NBSAPs 2.0: Mainstreaming Biodiversity
and Development

Defining and assessing success in mainstreaming

Background Paper, Julie Thomas

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About the project

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Executive summary

This paper explores current experience of a specific aspect of mainstreaming biodiversity and development: defining 'what success looks like' and how to monitor how successful a mainstreaming process has (and is) being. The information in this paper is based on both a review of the mainstreaming targets and indicators of selected National Biodiversity Strategies and Action Plans (NBSAPs) from countries at different stages of their mainstreaming processes, and a review of approaches to assessing the success of mainstreaming biodiversity and other issues into development. The latter presents some good, long-term lessons on assessing the success of mainstreaming. Based on the findings and lessons from the material reviewed, some suggestions are made about what needs to be monitored and indicators that can be used to do this.

The recommendations from this paper are not designed to be a 'how-to guide' for putting together a monitoring plan for tracking success in biodiversity-development mainstreaming, but rather to provoke thinking among those responsible for NBSAPs about how they might assess success within their own individual country context. Indeed, one of the main themes of this paper is that no two countries conditions are the same and that what success looks like will depend on an individual country's context.

The key observations emerging from these reviews are as follows:

Assessing biodiversity mainstreaming success should involve monitoring the following two areas:

- **The process of mainstreaming**. Progress with the steps along the way and the quality of the process against set criteria (e.g. participation, political will, leadership, reciprocal mainstreaming).

- **The outcomes and impacts of the mainstreaming process**. Ideally this should include monitoring both upstream and downstream outcomes and these should address and relate to both biodiversity and development impacts.

There is also merit in considering a third area of monitoring:

- **The mainstreaming context**. Ideally this should consider how the context is changing in relation to enabling, disabling, driving, and antagonising biodiversity-development integration.

Potential indicators and criteria for successful mainstreaming can begin to be identified.

Based on experience to date and current guidance, outcome and impact indicators and criteria for successful biodiversity-development mainstreaming have been identified for consideration and are listed in Box 1. This list is illustrative of potential indicators and is by no means exhaustive. It provides a starting point for thinking and discussion. Ultimately, indicators need to be developed to be unique, relevant, and tailored to a country's context, as well as suitable for monitoring.

Mainstreaming is more effective when success indicators are developed with partners and made relevant to their ambitions.

Mainstreaming success relies on a truly cross-cutting, reciprocal and participatory approach with partners and the following should be considered: defining success (and the indicators used to monitor it) requires an understanding of the perspectives on success of partner ministries. If NBSAP targets can be linked to the goals of other ministries, those ministries and their work can become enablers for NBSAP targets. So, indicators need to be set in partnership these partner ministries. Where possible, drawing on existing indicators and integrating them into national monitoring frameworks can again strengthen the potential for implementation.

Ensuring that success indicators reflect both biodiversity and development outcomes is essential to ensuring reciprocal mainstreaming. Biodiversity mainstreaming should not be limited to being a one-way push of biodiversity concerns into other agendas. An example from England's NBSAP exemplifies many of the above learnings and the complexity of the mainstreaming process. The selection of Bumblebee abundance as a headline indicator of mainstreaming may seem highly-specific and only of relevance to environmental stakeholders, but England has chosen to track the status of species/ecosystems that provide important services to the UK as a whole.

Maintaining Bumblebee abundance can be linked directly to an economic benefit in supporting agricultural mechanisms – without bee pollination, a whole economic strand of England is at threat. The indicator therefore unites a range of stakeholders – farmers, gardeners, economists, agronomists, politicians and academics – around a specific aspect of biodiversity. The maintenance of Bumblebee abundance is both useful as a cross-ministry (agriculture, treasury) outcome and as a long-term change that will show that 'the value of biodiversity' has been taken into account in decision-making and societal actions.

Box 1. Indicators and criteria for successful biodiversity mainstreaming

Process indicators

- Undertake research on the value of biodiversity to society

- Develop and implement communication strategy to raise awareness across society of the value of biodiversity

- Identify and put in place institutional mechanisms to support biodiversity mainstreaming

- Develop guidelines for biodiversity mainstreaming for local planning, key sectors impacting on biodiversity and the private sector and build capacity of institutions to use these

- Develop and provide training programmes for key partners

- Develop and implement tools and approaches which enable biodiversity mainstreaming e.g. biodiversity and ecosystem valuation, Payment for Environment Services

Outcome indicators

- Biodiversity targets integrated into national and local development plans

- Biodiversity targets integrated into key sectors policies and plans (key sectors range from those that are having a significant impact on biodiversity e.g. oil and gas and agriculture, to those where the inclusion of biodiversity concerns can deliver development outcomes e.g. food security and climate change).

- Development targets integrated into biodiversity policies and plans

- Increase in awareness of the importance and value of biodiversity across society

- Strengthened co-ordination and capacity for facilitating biodiversity mainstreaming into policies and planning processes

- The value of biodiversity is considered in decision making

- Biodiversity and ecosystem values are integrated into national accounts

- Increase in financial resources available for biodiversity (this could be increases in public / private sources of funding or relate to funds generated through innovative financing mechanisms such as Payment for environmental services and green taxes)

- Species / ecosystem that provide benefits and services to the economy / people's well-being are protected /managed

- Ecologically sustainable systems of production and consumption established

Impact indicators

- Improved livelihoods, wealth and wellbeing from sustainable utilisation of biodiversity

- Improved condition and sustainability of ecosystem services that support human wellbeing

Criteria for assessing the quality of the overall mainstreaming process

- Extensive stakeholder participation

- Political will

- Shared Leadership

- Reciprocal mainstreaming

1. Introduction

In recent years, parties to the Convention on Biological Diversity (CBD) have been revising their National Biodiversity Strategies and Action Plans (NBSAPs). Many have used this as an opportunity to begin mainstreaming biodiversity across government and society (in line with the Aichi Strategic Goal A)[1] and to incorporate development outcomes into their NBSAPs. This is reflected in many of the revised NBSAPs, which now have specific targets for both biodiversity mainstreaming and achieving biodiversity and development outcomes.

Biodiversity-development mainstreaming is defined as:

"the integration of biodiversity concerns into defined sectors and development goals, through a variety of approaches and mechanisms, so as to achieve sustainable biodiversity and development outcomes."

African Leadership Group (ALG)[2], 2012

The framing of the Aichi goal in terms of mainstreaming being an approach to 'tackling the underlying causes of biodiversity loss' appears a rather negative (even if legitimate) approach. It fails to embrace the positive opportunities that incorporating biodiversity potentials into plans, businesses and livelihood systems, can bring. Although the definition by the ALG takes a more positive approach and recognises that biodiversity and development mainstreaming should lead to positive outcomes for biodiversity and development. The approach it proposes for achieving this does not truly describe the ethos of biodiversity and development mainstreaming, since it does not embrace the reciprocal mainstreaming of development concerns into biodiversity plans and policies. Experience has shown that for biodiversity and development mainstreaming to work, reciprocal mainstreaming is key.

Biodiversity and development mainstreaming is a long-term, iterative process. It involves working with a range of actors (government, private sector, public) to create changes in values, attitudes, knowledge, policy, procedures and behaviours towards biodiversity (IIED 2013a). The process of mainstreaming involves a number of steps, often carried out over timescales of many years. Steps initially include identifying elements of biodiversity to be mainstreamed, developing a business case to convince decision makers, actual integration of biodiversity and development objectives into national plans and processes and also ensuring there is sufficient capacity and resource to implement these objectives. Over time, some of these steps may need to be repeated in response to changing external contexts (socio-economic, political, and environmental) and opportunities, which may arise. With such a long-term and dynamic process, assessing the success of mainstreaming efforts along the way is often complex, but vital.

