments in the development of sustainable forestry industry, community and private sector forestry management projects, and sustainable agriculture and livestock initiatives.

The second phase of Acre's EEZ Program began in 2007. Among the results are the Territorial Management Map of the State of Acre- a legal document establishing land use zones, and obligatory rules and sustainable management criteria in the state, the zoning of 50% of the state's territory as protected and sustainable use areas, and the initiation of several environmental and sustainable development programs. What is particularly innovative in the second phase is the inclusion of cultural and political dimensions in land-use planning in addition to the more commonly used socio-economic and biophysical dimensions. The state government has used its people's history, culture, traditional knowledge, aspirations, and development projects to create an innovative method for ZEE, which has become the key to negotiations between government and society on territorial management issues.

Source: ACRE. Governo do Estado do Acre. Programa Estadual de Zoneamento Ecológico-Econômico do Estado do Acre. Zoneamento Ecológico-Econômico do Acre Fase II: documento Síntese – Escala 1:250.000. Rio Branco: SEMA, 2006. 354p.

Box 12   Decentralising Wildlife Management Through Namibia's Conservancies

        In 1996 the Government of Namibia passed The Nature Conservation Act which started the Community Based Natural Resource Management Program. This program sought to reverse the rampant poaching and severe over-use of drought-prone land plaguing the world-renowned, wildlife-rich plains of northern Namibia, by devolving rights and responsibilities over wildlife and tourism to rural communities.
        The Program enabled the establishment of legally gazetted conservancies on state-owned communal land, and granted conservancy committees limited wildlife rights – including the right to sustainably hunt, capture, cull and sell game. In order to obtain these rights, communities had to define conservancy boundaries, elect committee representatives, negotiate a constitution, produce an acceptable plan for the equitable sharing of wildlife-related benefits, and prove their ability to manage funds. The program was well received by

local people in the region who saw the potential benefits and opportunities of conserving wildlife and using it sustainably for game meat, trophy hunting and eco-tourism.

The benefits of Namibia's 50 conservancies which cover 11.9 million has (over 14% of the country's area) include:
- The recovery of various wildlife species: including the elephant, zebra, oryx, kudu and springbok
- Reduced risks of desertification associated with over-grazing and increased connectivity of protected areas.
- Socioeconomic benefits to more than 230,000 rural people in the form of jobs, cash dividends, game meat, skill building, and various social development project.
- The strengthening of local institutions, governance, social capital, and women's empowerment.

Source: WRI, 2005 The Wealth of the Poor; WRI, 2008 Roots of Resilience; Ministry of Environment and Tourism – Programs, CBNRM

3.3   Regional Strategies, Plans, Programs

Regional strategies, plans, and programmes can also be important entry points for mainstreaming, particularly for fisheries, tourism and other sectoral activities that depend on, and impact, biodiversity that transcends state boundaries. Such is the case of the West African coastal and marine eco-region. Box 13 describes the mainstreaming efforts of the Regional Coastal and Marine Conservation Programme for this region (PRCM).

Box 13   The Regional Coastal and Marine Conservation Programme for West Africa (PRCM)

The West African coastal and marine eco-region is one of the world's most economically significant fishing zones. Spanning more than 3500kms of coastline, this region is also one of the world's most biologically diverse eco-regions. Its varied habitats, including mangrove forests, estuaries, coral reefs, sea grass prairies and sandy beaches are home to thousands of species including 5 endangered marine turtle species and the largest remaining breeding population of the critically endangered monk seal. The Regional Coastal and Marine Conservation Programme (PRCM) for West Africa brings together numerous institutions in the seven countries on the West African seaboard in order to coordinate the myriad efforts to conserve and sustainably manage this biodiversity rich eco-region. The Programme's work, now in its second phase (2008-2011) is composed of three main rubrics: Biodiversity Conservation, Sustainable Management of Fisheries, and Supporting Integrated Management Processes.

The PRCM's line of action concerning fisheries management plans to strengthen the fishing agreement negotiating capacities of its seven member countries, and to help review the Convention on Minimal Access Conditions. Among the biodiversity related objectives within this component of the program are the integration of the ecosystem approach into fisheries management in the revised version of the Convention on Minimal Access Conditions, and the adoption and integration of technical measures to improve selectivity and reduce environmental impact. This component will also see to the development of a

management plan for shared transboundary fishery resources, and work on the co-management of fisheries and MPAs.

Source: [Programme Regional de Conservation de la Zone Côtiere et Marine en Afrique de L' Ouest](#)

3.4   Sectoral Strategies, Plans, Programs

Most nationally important sectors have their own planning processes from which emerge plans, programs, and policies for the sector's development (e.g. National Forestry Action Plans (NFAP), National Water Plans). The issues addressed in these programs relate directly to the use of biodiversity and ecosystem services.

Oftentimes international cooperation agencies and environmental NGOs target their support to country-led sector reforms, investment programmes and technical assistance (e.g. Finland in Biodiversity in Peru; WWF in Forestry in Peru). This **sector wide approach** provides an important entry point for mainstreaming biodiversity concerns into sector strategies, plans and programs.

When working with individual sectors it is important to keep in mind that the ecosystem services used by any sector are often also used by other sectors. Oftentimes conflicting goals for the use of ecosystem services will require sectoral coordination in order to be reconciled in a way that renders the highest sustainable societal benefits.

Like NBSAPs, sectoral plans and programs are ideally developed with the participation of a wide range of stakeholders. In order to mainstream biodiversity into these plans and programs biodiversity experts need to participate actively in these processes at as early a stage as possible. Likewise, the participation of sectoral representatives in the NBSAP development process can be very helpful in the mainstreaming effort.

Some production sectors use **standards, codes of conduct, guidelines and good practices** for achieving environmentally and socially sustainable resource management practices. These are discussed in more detail in **section 3B below**.

