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an assessment of national biodiversity strategies and action plans

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Foreword

The Convention on Biological Diversity (CBD) is nearly twenty years old and has achieved a number of significant goals, including the adoption of national biodiversity strategies and action plans (NBSAPs) by 171 countries, promoting the notion of a global protected area network, raising awareness about the role of biodiversity within the scientific community, mainstreaming the concept of biodiversity within the UN system and promoting the rights of indigenous peoples.

Even so biodiversity is still being lost at unprecedented rates – rates that undermine sustainable development and threaten human security. The threats posed by the loss of biodiversity are as significant as those posed by climate change, albeit less recognised.

The Nagoya Biodiversity Summit (the tenth meeting of Conference of the Parties to the CBD – COP-10) takes place at an important and auspicious moment for the CBD – a moment when the world's attention will turn to biodiversity.

It coincides with the target adopted by world leaders to reduce the rate of loss of biodiversity by 2010, the celebration of the International Year of Biodiversity and the first-ever summit of the United Nations General Assembly on biodiversity. COP-10 will address several key issues for the development of the CBD, such as the adoption of a new target to replace the 2010 target, the adoption of an international regime on access and benefit sharing, and a new protocol on liability and redress under the Cartagena Protocol on Biosafety. Awareness of the importance of biodiversity is also increasing in the wider community. For example, a recent McKinsey Global Survey of over 1,500 business executives indentified biodiversity as the next environmental issue for business after climate change. Japan, the host for COP-10, provides a wonderful example of how it is possible to have an advanced economy that maintains, even promotes, traditional lifestyles that respect biodiversity, which, among others, is highlighted by the concept of *Satoyama* socio-ecological production landscapes. Additionally, with one of the largest economies in the world, Japan is well placed to provide significant international leadership in biodiversity.

We have a profound responsibility to make the most of this moment and endeavour to ensure that the CBD matters and biodiversity is managed sustainably.

The key challenge facing the CBD and COP-10 is implementation. This challenge has many dimensions, nuances and aspects. How do we find the resources? How do we focus the work on the key challenges? How do we mobilise the commitment of all stakeholders? How do we address the gaps in our knowledge and understanding of biodiversity? How do we adapt to new circumstances?

The main mechanism for implementing the CBD and answering these questions are the NBSAPs that countries are required by the CBD to develop, implement and periodically revise. To date, 171 countries have adopted their NBSAPs. The new Strategic Plan for the period 2011-2020 to be agreed at COP-10 will require countries to revise their existing NBSAPs and to reinvigorate their implementation. The new Strategic Plan for Biodiversity and national processes of NBSAP revision must build on the experience gained in developing and implementing NBSAPs over the last twenty years and heed the lessons learnt.

The main mechanism by which the COP can review the implementation of the Convention and the steps taken for national implementation is the national report required under Article 26. There have been four rounds of national reports so far. However, the nature and format of the reports do not lend themselves to undertaking the in-depth review of implementation needed to assess where we stand at the end

of the first strategic planning cycle. The experience and lessons of the NBSAP implementation are not readily available to the COP.

In line with its role as a strategic think tank for the United Nations and its agencies, the United Nations University Institute of Advanced Studies (UNU-IAS) decided to carry out an in-depth assessment of NBSAPs in the expectation that this could help address this important knowledge gap and provide a sound basis on which the Nagoya Biodiversity Summit could review the experience of implementation so far and adopt a new Strategic Plan for Biodiversity. This report is the outcome of that assessment.

The UNU-IAS project was only possible with the generous support of the Governments of Sweden, Norway and Germany, the Northern Territory Government of Australia and The Christensen Fund. I would like to take this opportunity to thank them for their support and also acknowledge the significant intellectual contribution these governments and organisations made to the study. I would also like to take this opportunity to thank my colleagues Christian Prip, Tony Gross, Sam Johnston and Marjo Vierros for their dedication and hard work in the preparation of this report.

Professor Govindan Parayil
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Director, United Nations University Institute of Advanced Studies
September 2010
Tokyo, Japan

Executive summary

The Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) has proclaimed national biodiversity strategies and action plans (NBSAPs) to be the primary mechanisms for the implementation of the Convention and its Strategic Plan.

Article 6(a) of the CBD requires all Parties to develop an NBSAP. The strategy is meant to be a roadmap for how the country intends to fulfil the objectives of the Convention in light of its specific national circumstances. The related action plan will constitute the sequence of steps to be taken to meet the goals of the strategy. The development of the NBSAP in accordance with Article 6(a) is the cornerstone for fulfilling the requirement of Article 6(b) to mainstream biodiversity and the three objectives of the CBD. This should occur across all sectors of government, economic sectors and involve other actors who have an impact on biodiversity, through relevant sectoral or cross-sectoral plans, programmes and policies. NBSAPs developed in isolation from other sectoral policies and programmes will be ineffective in protecting biodiversity and the integrity of critical ecosystem functions.

By September 2010, 171 countries (89 per cent of the total number of CBD Parties) had adopted their NBSAPs or equivalent instruments. In addition, thirteen countries had informed the Secretariat that they were in the process of preparing their NBSAP, including two countries who have acceded to the Convention in the last two years. Nine others have not prepared NBSAPs or initiated the process to do so, or have not informed the CBD Secretariat that they have done so. Forty-nine Parties have revised their NBSAPs, or are in the process of doing so.

Although there have been various studies of NBSAPs, especially developing country NBSAPs, so far no comprehensive assessment of all NBSAPs and their effectiveness as tools for national implementation has been carried out.

The UNU-IAS project aimed to undertake a comprehensive assessment of the preparation, content, adequacy and effectiveness of existing NBSAPs and, in the light of this assessment, offer recommendations on what steps should be taken to ensure that NBSAPs fulfil their role as the primary mechanism for the implementation of the Convention and the Strategic Plan for Biodiversity 2011-2020.

The project team carried out a desktop review of all NBSAPs and equivalent national documents as well as specific studies of nine countries. The team attended most of the regional and sub-regional capacity-building workshops on NBSAPs and mainstreaming of biodiversity organised by the CBD Secretariat from 2008 to 2010.

The large number of NBSAPs is in itself an achievement and an indispensable step on the road to implementation. NBSAPs have generated important results in many countries, including a better understanding of biodiversity, its value and what is required to address threats to it. Legal gaps in implementation have been filled, the coverage of protected areas has been considerably extended, and in many countries better protection of endangered species has been introduced. Recently, the fourth national reports and the series of regional and sub-regional capacity workshops on implementing NBSAPs and mainstreaming biodiversity have provided new information and insights into the wealth of action for biodiversity taking place throughout the world. This encompasses both action for the conservation of biodiversity and action related to mainstreaming biodiversity within sectoral and cross-sectoral activities at both national and sub-national levels. This is an indication of another positive trend in CBD implementation.

In spite of these achievements and positive trends, our general conclusion matches that of earlier assessments: NBSAPs have not attenuated the main drivers of biodiversity loss. The Global Biodiversity Outlook confirms the continuing decline of biodiversity in all three of its main components – genes, species and ecosystems. It argues that "action to implement the CBD has not been taken on a sufficient scale to address the pressures on biodiversity in most places" and "there has been insufficient integration of biodiversity issues into broader policies, strategies and programmes, and the underlying drivers of biodiversity loss have not been addressed significantly".

Our assessment suggests that, taken together, existing NBSAPs will not be capable of changing this global picture by meeting the objectives of the CBD or the strategic goals and targets of the new Strategic Plan. This worrying conclusion does not mean, however, that the outlook is completely bleak; at least 184 countries have taken steps towards implementing the CBD and among these are countries whose NBSAPs are comprehensive, strategic and feasible. The challenge, to which the energies of the CBD with the support of its partner organisations should be directed as a matter of urgency, is to ensure that as soon as possible all NBSAPs are comprehensive, strategic and being implemented. This will provide the best chance for reducing biodiversity loss and meeting the strategic goals and targets of the new Strategic Plan. At the moment, although it is true that the political attention paid to biodiversity and its importance for sustainable development is growing in many countries, and that biodiversity concerns are increasingly integrated into national development policies, it seems this is rarely due to NBSAPs.

Many NBSAPs quickly lost their momentum and, since most have not been revised and are more than eight years old, they have also been unable to serve as implementation mechanisms for some of the most important and far-reaching CBD decisions taken since they were developed. This includes key areas such as the Strategic Plan with its global 2010 target and its request for countries to adopt national goals and targets, as well as several thematic and cross-cutting work programmes adopted at COP-6 and subsequent meetings.

The inability of NBSAPs to influence mainstream development outcomes can be largely attributed to weaknesses in the process of their development. Many processes were often more technical than political, and did not manage to sufficiently influence policy beyond the remit of the national agency directly responsible for biodiversity. The need for mainstreaming across sectors is generally recognised in NBSAPs, but often in general and aspirational terms, with little direction on how this mainstreaming is actually going to take place. Coordination structures may formally exist, but often with limited political and cross-sectoral ownership, as well as with limited ownership at the sub-national level. Many NBSAPs are overly ambitious and prescriptive whilst at the same time lacking a strategy for financing their implementation. They often appear to have been addressed to external funding agencies rather than national decision-makers.

However, the development process is not the only factor determining whether implementation will be successful. A number of countries have conducted excellent processes with extensive stakeholder involvement and well-structured NBSAPs, but are still faced with implementation constraints, mostly in the form of inadequate institutional, technical and financial capacity.

On the positive side, many countries have learned from the shortcomings of first generation NBSAPs. Although fewer than a third of NBSAPs have been revised, second generation NBSAPs are generally very different from the first in terms of greater stakeholder involvement in their preparation, approval at a higher political level, focus on mainstreaming, alignment with other relevant plans and policies, monitoring tools, and strategies for communication and financing. However it is striking that, despite recent strong calls to set time-bound and measurable national biodiversity targets and the many COP decisions to this effect, very few new NBSAPs include such targets. While some of the new NBSAPs are

starting to demonstrate results, it is still too early to assess the impact of second generation NBSAPs on the status of biodiversity and the main drivers of biodiversity loss.

Many NBSAPs are quite comprehensive in scope, and their preparation has in itself been a major achievement for the country. Nearly all countries have applied a participatory process, and according to reports at the workshops, preparation of NBSAPs has been important in creating awareness on biodiversity issues. The workshops have revealed a lot of concrete activities and innovative thinking, generated to some extent from NBSAPs, not only in the conservation community but also on a broader scale across sectors.

Our assessment has revealed clear differences between older and newer NBSAPs. Second generation NBSAPs – including both revised and new NBSAPs – have a stronger emphasis on mainstreaming and are far more strategic and action-oriented. Notably, they include a higher degree of self-reliance when compared to many first generation NBSAPs, which often presupposed external funding for implementation.

Nevertheless, many obstacles and shortcomings still persist. Second generation NBSAPs are still few in numbers and their impact has yet to materialise. Hence, the overall impact of NBSAPs on the driving forces of biodiversity loss continues to be limited. Biodiversity planning is still rarely viewed as a political and economic process in which hard decisions are to be made on resource allocation and use.

The NBSAPs are quite varied in form and content. There is no clear differentiation between developed and developing country NBSAPs or among geographic regions. Development status does not predetermine the quality of national biodiversity planning, and regional neighbours with shared characteristics and comparable development status often show marked differences in the approaches adopted and their effectiveness.

A large majority of countries have applied a participatory approach to NBSAP preparations. However, key stakeholder categories, such as women's organisations, local and indigenous communities, and the private sector, appear to have participated less frequently in national processes. Second generation NBSAPs have typically been prepared through a broader, longer and more structured preparatory process, often also including provincial and local levels.

The momentum that was built up during these participatory preparatory processes seems to have been quickly lost in many countries. Most countries have created some kind of national coordination structure, but these typically involve fewer stakeholders than in the preparatory processes. It also seems that many NBSAP coordination structures are not functioning well, if at all, and that there is a clear connection between the limited degree of implementation and the lack of efficient coordination mechanisms.

The level of endorsement and thereby ownership of the NBSAP at the government level is also critical to its success. It appears that most first generation NBSAPs were approved at the level of the minister responsible for the national CBD focal point or below. Many of the second generation NBSAPs have been adopted at the level of the head of state or cabinet, while some have been adopted by the parliament.