Although the integration of biodiversity conservation and development / poverty alleviation is not a new endeavour (IIED 2013a), to date there has been limited experience in biodiversity and development mainstreaming into development planning. As noted before, the current round of revising NBSAP's provides an excellent opportunity for strengthening mainstreaming. In response to this opportunity, since 2012 the NBSAPs 2.0: Mainstreaming Biodiversity and Development project (co-ordinated by IIED and UNEP-WCMC) has been supporting four African countries[3] in the revision of their NBSAPs. The project aims to support these countries in the development of resilient and effective NBSAPs that influence development decisions and improve outcomes for biodiversity and poverty. Work to date has included working with these countries to identify the steps in the mainstreaming process, development of tools to support the steps identified and provision of opportunities for sharing and learning from one another's experiences. There is mixed experience of defining and assessing the success of mainstreaming both biodiversity and other issues into development. This background paper explores

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[1] CBD, Aichi target - Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society
[2] Established by the NBSAP 2.0 project, the African Leadership Group (ALG) includes Government representatives (typically government staff who are leading the NBSAP revision and technical experts in mainstreaming) from the four NBSAP 2.0 project countries (Botswana, Namibia, Seychelles and Uganda) and independent members from across Africa who offer specifically relevant expertise and experience of mainstreaming. The role of the group is to offer support and leadership in different aspects of biodiversity/poverty linkages and in mainstreaming biodiversity.
[3] The project countries are Botswana, Uganda, Namibia and Seychelles.

experiences to date and starts to draw out lessons that can be of value to biodiversity and development mainstreaming. Specific areas reviewed for this paper include:

- A selection of other (non-biodiversity) issues that are being mainstreamed into development, with a focus on some of the monitoring and evaluation approaches that they use.

- A selection of completed NBSAPs which are known to have mainstreamed biodiversity and development - looking at how biodiversity and development mainstreaming has been addressed, pulling out relevant goals, targets and indicators (where available), as well as plans for monitoring these strategies.

In reviewing the NBSAP's, mainstreaming has been considered with both Aichi Goal A (i.e. mainstreaming biodiversity across government and society) and the African Leadership Group (2012) definition for biodiversity-development mainstreaming (i.e. the integration of biodiversity concerns into defined sectors and development goals leading to biodiversity and development outcomes), in mind.

2. Experience to date: approaches to defining and monitoring the success of biodiversity mainstreaming in NBSAPs

In the revision of their NBSAP, many countries have included targets and actions that support biodiversity and development mainstreaming. Those of Cameroon, Timor-Leste, Tuvalu, England and Brazil[4] are selected for review here, since they have targets for mainstreaming biodiversity across government and society and have either put in place monitoring and evaluation (M&E) systems or begun to consider how they might do this. The selection also covers countries that are in varying stages of their mainstreaming journey.

There follows a summary of how each of these countries has addressed biodiversity and development mainstreaming within their NBSAP, drawing out how they define success, specifically through goals and targets and (where available) indicators for monitoring progress.

2.1. Cameroon (NBSAP II 2012 - 2020)

When the Ministry of Environment, Protection of Nature, and Sustainable Development (MINEPEDED) began revising Cameroon's NBSAP, there was good political commitment to biodiversity conservation (Eyebe, A. et al 2012), but limited integration between biodiversity and development in national plans and policies. A key starting point for the revision, was the recognition that the NBSAP II needed to respond to national challenges, such as growth, development and poverty reduction, as set out in Cameroon's 2035 National Vision and the 2010 Development, Growth and Employment Strategy (DGES). Although the DGES provides an opportunity (recognising the need to conserve biodiversity), the driving force in the strategy is rural development and industralisation (driven by production sectors with a large dependence on natural resources and which are inherently detrimental to biodiversity). Implementation of the DGES has led to increasing investment in these sectors and therefore creating negative impacts on biodiversity.

In response to this, an emphasis on the sustainable use and management of biodiversity as a basis for supporting growth of the national economy and improving livelihoods, is at the heart of Cameroon's NBSAP II. This is reflected in the importance given to mainstreaming throughout the strategy. The NBSAP II has four strategic goals, of which the following two support biodiversity and development mainstreaming:

- To mainstream biodiversity in sector and local level strategies and strengthen coordination and capacity for implementation.

- Promoting sustainable utilisation of biodiversity for wealth creation and contributing to poverty reduction.

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[4] NBSAP document was not available for review, interview held with member of team responsible for revising NBSAP.

Guiding the implementation of these strategic goals are ten principles, of which four are supportive of mainstreaming. They are:

- The payment for biodiversity and ecosystem services should be promoted and instituted as a corporate and development responsibility.

- Mainstreaming biodiversity and ecosystem considerations into all sector and national planning processes, is central to guaranteeing development that is ecologically and economically sustainable.

- Biodiversity conservation, sustainable use and benefit sharing should be a major consideration in Environmental and Social Impact Assessments, which are planning tools for major development initiatives.

- There should be consistency, harmonisation and coordination of all biodiversity-related policies within and across sectors.

The four strategic goals are implemented through 30 biodiversity and ecosystem specific targets. Biodiversity mainstreaming is addressed extensively, with almost half the targets in the NBSAP supporting mainstreaming specifically (detail shown in Box 2). These include targets on where biodiversity concerns are to be mainstreamed into approaches, mechanisms and tools for achieving biodiversity and development outcomes.

Box 2. Targets that support mainstreaming in Cameroon's NBSAP

- By 2020 at least 80% of the population are aware of the importance of biodiversity with an increased knowledge on the link and impact of human activities on the major ecosystems

- By 2020 significant increase in the contribution of scientifically-based information into biodiversity decision making processes and management interventions

- By 2020 an ecologically sustainable system of production and consumption is established based on sustainable practices with appropriate investments

- By 2020, the genetic diversity of cultivated plants, domesticated animals, and their threatened wild relatives, including culturally valuable species, should be maintained and valorised

- By 2020 community-based biodiversity conservation and ecosystem management approaches should be promoted

- By 2020 the development and implementation of a comprehensive program for the valuation of biodiversity should have been realised and payments for ecosystem services and goods imputed into the national budget for use in promoting sustainable biological and genetic resources programmes

- By 2020, the establishment and implementation of mechanisms for the payments for ecosystem services, including carbon stocks, should generate increased revenue

- By 2020, the sharing of benefits from payments for the sustainable utilisation of biodiversity, genetic resources and associated traditional knowledge should increase incomes of local communities

- By 2020, biodiversity-related coordination mechanisms should be fully functional and strengthened

- By 2020, key production sectors and decentralised local authorities should have developed sector or region-specific biodiversity targets, linked to the national targets.

- By 2020, the capacity of key actors should be built and gender mainstreaming carried out for the effective implementation of the biodiversity targets

- By 2018, partnership support and funding of biodiversity programs should have increased

- By 2020, develop and/or intensify integrated action frameworks on all activities (mining, industrial logging, smallholder agriculture, and illegal logging) that impact on forest biodiversity conservation, Protected Areas management in a manner that enhances local governance

To assess progress with implementation of their NBSAP, Cameroon has opted for an implementation, monitoring and evaluation framework. This sets out performance criteria and indicators for assessing the success of implementation against the targets. The development of this framework was led by MINEPEDD, but working closely with other ministries and devolving responsibility to them to identify relevant actions and indicators. Implementation of the framework will be a joint effort between MINEPEDD and key sector ministries. This approach is seen as essential to building ownership of the NBSAP beyond MINEPEDD (Biodiversity Indicators Partnership 2014).

The implementation, monitoring and evaluation framework is extensive and includes over 200 performance indicators, with around a third being monitoring actions that contribute to mainstreaming biodiversity and development. Since the purpose of the framework is to assess the level of implementation, there is an emphasis on the use of output indicators and these cover areas such as:

- Availability of guidelines for mainstreaming biodiversity into production sectors and decentralised planning

- Number of capacity building workshops carried out

- Number of people trained in the use of biodiversity mainstreaming tools

- Number of biodiversity projects by private sector / key sectors

There are also some outcome indicators, which include:

- NBSAP targets integrated into Growth and Employment Strategy Paper (GESP)

- Budget allocations for biodiversity mainstreaming in GESP

- Proportion of GDP from biodiversity resources and ecosystem services

- Amount of revenue generated from Access and Benefit Sharing

- Number of sector policies / laws revised that address biodiversity issues

- Number of sector ministries with defined biodiversity targets

- Number of beneficiaries benefitting from biodiversity benefit sharing

A full list of indicators is provided in Annex 1.

There are plans to put in place further M&E mechanisms, which will monitor the conservation, sustainability and equity impacts of the strategy. Progress will be monitored on a 3-year basis, to link into and inform the National Budget which is also reviewed every three years.

Whilst the need for synergy with the national budgeting process has been recognised in the above case, in other areas, the process is less joined up. For example, although the NBSAP references the ambition to align with the DGES, there is no later evidence of inclusion of DGES targets or alignment to them.