Box 14	**Environmental Impact Assessment of Operational Forest Management Plans (OFMPs) in Nepal**

Nepal has prepared OFMPs for 20 Terai districts, and has included EIA as a separate chapter of the plans in order to inform decision-makers and practitioners how to integrate environmental and biodiversity concerns during the implementation of these plans. OFMPs fall within the administrative jurisdiction of the District Forest Offices which administer forest conservation and management activities including biodiversity aspects in forests, protected areas and wetlands.

The EIA studies used expert and local knowledge to identify and predict possible environmental and biodiversity impacts and recommend corresponding mitigation measures

for each. One assessment, in the district of Rautahat, proposed a code of conduct and a conservation strategy for threatened plant species including measures such as harvesting in the dry season in order to enhance regeneration, ensuring that only recommended commercial tree species be scientifically cut leaving others least damaged, and conducting a floral survey in each compartment before harvesting timber species. The report also made recommendations for the protection of forest wildlife. Each EIA report recommends specific monitoring indicators, methods and schedules.

Source: Nepal: Integration of Biodiversity Aspects in SEA of Nepal Water Plan and EIA of Operational Forest Management Plans in Nepal. Case study compiled for the drafting of the CBD Guidelines on Biodiversity in SEA. by Uprety, B.K. Available at: http://cdn.www.cbd.int/impact/case-studies/cs-impact-nl-iaia-np-sea-en.pdf

3.5 Area-Based Management Initiatives

Area-based management initiatives such as **integrated marine and coastal area management, integrated watershed management, and integrated oceans management** are important entry points for mainstreaming biodiversity into the management of specific spatial areas. These can be large or small, within one country or spanning several national territories and jurisdictions. Such initiatives, often grounded in a common vision negotiated between multiple stakeholders and having socio-economic and environmental components, encourage stakeholder, sectoral, inter-governmental, and public-private collaboration in order to realize that vision. Box 14 describes Large Marine Ecosystems, one form of area-based management initiative.

Box 15   The Pacific North Coast Integrated Management Area (PNCIMA)- Large Marine Ecosystems Fostering Integration

Large Marine Ecosystems (LMEs) are coastal areas that extend from river mouths to the outer boundaries of continental shelves and the outer margins of coastal currents. In order to address common issues of concern such as overfishing, coastal erosion, and oil and chemical spills, LME management requires integration. Vertical integration is achieved through the involvement of all levels of government, from local to national. When LMEs cross national boundaries, trans-boundary and/or regional cooperation is required. LME management also requires the participation of all sectors utilizing the LME space (horizontal integration), including fisheries, shipping, oil exploration, tourism, etc. Scientific input is required for management, and many LME projects also include capacity building and educational components. All LME projects have established some form of coordination mechanism that allow the various stakeholders to communicate and take decisions on management.

The Pacific North Coast Integrated Management Area (PNCIMA) covers an area of approximately 88,000 km^2 in the Pacific Ocean off the coast of British Columbia, Canada. Its waters are biologically diverse and contain thousands of fish, invertebrate and plant species. The undersea environment is dynamic and a source of food, jobs and recreation for thousands of Canadians. In 2008, a Memorandum of Understanding was signed by the Department of Fisheries and Oceans, Coastal First Nations, and the North Coast-Skeena First Nations Stewardship Society confirming all three parties' commitment to integrated marine use

planning in order to maintain healthy ocean ecosystems and sustain local marine economies. The PNCIMA currently supports diverse marine activities including: commercial and recreational fisheries, First Nations' traditional use, marine tourism, shipping and transportation and aquaculture. Alternative offshore energy projects, new commercial fisheries and shellfish aquaculture initiatives are also emerging industries in the region.

Source: PNCIMA Initiative web site: http://www.pncima.org/

4. Approaches and Tools for Mainstreaming

Many tools, strategies and approaches exist for mainstreaming. This section will provide a brief overview of some of these most commonly used:

Approaches
- Ecosystem Assessment Approach
- Strategic Environmental Assessment (SEA)
- The CBD Ecosystem Approach
- Spatial Planning

Tools
- Legal instruments
- Economic and Financial Tools
- Sectoral standards, codes of conduct, guidelines, certification schemes, good practices

Although some of these tools/strategies/approaches are more commonly used at one entry point or another, they are not specific to any given sector or level of government. As will be shown in the case studies presented, they have been used in many different ways.

APPROACHES

A. Ecosystem Services Approach

This approach uses the Millennium Assessment's ecosystem services framework to help policymakers identify how their decisions depend on, and impact biodiversity, and to understand, analyze and maximize both biodiversity and human-wellbeing benefits in their decisions. The approach proposes **a five step process for assessing the risks and opportunities** inherent in decisions regarding activities that depend on and affect ecosystem services. It also proposes **scenario planning** as a way to systematically explore possible alternative futures stemming from different decisions and how they may affect direct and indirect drivers of ecosystem change. Finally, the approach **provides guidance on choosing and implementing policies** to sustain the ecosystem services that underlie development.

The Ecosystem Services approach is designed to be incorporated into existing decision-making processes and to be used by decision makers at all levels of governance and in different sectors.

B. Environmental Impact Assessment (EIA) / Strategic Environmental Assessment (SEA)

Integrating **EIA requirements into development planning** can be a powerful approach to mainstreaming. This can be done by incorporating the findings of EIAs into planning and/or by using SEA to guide planning processes. SEA **identifies and evaluates the possible consequences of policies, plans or programs, before they are implemented**, in order to ensure that they balance economic, social, and environmental objectives. It is particularly useful in drawing attention to interrelated ecosystem services and in addressing trade-offs between them.

Many countries have passed laws requiring EIAs and/or SEAs for new developments. Likewise many donors have incorporated SEA requirements into their development assistance procedures and/or into specific Country Assistance Strategies/Plans (See Box 16 Sida and Vietnam).

The **Akwé: Kon Voluntary Guidelines were** prepared by the CBD Open-ended working group on Article 8 (j) in order to ensure that projects and programs with a potential impact on indigenous and local communities undergo an appropriate impact assessment process. It is expected that the procedures and methodologies embodied in the Voluntary Guidelines will play a key role in providing information on the potential cultural, environmental and social impacts of proposed developments, thereby helping to prevent adverse impacts.