Developing and implementing the NBSAPs have helped countries to improve their biodiversity knowledge, and to identify the main causes of biodiversity loss and the response measures needed to combat the loss. At the same time, it has led many countries to become aware of huge gaps in their knowledge, therefore improvement of the knowledge base features as a key objective in many NBSAPs.

There is an uneven focus on the three CBD objectives in NBSAPs. Conservation gains most attention, especially with regard to protected areas. Sustainable use often appears in vague and general terms. Measures for access to genetic resources and the equitable sharing of benefits arising out of their use of genetic resources are absent from most NBSAPs.

Nearly half the NBSAPs do not consider biodiversity in a broader development policy context. Amongst those that do the treatment varies considerably, from thorough analysis and actions linked to development policy papers to very general statements with no elaboration or concrete proposals for action. In addition, the degree to which development objectives have been reflected in NBSAPs does not necessarily reflect the degree to which biodiversity has actually been incorporated into national development policies. In many cases, NBSAPs are more than ten years old and no longer influence national policy. The implication is that in some cases even robust language on linking biodiversity to broader development policies has not led to this integration, whilst in other cases integration has occurred despite the NBSAP.

A study was undertaken of forty-five Poverty Reduction Strategy Papers (PRSPs) completed after 2004 on the extent to which they address environmental issues in general and biodiversity in particular. The study revealed that there has been a steady improvement in the degree of environmental mainstreaming within PRSPs, but that biodiversity-related issues receive limited attention compared to environmental issues such as water and sanitation. The study also revealed that in many cases there was limited correlation between the NBSAP and the PRSP, suggesting that each had been prepared in isolation from the other.

A study of reports on implementation of the UN Millennium Developments Goals (MDGs) also showed similarly weak consideration of biodiversity compared to other environmental issues. The incorporation of the 2010 biodiversity target into Goal 7 on environmental sustainability is largely ignored in the MDG reports. However, the study did reveal that a number of countries have included biodiversity-related targets and a trend towards greater recognition of the importance of biodiversity for development.

Only a minority of NBSAPs address the question of climate change and, when they do, this is mostly in the form of simply reflecting on the impact of climate change on biodiversity and not in the form of specific objectives and actions. Very few NBSAPs emphasise the role of diverse and robust ecosystems in mitigation and adaptation.

A study of National Adaptation Programmes of Action (NAPAs) under the UNFCCC revealed that the majority included actions related to biodiversity.

Preliminary analysis of the extent to which biodiversity is integrated into National Action Plans under the UNCCD reveals a strong correlation between NAPs and NBSAPs.

Most NBSAPs place a strong emphasis on planning at the national level, and only a minority explicitly acknowledge the benefits of sub-national BSAPs. Those countries where sub-national BSAPs have been developed tend to be large countries with a federal or other decentralised structure. Even in countries that clearly acknowledge local co-responsibility for biodiversity planning, the actual communication of the NBSAP to the sub-national authorities and the empowerment of these to act has often been unsuccessful due to weak local institutional capacity.

Many COP decisions, and in particular the different thematic programmes of work, are used only rarely as points of reference in the NBSAPs or even referred to at all. Many of the thematic and cross-cutting

programmes of work and other decisions were adopted after the majority of NBSAPs were prepared, but even so it is striking how little they seem to influence national biodiversity planning.

From discussions at the workshops and with interviewees we have detected a general consensus that the CBD should focus more on implementation than has been the case until now. Substantial resources have been put into policy development in the form of the negotiation, adoption and revision of decisions, work programmes and guidelines. The view is increasingly expressed that the Convention now needs to move beyond the stage of refining its guidance and focus on delivering tangible results on the ground. Symptomatic of this is the fact that, when countries were asked in the fourth national reports to describe implementation outcomes, they tended to report the development of new plans, programmes and strategies rather than concrete action to meet their commitments under the Convention.

However, the action needed to halt the loss of biodiversity will have to seriously address the root causes of biodiversity, and addressing root causes and not just treating symptoms is a complex cross-sectoral issue that requires a political and economic planning process with compromises and trade-offs. This planning process is envisaged in Article 6 of the CBD, but in most countries did not take place, or took place with only limited success in the first phase of the life of the Convention. A new strategic plan for the post-2010 period with measurable targets will provide a framework for a new phase of national biodiversity planning that can address the issues that have not been properly addressed so far. A number of recently prepared NBSAPs have already begun to pave the way. This is not a question of delivering yet another 'document', but of establishing an ongoing, cyclical, participatory process with regular reviews.

Countries are being asked to redouble their efforts over the coming decade to reduce the rate of biodiversity loss and meet the strategic goals and targets of the new Strategic Plan for Biodiversity. NBSAPs are the primary mechanism for determining and implementing national efforts to meet these goals.

The guidance given by the COP in decision IX/8 for developing, implementing and revising NBSAPs provides the basis for a new cycle of national biodiversity planning designed to be capable of meeting the objectives of the CBD and the goals and targets of the Strategic Plan. What also needs to be put in place is a biodiversity planning support network that can complement and assist national efforts by marshalling existing knowledge and expertise and facilitating access to these by national biodiversity planners.

On the basis of its assessment of how NBSAPs have been developed, implemented and revised to date, UNU-IAS offers a set of recommendations on how countries might approach the new biodiversity planning cycle and how organisations with the relevant expertise could support countries in their endeavours. These recommendations are contained in part 3.2 of this report.

Introduction

The idea for this assessment arose in early 2006 at COP-8 in Curitiba. It was prompted in large measure by a note[1] prepared by the incoming Executive Secretary which reflected on the twin issues that were then becoming a key focus of discussion within the CBD – the predominant emphasis on developing guidance to Parties as opposed to providing practical support for national implementation, and the difficulties of obtaining a reliable picture of the status and experience of implementation in countries.

He noted:

1. Since the entry into force of the Convention on Biological Diversity on 29 December 1993, significant progress had been made in laying the foundations for achieving the objectives of this vital international legal instrument. Since the first meeting of the Conference of the Parties, more than 278 meetings had been convened. A total of 182 decisions had been adopted at the seven meetings of the Conference of the Parties and 14 by the two meetings of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety. As a result, a vibrant body of policy had been agreed upon.
2. However, in spite of the significant progress achieved by the Convention since its entry into force, the immensity of the biodiversity challenge facing the international community required urgent additional sustained efforts, as well as enhanced inter-agency collaboration and international cooperation on the scale necessary to translate the three objectives of the Convention into reality if the 2010 biodiversity target was to be achieved.
3. To achieve such a strategic objective, a new era of enhanced implementation was urgently required.

This crystallised the growing feeling that since 1994 the COP had devoted its energies to an intense and necessary programme of negotiation and adoption of decisions, programmes of work, guidelines, calls for cooperation and harmonisation with other relevant processes that taken together constituted a compendium of accumulated and, by now it could be assumed, comprehensive guidance to Parties on how they could and should proceed with national implementation of the CBD.

What was less clear was how countries were in fact using this guidance and what was their actual experience of attempting to meet their national commitments under the Convention in their real-life circumstances and in the face of multiple constraints.

Parties to the CBD assume a set of commitments whose aim is to ensure they meet the three objectives of the Convention. However, only two of these commitments are unqualified and binding whatever the circumstances: Article 6 – the obligation to develop and implement a national biodiversity strategy and action plan and to mainstream this within sectoral and cross-sectoral plans, programmes and policies; and Article 26 – the obligation to report to the COP on the measures taken for implementation of the Convention and the effectiveness of these.

The intention is clear. Parties are to develop national biodiversity strategies and action plans (NBSAPs); mainstream policies and programmes designed to ensure the conservation and sustainable use of biodiversity within relevant sectors of public administration and economic activity; and periodically

1 Document UNEP/CBD/COP/8/28/Add.1, *Enhancing the Secretariat's support to implementation of the Convention and achievement of the 2010 target*.

report on the steps it has taken and the effectiveness of these to the COP. This will in turn enable the COP to fulfil its primary responsibility to "keep under review the implementation of this Convention" (Article 23).

However the format and the periodicity of national reports were proving not conducive to providing the COP with a comprehensive and reliable overview of the status of implementation. At the first meeting of the Working Group on Review of Implementation of the Convention in 2005 the Secretariat had identified the difficulties faced in forming a picture of the true state of implementation and noted that "to date, the implementation of national biodiversity strategies and action plans has not been subject to an in-depth analysis by the Conference of the Parties or one of its subsidiary bodies".[2]

In Curitiba members of the UNU-IAS delegation discussed these issues with the Secretariat, members of delegations and other partners, and decided to investigate the feasibility of undertaking such an in-depth analysis of NBSAPs as a contribution to the review of the Strategic Plan and the decisions to be taken by COP on the expected 'enhanced implementation' phase of the CBD in the post-2010 period.

UNU-IAS felt it was well-equipped to carry out such an analysis. First, its mandate is to be "a strategic think tank for the UN and its agencies" and as such has the academic freedom to provide in-depth analysis and evidence-based recommendations designed to contribute to resolving "pressing global problems that are the concern of the United Nations, its Peoples and Member States".

When the idea for this study was born the Millennium Ecosystem Assessment (MA), the first scientific attempt to describe and evaluate on a global scale the full range of services people derive from nature, had recently been published. The MA had identified three major problems associated with our management of the world's ecosystems that were already causing significant harm to some people, particularly the poor, and which unless addressed would diminish the long-term benefits we derive from ecosystems:

- Some 60 per cent of the ecosystem services examined were being degraded or used unsustainably and the available evidence demonstrated that this loss and degradation was substantial and growing.
- Established but incomplete evidence that changes being made in ecosystems would increase the likelihood of non-linear changes in ecosystems.[3]
- The harmful effects of the degradation of ecosystem services were being borne disproportionately by the poor, were contributing to growing inequities and disparities across groups of people, and were sometimes the principal factor causing poverty and social conflict.[4]

Four years later, as our research was drawing to a close, the publication of the third edition of the Global Biodiversity Outlook (GBO-3) confirmed that the target agreed by the world's governments in 2002 – "to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth" – had not been met.[5]

The GBO-3 reaffirms the fact that biodiversity underpins the functioning of ecosystems which provide a wide range of services to human societies and that its continued loss therefore has major implications for current and future human well-being. It confirms that there is a high risk of dramatic biodiversity loss

2 Document UNEP/CBD/WG-RI/1/2.
3 Changes now commonly referred to as 'tipping points'.
4 Millennium Ecosystem Assessment (2005).
5 Secretariat of the Convention on Biological Diversity (2010), *Global Biodiversity Outlook 3*.

and accompanying degradation of a broad range of ecosystem services if ecosystems are pushed beyond certain thresholds or tipping points. The poor would face the earliest and most severe impacts of such changes, but ultimately all societies and communities would suffer.

The COP has determined that NBSAPs should be the primary mechanism for achieving the objectives of the Convention. To examine the experience so far of developing and implementing NBSAPs with a view to recommending how they can in fact become this primary mechanism for addressing biodiversity loss, and the attendant risks to the continued provision of the ecosystem services upon which human societies depend, is clearly to address one of the most, if not the most, pressing global problems that concern us all.

Second, the UNU-IAS team comprised researchers with an intimate knowledge of both the workings of the CBD and national implementation. The authors include a former chair of SBSTTA and three former members of the Secretariat of the CBD. Two have direct experience of national biodiversity planning and NBSAP development and implementation, one in a developed and the other in a developing country party.

COP-8 recommended that regional and/or sub-regional meetings be convened to discuss national experiences in implementing national biodiversity strategies and action plans, and the integration of biodiversity concerns into relevant sectors, including consideration of obstacles and ways and means for overcoming the obstacles.[6]

During the period 2008-2009 the Secretariat organised a series of such workshops[7]and UNU-IAS researchers were able to participate in the majority of these. As noted in the report, these were invaluable opportunities to build a reliable picture of how countries have gone about national implementation of the Convention, the progress made, the obstacles encountered and the lessons learned. This was all the more invaluable as the workshops tended to take place in a collegiate and informal atmosphere and with a tacit agreement to put cards on the table and not skirt around the real issues, thus allowing an opportunity for real insights that tends not to occur in the formal setting of a meeting of COP or a subsidiary body.