2.2. Tuvalu (National Biodiversity Strategy and Action Plan 2012 - 2016)

Led by the Department of Environment, this is Tuvalu's first NBSAP. Prior to this, the only guiding document for environmental considerations was the National Environmental Management Strategy (1997). The vision of their NBSAP is to achieve equitable sharing of the benefits of Tuvalu's biological resources, through their protection and sustainable management. The NBSAP sets out thematic priorities, with five cross-cutting issues (including Biodiversity Mainstreaming) which are seen as essential to their achievement. The NBSAP does not have specific date-bound targets, but instead has goals and objectives and actions and those of relevance to mainstreaming are shown in Table 1.

Tuvalu has developed indicators for the thematic priorities, but not yet for cross-cutting issues. Within this set of indicators are some that are relevant to biodiversity and development mainstreaming. These are a mix of output and outcome indicators, but dominated by output indicators.

Output indicators cover areas such as:

- Enabling legislation in place

- Policy papers on links between biodiversity and key sectors, in place

- Coordination mechanisms for biodiversity mainstreaming agreed by all relevant agencies

Outcome indicators include:

- Funding secured for biodiversity-related activities

- Biodiversity priorities and issues integrated into Kakeega II (Tuvalu's national development plan)

- Production and consumption of traditional food crops increased

The emphasis on output indicators may simply be a reflection that Tuvalu is in the early stages of mainstreaming. Initial mainstreaming activities (for example) are dominated by establishing evidence of the link between biodiversity and the country's relevant sectors - and incorporating this into policy papers (i.e. outputs rather than outcomes).

Overseeing and monitoring implementation of the plan will be the responsibility of the Department of Environment. There are plans to develop an implementation plan for the NBSAP, which will include an M&E plan.

It is notable that Tuvalu has been successful in linking biodiversity issues to tangible outcomes and national benefits, such as food security, disaster planning and income for islanders.

Table 1: Goals and objectives in Tuvalu's NBSAP that support biodiversity and development mainstreaming

Goal	Objective
To enable the people of Tuvalu to understand, appreciate and have the necessary know-how to conserve and sustainably use biodiversity resources	Take into full account biodiversity in all aspects of planning and development on each island
To integrate priority biodiversity benchmarks into the national policy framework and simultaneously institute appropriate funding levels	Review all documentations related to environment in Tuvalu and build baseline data for mainstreaming biodiversity into Tuvalu"s overall national policy framework
Build resilience of biodiversity to manage, control and reduce the risks and impacts of climate change and natural disasters	Improve knowledge on the impact of climate change and natural disasters on biodiversity

Develop contingency plans to ensure biodiversity, culture and traditions of Tuvalu are preserved and protected in time of extreme events of climate change and natural disasters |
| Increase the use of traditional knowledge and practices in the conservation and management of biodiversity in Tuvalu as well as the equitable sharing of benefits | Foster and promote the equitable sharing of benefits derived from biodiversity |
| Integrating key biodiversity conservation criteria into existing and new waste management policies, strategies and plans | To ensure the impacts of waste on biodiversity is minimised

Enhance capacity and understanding on impact of waste on biodiversity |
| Improve sustainable management and use of existing conservation areas and establish more conservation areas throughout the nation | Create alternative livelihoods through the sustainable use of relevant biodiversity to provide sustainable livelihood and income to communities and families |
| Revive the production and consumption of local food | To increase awareness and understanding of the people on the linkages between food security and biodiversity |

2.3. Timor-Leste (The National Biodiversity Strategy and Action Plan of Timor-Leste 2011 - 2020)

The revision of Timor-Leste's NBSAP was led jointly by the Ministry of Economy & Development (MED) and the Ministry of Agriculture & Fisheries (MAF). The NBSAP started from a point where Timor-Leste's Strategic Development Plan (SDP) (2011-2030) recognised the importance of biodiversity for achieving sustainable growth and poverty reduction - and the need to protect biodiversity as development progresses. This is articulated in the following goal of the SDP:

"By 2015, our goal is for Timor-Leste to have developed a National Planning Framework to guide the acceleration of sustainable economic growth and equitable development from national level to local level, while protecting Timor-Leste's biodiversity and natural environment in conservation zones."

Timor-Leste's Strategic Development Plan (SDP) (2011-2030)

In its environment section, the SDP also included targets to develop the NBSAP and a National Biodiversity Act (designed to regulate implementation of the NBSAP). The NBSAP needed to align to the targets in the SDP and provide a roadmap for achieving them.

The vision of the NBSAP is to "conserve and wisely use biodiversity to provide food security and contribute to poverty eradication and improved quality of life". The strategy sets out five priority strategies and associated targets. Mainstreaming is central to these, with three of the priorities addressing biodiversity-development mainstreaming (shown in Table 2).

Despite this strong emphasis of protecting biodiversity within the SDP, the NBSAP does not appear to respond to this challenge. For example, there is no specific target linked to ensuring that National Planning Framework takes account of biodiversity issues in its implementation.

Table 2: Timor-Leste – NBSAP priority strategies and targets that support biodiversity and development mainstreaming

Priority Strategy	Target
Mainstreaming biodiversity into sector plans and programmes to address the underlying causes of biodiversity loss	By 2015, public awareness on biodiversity has increased and participation in conservation activities (through sustainable tourism and sustainable agriculture) by private sector, media, and local communities, including women and youth has been enhanced
Protecting biodiversity and promoting sustainable use	By 2015, rehabilitation activities in critical watershed and degraded lands have been undertaken and at least one million trees have been planted per year, and sustainable livelihoods have been provided to local communities through ecosystem restoration activities
Enhancing biodiversity and ecosystem services to ensure benefits for all	By 2020, ecosystems services have been enhanced through promoting economic values of biodiversity and ecosystems and promoting benefits sharing

Timor-Leste has yet to develop its M&E system, but in the interim will track progress of the NBSAP, using the targets set in the NBSAP, the SDP and the National Ecological Gap Assessment report. Plans are underway to develop specific indicators for the NBSAP and these will draw upon the Convention on Biological Diversity's, suggested areas for indicator development include:

- Health and well-being of communities who depend directly on local ecosystem goods and services

- Biodiversity for food and medicine

- Trends in genetic diversity of domesticated animals, cultivated plants and fish species of major socio-economic importance

- Access and benefit sharing

- Official development assistance provided in support of the Convention

2.4. Brazil (National Biodiversity Strategy and Action Plan)

The revision of Brazil's NBSAP started when nationally, biodiversity was already seen as an important issue, it being a theme within the national multi-year budget. There was also growing awareness of biodiversity's importance to broader development issues, as a result of national programmes such as Biodiversity for Food and Nutrition.

A key lesson learnt from the previous NBSAP was that implementation had been weak, due to their having been little involvement in its development by stakeholders outside of the environment discipline. Revising the NBSAP was seen as an opportunity to address this weakness and to begin mainstreaming biodiversity into other sectors.

Working closely with other ministries, academics, local communities, private sector and local government, 20 targets based closely on the Aichi targets have been developed - and correspondingly, include targets that cover the following areas that are supportive of biodiversity and development mainstreaming:

- Raising awareness of the values of biodiversity across society

- Integrating biodiversity values into national and local development plans and relevant sector plans.

- Eliminating incentives that are harmful to biodiversity and putting in place incentives that encourage conservation and sustainable use of biodiversity

- Development and implementation of plans that support sustainable production and consumption

- Sustainable utilisation of biodiversity for improved livelihoods, wealth and wellbeing

It is interesting to note that three targets took over a year to agree, but this process was seen as essential to achieving buy-in and commitment from other partners.

Development of activities to support the implementation of the targets involved 31 ministries and federal agencies, who were asked to specifically identify and align what they were already doing to address biodiversity issues and also what was already funded. The Ministry of Planning has played an important role in this process by helping to broker relationships and encourage buy-in from other ministries.

Work is currently underway to take a similarly collaborative approach to an M&E plan. The Ministry of Planning has advised the prioritisation of indicators in order to make the plan manageable, achievable and trackable. PainelBio, a network of institutions from different sectors, is supporting the process of developing indicators. Once finalised, the indicators will need to be approved by the National Commission for Knowledge and Use of Biodiversity, Conabio.

Although the Ministry of Environment is not formally monitoring the mainstreaming process, staff are informally tracking the changes they see, as shown in the quote below:

'The revision process has been an important approach to mainstreaming biodiversity. It's meant that 31 ministries and Federal Agencies have been discussing and thinking about biodiversity issues. The Ministry of Agriculture gave a lecture the other day and it talked about biodiversity. That's due to the NBSAP process.'

Camila Oliveira, Environment Analyst, Ministry of Environment, Brazil

2.5. England (Biodiversity 2020: A strategy for England's wildlife and ecosystem services)

The issues associated with development are not only limited to developing countries. Industrialised countries such as England also have to ensure that biodiversity issues are taken into account and yields some useful lessons.