Box 16   SEA in Swedish Development Cooperation's Country Strategy for Viet Nam

In 2002 the Swedish development cooperation needed to prepare a new strategy for its engagement in Viet Nam (for the period 2004-08). The Vietnamese Comprehensive Poverty Reduction and Growth Strategy served as a starting point and strategic priorities were identified through analytical work and dialogue with the Vietnamese government and other stakeholders. In line with Sida' s policy, an SEA was carried out to ensure the integration of environment into the Country Strategy.

An iterative approach was used to feed environmental aspects into the strategy process at several points:

• At the initial stages of the strategy process, an environmental policy brief was produced outlining key challenges and opportunities from an environmental and sustainability perspective and linking them to key development issues such as poverty, growth and health.
• An in-depth environmental and sustainability analysis was produced by a team of WWF-Viet Nam consultants, as one of several background studies conducted as part of the strategy process.

•Environment was included as one of several dialogue issues in stakeholder workshops in Viet Nam. The Swedish delegation and Embassy met with government agencies, regional authorities, NGOs, development agencies and other key stakeholders.
• A workshop was also held with Swedish stakeholders (private sector, civil society, universities and government officials) to discuss the findings from the environmental background study in relation to the country strategy.
• Detailed comments by environmental specialists were provided on different drafts of the strategy document.

As a result of this process, environment and sustainability issues were well integrated with other important development issues in the final strategy document and following action plans. The SEA process also helped stakeholders to gain a deeper understanding of how the environment is intrinsically linked to other critical development issues.

Source: OECD, 2006. Applying Strategic Environmental Assessment: Applications of Strategic Environmental Assessment in Development Co-operation. p 100.

C. The CBD Ecosystem Approach

The ecosystem approach provides a framework of 12 principles that can be used to guide planning processes at national and sub-national levels in order to ensure that policies, plans and programs consider biodiversity alongside economic and social objectives. With its provisions for the accommodation of different uses and interests in biodiversity, for the recognition of the interconnectedness of ecosystems, and for stakeholder participation and adaptive management, the Ecosystem Approach is an effective guide for mainstreaming. By its very nature, it also provides for integration between various sectoral interests. Rather than provide a fixed method, the Ecosystem Approach's 12 principles are to be used flexibly and with varying weights assigned to them, according to the context. Box 17 provides 12 guiding questions for the application of the principles of the CBD ecosystem approach.

The Ecosystem Approach has been used extensively and successfully in area-based management plans such as Integrated Marine and Coastal Area Management and Integrated Watershed Management. It has also been incorporated into certain sectoral good practice guidelines such as FAO's Code of Conduct for Responsible Fisheries (see Box 25 pg. 31), Sustainable Forest Management principles (see box 18, pg 24), and the CBD Biodiversity and Tourism Development Guidelines (see box 24, pg 31).

Box 17	Guiding Questions for the Application of the 12 Principles of the Ecosystem Approach

1. How do you **involve all stakeholders** in decisions associated with the management of land, water and living resources?

2. How do you ensure **management is decentralized** to the lowest appropriate level?

3. How do you ensure the (potential or actual) **effects of management actions** on adjacent and other ecosystems are taken into account?

4. How can the **economic context be understood** so that a) market distortions that affect biological diversity are reduced, b) incentives are developed to promote biodiversity and sustainable use, c) ecosystem costs and benefits are internalized?

5. What measures could be used to **conserve ecosystem structure and functioning** so as to maintain ecosystem services?

6. What measures can be taken to ensure **ecosystems are managed within the limits** of their functioning?

7. How can problems be addressed at the **appropriate temporal and spatial scales**?

8. How can **varying temporal scales and lag-effects** be taken into account when considering the sustainable use of ecosystems?

9. How can **adaptive management** be used to address the problem(s) identified?

10. How can an appropriate balance be sought between, and integration of, **conservation and use of biological diversity?**

11. How do you ensure **all forms of relevant knowledge** including, scientific, indigenous and local knowledge, innovations and practices are included?

12. What measures can be taken to facilitate the **involvement of all stakeholders** including all sectors of society and scientific disciplines?

Further explanation of these questions and guidelines for answering them can be found in the Ecosystem Approach sourcebook available at: http://www.cbd.int/ecosystem/sourcebook/

Box 18   Sustainable Forest Management

In 1992, the Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forest of the United Nations Conference on Environment and Development (UNCED), also referred to as the "Forest Principles", defined a new paradigm for forest management, through a set of 15 principles in support to the overall objective of contributing to the management, conservation and sustainable development of forests and their multiple functions and uses. In this regard, the concept of sustainable forest management (SFM) is complementary to the CBD ecosystem approach, both of which are based on the tenet of sustainability. SFM incorporates the following key sustainability concepts:

(i)   Stewardship;
(ii)   Enabling environment;
(iii)   Continuous flow of goods and services without undermining the resource base;
(iv)   Maintenance of ecosystem functioning and biodiversity;
(v)   Maintenance of economic, social, and cultural functions;
(vi)   Benefit-sharing; and
(vii)   Stakeholder participation in decision-making.

More information, including guidance, criteria and indicators can be found on the FAO website at: www.fao.org/forestry

D. Spatial Planning

Spatial plans provide an important opportunity for mainstreaming biodiversity into sectoral and cross-sectoral plans as they determine where economic activities and infrastructure developments are established. Dealing with specific spatial areas and the activities undertaken within them, spatial planning also provides for the coordination of different sectors and tiers of government. Many countries have begun to integrate environmental and sustainability objectives into spatial plans opening a door for biodiversity. While spatial plans were once the exclusive domain of national governments, they are now also used in sub-national planning. Many spatial planning processes are becoming more democratic than before inviting the input and expertise of a range of stakeholders. (Box 19 gives the example of South Africa's National Spatial Biodiversity Assessment.)