The project team undertook a series of in-depth country studies involving on-site visits and interviews and these served to refine and validate the conclusions emerging from the desk study of all available NBSAP reports. To get a clearer picture of whether and how biodiversity was being integrated into other strategies, we looked at Millennium Development Goals Reports, Poverty Reduction Strategy Papers, National Adaptations Plans of Action and National Action Plans to combat desertification.

In keeping with the mandate of UNU-IAS, the intention of the authors has been to offer analysis and policy advice to those directly responsible for reviewing the implementation of the CBD, those who will have a role in implementing a new generation of NBSAPs and those working to support countries in their efforts to stem the rate of biodiversity loss. Although this report may hopefully be useful to students of international environmental law, political science or international relations, these are not the primary audience. However, in this regard, we did recall with interest the arguments made in 1995 by Philippe Sands in a publication destined to become the textbook for a generation of international environmental law students in the post-UNCED period:

> International environmental law is no longer exclusively concerned with the adoption of normative standards to guide behaviour, but increasingly addresses techniques of

6 Decision VIII/8.
7 See www.cbd.int/nbsap/workshops for details.

> implementation which are practical, effective, equitable and acceptable to most members of the international community. Two consequences follow. First, the focus on implementation means that international environmental law will increasingly be concerned with procedural, constitutional and institutional issues: environmental impact assessment; access to and dissemination of environmental information; techniques of law-making and issues of international governance, including accountability and transparency in decision-making; the participation or representation of the different members of the international community in the international legal process; new compliance mechanisms (including appropriate national judicial and administrative remedies); and new techniques of regulation (including economic instruments). Second, as environmental issues are increasingly integrated into aspects of economic and development institutions and law (in particular trade, development lending and intellectual property), the field in which international environmental law has developed will continue to broaden, creating new challenges for the subject and for lawyers and others involved in its development and application.[8]
>
> States implement their international environmental obligations in three distinct phases. First, by adopting national implementing measures; secondly, by ensuring that national measures are complied with by those subject to their jurisdiction; and, thirdly, by fulfilling obligations to the relevant international organisations, such as reporting the measures taken to give effect to international obligations.[9]

So a study of the efforts of the COP to translate the normative standards of the CBD into guidance on techniques for implementation, and the scientific, administrative, political and capacity issues brought to light by countries' attempts to follow this guidance and to report back to the COP on measures taken may in fact speak directly to the study of international environmental law.

However, this report and its conclusions are offered principally as a contribution to the deliberations at COP-10 in Nagoya in October 2010 which will, hopefully, usher in a new phase of enhanced implementation of the CBD, imbued with a sense of urgency and determination to do everything possible to ensure that by the end of the coming decade effective global and national action will have addressed the drivers of biodiversity loss, that the importance of biodiversity and ecosystem services will have been generally understood and acknowledged, and that countries will have reoriented to sustainable development strategies that encompass the objectives of the CBD.

8 Sands, P. 1995, *Principles of International Environmental Law: vol.1 Frameworks, Standards and Implementation* Manchester University Press, p.61.

9 ibid., p.174.

Part 1 – Background to NBSAPs and this assessment

1.1 Background

By ratifying the Convention on Biological Diversity ('CBD' or 'the Convention'), 192[10] states have agreed that biodiversity is a common concern of humankind and have committed themselves to conserving and sustainably using biodiversity and to fairly and equitably sharing the benefits arising from the use of genetic resources. Yet states have sovereign rights over their natural resources, a fact recognised in the Convention, and the distribution of biodiversity varies enormously across states. Effective implementation of the CBD therefore, even more than is the case with implementation of other multilateral environmental agreements, depends on effective action at the national level.

If the CBD is to be effectively implemented it is important to start by addressing national biodiversity strategies and action plans (NBSAPs), which provide the foundation for national implementation of the CBD. Although there have been a number of studies of NBSAPs, especially those of developing countries, no comprehensive assessment of all NBSAPs and their effectiveness as tools for national implementation has so far been carried out.

Article 6(a) of the CBD requires all Parties to the Convention to develop an NBSAP or its equivalent. The strategy is intended to be a roadmap for how each country intends to fulfil the objectives of the Convention in light of its specific national circumstances. The related action plan constitutes the sequence of steps to be taken to meet the goals of the strategy.

The NBSAP should provide the overall framework for national implementation of the three objectives of the Convention, through action for the conservation and sustainable use of biodiversity and the equitable sharing of benefits arising from the utilisation of genetic resources. It should form part of a country's overall sustainable development strategy. The NBSAP and other instruments, such as Poverty Reduction Strategy Papers (PRSPs)[11] and strategies to attain the UN Millennium Development Goals (MDGs),[12] should be mutually reinforcing.[13]

It is generally recognised that biodiversity and the integrity of ecosystems are key development concerns, and that the main drivers of biodiversity loss are in the production sectors of the economy, such as agriculture, forestry, fisheries, energy and transport, as well as in the finance sector. The development of an NBSAP in accordance with Article 6(a) is the means by which each country will be able to fulfil the requirement of Article 6(b) to mainstream biodiversity and thereby to implement the three objectives of the CBD as a whole. Such mainstreaming should occur across all government and economic sectors, and involve all those other actors whose activities and behaviour have an impact on biodiversity through relevant sectoral or cross-sectoral plans, programmes and policies. Common sense suggests, and experience has shown, that NBSAPs developed in isolation from other sectoral policies and programmes are ineffective in protecting biodiversity and the integrity of critical ecosystem functions.

10 There are currently (August 2010) 193 contracting parties to the CBD: 192 states and one regional economic integration organisation (the European Union).
11 www.imf.org/external/np/prsp/prsp.asp
12 www.undp.org/mdg
13 "Recognizing that economic and social development and poverty eradication are the first and overriding priorities of developing countries", Convention on Biological Diversity, Preamble.

An important aim of an NBSAP is to promote a greater understanding of the importance of biodiversity and of the measures needed to promote its conservation and sustainable use by means of communication, education and public awareness programmes to engage the public, media, policy-makers and the formal and informal educational systems.

A well-designed NBSAP should incorporate this logic and the specific guidance provided by the Conference of the Parties (COP) in accordance with national circumstances. The development of the strategy and the implementation of the action plan should be based on the full and effective participation of stakeholders. The NBSAP should serve as a key element in national and sub-national policy development and planning processes, and should result in demonstrable mainstreaming of biodiversity concerns. Its implementation should be ensured through adequate and appropriate human and financial resources, as well as agreed procedures and timetables for periodic revision of the NBSAP.

The findings of the Millennium Ecosystem Assessment (MA)[14] and the three editions of the Global Biodiversity Outlook (GBO)[15] show that the provisions of the Convention on Biological Diversity and its various decisions and work programmes have not been sufficiently implemented at the national level. This is not because we do not know what drives biodiversity loss, but because addressing the drivers – such as the lack of consideration for biodiversity in national development planning and economic policies – is difficult and complex. In adopting the Strategic Plan in 2002,[16] the COP acknowledged that implementation of the Convention has been impeded by many obstacles, and provided an illustrative list of these obstacles. Political and societal obstacles exist in one form or another in all countries. However, in developing countries – and in particular in least developed countries, other low-income countries and small countries – the comparative lack of capacity, of financial, human and technical resources, of access to information and of collaborative partnerships are major obstacles to effective implementation.[17]

The project whose outcome is this report aimed to provide a comprehensive assessment of the preparation, content, adequacy and effectiveness of existing NBSAPs. It sought to assess the extent to which relevant objectives[18] of the Strategic Plan have been achieved and to suggest priorities for supporting national implementation in the post-2010 period.

Our assessment reviewed the mechanisms by which some countries seem to have developed successful and well-implemented NBSAPs while others appear to have been unable to do this. It examined the extent to which existing NBSAPs integrate biodiversity concerns into sectoral and cross-sectoral policies, including sustainable development strategies, Poverty Reduction Strategy Papers, and national processes to meet the Millennium Development Goals.

The tenth meeting of the Conference of the Parties (COP-10) in October 2010 will mark the start of a new era for the CBD. A new strategic plan, new targets for reducing biodiversity loss and new indicators for measuring this are expected to be adopted, and this should also lead to a new generation of NBSAPs. On the basis of its analysis of the current generation of NBSAPs, this report offers recommendations for the new strategic plan of the Convention and for the revision and implementation of NBSAPs in the post-2010 period.

The Global Environment Facility (GEF) is the Convention's financial mechanism. The fifth replenishment of resources of the GEF Trust Fund (GEF-5), concluded in May 2010, will fund the next four years of GEF

14 www.millenniumassessment.org
15 http://www.cbd.int/information/library.shtml
16 Decision VI/26.
17 However, the point is made in several places in this report, and is worth emphasising here, that our assessment reveals there is no simple dichotomy between developed and developing country NBSAPs in terms of their quality or effectiveness; these do not depend on a country's development status and wealth.
18 Objectives 3.1, 3.3 and 3.4 – see Annex 1.

operations and activities, from July 2010 to June 2014. The goal of the GEF-5 biodiversity focal area strategy is the conservation and sustainable use of biodiversity and the maintenance of ecosystem goods and services. To achieve this goal, one of the five objectives of the strategy is the integration of CBD obligations into national planning processes through enabling activities.

Thus for the four-year period following COP-10, a period that will constitute the first half of the period of the new CBD strategic plan, eligible countries will have access to GEF funds for the revision and updating of their NBSAPs.

1.2 Scope and method

The scope of the assessment was potentially extremely wide, as is the scope of the Convention itself. In reviewing NBSAPs and their implementation, it did not give equal attention to all topics covered by the CBD, and this is reflected in the present report. Some topics, such as alien invasive species and biosafety, are hardly covered at all as they have been specifically covered in other recent reviews.[19] A clear priority is given to issues that transcend the environment sector and require the involvement of other societal sectors. These issues go to the root causes of biodiversity loss; they clearly indicate the link between biodiversity conservation and development, and they have posed much bigger challenges to the CBD Parties than 'traditional' nature conservation topics. Particular attention is given to the extent to which biodiversity concerns have been mainstreamed into sectoral and cross-sectoral national policies and plans.

Given that development and implementation of NBSAPs pose particular challenges to developing countries, the report focuses mainly on these countries but without excluding consideration of developed countries.

The report does not consider the extent of biodiversity loss and the impacts of such losses. Rather it builds on the findings of the assessments carried out by the Millennium Ecosystem Assessment and the three editions of the Global Biodiversity Outlook.

With regard to methodology, the key foundation for the assessment was a desktop review of all NBSAPs or equivalent national documents using a standard template developed for this purpose. In addition, the assessment team undertook specific country studies of a representative group of nine countries. These country studies included onsite visits and interviews with key stakeholders in the respective NBSAP process.

The assessment team participated in the majority of the regional and sub-regional capacity-building workshops on NBSAPs and mainstreaming of biodiversity organised by the CBD Secretariat from 2008 to 2010. The team has drawn upon the presentations made in those workshops for many of the case studies presented here, and also used these opportunities to interview many national stakeholders.

The team reviewed the third and fourth national reports, relevant sectoral and cross-sectoral policies, documentation from the CBD Secretariat and existing literature relevant to this topic.

19 The 2008 UNU-IAS assessment and subsequent publication *Internationally Funded Training in Biotechnology and Biosafety – Is it Bridging the Biotech Divide?* considers the level of implementation of the Cartagena Protocol on Biosafety.

1.3 Earlier assessments and literature related to NBSAPs

Global assessments

The following provides a short description of assessments and literature directly relevant to NBSAPs.[20] The first assessment of NBSAPs was carried out by the Global Environment Facility (GEF) in 1999.[21] By then the GEF had already provided financial support for NBSAP preparations in a number of countries. The overall finding was that NBSAP processes were worthwhile and cost-effective and had raised awareness about biodiversity, but that there was still some way to go before NBSAPs could be implemented and make a real difference on the ground. It was found that country motivation was often more concerned with accessing GEF funding than conserving biodiversity, and that stakeholder involvement and public support were inadequate. It further concluded that in several countries NBSAP preparations had not been coordinated with concurrent planning initiatives, and intersectoral issues and the politically sensitive root causes of biodiversity loss had not been seriously addressed.

In 2006, the United Nations Environment Programme (UNEP) revisited the 1999 GEF assessment in its analysis of biodiversity enabling activities.[22] To a large degree, the UNEP findings confirmed the findings of the 1999 assessment.