When the Department for Environment, Food and Rural Affairs (DEFRA), started revising England's NBSAP, there had already been extensive experience of biodiversity mainstreaming and a growing base of evidence and awareness of the benefits that the natural environment provides to society and the economy (UK National Ecosystem Assessment 2011). The UK Government was also firmly committed to improving how the value of biodiversity is taken into account in decision-making. This is

a central theme of the UK's first natural environment White Paper in 20 years: The Natural Choice – Securing the Value of Nature (DEFRA 2011).

England's NBSAP builds on the White Paper and its overall vision is that '*by 2050 our land and seas will be rich in wildlife, our biodiversity will be valued, conserved, restored, managed sustainably and be more resilient and able to adapt to change, providing essential services and delivering benefits for everyone'.*

The strategy sets out four high-level outcomes that seek to deliver improvements to: i) land habitat and ecosystems, ii) marine habitat and ecosystems, iii) species conservation, iv) people's engagement in biodiversity issues and understanding of its value.

Box 3. Priority actions in England's NBSAP that support biodiversity and development mainstreaming

- Work with the biodiversity partnership to engage significantly more people in biodiversity issues, increase awareness of the value of biodiversity and increase the number of people taking positive action

- Promote taking better account of the values of biodiversity in public and private sector decision-making, by providing tools to help consider a wider range of ecosystem services

- Develop new and innovative financing mechanisms to direct more funding towards the achievement of biodiversity outcomes

- Integrate consideration of biodiversity within the sectors which have the greatest potential for direct influence, and reduce direct pressures

- Improve the delivery of environmental outcomes from agricultural land management practices, whilst increasing food production

- Reform the Common Agricultural Policy to achieve greater environmental benefits

- Through reforms of the planning system, take a strategic approach to planning for nature within and across local areas. Retain the protection and improvement of the natural environment as core objectives of the planning system

- Establish a new, voluntary approach to biodiversity offsets and test our approach in pilot areas

- Develop 10 Marine Plans which integrate economic, social and environmental considerations, and which will guide decision-makers when making any decision that affects, or might affect, a marine area

- Put robust, reliable and more coordinated arrangements in place, to monitor changes in the state of biodiversity and also the flow of benefits and services it provides us, to ensure that we can assess the outcomes of this strategy

- Improve public access to biodiversity data and other environmental information – putting power into the hands of people to act and hold others to account. Also communicate progress towards the outcomes and priorities of this strategy and make available information to support decision-making at a range of scales to help others contribute to the outcomes

- Align measures to protect the water environment with action for biodiversity, including 'through the river basin' planning approach under the EU Water Framework Directive

- Continue to promote approaches to flood and erosion management which conserve the natural environment and improve biodiversity

- Reduce air pollution impacts on biodiversity through approaches at national, UK, EU and international levels targeted at the sectors which are the source of the relevant pollutants

Biodiversity mainstreaming underpins the achievement of these high-level outcomes. While the term 'target' is not generally used, there is instead a key focus on 'priority actions' for delivery of these outcomes. The strategy sets out 23 priority actions, of which 16 are important in the process of mainstreaming biodiversity (Box 3).

Because England is already advanced in national policy commitment to mainstreaming, most actions are focused around further integration into specific sector policies and plans and delivering mainstreaming outcomes in practice.

England has taken a twin-track approach, monitoring both implementation and progress towards outcomes. To monitor progress on the implementation of the strategy (and outputs), there is a 3-year delivery plan, which sets out milestones against each priority action. This delivery plan is reviewed and updated annually and where necessary changes made to milestones. This enables implementation to respond to changing external context and remain relevant.

To monitor progress towards outcomes, twenty-four indicators have been identified. Almost half of these are relevant to biodiversity mainstreaming. This process was led by DEFRA, but with extensive consultation across relevant sectors, local government, private sector and communities.

England has specifically opted to limit the number of indicators so that they can be easily understood, easy to use (e.g. in government-public communications) and cost-effective. Since England's strategy is outcome-focused, there is an emphasis on measuring progress towards the desired outcomes of the strategy using state indicators (which show the status of components of biodiversity). In addition, a small number of response indicators (which track the efforts to conserve biodiversity), benefit indicators (which measure trends in the benefits and services that humans derive from nature) and pressure indicators (which measure some of the factors causing biodiversity loss), are used to show progress with the priority actions (DEFRA 2013). Indicators tracking biodiversity mainstreaming are a mix of state, response and benefit indicators. Progress is considered in terms of long-term and short-term (5 years) change. A traffic lights approach is used to show 'change over time' for each indicator. This example shows use of a pressure, state, benefit, response (PSBR) framework, but equally a driving forces, pressures, states, impacts, resources (DPSIR) framework could be employed to monitor mainstreaming.

Table 3 shows the indicators used to monitor progress with biodiversity mainstreaming actions. Some of these indicators are still under development, especially those relating to decision-making and sustainable UK consumption. These are naturally difficult areas to develop monitoring for and they include for example, identifying an indicator that can track nationally how biodiversity considerations are being integrated into decision-making.

Table 3. Indicators from England's Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services, used to track progress with biodiversity and development mainstreaming

Indicator	Measures
Integrating biodiversity considerations into local decision making	Use by local authorities of biodiversity data in planning application screening or assessing local and neighbourhood plans (Under development)
Biodiversity data and information for decision making	Under development
Global biodiversity impacts of UK consumption	Footprint indictors for land use, water and carbon (under development)
Funding for biodiversity	Public sector expenditure on UK and international biodiversity
Public use and enjoyment of the natural environment	Percentage of the adult population visiting the Outdoors several times or more a week in the last 12 months. Work is underway to develop a measure that looks at people's awareness, understanding and support for biodiversity
Public taking action for the natural environment	Conservation volunteering Households undertaking wildlife gardening in England
Agricultural and forest area under environmental management schemes	Area of land under targeted agri-environment schemes Area of land under entry level agri-environment schemes (ELS) Uptake of priority ELS options

	Percentage of woodland certified as sustainably managed
Biodiversity and ecosystem services: terrestrial habitats	Level of carbon stock in Great Britain (under development)
Biodiversity and ecosystem services: species	Bumblebee abundance
	Species richness of hoverflies and wild bees, based on presence/absence data for hoverflies and solitary/social bees (under development)
Sustainable fisheries	Percentage of fish stocks harvested within sustainable limits.
Genetic resources for food and agriculture: animals.	Effective population size of native sheep and cattle breeds

The stage that England is currently at with mainstreaming, throws up a useful example of how monitoring of downstream outcomes and ultimate impacts, becomes more relevant as a country moves into the implementation stage. The selection of Bumblebee abundance as a headline indicator of mainstreaming may seem highly-specific, but England has chosen to track the status of species/ecosystems that provide important services to the UK as a whole. Maintaining Bumblebee abundance can be linked directly to an economic benefit in supporting agricultural mechanisms – without bee pollination, a whole economic strand of England is at threat – maintenance of bee population is literally essential.

The indicator unites a range of stakeholders – farmers, gardeners, economists, agronomists politicians and academics – around a specific aspect of biodiversity. Thus, as an indicator of successful mainstreaming, the maintenance of Bumblebee abundance is both useful as a cross-ministry (agriculture, treasury) outcome and as a long-term change that will show 'the value of biodiversity' has been taken into account in decision-making and societal actions.

3. Lessons from approaches to assessing the success of mainstreaming biodiversity and other issues into development

Biodiversity is not the only issue to be mainstreamed into development. Examples of other recent issues being mainstreamed include environment, drylands, climate change and gender. There is mixed experience of monitoring the success of mainstreaming all of these issues. Current guidance from biodiversity mainstreaming is also explored here.

Much of the recent guidance for **environmental** mainstreaming has been developed by the UNDP-UNEP Poverty Environment Initiative (PEI), which supports country-led efforts to mainstream poverty-environment linkages into national development planning.

The PEI has developed a set of indicators for successful environment mainstreaming (UNDP 2009). These are used to stimulate discussion as to what mainstreaming success could look like, in the countries that PEI supports. They define success in terms of outcomes (Box 4).

Dalal-Clayton and Bass (2009) propose that there are two key dimensions to be considered when assessing the effectiveness of environmental mainstreaming:

1. Process - assessing progress in terms of the steps that have been undertaken and the quality of that process against a set of country-specific principles for environmental mainstreaming. These principles cover areas such as leadership, broad dialogue and participation, and reciprocal mainstreaming.