Box 19   South Africa's National Spatial Biodiversity Assessment

      Recognizing that limited human and financial resources would not permit the conservation of the whole national territory, South Africa sought a systematic way of prioritizing conservation action. Drawing on its strong expertise in systematic conservation planning, South Africa's innovative National Spatial Biodiversity Assessment (NSBA) informs land-use policy and decision-making at national, provincial, and municipal levels. The assessment combines several layers of spatial biodiversity information such as the incidence and location of species of concern and ecosystems, and critical areas for certain ecosystem processes such as carbon sequestration and water production. It then combines these layers with information on ecosystem status and protection levels, and present and future threats to ecosystem integrity. This process highlights areas that should be given priority for conservation action.

      The NSBA relates to many South African laws and policies across different sectors, and provides valuable indicators and targets that can feed into monitoring and reporting requirements under national environmental legislation. It is an important tool for co-operative governance and mainstreaming of biodiversity conservation efforts within South Africa.

Sources: South Africa National Spatial Biodiversity Assessment 2004. South Africa NBSAP

TOOLS

Indicators

Indicators can be valuable in mainstreaming because they facilitate the understanding and appreciation of the complex relationships between biodiversity and human well-being. They can be used to raise awareness of key actors, to motivate action, and to monitor progress toward sustainability.

Numerous indicators exist and Module 4 (Targets and Indicators) of this series goes into more detail on this subject in the context of the NBSAP. Of particular interest to the

mainstreaming effort are **Ecosystem service indicators**, whereby ecosystems' capacities to render ecosystem services are measured. Box 20 presents some examples.

Box 20   Some Examples of Ecosystem Service Indicators

Provisioning of Food
- Crop production from sustainable [organic] sources in tons and/or hectares
- Livestock from sustainable [organic] sources in tons and/or hectares

Provisioning of Raw Materials
- Industrial roundwood in million m3 from natural and/or sustainable managed forests
- Cotton production from sustainable [organic] resources in tons and/or hectares

Regulation of Air Quality
- Atmospheric cleansing capacity in tons of pollutants removed per hectare

Recreation and Eco-tourism
- Number of visitors to protected sites per year
- Amount of nature tourism

Source: TEEB D1 Report, Chapter 3: Strengthening Indicators and Accounting Systems for Natural Capital.

Legal Instruments

Biodiversity considerations may be integrated into a country's legal framework. This can be done at national or sub-national levels. Laws can also be designed specifically for a sector or an economic activity. (Box 21 presents examples of legal instruments used to mainstream biodiversity.)

Laws governing the ownership, access and use of natural resources are particularly important for the protection and sustainable use of biodiversity. They can be instituted to encourage, control, or prohibit particular uses. When instituting such laws it is crucial that pre-existing customary laws, governance, and management structures be understood and considered, allowing new legal instruments to complement those (and aspects thereof) that promote sustainable and equitable use.

As with other tools, strategies and approaches (particularly economic instruments) discussed below, legal instruments designed for specific sectors should take into account their effects on other sectors. Likewise, they should consider the full range of stakeholders likely to be affected.

Box 21   Examples of Legal Instruments Used to Mainstream Biodiversity

Algeria – Coastal Law, 2002
- Prohibits construction within 300 meters of the coast, and prohibits the building of roads within an 800 meter band parallel to the coast, on coastal dunes, dune ridges and upper parts of beaches. Institutes a Coastal land use plan.

Algeria – Law on the Protection of the Environment in the Context of Sustainable Development, 2003
- Permits national biodiversity strategies and action plans to be better integrated into economic sectors. Conservation and sustainable use of biodiversity are integrated into sectoral and inter-sectoral plans.

Cambodia- Fishery Law, 2006
- Requires fishery management be based on the ecosystem approach and emphasizes fish habitat conservation.

Spain –Law on Environmental Responsibility, 2007
-Requires operators of economic or professional activities that will, or might have environmental impact to adopt measures to prevent, avoid, or repair damages, and to pay the costs of doing so. Also requires the operators to communicate environmental damages. This law complements laws on EIA and SEA.

Lebanon- Hunting Law, 2004
- Aims to make hunting sustainable; refers explicitly to CBD; establishes hunting season, bans hunting for certain species, prohibits nest snatching, taking, destroying, selling etc. establishes breed centers for selected game species.

Djibouti – Law on the Orientation of Economic and Social Development for the period 2001- 2010, Poverty Reduction Strategy 2003, National Initiative for Social Development (INDS) and the MDGs
- All integrate biodiversity protection

Source: National Reports

Economic and Financial Tools

Economic and financial tools can be particularly useful in mainstreaming because economic forces underlie and explain much biodiversity degradation and loss. These tools aim to "correct" or modify these economic forces and/or to put other economic forces into play, which favor the conservation and sustainable use of biodiversity.

Economic and financial tools that can be useful in mainstreaming efforts include:

- Economic Valuation
- Economic Incentives: Payments for Ecosystem Services
- Polluter Pays and other User Fees
- Removal of Harmful Subsidies

Although these economic and financial tools are presented independently here for heuristic purposes, they are best implemented in combination as part of a broader policy mixture aiming to create economic conditions and structures that are favorable to biodiversity conservation, sustainable use, and equitable benefit sharing.

While many economic and financial tools can be used to stimulate changes in behavior, those that generate revenues (such as taxes and fees) should not be relied on to finance biodiversity policy development and implementation in the long term. As discussed in Module 6 such financing should be sought from more solid and lasting sources such as national, sub-national and or sectoral budgets.

Economic Valuation

Over the last decades a range of **economic tools** have been developed or refined with which to quantify the economic value of biodiversity. These tools can be useful in distinguishing between short-term and long-term economic costs and benefits (immediate costs of conservation vs. long term gains), and may assist in answering who should pay the costs of conservation (developers vs. local communities). **Valuation tools** can be particularly useful in: a) making the case for biodiversity mainstreaming, and b) informing the design and assessment of policy alternatives. They are being used increasingly to:

- Illustrate the benefits of biodiversity conservation and sustainable use,
- Point to ways of sustainably maximising and capturing the benefits of biodiversity,
- Better analyze the economic impacts of biodiversity conservation and loss on different groups and sectors, and
- Compare policy options and alternate resource use scenarios.