In 2001, as part of the UNEP/UNDP/GEF Biodiversity Planning Support Programme (BPSP), the International Union for Conservation of Nature (IUCN) conducted a review on the integration of economic measures and incentives into NBSAPs.[23] The review concluded that many NBSAPs had integrated economic objectives and goals as part of their basic rationale, contained stand-alone activities to strengthen their capacity and information regarding the economics of biodiversity, and identified a range of economic instruments and incentives that could be used in support of conservation actions in other biodiversity sectors. However, there was weak capacity, knowledge and information about economic aspects of biodiversity, and insufficient involvement of economists and development decision-makers in NBSAP processes. The review suggested this as a reason why NBSAPs had not yet entered into the agenda of mainstream development and economic decision-making.

In 2002 the International Institute for Environment and Development (IIED) undertook a review of country experience in mainstreaming biodiversity into development policy and planning, with a specific emphasis on NBSAPs. In line with previous reviews, this review concluded that NBSAPs had generally not influenced planning in mainstream economic sectors, and so were not addressing the main drivers of biodiversity loss.[24]

Regional assessments

NBSAP assessments have also been conducted at the regional level. The earliest regional reviews were carried out in the Pan-European region (Western Europe and the Central and Eastern Europe (CEE) region). In 1996 a review of the status of NBSAP development in the 55 countries of the Pan-European region was prepared by UNEP and IUCN under the Pan-European Biological and Landscape Diversity

20 More detailed accounts of reviews and literature related to NBSAPs up to 2007 are given in the CBD information documents *National Biodiversity Strategies and Action Plans: A meta-analysis of earlier reviews* (UNEP/CBD/WG-RI/2/INF/9) and *Review of National Biodiversity Strategies and Action Plans, Biodiversity Mainstreaming and Implementation of the Convention: A Bibliography* (UNEP/CBD/WG-RI/2/INF/10).

21 GEF 1999, *Interim Assessment of Biodiversity Enabling Activities: National Biodiversity Strategies and Action Plans*, Washington DC: GEF.

22 UNEP/GEF 2006, *Analysis of Biodiversity Enabling Activities*, draft report prepared by UNEP Division of Global Environment Facility Coordination (DGEF), Nairobi.

23 Emerton, L. 2001, *The Use of Economics in National Biodiversity Strategies and Action Plans: A Review of Experiences, Lessons Learned and Ways Forward*, Karachi, Pakistan: IUCN Regional Environmental Economics Programme for Asia.

24 Swiderska, K. 2002, *Mainstreaming Biodiversity in Development Policy and Planning: A Review of Country Experience*, London, UK: IIED, www.iied.org/pubs/pdfs/G01228.pdf

Strategy (PEBLDS). The review identified the status of biodiversity planning in thirty-seven of the fifty-five countries. Of these, ten countries reported having an NBSAP, but the review concluded that most of the existing NBSAPs were only strategies and policy plans and that"concrete action and implementation [had] only started in a few countries". Of the ten countries, seven were Western European; the others were Bulgaria, Romania and Cyprus. Out of the thirty-seven respondents, twenty-two indicated that assistance was needed for further NBSAP development. These countries included most of the CEE region and Turkey. CEE countries also viewed exchange of experience as the most valuable type of assistance. Both 'east-east' and 'east-west' exchanges in specific 'working-together' situations, including networking on the majority of CBD issues, were sought.[25]

In the same year, 1996, the European Environment Agency (EEA) commissioned a survey of CBD implementation by its eighteen Member Countries (the then fifteen member states of the European Union, together with Iceland, Norway and Liechtenstein). The survey[26] showed that "many EEA Member Countries seemed to have been slow in their implementation of the Convention and little or no information was provided in the responses on how they would react once their strategies and plans were ready". Regarding the question "has the Convention actually changed policies and actions at the national level, or would these have been adopted without the Convention?", most countries reported that they intended to adapt or use existing legislation to meet obligations under the Convention. The survey proposed a "set of requirements for the successful implementation of the Convention" and identified issues that, as will be seen below, the present assessment still identifies as crucial almost fifteen years later (see Box 1).

Box 1
A partial list of the conclusions of the EEA Study 1996

Cooperation and coordination

- It is necessary to identify a department responsible for the coordination of activities in following up the Convention, and for a multidisciplinary group wider than official government departments to provide oversight of the national response. Only ten countries have such a body.
- The Convention requires there to be a cross-sectoral approach, but the survey responses showed that, of the groups consulted in the development of national strategies and plans, the interests of business and industry had been given greater priority than those of farming and fishery, for example. NGOs appeared to play an important role in the follow-up activities in several countries.
- A general problem for federal states was that the national response to the survey referred to delegation at state (regional) level without indicating what kind of response these regions had given to the relevant Articles in the Convention.
- Cooperation with east European countries was important for EEA Member Countries, as was the importance of biodiversity to the wider issue of sustainable development. Seven countries had, or would soon have, joint programmes with other countries for research on genetic resources. Only two countries, however, had measures that required the private sector to cooperate with government institutions and with the private sector in developing countries in this respect.

Gathering knowledge, education and dissemination of information

- Extensive biodiversity monitoring programmes had yet to be implemented in most countries, and in most cases the impacts on biodiversity of changes in the state of the biotic environment had not been compared with the overall status and trends in biodiversity.
- Scientists must translate their information into a form which can be used and understood by administrators. Governments should demonstrate what information and research already exists, and what they are going to do to maintain and improve research and training levels.

25 Külvik, M. 1996, *Status of Development of Biodiversity Strategies and Action Plans in Europe and Identification of Needs for Assistance*, UNEP/IUCN, Geneva, November.

26 Anderson, L.S., Davies C.E. & Moss, D. 1997, *The UN Convention on Biological Diversity: Follow-up in EEA Member Countries 1996*, European Environment Agency, Copenhagen.

Commitment: political, moral, ethical and financial

- Adequate progress is dependent upon public awareness and political commitment. The systems of government in Member Countries tended to conflict with the cross-cutting nature of the biodiversity issues involved, and this created institutional problems, financial difficulties, and a need for coordination of efforts.
- Most countries had made no extra financial resources available to meet their obligations under the Convention within their own borders.
- There was a need to identify cash flows within national governments, to know at a national level what regional and local authorities are doing, and to know what is spent outside government. There should be, as a minimum standard, some reporting on finance, possibly on direct cash flows, and an evaluation of the use of positive and negative economic incentives.

Legislation and enforcement

- The main problem reported was the need to focus on the gaps in existing legislation. There is no mechanism to 'police' whether minimum standards have been reached, other than peer pressure from other contracting parties.

Targets and indicators

- There had been limited progress on development of biodiversity indicators as indicators of sustainable development. This is a key area for future research.
- Integrated environmental assessments are necessary for examining the interrelationships between the driving forces created by human activities in different economic sectors and their resulting pressures on the environment, and changes in the state of the environment, impacts on ecosystems and the consequent political responses. The survey was unable to discover examples of any such assessments currently in operation in EEA Member Countries.

Source: Anderson, L.S, Davies, C.E. & Moss, D. 1996, The UN Convention on Biological Diversity: Follow-up in EEA Member Countries European Environment Agency, Copenhagen.

In 2000, following the first national reporting cycle (although first national reports were due in 1998, many were only received in 1999 or 2000), UNEP commissioned a further survey of biodiversity planning in the Pan-European region. The survey,[27] carried out by the European Centre for Nature Conservation (ECNC), sought to identify, on the basis of the first national reports, how European countries were integrating biodiversity into relevant sectoral or cross-sectoral programmes and policies – in other words, their implementation of Article 6(b) of the Convention on mainstreaming biodiversity. The survey was restricted to European countries that were members of the United Nations Economic Commission for Europe.

The focus was twofold: a general assessment of how integration was reported within the first national reports, and a specific assessment focusing on a sector-by-sector review. A summary of the conclusions is contained in Box 2.

27 Drucker, G. & Damarad, T. 2000, *Integrating Biodiversity in Europe: A Review of Convention on Biological Diversity General Measures and Sectorial Policies*, European Centre for Nature Conservation, Tilburg, The Netherlands.

Box 2
A partial list of the conclusions of the ECNC survey 2000

Trends in reporting on integration

- Almost all the reviewed national reports addressed the issue of integration, yet all had tackled the issue to different extents and attached different importance to it.
- Most countries made reference to the need for biodiversity integration after indicating that there were 'problems' of biodiversity loss caused by economic constraints on the countryside.
- Few reports clearly identified the national approach in response to Article 6(b) of the Convention.
- The first national reports for Scandinavian countries, the Benelux countries, as well as the UK, France, Ireland, Hungary and the European Community, in particular highlight the concerns and needs for biodiversity integration in the social and economic sectors, to a level significantly greater than the reporting provided by the rest of the European region.

Regional differences in highlighting sectoral concerns

- Analysis of the regional differences of national reports in highlighting sectors of concern regarding biodiversity demonstrated the variation in the three geopolitical sub-regions of Europe: Western Europe, Central and Eastern Europe (CEE) and the Newly Independent States.
- Consistently, Western European countries highlighted the same sectors, in particular agriculture, forestry, fisheries and transport. By comparison, the CEE countries placed emphasis on forestry and protected areas, and to a lesser extent agriculture and tourism. The Newly Independent States emphasised agriculture, forestry and protected areas.

Assessment of sectors impacting on biodiversity conservation and sustainable use

- In general most countries reported on current biodiversity status but not on the degree of integration.
- Most countries profiled a few sectors, and there were regional differences as regards which sectors were highlighted, with agriculture, forestry and fisheries being well represented.
- Regional differences were apparent, with greater emphasis on agriculture in Western Europe and more concerns for forestry in the CEE region.
- Mostly the reports had limited assessment of current knowledge, institutional measures and legislative measures as regards integration.
- Reports tended to provide only a limited indication of priorities as regards Article 6(b) or action towards integration in general.
- Reference to monitoring of biodiversity integration implementation action in response to sectoral pressures was largely absent.

Source: Drucker, G. & Damarad, T. 2000, Integrating Biodiversity in Europe: A Review of Convention on Biological Diversity General Measures and Sectorial Policies, European Centre for Nature Conservation, Tilburg, The Netherlands.

A comprehensive regional assessment for Asia was carried out by IUCN in 2002 and included reviews of fifteen Asian NBSAP processes. Its main conclusions were that the NBSAP processes had led to raised awareness of the status of biodiversity and of the policy options for its management, as well as the need for major expansion of protected area networks and biodiversity information systems. However, the NBSAP processes had not altered the main forces affecting biodiversity, and Asian NBSAPs did not address the full range of issues in the CBD.[28]

A more limited review of Asian NBSAPs was made by the ASEAN Centre for Biodiversity in 2008.[29]

28 Carew-Reid, J. (ed) 2002, *Biodiversity Planning in Asia: A Review of National Biodiversity Strategies and Action Plans (NBSAPs)*, IUCN, Regional Biodiversity Programme Asia – Colombo: IUCN Regional Biodiversity Programme Asia.

29 'National biodiversity strategy and action plans of ASEAN Member Countries: An overview', Analysis of the NBSAPs' and 'Voluntary guidelines in reviewing national biodiversity strategy and action plans', *ASEAN Biodiversity*, Vol.7, No.1, January-March 2008, ASEAN Centre for Biodiversity, Manila, www.aseanbiodiversity.org/index.php?option=com_docman&task=doc_view&gid=39&tmpl=component&format=raw&Itemid=127

In 2007 a regional NBSAP review of fifteen countries in the Pacific region was carried out, reviewing both the content and implementation of NBSAPs. The results of the review showed that the status of the development and implementation of NBSAPs in the selected countries was varied, ranging from countries still awaiting funding to begin their NBSAP development process to others that were busy undertaking implementation activities. The review found that a common gap in NBSAPs was a monitoring and evaluation protocol with appropriate targets, indicators, timescales and prioritisations.[30]

Reviews of NBSAPs requested by the COP

At the request of COP-8, the CBD Secretariat prepared, as a contribution to the in-depth review of Goals 2 and 3 of the CBD Strategic Plan at COP-9 in 2008, an overview of the status of implementation of these two goals, focusing on implementation of NBSAPs and availability of financial resources.[31] The findings were based on existing sources, including the reviews mentioned above, plus the third national reports of Parties, and to a large extent confirmed earlier findings.[32] An update was prepared for COP-9 that also took into account the results of the first phase of regional workshops on NBSAPS.[33] A review of the Strategic Plan, carried out in 2010 in preparation for COP-10, found, on the basis of the latest available information, including from the fourth national reports, that the quality and quantity of NBSAPs seems to have been underestimated in earlier reviews.[34]

1.4 NBSAP guidance

Since the entry into force of the Convention, the COP has considered NBSAPs to be the cornerstones of national biodiversity planning and of national implementation of the Convention.