2. Outcome - assessing how far intended or unintended desirable outcomes have been achieved. These outcomes include both upstream (such as inclusion of development-environment linkages in national development and poverty reduction strategies) and downstream outcomes (such as improved livelihoods from the use of environmental assets).

Box 4. Indicators of successful environmental mainstreaming

• Inclusion of poverty-environment linkages in national development and poverty reduction strategies

• Strengthened capacity within finance/planning ministries as well as environmental agencies to integrate environment into budget decision-making and sector strategies and implementation programmes

• Inclusion of poverty-environment linkages in sector planning and implementation strategies.

• Strengthened capacity in key sector ministries to include environmental sustainability into their strategies

• Widened involvement of stakeholders in making the case for the importance of environment to growth and poverty reduction

• Improved domestic resource mobilisation for poverty-environment investments

• Increased donor contributions to country-level environmentally sustainable investment

• Improved livelihoods and access to environmental and natural resources for the poor

Considerable effort has also gone into developing specific indicators that assess poverty-environment linkages (Shyamsundar, P. 2002, Nunan et al. 2002, Tyrell et al. 2012). The development of such indicators and integrating them into national monitoring systems, is an important tool for implementing environmental mainstreaming. It can help increase the chances that the poverty-environment elements of policy documents are both monitored and implemented effectively[5].

Common across the guidance for environmental mainstreaming, is a focus on defining success by monitoring outcomes and these should include both environment and development outcomes.

Guidance for **drylands mainstreaming** (UNDP 2008) recommends that evaluation should focus not only on the effectiveness of the mainstreaming process, but also on the impacts of implementing the mainstreaming process. It provides a tool for assessing the overall effectiveness of the mainstreaming process (Figure 1).

It is recommended that the assessment of process can be useful in stimulating further debate and can promote mainstreaming if key stakeholders are involved.

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[5] http://www.unpei.org/poverty-environment-indicators

Criteria	Scale (5 = highest) 1 2 3 4 5	Evaluation questions
[1] Political leadership		• How supportive is the political leadership on environmental issues? • Do key individuals in government hold environmental responsibilities?
[2] Institutional commitment		• Are there institutions specifically mandated for environmental management? • Are they committed to environmental mainstreaming? • Are the institutions responsible for planning and finance equally committed to environmental mainstreaming? • Are institutions orienting their staff to adopt a mainstreaming culture? • Does government increasingly finance mainstreaming processes?
[3] Coordination		• Is there an institution that coordinates environmental mainstreaming? • Is it well staffed, with technical backstopping? • Are there sub-committees, sector working groups or task forces on environmental mainstreaming? • Have they been successful in advocating for environmental issues?
[4] Participation		• Is planning done in a participatory manner? • Do the direct beneficiaries participate? • Is there a plan to cost-effectively manage the participatory/consultative processes?
[5] Communication reporting		• Are there good and regular communication links among the institutions and groups involved in mainstreaming? • Is there sharing of information on mainstreaming practices? • Is the media used to disseminate emerging good practices?
[6] Guidance training		• Are staff trained before they undertake mainstreaming? • Are they guided by experts knowledgeable in mainstreaming? • Are guidelines available to the staff?
[7] Awareness raising		• Are all staff in the organisation(s) that lead mainstreaming initiative(s) made aware of its importance and steps? • What about the general public? • Are awareness campaigns conducted for the political leadership?
[8] Appraisal/ Assessment		• Is the assessment of likely impacts made? • Is the assessment of potential developmental opportunities from natural resources also made? • Are the environmental, economic and social challenges of exploiting particular resources or development in areas articulated?
[9] Mainstreaming tools		• Are tools for mainstreaming available? • Are they being followed? • Is training made available for the users?
[10] National/local sustainability		• Are there national and local (e.g. district) sustainability strategies or environment plans?
[11] Targets objectives/ indicators		• Have baselines indicators/benchmarks to mainstreaming been created? • Have objectives been set very clearly? • Are target indicators reflected in the respective planning frameworks?
[12] Allocation of spending and actual funding		• Are the plans made linked to the budgeting framework or other funding mechanisms? • Are approved budgets actually spent? • Are public expenditure tracking surveys regularly conducted?
[13] Monitoring/ auditing		• Does the monitoring framework include monitoring of mainstreamed issues? • Are the mainstreamed issues sufficiently reported upon? • Is there a culture to share the TOR for hiring consultants to review mainstreaming well in advance?

Figure 1. Tool for evaluating the effectiveness of drylands mainstreaming processes (UNDP 2008)

Mainstreaming **Climate Change** into development is a more recent process and in many countries is at a very early stage. There is considerable guidance available on climate change mainstreaming. The need to monitor and review is stressed in most guides and frameworks, but how to achieve this is often left unspecified (Preston, Westaway & Yuen 2011). However, some frameworks are beginning to emerge:

- The PEI's guidance on monitoring climate change adaptation mainstreaming (UNDP 2011), focuses on monitoring the process of mainstreaming and the likely outcomes at the different stages of the mainstreaming process. Guidance includes a checklist of suggested outcomes for the three key stages of mainstreaming; identifying entry points and making the case, mainstreaming climate change adaptation into policy process and meeting the implementation challenge (Box 5). A strength of this approach is that it embraces both process and outcome monitoring, however when applying the checklist it is worth remembering that some outcomes can be the result of more than one key stage.

- The Global Climate Change Alliance recommends that monitoring systems should include process and outcome indicators.[6] The guidance suggests that process indicators track the integration of climate change adaptation and vulnerability objectives into relevant policies and programmes and measure the extent to which mainstreaming is institutionalised e.g. political leadership, institutional commitment, resource allocation. Suggested areas for outcome indicators include:

  o Increased capacity of government to assess climate risks / identify climate trends

  o inclusion of climate related criteria in development / sector policies and programmes

  o implementation of adaptation and mitigation related measures and regulations

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6 http://www.gcca.eu/sites/default/files/GCCA/module8_pacific_2011-02-16.pdf

Box 5. PEI's checklist of outcomes for climate change adaptation mainstreaming

Finding the Entry Points and Making the Case

- Entry points for adaptation mainstreaming agreed

- Key ministries (e.g. environment, finance, planning, sectors) and other non-governmental actors (e.g. representatives of communities and the private sector) relevant to the agreed entry points are members of the steering committee or task force of the adaptation mainstreaming effort

- Adaptation mainstreaming champions liaising with in-country donor coordination mechanisms

- Increased awareness that poor people are likely to be the most affected by climate change, that national development goals and key sector strategies (e.g. agriculture, health, energy, tourism) can be affected by climate change and that national development and sectors can in turn affect the vulnerability of the country and the poor

- Activities to be implemented in collaboration with finance and planning or relevant sector ministries included in the workplan for the following stage of the effort

Mainstreaming Climate Change Adaptation into Policy Processes

- Country-specific evidence collected on the costs and benefits of climate change and adaptation (e.g. impact, vulnerability and adaptation assessment, socio-economic analysis, demonstration projects)

- Adaptation and its links to development and poverty reduction included in the working documents produced during the targeted policy process (e.g. documents produced by the working groups of the relevant national, sector and subnational planning processes)

- Adaptation and its links to development and poverty reduction included as a priority in the completed policy documents of the targeted policy process (e.g. poverty reduction strategy paper, MDG strategy, relevant sector or subnational plan)

- Climate-proofed and specific adaptation policy measures for climate change adaptation costed by finance and planning or sector ministries and subnational bodies

Meeting the Implementation Challenge

- Adaptation-related indicators linked to policy documents of national development planning integrated in the national monitoring system

- Increased budget allocations and public expenditures for adaptation policy measures of non-environment ministries and subnational bodies

- Adaptation mainstreaming established as standard practice in government and administrative processes, procedures and systems (e.g. budget call circulars, systematic inclusion of adaptation in public expenditure reviews, coordination mechanisms, systematic climate-proofing, monitoring)

Long-Term Outcomes

- Institutions and capacities strengthened for long-term adaptation mainstreaming

- Conditions for simultaneous improvement of adaptation and poverty reduction enhanced

CARE's guidance[7] suggests that monitoring needs to look further than traditional programmatic monitoring of inputs and outputs and outcomes. It should also include indicators that monitor the process and enabling factors (CARE 2010 a & b). Enabling factors include an enabling policy context, political will and capacity of governments and local communities, to carry out climate change adaptation. The guidance also recommends that monitoring systems should track the external context (environmental, social, political and economic).