Box 22	Valuation of Pollination Services Rendered to Agricultural Landscapes
Among the multiple services provided by tropical forests, the pollination service supplied to agriculture has a particular status as even small patches of natural forest in human-dominated agricultural landscapes generate it, and it can be locally important. Based on ecological experiments in Costa Rica, Ricketts et al. (2004) found that the presence of forest-based wild pollinators increased coffee yields by 20% and improved its quality for farms located close to the forest (less than 1 km away). The economic value of this service was estimated at around US$ 395 per hectare of forest per year, or 7% of farm income. This value is of the same order of magnitude as those of cattle and sugar cane production, the major competing land uses in the area – without taking into account the other important services provided by forests such as carbon sequestration.	
Source: TEEB for National and International Policymakers, 2009. p. 9	

Economic Incentives

Setting in place **economic incentives** provides an important source of support and encouragement for biodiversity conservation, and is required in Articles 11, 20 and elsewhere in the CBD. Within the context of the Convention, an incentive is defined as:

"A specific inducement designed and implemented to influence government bodies, business, non-governmental organisations, or local people to conserve biological diversity or to use its components in a sustainable manner. Incentive measures usually take the form of a new policy, law or economic or social programme."

Payments for Ecosystem Services (PES). There are various forms of payments for the maintenance of biodiversity and ecosystem services and they can involve the private and the public sector; their scale can range from global (i.e. REDD-Plus), national and sub-national (See Box 23 China's Grain-to-Greens Programme), to local. At the most basic, PES can be schemes such as product certification, standards and labeling, whereby products produced sustainably obtain higher prices than similar products produced conventionally. Other, less extensively used methods include:

- Direct payments to landowners/users for changing land use patterns
- Payments to landowners/users to maintain an aesthetically pleasing landscapes
- Payments for offsetting biodiversity losses

Two words of caution are warranted in the use of PES schemes regarding the possibility of generating unintended side effects. The first is the need to carefully consider who should receive payments for ecosystem services. Rewarding the wrong actors, or rewarding some actors disproportionately may exacerbate social inequities and may further disadvantage the less wealthy, women, indigenous people, and minority ethnic groups. The second caution is related to the possibility of PES to take the form of 'green' subsidies, which, like other subsidies, tend not to be cost-effective and well targeted (UNEP has set of minimum criteria any subsidy should fulfill to prevent it from turning perverse in the long-run see TEEB D1 chapter 6 pg 34). For more information and guidance on economic incentives please see TEEB Study (D1 Chapter 5).

Box 23   China's Grain-to-Greens Programme

China's Grain-to-Greens Programme (GTGP) is one of the largest PES schemes in the world. Its main objective is to convert steep sloping agricultural land back to forest and grassland, in order to reduce severe soil erosion and flooding. Participating farmers receive grain and cash subsidies for converting their lands and taking care of restored forest and grasslands (Per hectare converted, the grain subsidy is 2250-1500 kgs annually, depending on the region, and the cash subsidy is of RMB300). The participating farmers also receive seed and tree seedlings (many of which are fruit and other commercially valuable trees) and are allowed to keep the economic benefits derived from the trees and pastures. By the end of 2006, close to 9 million ha of cropland had been converted. The GTGP is expected to generate conservation benefits and improve degraded ecosystem services, especially in regions in global biodiversity hotspots such as Wolong Nature Reserve (one of the largest reserves for endangered giant pandas).

Sources: Forests for Poverty Reduction, Proceedings of the Workshop. FAO, 2004: http://www.fao.org/docrep/008/ae537e/ae537e0j.htm#TopOfPage;
Chen et al. 2009. Linking Social Norms to Efficient Conservation Investment in Payments for Ecosystem Service: http://www.pnas.org/content/early/2009/06/26/0809980106.full.pdf+html

'Polluter Pays' and 'Full Cost Recovery' Instruments such as taxes, charges, fees, fines, compensation mechanisms and/or tradable permits are tools that reflect the cost of biodiversity and ecosystem services loss and aim at having those (potentially) causing the loss to pay for it. Such tools can encourage polluters and those who overexploit biodiversity to take preventative action and to put aside funds for remedial action if such loss were to occur. They also ensure that those who reap certain ecosystem services pay for them rather than having society at large pay. For more information and guidance on these types of instruments please refer to the TEEB study (D1 Chapter 7).

Reform and Removal of Harmful Subsidies. Subsidies to sectoral production, including energy, fisheries, agriculture and others, are estimated at hundreds of billions of dollars annually. Many of these subsidies support environmentally harmful practices and thus put them at an advantage over more sustainable processes. Experience shows that subsidy reform and removal can reduce environmental pressures, increase economic efficiency and reduce fiscal burden. The removal of harmful subsidies can be done in isolation but is best executed within a broader process of fiscal reform. For more information and guidance on subsidies please refer to the TEEB study (D1 Chapter 6).

C.   Standards, Codes of conduct, Guidelines, Certification, and Good practices

Production sectors use a **number of tools for achieving environmentally and socially sustainable resource management practices**. Many such tools including biodiversity concerns are established at the international level with country abidance determined on a voluntary basis. Biodiversity mainstreaming with regard to these types of sectoral tools may concentrate on achieving the country's adoption of such guidelines as standard practice and/or on the creation of national standards where international ones are not applicable. Standards can also be regulated at the national or sub-national level.

In many cases sectoral abidance to standards, codes, guidelines etc. will be recognized and will favour the country's products through higher prices and access to niche markets reserved for suppliers who abide by the given standards.

Some examples of these tools include:

Standards are policies that regulate the effect that human activity may have on the environment. They may specify a desired state (e.g. Lake pH should be between 6.5 and 7.5) or limit alterations (e.g. no more than 50% of natural forest may be damaged).