At its first meeting (COP-1 in 1994) the COP decided to include capacity-building for facilitating preparation and implementation of NBSAPs in the list of programme priorities for funding under the Financial Mechanism.[35] Subsequent meetings of the COP have taken more than sixty decisions that provide guidance to Parties in various forms on NBSAPs.[36]

Most of the guidance issued by the COP has concerned the integration of the various CBD thematic and cross-cutting programmes of work into the NBSAPs; however, the COP has also adopted guidance of a more general nature, of which the most comprehensive was the decision adopted at COP-9 in 2008.[37] To a large extent this constituted an updating and consolidation of earlier guidance scattered across decisions adopted by previous meetings. The general guidance on NBSAPs issued by the COP is summarised in Annex 1.

In addition to the guidance provided by the COP, various other guidelines and toolkits have been developed. The most widely known and used is *National Biodiversity Planning: Guidelines Based on Early Experiences around the World*, prepared by the World Resources Institute (WRI), UNEP and IUCN in 1995 (see Box 3). These guidelines were endorsed by COP-2.[38]

30 Carter, E. 2007, *National Biodiversity Strategies and Action Plans: Pacific Regional Review*, Commonwealth Secretariat and Secretariat of the Pacific Regional Environmental Programme (SPREP), Apia, Samoa, www.sprep.org/att/publication/000582_FinalRpt_NBSAPRegionalReview.pdf
31 See Annex 1.
32 UNEP/CBD/WG-RI/2/2.
33 UNEP/CBD/COP/9/14/Rev.1.
34 UNEP/CBD/WG-RI/3/2.
35 Decision I/17.
36 Annex to UNEP/CBD/WG-RI/2/3.
37 Decision IX/8.
38 Decision II/7.

Box 3
Early guidelines for national biodiversity planning

National Biodiversity Planning: Guidelines Based on Early Experiences around the World, developed by WRI, UNEP and IUCN and published in 1995, are the first set of comprehensive guidelines for national biodiversity planning and preparation for NBSAPs. They were explicitly recommended to CBD Parties at COP-2 in 1995, and up to COP-9 they represented the best available resources on the steps countries should follow when developing their NBSAPs. They have been widely used by Parties in preparing NBSAPs, and have also to a large extent informed the structure of subsequent guidelines.

The guidelines are based around a seven-step biodiversity planning process:

(a) *Getting organised* – Establish a focal point in government, get an adequate high-level mandate, form a partnership with governmental agencies, non-governmental organisations (NGOs), indigenous peoples, community leaders, and business and industry, and obtain adequate funds.

(b) *Assessment* (country study/stocktaking step) – Gather and evaluate information on the status and trends of the nation's biological diversity and biological resources, laws, policies, organisations, programmes, budgets and human capacity; select preliminary goals and objectives; identify gaps between desired and current situations; review options to close gaps; and estimate costs, benefits, and unmet needs.

(c) *Developing a strategy* – Determine goals and operational objectives; analyse and select specific measures to close the gaps identified in the assessment; hold further consultations and dialogue until consensus is reached on acceptable targets and mechanisms for action; and identify the potential roles of stakeholder groups.

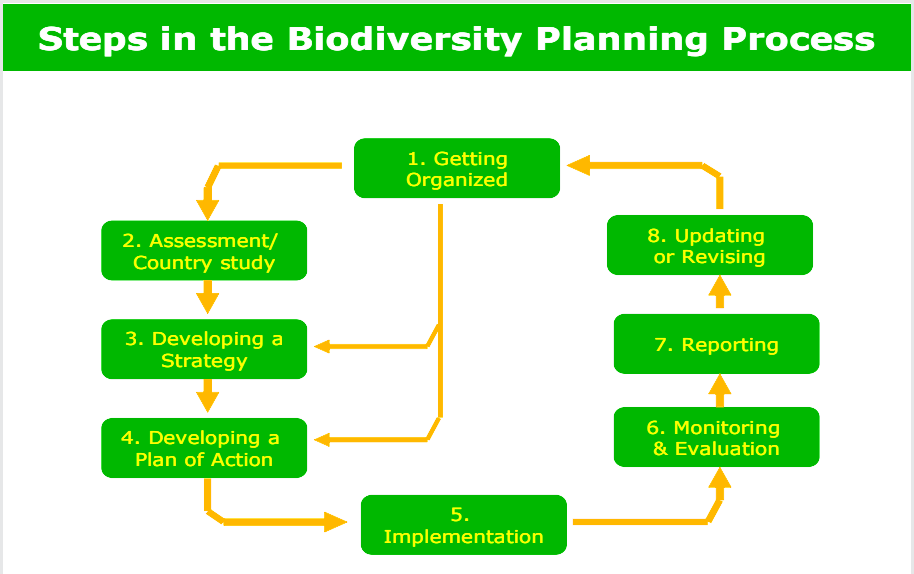
(d) *Developing a plan of action* – Determine which public and private organisations and groups will implement which activities denoted in the strategy, in which location or region, by what means, and with which people, institutions, facilities and funds, and set a timetable for action.

(e) *Implementation* – Launch activities and policies in practical ways so that partners take charge of particular elements of the plan and biological diversity planners become 'biological diversity implementors'; in other words, individuals from the key ministries, NGOs, communities, indigenous groups, business and industries, each with self, group, or business interests and commitment, move forward to seek results from their plans and action.

(f) *Monitoring and evaluation* – Observe and measure the impact of the plan on the economy, ecosystems and social indicators; note changes in laws and policies, behavioural responses, conservation improvement, sustainability and enhanced equity; and note changes in capacity and investment.

(g) *Reporting* – prepare reports for important constituencies; such documents can include country studies, national strategies, action plans, reports to the Convention, and reports to the country's chief executive and general public.

Biodiversity planning is represented in the guidelines as a cyclical and adaptive process, illustrated by showing the seven steps as a flow chart with feedback from the final stages into steps (b), (c) and (d). The guidelines examine seventeen early biodiversity planning experiences and the framework of the Convention for national biodiversity planning and (in Chapter 5) propose an "illustrative biodiversity planning process".



Source: Miller, K.R. & Lanou, S.M. 1995, National Biodiversity Planning: Guidelines Based on Early Experiences around the World, World Resources Institute, United Nations Environment Programme and The World Conservation Union, Washington DC, Nairobi, Gland, Switzerland.

Other guidelines include:

- Fernandez, J.J.G. 1998, *Guide for the Preparation of Action Plans within the Framework of the Biodiversity Convention*, UNDP/GEF (available in English and Spanish)
- Glowka, L. et al 1998, *A Guide to Undertaking Biodiversity Legal and Institutional Profiles*, IUCN Environmental Law Centre
- Hagen, R.T. 1999, *A Guide for Countries Preparing National Biodiversity Strategies and Action Plans*, UNDP/GEF
- Fauna & Flora International (n.d.) *National Biodiversity Strategy and Action: Planning BSAP Preparation: Materials Compiled for the BSAP Preparation Process*, FFI, Cambridge, UK
- Prescott, J., Gauthier, B. & Nagahuedi Mbongu Sodi, J. 2000, *Guide to Developing a Biodiversity Strategy from a Sustainable Development Perspective*, Institut de l'Énergie et de l'Environnement de la Francophonie (IEPF), Ministère de l'Environnement du Québec, UNDP and UNEP, Montreal, September (available in English, French and Spanish)
- WWF/SPREP (n.d.) *NBSAP Preparation Checklist – Pacific Island Countries*, WWF/SPREP, Apia, Samoa
- Global Environment Facility 2000, *Revised Guidelines for Additional Funding of Biodiversity Enabling Activities*, GEF, Washington, DC.

As is clear from this list, existing NBSAP guidelines are relatively old and therefore do not cover many important aspects of advice adopted by the COP over the last ten or more years – for example, concerning new or revised programmes of work or national action to implement the CBD Strategic Plan (adopted by COP-6 in 2002) or achieve the 2010 biodiversity target, including the set of sub-targets and indicators adopted by COP-7 in 2004.

At its second meeting in 1995, when the COP considered NBSAPs for the first time, Parties were encouraged to use existing guidelines, such as those described in Box 3. In the years that followed, the COP issued additional guidance on the development and implementation of NBSAPs in a large number of decisions, including (a) general guidance and (b) guidance relating to specific programmes of work of the Convention, and on some crosscutting issues.

However, by the middle of the following decade this had led to a situation in which its existing guidance on the preparation and implementation of NBSAPs became scattered and in certain areas was incomplete.[39]

Specifically:

(a) Guidance relating to the substantive scope of NBSAPs was scattered among a large number of individual decisions, particularly among those dealing with the thematic programmes of work;

(b) A number of tools had been developed by the COP (including, for example, the principles and guidance on the ecosystem approach and the guidelines on environmental assessments) that it was suspected were probably not being used to their full potential in developing and implementing NBSAPs;

(c) Parties had been encouraged to integrate NBSAPs with corresponding plans and strategies under other conventions (including the UNFCCC and the UNCCD) and to include elements relevant to the other biodiversity-related conventions, but little specific guidance had been given on this.

In 2007 the Working Group on Review of Implementation of the Convention recommended that COP consolidate and update its available guidance and guidelines on NBSAPs.

It noted that a number of issues had emerged that were not fully reflected in the existing guidance:

(a) The need for a communication plan for promoting NBSAPs (in addition, for NBSAPs to include strategies for communication, education and public awareness);

(b) The need to make the case for biodiversity by linking biodiversity, ecosystem services and human well-being;

(c) The need for funding plans for priority activities;

(d) The need to engage all stakeholders in the development, updating and implementation of NBSAPs; and

(e) The need for local-level action on biodiversity, including by linking NBSAPs with local planning processes, and/or developing local biodiversity strategies or action plans.

At its ninth meeting in 2008 the COP adopted consolidated guidance to Parties on NBSAPs[40] (see Box 4).

39 See document UNEP/CBD/WG-RI/2/3 *Guidance for the Development, Implementation and Evaluation of National Biodiversity Strategies and Action Plans.*

40 Decision IX/8.

Box 4
Recent COP Guidance on NBSAPs: Decision IX/8 paragraph 8[41]

COP "… *urges* Parties in developing, implementing and revising their national and, where appropriate, regional, biodiversity strategies and action plans, and equivalent instruments, in implementing the three objectives of the Convention, to:

Meeting the three objectives of the Convention:

(a) Ensure that **NBSAPs are action-driven, practical and prioritized**, and provide an effective and up-to-date national framework for the implementation of the Convention;

(b) Ensure that NBSAPs take into account the **principles in the Rio Declaration** on Environment and Development;

(c) Emphasize the **integration of the three objectives of the Convention into relevant sectoral or cross-sectoral plans**, programmes and policies;

(d) Promote the **mainstreaming of gender considerations**;

(e) Promote synergies between activities to implement the Convention and **poverty eradication**;

(f) Identify **priority actions at national or regional level, including strategic actions** to achieve the three objectives of the Convention;

(g) Develop a **resource mobilization plan** in support of priority activities;

Components of biodiversity strategies and action plans:

(h) Take into account the **ecosystem approach**;

(i) Highlight the **contribution of biodiversity and ecosystem services**, to poverty eradication, national development and human well-being, as well as the economic, social, cultural, and other values of biodiversity;

(j) Identify the **main threats to biodiversity**, including direct and indirect drivers of biodiversity change, and **include actions for addressing the identified threats**;

(k) As appropriate, **establish national, or where applicable, sub-national, targets**, to support the implementation of NBSAPs;

Support processes:

(l) Include and implement **national capacity-development plans** for the implementation of NBSAPs, making use of the outcomes of national capacity self-assessments;

(m) Engage **indigenous and local communities, and all relevant sectors and stakeholders;**

(n) Respect, preserve and maintain **traditional knowledge**, innovations and practices;

(o) Establish or strengthen **national institutional arrangements** for the promotion, coordination and monitoring of the implementation of the NBSAPs;