With the exception of PEI, the emphasis is on recommending monitoring of both process and outcome again. There is also an interesting emphasis on careful consideration of changing external context.

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[7] http://www.careclimatechange.org/files/toolkit/CARE_Integration_Toolkit.pdf

Although the integration of biodiversity conservation and development / poverty alleviation is not a new endeavor. The mainstreaming of **biodiversity-development,** as a deliberative effort, is a relative recent initiative (IIED 2013a) and consequently there is currently less experience from which to draw upon. However, the NBSAPs 2.0 project and CBD has begun to develop guidance**.** Guidance from the NBSAPs 2.0 project suggests that biodiversity mainstreaming can result in a spectrum of outcomes, ranging from influencing a policy, plan, budget or decision - to changing behaviour and delivering environmental and development improvements on the ground (IIED 2013b (Box 10). The outcomes a country may seek to achieve will vary depending on where it is in the mainstreaming process. For example, for countries at the start of mainstreaming process, the focus may be on achieving upstream outcomes, whereas if a country already has in place appropriate polices and plans, but these are not being effectively implemented, it may want to focus on achieving downstream outcomes.

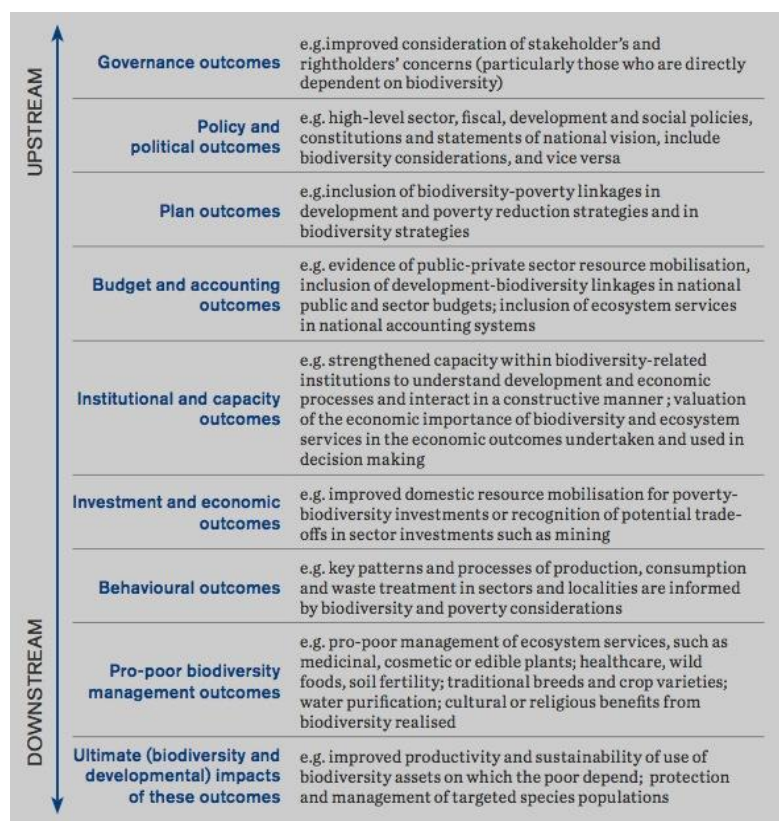|		
UPSTREAM	**Governance outcomes**	e.g.improved consideration of stakeholder's and rightholders' concerns (particularly those who are directly dependent on biodiversity)
	Policy and political outcomes	e.g. high-level sector, fiscal, development and social policies, constitutions and statements of national vision, include biodiversity considerations, and vice versa
	Plan outcomes	e.g.inclusion of biodiversity-poverty linkages in development and poverty reduction strategies and in biodiversity strategies
	Budget and accounting outcomes	e.g. evidence of public-private sector resource mobilisation, inclusion of development-biodiversity linkages in national public and sector budgets; inclusion of ecosystem services in national accounting systems
	Institutional and capacity outcomes	e.g. strengthened capacity within biodiversity-related institutions to understand development and economic processes and interact in a constructive manner ; valuation of the economic importance of biodiversity and ecosystem services in the economic outcomes undertaken and used in decision making
	Investment and economic outcomes	e.g. improved domestic resource mobilisation for poverty-biodiversity investments or recognition of potential trade-offs in sector investments such as mining
	Behavioural outcomes	e.g. key patterns and processes of production, consumption and waste treatment in sectors and localities are informed by biodiversity and poverty considerations
DOWNSTREAM	**Pro-poor biodiversity management outcomes**	e.g. pro-poor management of ecosystem services, such as medicinal, cosmetic or edible plants; healthcare, wild foods, soil fertility; traditional breeds and crop varieties; water purification; cultural or religious benefits from biodiversity realised
	Ultimate (biodiversity and developmental) impacts of these outcomes	e.g. improved productivity and sustainability of use of biodiversity assets on which the poor depend; protection and management of targeted species populations

Figure 2. Upstream and downstream outcomes of biodiversity

Drawing on this guidance, the NBSAPs 2.0 project countries have identified an initial list of potential biodiversity and development mainstreaming outcomes they would like to achieve. These were:

- harmonised land use planning

- increased tourism investment in communal land under conservation to realise

- equitable benefits from these areas.

- cessation of particular behaviour threatening to biodiversity

CBD guidance on mainstreaming biodiversity (CBD a) makes suggestions for what mainstreaming might look like, this being that biodiversity is explicitly integrated into sectoral and/or cross-sectoral:

- Policy documents

- Plans and actions

- Budgets

- Legislation

- Indicators and monitoring system

With regard to monitoring and evaluation, the guidance (CBDa&b) suggests that the effectiveness of activities should be measured along with an assessment of the outcomes. Indicators are proposed that could be used to assess progress with mainstreaming. These are:

- 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/authorities to implement the convention

The guidance also notes that it is important to monitor and evaluate the process by which the NBSAP was developed and implemented (i.e. who was involved, what their roles were, how decisions were made, when and how public consultation was done, how new stakeholders were approached, etc.).

The Biodiversity Indicators Partnership (BIP), current guidance for developing biodiversity indicators for NBSAPs, recommends that two types of indicators should be considered to assess progress (BIP) 2014). These are:

- Implementation indicators that are used to monitor the completion of actions that enable targets or actions to be achieved. These are likely to be measures of tangible outputs.

- Impact indicators - These indicators help track progress towards targets or objectives by providing information on the actual impacts of the actions taken on biodiversity or drivers of change

Within this guidance there is very little information on how to develop appropriate indicators specifically for the mainstreaming aspects of NBSAPs.

Outside of environmental issues, **gender** is another issue that has been mainstreamed into development. There is a long history of mainstreaming dating back to the 1970's, which can be drawn upon. Despite this history, examples of monitoring the impact of gender mainstreaming are scarce. Measurement techniques and data have been limited and poorly utilised (Moser 2007). Where monitoring has occurred there has been a tendency to focus on input and output indicators, such as the number and proportion of female beneficiaries and number of activities focusing on women. There has been little monitoring of the outcomes and impacts of mainstreaming (Moser and Moser 2005). This is especially true amongst donor M&E systems, which have produced limited, anecdotal reporting with the results often being invisible and the focus being on women rather than gender equality. A consequence of this is that success has been viewed in terms of a few more projects targeted at women, rather than significant institutional changes within organisations that lead to gender equality (Risby and Todd 2011).

Current guidance on gender mainstreaming, is trying to address these issues and recommends monitoring at two levels and using a mix of quantitative and qualitative indicators (UNDP 2005, WSP 2010, CIDA), the two levels being:

1. Monitoring progress towards achieving goals and objectives through indicators that track the delivery of specified outputs and outcomes.

3. Monitoring the implementation process , selecting targets and indicators that track the extent to which the process is gender sensitive.

The South African Government draws upon this approach to monitor the implementation of its Gender Policy Framework. Monitoring is considered in both the short and long term. With short-term measures tending to focus on the process of gender mainstreaming e.g. the extent to which the state, private sector and NGOs are incorporating a gender perspective into their policies, procedures and practices. Long-term measures look at the outcomes and impact of mainstreaming e.g. equality of opportunity to participate in all aspects of economic, social, and political decision-making (De Waal 2006).