Guidelines provide voluntary and practical advice on how to undertake particular processes. They are usually relatively general and can be applied to a number of circumstances. An example of such guidelines are the CBD Tourism guidelines which aim to make tourism and biodiversity more mutually supportive, engage the private sector and local and indigenous communities, and promote infrastructure and land-use

planning based on the principles of conservation and sustainable use of biodiversity (see box 24)

Box 24   CBD Sustainable Tourism Guidelines

The CBD has produced international guidelines for sustainable tourism development in vulnerable terrestrial, marine and coastal ecosystems and habitats of major importance for biological diversity and protected areas, including fragile riparian and mountain ecosystems. According to the guidelines, in order to be sustainable, tourism should:

- **Make optimal use of environmental resources** that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity;
- **Respect the socio-cultural authenticity of host communities**, conserving their built and living cultural heritage and traditional values, and contributing to inter-cultural understanding and tolerance;
- **Ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders** that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation;
- **Maintain a high level of tourist satisfaction** and ensure a meaningful experience to the tourists, raising their awareness about sustainability issues and promoting sustainable tourism practices amongst them.

The Guidelines are voluntary and represent a range of opportunities for local, regional, national governments, indigenous and local communities and other stakeholders to manage tourism activities in an ecological, economic and socially sustainable manner. They can be applied flexibly to suit different circumstances and domestic institutional and legal settings.

Source: CBD Guidelines on Biodiversity and Tourism Development; Users' Manual on the CBD Guidelines on Biodiversity and Tourism Development. http://www.cbd.int/tourism/guidelines.shtml

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Codes of Conduct can be very detailed, and set out standards of behavior for responsible practices with a view to ensuring sustainable resource use. Two good examples of sector-specific codes of conduct are the FAO Code of Conduct for Responsible Fisheries and the World Tourism Organization's Global Code of Ethics for Tourism (see box 25).

Box 25   Sector Specific Codes of Conduct for Fisheries and Tourism

The FAO Code of Conduct for Responsible Fisheries, with its accompanying Technical Guidelines is an authoritative digest of the principles of sustainable fisheries. It is as valid for nations as it is for local communities involved in fisheries regulation. Article Seven (Fisheries Management) deals with many important biodiversity-related issues, including:

- Excess fishing capacity,
- The special requirements of developing countries and small-scale, subsistence and artisanal fisheries,

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- The conservation of habitats and ecosystems,
- Effects of humans on habitat,
- Aquaculture,
- By-catch and selective harvest,
- The need to base management on the biological and genetic characteristics of stocks,
- The need for gathering knowledge on social and economic impacts of fisheries management and conservation,
- Coastal zone management, and
- The need to adopt a precautionary approach.

The Code and associated guidance are available on the FAO website at:
http://www.fao.org/DOCREP/005/v9878e/v9878e00.htm

World Tourism Organization's Global Code of Ethics for Tourism includes nine articles outlining the "rules of the game" for destinations, governments, tour operators, developers, travel agents, workers and travelers themselves. The tenth article involves the redress of grievances and marks the first time that a code of this type will have a mechanism for enforcement.

Article 1: Tourism's contribution to mutual understanding and respect between peoples and societies;
Article 2: Tourism as a vehicle for individual and collective fulfillment;
Article 3: Tourism, a factor of sustainable development;
Article 4: Tourism, a user of the cultural heritage of mankind and contributor to its enhancement;
Article 5: Tourism, a beneficial activity for host countries and communities
Article 6: Obligations of stakeholders in tourism development;
Article 7: Right to tourism;
Article 8: Liberty of tourist movements;
Article 9: Rights of the workers and entrepreneurs in the tourism industry
Article 10: Implementation of the principles of the Global Code of Ethics for Tourism

Source: http://www.tourismpartners.org/globalcode.html

Good practices (or best practices) are informal examples of actions that can be undertaken to achieve certain sustainability goals, or points that need to be kept in mind towards this end. Box 26 provides an example of such good practices for the conservation of genetic diversity in agriculture.

Box 26	**Examples of Best Practices for Conserving Genetic Diversity in Agriculture**

✓ Establish early warning systems of genetic erosion
✓ Organize Seed and livestock/diversity fairs
✓ Create community gene banks
✓ Improve local seed storage practices
✓ Offer farmers greater room for making their own decisions, and integrating the best of traditional practices and modern technologies

✓ Provide more choices of varieties to farmers, both traditional and improved
✓ Support farmer processes of innovation and adaptation to changing local conditions
✓ Engage farmers and their landraces in plant breeding activities
✓ Improve access to credit for farmers planting landraces and conserving traditional systems of farming
✓ Increase demand for landraces produced sustainably
✓ Strengthen cultural identities

Source: Managing Agricultural Resources for Biodiversity Conservation. UNEP Biodiversity Planning Support Programme Thematic Studies. Available at
http://www.unep.org/bpsp/Agrobiodiversity/agrobiodiversity%20thematic/agbioguide.pdf

Certification schemes
Certification schemes go a step further than voluntary codes of conduct in demanding **adherence to a set of criteria** which a given operation must meet before they can use the logo or name of the certification scheme. It is important for mainstreaming that biodiversity experts are involved in developing criteria for both national and international certification schemes.

Certification schemes that include biodiversity in their criteria can be an extremely powerful tool for mainstreaming because they present the consumer with a choice to buy a more sustainable product. Some examples of certification schemes include those developed by the Marine Stewardship Council (see box 27), the Forest Stewardship Council, the Rainforest Alliance and the Marine Aquarium Council. There are also a number of tourism certification schemes.

Box 27   The Marine Stewardship Council Certification Scheme

The Marine Stewardship Council (MSC) is an independent, global non-profit organization set up in the mid-1990s to promote sustainable fishing by harnessing market forces. The MSC has developed an environmental standard for sustainable and well-managed fisheries. It uses a product label to reward environmentally responsible fishery management and practices. Consumers, concerned about overfishing and its environmental and social consequences will increasingly be able to choose seafood products, which have been independently assessed against the MSC Standard and labeled to prove it. This will assure them that the product has not contributed to the environmental and social problems associated with overfishing. The MSC principles and criteria stipulate that fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends.