(p) Develop and implement a **communication strategy** for the national biodiversity strategy and action plan;

(q) Address **existing planning processes in order to mainstream biodiversity** concerns in other national strategies, including, in particular, poverty eradication strategies, national strategies for the Millennium Development Goals, sustainable development strategies, and strategies to adapt to climate change and combat desertification, as well as sectoral strategies, and ensure that NBSAPs are implemented in coordination with these other strategies;

(r) Make use of or develop, as appropriate, **regional, sub-regional or sub-national networks** to support implementation of the Convention;

(s) Promote and support **local action for the implementation of NBSAPs**;

41 This is an abbreviated version of the Decision; see Annex 1 for a fuller version, or the complete text can be accessed at www.cbd.int/nbsap/guidance.shtml

Monitoring and review:

(t) Establish national mechanisms including **indicators**, as appropriate, and promote regional cooperation to **monitor implementation** of NBSAPs and progress towards national targets;

(u) **Review NBSAPs** to identify successes, constraints and impediments to implementation, and identify ways and means of addressing such constraints and impediments, including revision of the strategies where necessary;

(v) Make available through the **Convention's clearing-house mechanism** NBSAPs, including periodic revisions, and where applicable, reports on implementation, case studies of good practice, and lessons learned;"

1.5 Regional and sub-regional capacity-building workshops on NBSAPs and mainstreaming of biodiversity

COP-8 in 2006 recommended that regional and/or sub-regional capacity-building workshops on NBSAPs and mainstreaming of biodiversity be convened.[42] Following this recommendation the CBD Secretariat, in cooperation with host countries, donors and partner organisations, organised five regional workshops in early 2008 before COP-9 in May that year.[43]

COP-9 reaffirmed the need for regional and sub-regional meetings to discuss national experience in implementing NBSAPs and the integration of biodiversity concerns into relevant sectors.[44] A further eight workshops in the remaining regions and sub-regions were held in 2008 and 2009.[45]

The purpose of the workshops was to strengthen national capacities for the development, implementation, review and updating of NBSAPs, and for integration of biodiversity considerations into relevant national policies, strategies and planning processes. Participants in the workshops comprised officials from each of the countries in the region responsible for the development and/or implementation of NBSAPs. Resource persons with specific expertise and experience in NBSAPs and integration of biodiversity into sectoral and cross-sectoral policies also participated.

At all of the regional workshops, individual country presentations on the history of the development and implementation of the NBSAPs were made. They included the current status and the lessons learned, and were followed by general discussions. In this way the workshops were not only building capacity through mutual learning and training, but were also supplementing and updating earlier desk-based analysis on preparation and implementation of NBSAPs. Several of these workshops also explored a specific aspect of mainstreaming relevant to the particular region (e.g. in the South America workshop the focus was on biodiversity and agriculture; in the Central Africa workshop, on forests; and in the Caribbean workshop it was on biodiversity and climate change).

Each of the workshops included a field study visit related to local management of biodiversity and its components, with subsequent discussions of lessons learned.

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42 Decision VIII/8.

43 South, and South-East Asia (Singapore, 14-18 January 2008), Southern and Eastern Africa (South Africa, 4-7 February 2008), Mesoamerica (Mexico, 26-27 March 2008), South America (Brazil, 31 March-4 April 2008) and Europe (Germany, 26-30 April 2008). A summary report on the outcome of these workshops is provided in document UNEP/CBD/COP/9/14/Rev1 www.cbd.int/doc/meetings/cop/cop-09/official/cop-09-14-rev1-en.pdf, and further information and case studies are presented in *Mainstreaming Biodiversity – Workshops on national biodiversity strategies and action plans* http://www.cbd.int/doc/publications/cbd-brochure-nbsap-ws-en.pdf

44 Decision IX/8.

45 Central Africa (Cameroon, 22-25 September 2008), West Africa (Burkina Faso, 29 September-3 October 2008), Caribbean (Trinidad and Tobago, 3-7 November 2008), North Africa and the Middle East (Egypt, 14-18 December 2008), Pacific (Fiji, 2-6 February 2009), Central Asia (Iran, 9-13 March 2009) and Europe (second workshop) (Germany, 13-17 June 2009).

The workshops were all held in a friendly and informal atmosphere which promoted an open and frank exchange of views also on 'difficult' matters such as the various obstacles encountered in preparing and implementing NBSAPs. In fact, the workshops provided the first opportunity to date under the CBD to discuss progress in developing, updating and implementing NBSAPs and biodiversity mainstreaming, as well as enabling exchanges of experiences among countries in their respective regions with often similar biological conditions.

COP-8 had also determined that the fourth national reports by Parties should focus on the national status and trends of biodiversity, national actions and outcomes with respect to the achievement of the 2010 target and the goals of the Strategic Plan of the Convention, and progress in implementation of NBSAPs.[46] This would enable COP-10 to undertake a comprehensive review of the outcomes of the Convention's Strategic Plan (2002–2010), assess progress towards meeting the 2010 biodiversity target, and develop a revised strategic plan for the post-2010 period on the basis of the information provided by Parties in their fourth national reports on NBSAP implementation. To assist Parties with the preparation of their fourth national reports, the Secretariat organised a further eight regional capacity-building workshops between December 2008 and July 2010.[47]

46 Decision VII/14.
47 Details of these workshops can be found at www.cbd.int/nr4/support/capacity-development.shtml

Part 2 – Analysis of NBSAPs

2.1 Implementation of NBSAPs

Sources of information on implementation

Overall reviews of NBSAP implementation have for a long time been constrained by the fact that countries have provided very limited information in their national reports or elsewhere on whether and to what extent they have implemented their NBSAPs.[48] Although many NBSAPs provide for regular reviews and reports about implementation, these have rarely been carried out.

The CBD fourth national reports (due 1 April 2009 but still being submitted at the time of writing) provide an important source of information not previously available on the level of implementation. Countries were requested to use the national report to provide a summary of progress in the implementation of their NBSAP, as well as in promoting biodiversity mainstreaming. One hundred and thirty-one Parties had submitted their reports by 1 September 2010. In spite of the wealth of information provided in these reports, few provide detailed information on the extent to which activities in their NBSAPs have been implemented or on what outcomes have been achieved.[49] Only a very limited number provide quantitative assessments of implementation. These reports have typically assessed implementation levels to be between 30 and 50 per cent of planned NBSAP activities.[50] A number of countries, such as the Philippines, report that they are unable to provide full information because they lack essential monitoring tools.

Another important source of information on levels of implementation is the country presentations given at the regional and sub-regional capacity-building workshops on implementing NBSAPs and mainstreaming of biodiversity. The presentations demonstrated a more nuanced picture of NBSAPs and their implementation, raising the possibility that NBSAPs may have had a bigger impact on raising awareness about biodiversity and informing national policies than previously assumed and reported.

Complementing the fourth national reports, the workshop participants presented a variety of case studies of good practices in the implementation of the CBD (some of which have been turned into boxes in this report). These actions are being taken at all levels – regional, national, provincial, local and community – and with the involvement of a wide range of actors, including the private sector, civil society, and indigenous and local communities. It should be noted, though, that many of the actions reported at the workshops seem to have been taken outside the context of NBSAPs and other planning processes. Although examples of very good conservation and sustainable use practices, many of these cases are scattered, isolated projects often on a small scale.[51]

The fourth national reports and the workshop presentations together provide a better understanding of the gaps and constraints in implementation than was previously available. Such gaps and constraints are reported by nearly all countries. The constraints reported remain largely the same as those reported for overall CBD implementation in the earlier third national reports, which were based on a questionnaire. However, the narrative form of the fourth national report and the informal workshop format has allowed countries to provide more detailed explanations of the constraints and their causes than hitherto. Both in the reports and in the workshops, countries were generally very blunt about shortcomings in

48 UNPEP/CBD/WG-RI/22.
49 UNEP/CBD-WG-RI/3/2 and UNEP/CBD/WG-RI/3INF/1.
50 ibid.
51 The workshop presentations are available at www.cbd.int/nbsaps/workshops

implementation (though probably most blunt in the workshops). This, however, does not apply to all countries. Some have remained reluctant to reveal shortcomings in implementation.

As mentioned above, some NBSAP reviews have also been carried out at the regional level, of which the most comprehensive is the Asian review 'Biodiversity Planning in Asia' (2002), with studies of fifteen countries.[52] As this review was carried out at a time when a number of countries in Asia were either in the process of preparing or had only recently prepared their NBSAPs, the review focuses more on the process, content and likely effectiveness of NBSAPs than on implementation.[53] The more recent regional review (2007) of the NBSAPs of fifteen countries in the Pacific region addresses both NBSAP content and implementation.[54]

The information obtained in the above-mentioned reports, reviews and workshop presentations, and through the country studies carried out as part of the present assessment, indicates a progressive trend towards the implementation of NBSAPs as compared to earlier reviews made for example on the basis of the third national reports. Nevertheless, major gaps and constraints remain, and in many cases NBSAPs may in fact have had little influence on the success stories reported. The following pages will elaborate on both progress and shortcomings in implementation.

Progress in implementation

Progress in implementation of NBSAPs has mostly been achieved in the following areas:

Communication, education and public awareness

Communication, education and public awareness (CEPA) is an important cross-cutting area in which much progress has been made, but it is also an area with major gaps.

Promotion of better understanding of the importance of biodiversity is supposed to be an important element of every NBSAP, and the topic features prominently in most NBSAPs. The preparatory processes have in themselves raised awareness about biodiversity, and nearly all of the fourth national reports submitted provide information about actions related to education and public awareness.[55]

However, the activities reported are very varied in type and scale and rarely include broader CEPA strategies across economic and social sectors designed to promote awareness of biodiversity. As mentioned earlier, very few NBSAPs include strategies to communicate the NBSAP itself to a wider audience.

This could well be a reason why a low level of awareness is reported as a major obstacle to implementation in the fourth as well as in the third national reports, and this is surely part of the reason why NBSAPs generally have not been successful in affecting the main drivers of biodiversity loss.

52 Carew-Reid 2002, op cit.

53 ibid. Yet the main findings and conclusions of the Asian review are just as relevant today as in 2002 and not only applicable to Asia. The review concludes among other things that the NBSAPs process has not affected the main forces degrading biodiversity resources and that sustainable use and benefit sharing have been largely ignored. Four issues are highlighted as being especially important for future biodiversity planning: devolution, regionalisation, community management and accountability.

54 Carter 2007, op cit.

55 UNEP/CBD/WG-RI/3/3, including an outline of a number of CEPA activities reported in the fourth national reports.

Protected areas

The theme of protected areas is the one that most features in NBSAPs, and in the most developed way. Consequently, it is also the theme under which most tangible progress has been achieved, although in this field also international targets have not been fully met and much remains to be done.

Areas under designated protection have steadily increased in recent decades and now comprise over 120,000 different sites covering 12 per cent of the global land surface.[56] Fifty-six per cent of countries that have submitted national reports indicate protected area coverage greater than 10 per cent of their land surface. Some countries have an exceptionally high rate of protected areas coverage, such as Bhutan (39 per cent, see Box 11), Algeria (36.5 per cent) and Belize (26 per cent). Of the 700,000 square kilometres designated as protected areas since 2003, nearly three-quarters was in Brazil, largely as a result of the Amazon Region Protected Areas (ARPA) programme, which aims to protect 500,000 square kilometres in the Brazilian Amazon over ten years.

The extent of terrestrial protected areas is considerably higher than that of marine protected areas, the latter covering only 0.5 per cent of the total ocean area and 5.9 per cent of territorial seas. However, marine protected areas have also expanded considerably in recent years.[57]

A CBD sub-target to the overall 2010 target was to protect at least 10 per cent of each of the world's ecological regions.[58] Notwithstanding the progress made in the designation of protected areas, this target is far from being reached. Only 56 per cent of the 825 terrestrial eco-regions have 10 per cent or more of their area protected. Of the 232 marine regions, only 18 per cent meet the target and half have less than 1 per cent protection.[59]

Designation of protected areas will only benefit biodiversity if the areas are well managed. According to a recent global assessment of management effectiveness of 3,080 protected areas, only 22 per cent were judged 'sound', 13 per cent were 'clearly inadequate' and 65 had only 'basic' management.[60]

Legislation

Development of new legislation to protect biodiversity features in most NBSAPs and, in a large majority of fourth national reports, countries report that they have developed such legislation in recent years.[61] This was also highlighted by many country representatives at the NBSAP workshops. Many, however, also pointed to a lack of resources and capacity to implement and enforce the legislation as a major obstacle to NBSAP implementation.