In the past decade, monitoring and evaluating the effectiveness of gender mainstreaming within organisations has begun to receive much attention amongst multilateral organisations, which have developed frameworks and tools to do this. One such tool is the United Nations (UN) gender scorecard which evaluates the effectiveness of gender mainstreaming against a set of performance standards across eight dimensions of the UN's operations - planning, programming, partnerships,

capacity of the United Nations Country team, decision making, budgeting, monitoring and evaluation and accountability. [8]

4. Conclusions

This section aims to draw some generic observations and recommendations based on the NBSAP case studies and the review of approaches to monitoring mainstreaming success. Suggestions are presented on what needs to be monitored to understand if mainstreaming is being successful, as well as an initial list of generic indicators and criteria for assessing the success of biodiversity-development mainstreaming, and some other issues to consider when developing monitoring plans and identifying indicators. This list is by no means exhaustive, but should create a good starting point for further discussion.

Areas to monitor to assess successful biodiversity-development mainstreaming

Although the approaches and experience of assessing the success of mainstreaming issues such as environment, drylands, climate change, biodiversity and gender into development is varied, there are lessons that can be drawn. Over 40 years of work towards gender mainstreaming has shown that assessing success requires moving beyond monitoring just outputs.

For those countries that are at the early stages of mainstreaming, plans for monitoring tend to be dominated by output indicators. These early stage countries' outputs (such as developing a policy paper on the value of biodiversity) can be significant successes in themselves. However it is also important to start monitoring what these outputs should lead to (i.e. progress towards outcomes) in the medium to long-term and the ultimate impacts of mainstreaming (as recommended in BIP guidance and from the experience of other issues that have been mainstreamed).

Recent guidance from the other issues being mainstreamed concurs with this and begins to suggest that there is a need to monitor the following:

- **The process of mainstreaming**. Progress with the steps along the way and the quality of the process against set criteria (e.g. participation, political will and leadership, reciprocal mainstreaming). This is particularly helpful for those who are implementing mainstreaming strategies, since it can provide an understanding of what works well and not so well. It also helps ascertain to what extent biodiversity concerns have been institutionalised within partner ministries and organisations.

- **The outcomes and impacts of the mainstreaming process**. Ideally this should include monitoring both upstream and downstream outcomes and these should address and relate to biodiversity and development impacts.

A third area of monitoring that might be considered (given that mainstreaming is a dynamic process that needs to be able to respond to the external context) is:

- **The mainstreaming context.** Ideally this should consider how this is changing in relation to enabling, disabling, driving, antagonising biodiversity-development integration. This involves regularly re-assessing the policy context, the political and institutional context and identifying constraints and opportunities for biodiversity development integration. The rapid diagnostic tool developed by the NBSAPs 2.0 project, provides guidance on questions to be considered in each of these areas.

Process, outcome and impact indicators and criteria for successful biodiversity development mainstreaming

It is clear that no two country's area of focus for mainstreaming is exactly the same. Many countries have taken the Aichi targets (Annex 2) as inspiration and a starting point for developing their targets and goals. Priority targets and actions for mainstreaming respond to the economic, political and social context of the country and the stage they are at in their mainstreaming journey. For example in Cameroon – the extractive industries are key driver of growth, while in Brazil and Tuvalu, food security

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[8] http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/BSP/GENDER/PDF/Gender-Score-Card.pdf

is nationally important – and by necessity, biodiversity mainstreaming becomes focused on (and linked to) these national priorities.

Drawing on the experiences to date of issues being mainstreamed into development, we can begin to suggest some generic indicators and criteria that could be used to assess the success of biodiversity and development mainstreaming, in line with the proposed framework for monitoring (i.e. process, impact and mainstreaming context) (Box 6). These of course would need to be tailored to countries specific focuses and approaches, but reflect some of the common approaches and outcomes and principles articulated in the material reviewed.

Box 6. Indicators and criteria for successful biodiversity mainstreaming

Process indicators

- Undertake research on the value of biodiversity to society
- Develop and implement communication strategy to raise awareness across society of the value of biodiversity
- Identify and put in place institutional mechanisms to support biodiversity mainstreaming
- Develop guidelines for biodiversity mainstreaming for local planning, key sectors impacting on biodiversity and the private sector and build capacity of institutions to use these
- Develop and provide training programmes for key partners
- Develop and implement tools and approaches which enable biodiversity mainstreaming e.g. biodiversity and ecosystem valuation, Payment for Environment Services

Outcome indicators

- Biodiversity targets integrated into national and local development plans
- Biodiversity targets integrated into key sectors policies and plans (key sectors range from those that are having a significant impact on biodiversity e.g. oil and gas and agriculture, to those where the inclusion of biodiversity concerns can deliver development outcomes e.g. food security and climate change).
- Development targets integrated into biodiversity policies and plans
- Increase in awareness of the importance and value of biodiversity across society
- Strengthened co-ordination and capacity for facilitating biodiversity mainstreaming into policies and planning processes
- The value of biodiversity is considered in decision making
- Biodiversity and ecosystem values are integrated into national accounts
- Increase in financial resources available for biodiversity (this could be increases in public / private sources of funding or relate to funds generated through innovative financing mechanisms such as Payment for environmental services and green taxes)
- Species / ecosystem that provide benefits and services to the economy / people's well-being are protected /managed
- Ecologically sustainable systems of production and consumption established

Impact indicators

- Improved livelihoods, wealth and wellbeing from sustainable utilisation of biodiversity
- Improved condition and sustainability of ecosystem services that support human wellbeing

Criteria for assessing the quality of the overall mainstreaming process

- Extensive stakeholder participation
- Political will
- Shared Leadership
- Reciprocal mainstreaming

Other considerations when developing/ setting indicators

The NBSAPs reviewed provide a number of insights into further issues to consider when establishing monitoring plans to assess mainstreaming success. These are:

- Defining success (and the indicators used to monitor it) requires an understanding of the perspectives of success for partner ministries. Indicators need to reflect (and integrate into) the strategies of ministries and partners relevant to the NBSAP. It is important in optimising implementation of an NBSAP, to draw links between the NBSAPs own measures of success and what other bodies may consider success for their own sets of goals. Understanding different perspectives of success is a key element of this process.

- Setting indicators needs to be done in partnership with partners and ministries that can strengthen success of the NBSAP. This process can help maximise the ownership of indicators within bodies that can either monitor them or help achieve them. It also maximises commitment to the NBSAP from other sectors. It is also often advantageous to draw upon existing targets and indicators in national strategies when selecting indicators for mainstreaming (because this simplifies monitoring and/or increases synergies and ownership). The process of setting targets and indicators needs to be multi-disciplinary and inclusive early on.

- An ultimate aim of biodiversity and development mainstreaming is that biodiversity objectives are integrated into national, local and sector plans and that development objectives are integrated into biodiversity policies and plans – reciprocal mainstreaming. If you look at targets and priority actions within the case studies, it is noticeable that the emphasis has tended to be a one-way push of getting biodiversity-specific objectives into sector and development plans. There are few targets that specifically address biodiversity-development concerns. Although there is ambition to align to and contribute to national development targets, specific targets from other relevant national strategies are not incorporated into the NBSAPs (or even referenced). Similar observations were seen in a review of NBSAPs which found that the few NBSAPs that explicitly mentioned the ambition of poverty reduction, were not necessarily linked, synchronised with or referenced to relevant PRSPs or development documents (Prip, C. et al. 2010). This area of reciprocal mainstreaming needs more attention and thought leadership.

- The types of mainstreaming outcomes that are monitored (upstream or downstream) change according to what stage of mainstreaming and development a country is at. For Tuvalu, key outcomes being monitored are integration of biodiversity objectives into national and sector policies and increase in budgets for biodiversity (predominantly upstream outcomes). Whereas, for England, which is now at the stage of mainstreaming implementation, a combination of upstream and downstream outcomes are monitored. Examples of England's downstream outcomes and impacts being monitored, include protection of targeted species on which the economy depends and process of production and consumption being informed by biodiversity considerations.

- Indicators can be an important communication tool. England has specifically selected indicators that are easy to communicate and so can show progress to a range of actors across society. The example of England has shown how the monitoring of progress towards outcomes can produce information to inform and influence both public and political views on the progress of biodiversity conservation, and so contributes to mainstreaming in itself.

- Ensure that time frame for monitoring is linked in with national planning time frames e.g. national budgeting and development planning cycles, so that the information coming from the monitoring system can inform these processes. Aligning with national processes and cycles is inherently contributing to mainstreaming in itself.