Since the certification scheme began ten years ago (in 1999) 42 fisheries have been certified bringing environmental and social benefits, access to new markets, options for consumers, and guidance and ideas for policy makers.

Source: MSC website at http://www.msc.org/

Conclusion

This module has highlighted the importance of mainstreaming in the implementation of the Convention on Biological Diversity. It has stressed that the integration of biodiversity concerns into sectoral and cross-sectoral strategies, plans and programmes should be a key component of national biodiversity strategies and action plans. The module has provided some guidance on how to integrate mainstreaming into the biodiversity planning process. The task of the NBSAP working committee is to prioritize areas for action based on the biodiversity assessment, to decipher which sectors and activities are causing biodiversity loss, and to try to convince key actors in those sectors, including those responsible for sector plans and policies, to recognize sectoral dependency on biodiversity and to take action to mitigate their negative impacts and enhance their positive impacts on biodiversity. The entry points and approaches and tools provided in this Module can be useful in approaching these actors and in helping them to integrate biodiversity concerns in their activities.

Questions for reflection and discussion:

Has your country managed to mainstream biodiversity concerns into any sectoral and/or cross-sectoral strategies, plans and programmes? / - Is your country currently attempting to do so?

Can you provide examples of specific instances where mainstreaming in your country has been particularly successful or unsuccessful?
What were the main factors that led to the success (or to the failure?)
What are the main challenges/opportunities that your country is facing in its mainstreaming effort?

What knowledge and information were/are being used during the mainstreaming effort? How were/are they compiled? What other information might have been/be useful?

What were/are the main messages in your communication strategy and who were/are they directed to? Were/are they effective? How could they have been/be improved (if at all)?

Which approaches and tools were/are being used? How useful were/are they? Would you suggest any modifications?
What other approaches or tools, besides those that are discussed in this module, can provide for effective mainstreaming?

Who was/is involved in the mainstreaming efforts in your country? What is their engagement? How did they get involved?

How long did it take to mainstream biodiversity concerns?

What types and quantity of resources (financial or otherwise) were/are necessary for the mainstreaming effort in your country?

List of Acronyms
CBD Convention on Biological Diversity
COP Conference of the Parties (to the CBD)
EIA Environmental Impact Assessment
FAO Food and Agriculture Organization of the United Nations
IMF International Monetary Fund
NBSAP National Biodiversity Strategy and Action Plan
NFAP National Forestry Action Plans
NFP National Forestry Plan
PRSP Poverty Reduction Strategy Paper
SEA Strategic Environment Assessment
UNEP United Nations Environment Programme

RESOURCES

On Mainstreaming Generally

·   **Ecosystem Services: A Guide for Decision Makers (World Resources Institute, 2008)** This guide details the processes that decision makers can use in mainstreaming ecosystem services into policy. It begins with a conceptual framework that can be used to assess the services that development depends on and affects; it explains how to use scenarios to explore future situations, and how to choose policies that sustain ecosystems for development. Available at:
    http://pdf.wri.org/ecosystem_services_guide_for_decisionmakers.pdf

·   **Mainstreaming Poverty-Environment Linkages into Development Planning: a Handbook for Practitioners (UNDP-UNEP Poverty-Environment Initiative, 2009)** This handbook lays out a programmatic approach to mainstreaming poverty-environment linkages into development planning. The approach is a flexible model that can be adapted to national circumstances to guide the choice of activities, tactics, methodologies and tools. The guidebook provides practical, step-by-step guidance for champions of the mainstreaming process and practitioners at the country level. Available at: http://www.unpei.org/PDF/PEI-full-handbook.pdf

Sectoral Planning

·   **CBD Sectoral Good Practice Guide Series.** These guides, available for the Tourism, Forestry, Pastoralism and Water sectors present policy considerations, management tools, market-based instruments, and capacity-building methods that support biodiversity conservation and poverty reduction in a number of different development sectors. Each guide in the series is composed of a booklet and accompanying power-point presentation. (Guides are in preparation for the Fisheries and Health sectors). They are available at: http://www.cbd.int/development/training/guides/

- **CBD Guidance for Ministries in charge of Finance and Planning**

- **Thematic Studies on Sectoral Integration**. These studies, developed by the UNEP/Biodiversity Planning Support Programme (BPSP) Sectors cover: agriculture, fisheries, forestry, and tourism. There are also studies in this series on: environmental assessment, economic tools for biodiversity planning, financial planning for NBSAPs, legal obligations under MEAs. They are available at:
  http://www.unep.org/bpsp/TS.html

Local Biodiversity Strategies and Plans

- **Guidance for Local Authorities on Implementing the Biodiversity Duty.** This guidebook was developed by DEFRA, the UK Department for Environment, Food and Rural Affairs, in order to help local authorities implement their "biodiversity duty". In spite of being tailored for this purpose, the guide can also be useful for local authorities in other countries wanting to integrate biodiversity considerations into their affairs. The guide explains the relevance and importance for local authorities to integrate biodiversity and outlines key aspects of local authority functions that relate to biodiversity. It focuses on policy and procurement, management of public land and buildings, infrastructure and development, and education, advice and awareness. The guide also contains numerous case studies illustrating approaches and lessons learned. Available at: http://www.defra.gov.uk/environment/biodiversity/documents/la-guid-english.pdf

Economic Tools

- **Subsidies - Reforming Subsidies (TEEB for Policy Makers - Chapter 6)** addresses the need for comprehensive reform of subsidy policies to reduce harm to biodiversity and ecosystem services and improve effectiveness of public expenditures. It provides a critical breakdown of subsidies by major sector, showing ways in which subsidies can be better designed for social and environmental goals. Finally it presents a possible roadmap for reform with guidance on tackling specific obstacles. Available at:
  http://www.teebweb.org/LinkClick.aspx?fileticket=wN2tRlVFCZU%3d&tabid=1019&language=en-US