Shortcomings in implementation

Process and design of NBSAPs as obstacles to implementation

Although there is still a lack of data regarding NBSAP implementation, the manner in which NBSAPs have been prepared and designed gives some indication of the likelihood of success. NBSAPs are unlikely to be effectively implemented if they have been poorly prepared and designed, and the shortcomings in this respect in many first-generation NBSAPs may be the biggest obstacle to implementation. The following summarises some of those shortcomings:

56 Global Biodiversity Outlook 3, pp.35-40.
57 ibid.
58 Decision VII/30.
59 Global Biodiversity Outlook 3, pp.35-40.
60 ibid.
61 UNEP/CBD/WG-RI/3/INF/1, which in Annex 1 provides a comprehensive list of examples of newly developed national biodiversity legislation.

- *Preparation.* Involving stakeholders in the preparation is crucial, and while nearly all NBSAPs have been prepared through a consultative process, important stakeholders such as local authorities, indigenous and local communities, women and the private sector were in many cases largely absent. The process was often too short to obtain genuine ownership, and the momentum from the preparatory phase was often lost in the implementation phase.

- *Ownership and coordination.* Most NBSAPs are not 'owned' at the appropriate political level, implying that mainstreaming across sectors does not take place even if the NBSAP provides for this. NBSAPs are often technical rather than political documents. Coordination structures exist on paper in most countries, but often they either do not function or they function at levels that are too technical or too low to serve as effective implementation mechanisms.

- *Coverage of the Convention's objectives.* The fact that most NBSAPs cover conservation issues in much greater detail than issues related to sustainable use and benefit sharing leads to an uneven degree of implementation of the three objectives.

- *Mainstreaming.* Many NBSAPs deal with the mainstreaming of biodiversity concerns within sectoral and cross-sectoral plans and policies in vague terms, often with no identification of the lead agency responsible for each activity in the action plan. Thus, NBSAPs are not able to help sectors reorient their policies.

- *Action plan design.* Some countries have only strategies with no action plans, and in some cases the action plans are in fact no more than strategies with soft policy objectives (typically among developed countries). Both models indicate limited commitment to implementation, which in any case will be difficult to monitor. Other NBSAPs are unrealistically ambitious, with more than a hundred unprioritised activities outlined in their action plans and (in the case of some developing countries) often in the form of concrete project proposals with cost estimates directed less to domestic sources than to external donors. As stated by other NBSAP reviewers, this type of action plan is likely to freeze countries into inaction if the external funding does not arrive, which in most cases it does not.

- *Quantitative targets, indicators and monitoring mechanisms*. These are lacking from most NBSAPs, and this situation not only complicates the monitoring of implementation but indicates a lower level of commitment to implementation.

- *Funding.* Most countries lack mechanisms for funding of NBSAPs. Some countries simply have not considered the costs of implementation during preparation, others anticipate that the costs will be covered under existing budgets (as is the case for countries with less action-oriented NBSAPs), while others rely completely on the provision of external funding for implementation (see above).

Other obstacles to implementation

The above deficiencies in process and design are not the only reasons for lack of implementation. National reporting, workshop presentation and country studies have demonstrated NBSAPs that were both well prepared and designed but were still not well implemented. A number of countries have invested a lot of resources in conducting an exemplary environmental planning process, including a well-designed NBSAP, mainstreaming of biodiversity concerns into broader development processes, and invoking both environmental impact assessment and strategic environmental assessment as tools for implementation. However, these plans and policies are not being translated into the necessary action on the ground and thus have little or no impact on the main drivers of biodiversity loss.

The main obstacles reported are interrelated and are very much the same as cited earlier as obstacles to CBD implementation. They include:

- Limited capacity due to lack of financial resources and technical expertise
- Limited project funding in cases of project-based action plans
- Weak administrative and institutional structure
- Lack of political will and interest
- Poor enforcement of legislation
- Limited mainstreaming and cross-sectoral integration
- Lost awareness of the NBSAP (the awareness may have been there during and just after the NBSAP preparation, but was subsequently lost).

The NBSAP will only have impact on the ground if it is understood and supported by local authorities and communities, and the lack of resources and capacities seems to be most apparent at the sub-national level.

Some countries have carried out a lot of NBSAP follow-up activity at the national level in the form of plans, programmes and legislation, but their governments simply lack the local institutional set-up necessary to follow up at the sub-national level. In other countries local government reforms have been carried out, including devolution of biodiversity responsibility, but in many cases local resources and capacities are still inadequate to respond to the NBSAP. Thus, there are good reasons to target capacity development efforts to building capacities for implementation on the ground rather than capacities for broader policy formulation, international negotiations or suchlike.

Box 5
Gaps in NBSAPs and constraints to implementation

Country presentations at the regional and sub-regional workshops on implementing NBSAPs and mainstreaming biodiversity, organised by the CBD Secretariat in 2008 and 2009, provided new and frank insights into countries' NBSAP experiences throughout the world, including gaps and constraints. The following part of the presentation from Sudan at the workshop for North Africa and the Middle East is a good example, and the gaps and constraints outlined are representative of many country presentations:

Gaps identified in the NBSAP

- All assessments for biodiversity components in Southern Sudan were carried out as desk work.
- Issues of sustainable use and benefit sharing were not given adequate attention as that given to biodiversity conservation.
- Poverty has not been addressed within the NBSAP. Poverty is intricately connected to biodiversity.
- No clear mention or suggested approach to synergies between the Rio conventions.
- No clear vision on how to mainstream the NBSAP into the national strategies and plans.

Constraints to implementation

- Civil war and continued political instability and conflicts in south and western Sudan resulted in an influx of refugees who were settled close to biodiversity hotspots.
- Lack of coordination between natural resources departments due to the absence of an overall conservation policy and planning.
- Poor land use policies; the extensive mechanised agricultural farms had led to habitat shrinkage and species loss.
- Lack of understanding of the role of ecosystem values and services leading to ineffective management.

- Inadequate Institutional capacities; the government general budget to many vital sectors is very limited.
- Socioeconomic factors (spiral of poverty).
- Inadequate planning and proper affiliation of institutions e.g. the Wildlife Conservation General Administration (WCGA).
- Inadequate legislation and poor law enforcement e.g. poaching and smuggling of wildlife resources and biopiracy in genetic resources.
- Inadequate and/or lack of regular inventories and monitoring.
- The conservation status of most of the protected areas is unsatisfactory. The manpower of the WCGA is not fairly distributed in the different states or protected areas; they are mostly concentrated in some national parks e.g. the Dinder and Radom National Parks.
- Drought, fire, overgrazing and the imprudent use of the natural resources to the extent of endangering plant and animal species.

Source: PowerPoint presentation by Sudan at the NBSAP workshop for North Africa and the Middle East, 14 to18 December 2008 in Cairo, Egypt, www.cbd.int/doc/nbsap/nbsapcbw-mena-01/nbsapcbw-mena-01-sd-01-en.pdf

Lessons learned from country studies on implementation

Nearly all the countries that have been studied in-depth in this report have experienced gaps in implementation due to either deficiencies in the preparation and design of NBSAPs or lack of tools for implementation, or a combination of both.

For some countries, such as Cameroon, implementation was impeded from the start. The preparation phase did not gain enough ownership among major stakeholders and the design of the NBSAP makes it difficult for local or national planners and decision-makers to act upon it in a concrete way.

As noted above, other countries have invested a lot of resources in conducting an exemplary environmental planning process and in developing the structures and procedures for implementation, but these good intentions have to a large extent remained on paper and have not been translated into action on the ground capable of affecting the main drivers of biodiversity loss.

Box 6
St Lucia, an NBSAP champion

Among the countries that were studied in-depth, St Lucia is exceptional for having achieved nearly complete implementation of its first NBSAP. St Lucia has now prepared its second NBSAP. Some of the reasons stated for this success are:

- A long-standing conservation ethos in the country
- A biodiversity focal point based in the main natural resource ministry
- A willingness at all levels for the process to be participatory, involving most sectors and communities
- A team approach to implementation among various stakeholders and across sectors
- Good technical and management mentorship
- National investment and funding for biodiversity
- Good access to regional and international funding
- An NBSAP/biodiversity coordinator with drive and persistence, who is not restrained by the political process.

The country studies have shown that differences in implementation of NBSAPs are often to a large extent due to the individual persons involved in national biodiversity planning, particularly in countries with very small biodiversity administrations. Success in implementation is extremely dependent on strong and devoted individuals, and there are examples of how the NBSAP process can almost collapse if these individuals are replaced by someone else.

St Lucia owes part of its implementation success to having a team of officials across ministries who have worked for many years on biodiversity-related issues. However, 90 per cent of these officers will retire within three to five years, and the government has already started considering how to overcome this problem.

2.2 Review of the preparation and content of NBSAPs

Earlier reviews of NBSAPs have come up with rather negative conclusions regarding the preparation, content and effectiveness of NBSAPs.[62] The delay in completing the NBSAPs has been a long-standing problem from the beginning. With regard to completed NBSAPS, negative factors often highlighted were inadequate stakeholder involvement, lack of measurable targets, disregard of the ecosystem approach, action plans being merely lists of projects without dedicated funding and, not least, poor mainstreaming of biodiversity into sectoral and cross-sectoral policies, plans and programmes, including national development and poverty reduction strategies. NBSAP preparation has even been described as a 'pro-forma' exercise in many cases.[63]

The poor NBSAP performance of countries surveyed, particularly on mainstreaming, combined with the early election of NBSAPs as cornerstones of CBD implementation, has come to symbolise the enormous complexity of addressing the drivers of biodiversity loss and thus of the limited implementation of the CBD so far.

Encouragingly, however, information obtained during recent years, especially through the regional and sub-regional workshops and the fourth national reports, has shown a more nuanced picture and a more positive trend.

By September 2010, 171 countries (89 per cent of the total number of CBD Parties) had adopted their NBSAPs or equivalent instruments. In addition, thirteen countries had informed the Secretariat that they were in the process of preparing their NBSAP, including two countries who have acceded to the Convention in the last two years. Nine others have not prepared NBSAPs or initiated the process to do so, or have not informed the CBD Secretariat that they have done so. Forty-nine Parties have revised their NBSAPs, or are in the process of doing so (see Annex 2).

Many NBSAPs are quite comprehensive in scope, and their preparation represents in itself a major achievement, especially for many developing countries. Nearly all countries have adopted a participatory process, and, according to reports at the workshops, the preparation of an NBSAP has been important in creating awareness on biodiversity issues. The workshops have revealed substantial concrete activities and innovative thinking in biodiversity planning, generated to some extent by the NBSAP process, not only within the conservation community but also on a wider scale across mainstream economic sectors.

The present assessment reveals clear differences between older and newer NBSAPs. The critical NBSAP reviews mentioned above apply to a large extent to the first generation of NBSAPs prepared mostly between 1996 and 2003, while subsequent NBSAPs had not been reviewed to the same extent prior to the present assessment. It will be seen below that these second-generation NBSAPs – including both revised and new NBSAPs – are generally closer to the intended content of NBSAPs as agreed by Parties to the Convention through the various sets of guidance referred to above. These NBSAPs generally reveal a stronger emphasis on mainstreaming and are far more strategic and action-oriented. Most notably, they

62 See UNEP/CBD/WG-RI/2/INF/9, *National Biodiversity Strategies and Action Plans: A Meta-Analysis of Earlier Reviews*.

63 Le Prestre, P. 2002, 'The Convention on Biological Diversity: Negotiating the turn to effective implementation', *Isuma: Canadian Journal of Policy Research*, Vol.3(2), pp.92-98.

assume a high degree of self-reliance, in sharp contrast to many first-generation NBSAPs, which in many cases presupposed external funding for implementation.

Even if the trend is heading in the right direction, it will also be seen below that many of the obstacles and shortcomings persist. Second-generation NBSAPs are still few in number and their impact has yet to materialise. Thus the impact of NBSAPs on the main drivers of biodiversity degradation and loss continues to be limited. Biodiversity planning is still rarely viewed as a political and economic process in which hard decisions will have to be made on resource allocation and use.