- This paper has recommended that a third area for monitoring is the mainstreaming context. This level of monitoring is often inherently subjective and may not be appropriate to have in such a formal process as the NBSAP monitoring system. It is something that overseers of the mainstreaming process need to capture and can be done quite informally. Drylands mainstreaming advocates doing this with key partners (not just reflecting inwardly) and Brazil's observations of the changes they are seeing are a first step in this approach.

It would be convenient to be able to say that there is a list of targets and indicators to use in every NBSAP, but as we have seen, the differing contexts, ambitions and stages of a country dictate that every scenario will be different. This background paper simply seeks to draw attention to some good practice, highlight some examples of useful targets and indicators and to provoke thinking. It is up to a country to identify which targets and indicators suit their scenario and best help define and monitor success for them.

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Annex 1 - Biodiversity and development mainstreaming actions and indicators in the NBSAPs of Cameroon, Tuvalu and England

Key: C – Cameroon   Tu- Tuavalu   E – England

Theme	Biodiversity and development mainstreaming actions	Indicators
National and local development plans and processes	Developing evidence of the value / contribution of bio-diversity and ecosystems to national economic and development goals (C, E)	Research undertaken (C) Policy papers in place (Tu)
	Integrating biodiversity issues into national development plan(C, Tu)	Biodiversity / NBSAP targets integrated into national development plan (C, Tu)
	Improving systems for collating and sharing information on biodiversity (E, C)	Central biodiversity database is operational (C) Number of downloads from central biodiversity database (C) Number of people / institutions using data (C)
	Integrating biodiversity issues into local plans (All)	Guidelines available (C) Number of local authorities with biodiversity targets and action plans (C)
	Developing guidelines for integrating biodiversity into decentralised planning (C)	Number of biodiversity programmes and projects set up and implemented by local councils (C)
	Strengthening the use of biodiversity information in decision making (C, E)	Use of biodiversity research in decision making (C) How local authorities use biodiversity data in assessing and developing local plans (E – under development)
	Strengthening EIA framework (Tu)	Revised EIA framework in place (Tu)
	Apply EIA's to all development projects (C)	Number of EIA's carried out for development projects that reflect state of biodiversity (based on no net loss) by project promoters (C) Number of EMP implemented in an effective and efficient manner annually (C)
	Developing / promoting tools for biodiversity mainstreaming e.g. economic valuation of biodiversity / ecosystem services (C, E)	Tools developed (C, E)
	Developing capacity to use these tools (C)	Number of capacity building workshops and people trained on use of economic tools (C)
	Establishing / strengthening cross sectoral co-ordination mechanisms so that biodiversity issues are better considered (C)	Number of functional co-ordination bodies set up to handle biodiversity issues (C) Number and type of personnel on these bodies (C) A functional National Biodiversity Co-ordination Committee (C) Number of sectoral and regional focal points designated (C)
National and local budgets	Securing resources for biodiversity in national/ sectoral /local budgets (All)	Budget allocation for biodiversity in national development / growth strategy (C) Biodiversity sector programmes with investment budgets available (C) Budget allocation for biodiversity projects and programmes in sector public investment budget (C) Amount of financial support from national / regional /GEF / multi-lateral/ bi-lateral / private sector in biodiversity programmes and projects (C) Public sector expenditure on E and international biodiversity (E)
	PES / biodiversity values integrated into national budgets (C, E, Tu)	Progress in developing ecosystem accounts within national accounting framework (E).

		Ecosystem service values included in national accounts (C, E)
		Proportions of GDP from biodiversity resources and ecosystem services (C)
	Establishing innovative financing mechanisms to direct more funding to achieving biodiversity outcomes e.g. Payment for environmental services (PES), green taxes (C, E, Tu)	Mechanism for private sector payment of use of biodiversity and ecosystem services established (C)
		Total revenue generated through PES (C)
		Extent of schemes involving PES (E)
Private sector policies and approaches	Establishing business clubs (C)	Private sector engagement programme established (C)
		Number of biodiversity initiatives supported by the private sector (C)
	Promoting ecologically sustainable systems of production and consumption (C, E)	Number of SME's applying sustainable production methods based on developed standards (C)
		Impact of UK consumption on global biodiversity (E – under development)
		Number of new species promoted, supported and consumed (C)
		Agricultural and forest area under environmental management schemes (E)
	Supporting markets for green goods (E)	
	Developing guidance for business to understand and address their environmental impacts (E)	Number of business with environmental or sustainable management system (E – under development)
		Measure of how wide environment is considered in supply chain of businesses (E – under development)
Productive sectors e.g. Agriculture, Fisheries, Forestry and Extractives	Integrating biodiversity concerns into sector policies of the key sectors that impact on biodiversity (All)	Level of involvement of administration in charge of biodiversity and sector specific issues in revision of sector policies and laws (C)
		Number of sector ministries with biodiversity targets and action plans (C)
		Number of biodiversity programmes and projects set up and implemented by each sector (C)
		Biodiversity sector programmes with investment budgets available (C)
	Developing sector specific guidelines for taking account of biodiversity issues (C)	Guidelines for mainstreaming biodiversity in production sectors available (C)
	Ensuring coherent policies for addressing biodiversity issues across sectors (C)	
	Promoting ecologically sustainable systems of production and consumption (C, E)	Impact of UK consumption on global biodiversity (E – under development)
		Number of new species promoted, supported and consumed (C)
		Agricultural and forest area under environmental management schemes (E)
Agriculture	Maintaining genetic diversity of domestic livestock and cultivars (C,E)	Number of genetic species with potentials for commercialization valorised (C)
		Number of threatened marketable genetic species cultivated (C)
		effective population size of native sheep and cattle breeds (E)
		Diversity of plant genetic resource (E)
Sustainable livelihoods	Research on sustainable use of biodiversity to support livelihoods	
	Capacity building of local communities and local government on approaches to biodiversity based sustainable livelihoods (C)	Training programmes developed (C)
		No trainings held and people trained (C)
	Supporting sustainable livelihood activities (Tu)	
	Promoting benefit sharing from sustainable use of biodiversity (Tu, C)	Access and benefit sharing legislation and regulatory instruments in place (C)
		Proportion of revenue / benefits paid to local communities (C)

		At least 1 to 2 indigenous property rights would have been instituted by year 2015 (Tu)
Community Based Natural Resource Management (CBNRM)	Integrating biodiversity into CBNRM plans (C)	Number of community based forests in which biodiversity has been incorporated (C)
	Strengthening / developing policies that support CBNRM (C)	Guidelines for incorporation of biodiversity conservation in community forests (C)
Integrated Ecosystem planning e.g. land use, marine, river basins	Developing integrated land use policies (C)	Number of multi-stakeholder co-ordination structures for land use allocation (C)
	Adopt integrated plans and approaches to managing key ecosystems (e.g. marine, river basins) (E)	Number of integrated approaches promoted (C)
	Developing and promoting biodiversity offsetting (E)	
Waste management	Research to understand impact of waste on biodiversity (Tu)	Research paper produced and approved by cabinet (Tu)
	Waste – biodiversity policy developed (Tu)	All islands have policy by 2013 (Tu).
	Research on the use of green taxes	Research paper produced (Tu)
Tourism	Promoting nature and community based eco –tourism (Tu, C)	
Food security	Increase awareness of understanding of linkages between biodiversity and food security (Tu)	
	Integrate biodiversity issues into food security policy (Tu)	Integrated food security policy and implementation plan in place by 2013(Tu)
		Production and consumption of traditional food crops increased (Tu)
Education	Integrating biodiversity into national curriculum (C)	Number schools with biodiversity in curricula (C)
	Establishing biodiversity school programmes (C)	Number biodiversity school programmes (C)

Annex 2 – Aichi Biodiversity Targets

Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.

Target 3: By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.

Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use

Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

Target 6: By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.

Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services

Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

Target 16: By 2015 the Nagoya Protocol on Access to Genetic Resources and the fair and equitable sharing of benefits arising from their utilisation is in force and operational, consistent with national legislation

Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building

Target 17: By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

Target 20: By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.

This Background Paper was prepared to inform the 3rd International Workshop of the NBSAPs 2.0: Mainstreaming Biodiversity and Development project, that took place in Namibia, July 2014. It draws on reviews of the mainstreaming targets and indicators of selected NBSAPs from countries at different stages of their mainstreaming process, and the approaches to assessing the success of mainstreaming biodiversity and other issues into development. Recommendations are provided to provoke thinking among those responsible for NBSAPs about how they might assess success within their own individual country contexts.

Project materials

Biodiversity

Keywords:
Mainstreaming, National Biodiversity Strategies and Action Plans (NBSAPs), Convention on Biological Diversity

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