- **Standards and Pricing - Addressing Losses Through Regulation and Pricing (TEEB for Policy Makers - Chapter 7)** focuses on ways to increase accountability for the cost of damage to biodiversity and ecosystem services. It sets out key concepts, describes the role of environmental regulation and shows how economic information can be used to inform and target regulatory standards. It analyses compensation schemes, and discusses the scope and limitations of market-based instruments in delivering additional conservation gains and encouraging innovative approaches. The chapter concludes with design indicators for a smart policy mix. Available at: http://69.90.183.227/financial/doc/teeb-addressing-losses-en.pdf

Environmental Impact Assessment/ Strategic Environmental Assessment

· **Biodiversity in EIA and SEA. Background Document to CBD Decision VIII/28: Voluntary Guidelines on Biodiversity-Inclusive Impact Assessment.** This document contains the guidelines developed by the CBD to assist countries in incorporating biodiversity related issues into environmental impact assessment and strategic environmental assessment. It contains case studies, background material and examples that can help users to make full use of the guidelines. Available at: http://www.cbd.int/doc/publications/cbd-ts-26-en.pdf**.** They can be found in French at: http://www.biodiv.org/doc/publications/cbd-ts-26-fr.pdf and in Spanish at: http://www.biodiv.org/doc/publications/cbd-ts-26-es.pdf . In addition, a case study database is available at: http://www.cbd.int/impact/case-studies/

· **Akwé: Kon Guidelines**
These are voluntary guidelines for the conduct of cultural, environmental and social impact assessments regarding developments proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities. The guidelines can be found at: http://www.cbd.int/doc/publications/akwe-brochure-en.pdf

· **Applying Strategic Environmental Assessment: good practice guidance for development cooperation.** This guidance outlines the benefits of using SEA in a range of different circumstances, and sets out 12 key "entry points" for effective application of SEA in development co-operation. It describes each entry point and provides key questions to be addressed for each of them, accompanied by specific checklists of these questions, and illustrative case examples.
http://www.oecd.org/dataoecd/4/21/37353858.pdf

Ecosystem Approach

· **The Ecosystem Approach Sourcebook**
This sourcebook is a key resource for those implementing the ecosystem approach. It is offered in both beginners and advanced versions and has an associated database which can be used to browse and learn from the examples of others. In addition, practitioners can submit their own case studies, and in the process learn how their project measures against the principles of the ecosystem approach. Available at: http://www.cbd.int/ecosystem/sourcebook/

Tourism and Biodiversity

· **User's Manual on the CBD Guidelines on Biodiversity and Tourism Development.** This manual helps practitioners implement the CBD Guidelines on Biodiversity and Tourism Development. Case studies, examples and additional resources are included to assist users with implementation and to show how the steps of the Guidelines have been applied in the past. The manual includes a Technical

Users Reference List which provides an alphabetized glossary of important terms enhanced by practical outlines of key steps for the implementation of important techniques such as "Limits of Acceptable Change". It also includes a set of checklists for managers and technical personnel to review as they proceed through each phase of a tourism project to ensure that they are appropriately designing their project. Available at: http://69.90.183.227/doc/programmes/tourism/tourism-manual-en.pdf

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Activity 1   Information and Knowledge Component.

The purpose of this activity is to help those attempting to mainstream biodiversity into sectoral and cross-sectoral policies, programs and/or projects to generate and/or collect the information that will be useful in the mainstreaming effort. This in turn will inform the decision of which entry points to target, and will feed into the communication strategy to be developed for the mainstreaming effort. The activity may be used as one of the initial activities of a multi-stakeholder group brought together for the purposes of the mainstreaming effort. The information generated may also be used to persuade reluctant actors to come to the table.

The activity consists of filling country specific and concrete information into the four boxes of the Millennium Assessment's conceptual framework of the interactions among ecosystem services, human well-being and drivers of change (see figure 1).

You can begin with any of the four boxes, however, it may be easiest to begin with the direct drivers of change (lower right hand side) or with the ecosystem services (lower left hand side) as this information will already be in your country's biodiversity assessment (or country study), the 4th National Report and/or in the NBSAP.

Guiding questions

Direct drivers of change
- What factors (natural or human induced) are affecting biodiversity status and trends?
- Which activities and/or sectors impact on biodiversity and ecosystem services?

Ecosystem services
- Which ecosystem services are being affected by biodiversity degradation and/or loss? (eg. provision of food, fibre, fuel, biochemicals, freshwater, or genetic resources, regulation of air and water quality, climate, water (flows), erosion, pests and diseases, natural hazards, and seed and pollen dispersal (pollination), provision of non-material benefits such as spiritual fulfillment and recreation, and supporting nutrient and water cycling, soil formation and primary production).

Human well-being
- Who (which parts of society) is benefiting from ecosystem services and how?
- Which sectors depend on biodiversity and ecosystem services?
- What are the societal and private costs of the degradation and/or loss of biodiversity?

- Who's well-being is reduced by the degradation and/or loss of biodiversity?
- How are those whose well-being is reduced responding, and what effects does this have on other ecosystem services, on societal well-being?

Indirect drivers of change
- What socio-economic and political factors are propelling the direct drivers of change?
- How do these factors relate to economic sectors?
- How do these factors relate to cross-sectoral and national policy?
- Which policy, regulatory, and/or economic incentives are encouraging, promoting, or leading to the direct drivers.
- What alternatives

This activity can be tailored to different situations. It can be done in order to think through the potential consequences of a specific decision (eg the construction of a dam, the granting of a permit, the protection of a sensitive area, the creation of an incentive for a particular activity), for the management of a specific ecosystem or area (eg. a coastal zone, an area of forest, an administrative unit), for a particular sector (forestry, fisheries, agriculture), and/or for the country as a whole. Evidently the scale of the exercise and the information and stakeholders that should be involved will vary significantly depending on how the activity is used.