Box 7
South Africa – a modern NBSAP already showing results

South Africa's 2006 NBSAP is an example of the new generation of NBSAPs, with more focus on the preparatory process, mainstreaming and tools for monitoring progress – with tangible progress in implementation as a result. To obtain the support of all stakeholders from the start has been a key to the success.

The NBSAP was prepared between 2003 and 2005 under the strategic guidance of a Project Steering Committee, with representation by national departments, national agencies such as the National Botanical Institute (from September 2004, the South African National Biodiversity Institute), South African National Parks, provincial departments and agencies, as well as representation by civil society. A National Project Manager was appointed to manage the process, assisted by a Project Management Team and several voluntary task teams.

Stocktaking, assessment and analysis to identify priorities, existing initiatives and stakeholders were made on the following areas:

- Policy and legislation
- Institutional capacity
- Social aspects of conservation
- Sustainable use
- Economics and poverty alleviation
- Access and benefit sharing
- Invasive alien species.

A country study was prepared as part of the stocktaking and assessment phase, with a detailed examination of the status of South Africa's biodiversity and the current socioeconomic, policy and institutional context.

As part of the NBSAP process a comprehensive national spatial biodiversity assessment (NSBA) of the status of biodiversity at the ecosystem level was carried out. Using systematic biodiversity planning techniques, the NSBA provides the spatial component of the NBSAP, indicating nine priority areas for conservation action, integrating marine, river, terrestrial and estuarine ecosystems. A communication strategy for the NBSAP was also prepared.

The goal of the NBSAP is to conserve and manage terrestrial and aquatic biodiversity to ensure sustainable and equitable benefits to the people of South Africa, now and in the future. In support of this goal, the following five key strategic objectives have been adopted:

- Policy framework for biodiversity management
- Institutional framework for biodiversity management
- Integrated management of terrestrial and aquatic ecosystems
- Sustainable use of biological resources
- Conservation areas.

A number of outcomes have been identified for each of these strategic objectives, with five-year targets and indicators, and activities to achieve the outcomes, complete with priority, lead agency and support partners.

Despite its recent adoption, the NBSAP has already achieved progress in many fields. As a direct follow-up to the NBSAP, the South African *Biodiversity Act* now requires that a National Biodiversity Framework be developed and updated every five years. The purpose of this is to provide a framework to coordinate and align the efforts of the many organisations and individuals in conserving and managing biodiversity in support of sustainable development. The framework builds on both the NBSAP and the NSBA.

Progress has also been made with regard to the various targets for protected areas coverage and to mainstreaming biodiversity across sectors, especially in terms of spatial planning and decision-making, through development of bioregional plans. Business and biodiversity initiatives have been established, and various fiscal incentives to promote sustainable biodiversity management are under development.

Source: South Africa NBSAP 2005, Fourth National Report 2009 and South African presentation at the South and East African Regional Workshop on Implementing NBSAPs and Mainstreaming Biodiversity, Rustenburg, South Africa, 4-8 February, 2008, www.cbd.int/doc/meetings/nbsap/nbsapcbw-seafr-01/other/nbsapcbw-seafr-01-za-nbsap-en.pdf

The parameters used for the report largely reflect the different elements of NBSAP guidance included in COP decision IX/8. It may be argued that it is too early to assess progress against guidance adopted in 2008, but, as previously noted, a large part of the COP-8 guidance is little more than the consolidation of previous guidance scattered across earlier COP decisions.

2.3 NBSAPs in developed and developing countries

Despite greater capacity and resources in developed countries compared to developing countries, it would be wrong to assume that developed country NBSAPs in general have been better prepared and are more comprehensive than developing country NBSAPs. In fact, the opposite often seems to be the case.

Africa is the region with the highest percentage of completed NBSAPs, while Europe has the lowest percentage. Developed countries have typically prepared their NBSAPs later than developing countries, and a number of developed country NBSAPs are only strategies with no action plans.

Box 8
Finland and Cambodia: examples of NBSAPs close to the guidance on preparation of NBSAPs

Box 3 summarised the first comprehensive set of guidelines for the preparation of NBSAPs developed in 1995, and Annex 1 contains the consolidated and updated guidance adopted by COP-9 in 2008. While the guidance recommended and adopted by the COP over the years has been widely used by individual countries in their NBSAP preparations, the extent to which the guidance has been followed has varied greatly, and no single country has followed all the elements in their entirety. Finland and Cambodia are examples of countries which have included the guiding elements in their NBSAPs to a very large extent, even though both NBSAPs were prepared before the consolidated and updated guidance for NBSAPs was adopted by COP-9 in 2008.

The conditions of the two countries vary greatly. While Finland is a developed country, Cambodia belongs to the group of least-developed countries. The two NBSAPs are not only examples of exceptionally comprehensive and elaborate NBSAPs, but also a confirmation of a general finding in the comparison of NBSAPs, namely that the quality and comprehensiveness of NBSAPs seem to be independent of a country's development status and wealth.

Both NBSAPs strongly underline the value of biodiversity for human well-being. The title of the Finnish NBSAP is *Saving Nature for People*, while the subtitle and the overall mission of the Cambodian NBSAP are 'To Use, Protect and Manage Biodiversity for Sustainable Development in Cambodia'.

A key objective of both NBSAPs is to strengthen sectoral and cross-sectoral responsibility. The Finnish Action Plan includes 110 measures, and for each one the plan defines which ministries are responsible. The Cambodian NBSAP is divided into seventeen themes covering the different sectors relevant to biodiversity, with a set of actions under each theme and with the NBSAP clearly stressing the responsibility of each sectoral authority. Providing

something quite unique in NBSAPs, the Cambodian NBSAP addresses what is likely to happen in the absence of implementation of each action.

Both NBSAPs are results of extensive consultative processes, including with a wide range of national stakeholders, and both countries have established broad governing bodies to oversee the implementation of their NBSAP. While the Cambodian NBSAP includes indicators for monitoring progress within the NBSAP itself, a system for monitoring implementation of the NBSAP is still to be developed in Finland.

Both countries regard the implementation of their NBSAPs as adaptive, iterative and cyclical, to allow for the involvement of stakeholders and for the NBSAPs to be reviewed and expanded as conditions evolve. The Finnish NBSAP is in its second edition, and the government conducted a major evaluation of the first NBSAP covering 1997-2005 as a basis for this revision.

Like the overwhelming majority of NBSAPs, neither the Finnish nor Cambodian NBSAPs include time-bound and measurable targets beyond the general global and European 2010 targets.

Source: Cambodian NBSAP, adopted in 2002, www.cbd.int/doc/world/kh/kh-nbsap-01-en.pdf; revised Finnish NBSAP adopted in 2007, www.cbd.int/doc/world/fi/fi-nbsap-v2-en.pdf

Developing countries typically use the CBD scope and terminology as the basis for their NBSAPs, while developed countries are more likely to base their NBSAP on existing nature protection policies which, in many cases, ignore important CBD features. This may be due to the fact that for many developing countries the NBSAP process marked the start of their biodiversity policy development, while most developed countries had developed policies and legislation for nature conservation long before the CBD came into force.

A common feature of developing country NBSAPs is an action plan in the form of proposals for concrete projects with often little relation to the policy objectives of strategy and cost estimates for each project directed at external donors. This approach is discussed further below.

Another difference is that the large majority of NBSAPs of developing countries (and countries with economies in transition) have been prepared with the financial support of the Global Environment Facility (GEF) and the technical support of one of its Implementing Agencies, as part of the biodiversity enabling activities funding window. The original three GEF Implementing Agencies (United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP) and the World Bank) were all involved in the NBSAP processes. The two-year Biodiversity Planning Support Programme (BPSP) established under UNDP and UNEP in 1999 further served to strengthen countries' abilities to develop and implement NBSAPs (see Box 35).

2.4 NBSAPs in the various regions

With one exception there seem to be no distinct characteristics of or differences between NBSAPs from one region to another. Rather, it is *within* the regions that big differences between NBSAP preparation and content are discernible; this is the case even between neighbouring countries with apparently very similar conditions. This further supports the idea that both political support for biodiversity and the enabling environment at the national level vary considerably from country to country, and this in turn reinforces the potential benefits of investments aimed at promoting exchanges of experience and learning from each other at the regional level.

The Pacific region is the exception to the rule that there are no specific characteristics of each region's NBSAPs. In this region there is a considerable degree of commonality among the themes addressed in the NBSAPs across the region.[64]

2.5 Engagement of stakeholders in NBSAP preparation

Because hard choices must be made in biodiversity planning, negotiation and compromise are essential. Negotiations among all stakeholders take time and cost money, and the process of coming to agreement is likely to be initially contentious; but there is no other way to develop a plan that is truly national and comprehensive and that has any real possibility of being implemented.

As mentioned above, earlier literature on NBSAPs and their effectiveness has been critical, and the limited effectiveness of NBSAPs has often been associated with inadequate stakeholder involvement in the preparatory process.[65] This applies in particular with respect to the effective engagement of women, local and indigenous communities, and the private sector. The reviews further indicate that preparatory processes have been restricted by time constraints imposed by governments and donors. Many countries were allowed no more than eighteen months for the process, and at least one country (the Philippines) was only granted nine months for preparation.[66]

The present assessment has revealed that very few countries have regarded the NBSAP preparatory process as an exercise confined to government offices. An overwhelming majority of countries report that they have applied a participatory approach involving varying numbers and categories of stakeholders. According to many country presentations at the NBSAP regional workshops, the participatory NBSAP processes were considered an important contribution to raising awareness about the importance of biodiversity in their countries.

Box 9
Newer NBSAPs with extensive stakeholder involvement in the preparations

Angola
The two-year process from 2007 for the preparation of Angola's NBSAP began with preparation of six studies presenting an overview of the state of biodiversity in the country. The studies and their conclusions were then discussed in a number of regional and national workshops that involved more than 650 participants from government institutions, traditional authorities, the private sector, civil society, higher education, local communities and the press. The recommendations of the workshops and other contributions from the consultative process were compiled and edited into a single document, and all were taken into consideration in preparing the final NBSAP. A National Project Steering Committee was established to ensure the proper running of the process, and the NBSAP was approved by government.

Croatia
Croatia issued its second NBSAP in 2009. With the aim of analysing implementation of the first NBSAP since 1999 and proposing strategic objectives and actions for the new NBSAP, ten working groups covering the main features of the NBSAP, including biodiversity mainstreaming into various economic sectors, were established. The working groups comprised a very wide range of stakeholders relevant to the mandate of each group. The final draft was posted on the web for public consultation. All comments received were taken into consideration in finalisation of the NBSAP prior to final approval by parliament.

64 Carter 2007, op cit.
65 These reviews include Swiderska 2002 and Carew-Reid 2002, op cit.
66 Carew-Reid 2002, op cit.

Liberia
The process for preparing Liberia's NBSAP, adopted in 2003, involved the following stages:

1. Official launching of the project
2. Stocktaking and inventory of biodiversity information
3. Analysis of the data and identification of options
4. Introduction and training of planning team members, national consultants and workshop organisers in the techniques of strategic planning in biodiversity management
5. A three-day participatory national workshop
6. Three participatory regional workshops for discussing regional and county plans for the conservation and management of biodiversity; the process was the same as the national workshop
7. Drafting of the national biodiversity strategy and action plan
8. A one-day discussion forum involving members of the Steering Committee and planning team to review the draft strategy and action plan
9. A second three-day participatory national workshop at which the draft strategy and action plan were discussed
10. Submission of the strategy and action plan to the government of Liberia for adoption.

Throughout these stages, the NBSAP was formulated in a participatory manner. Collection and analysis of biodiversity information and stakeholder consultation were key components of this participatory process.

Sources: NBSAPs, fourth national reports and country presentations at regional NBSAP workshops.

A majority of countries have received support for NBSAP preparations from GEF or other external donors, and to varying degrees temporary consultants have been involved in these preparations. Early reviews of NBSAP preparations indicate that in many cases the processes may have been too 'consultant driven' and at the same time too short, at the expense of stakeholder involvement, ownership and commitment.[67]

The stakeholders involved were often represented in steering committees established for the NBSAP preparation. Government authorities appeared most frequently, but the scientific community and NGOs were often also involved in the process. Workshops were typically held as part of the process. In line with what has been found in earlier reviews, stakeholders such as women's organisations, local and indigenous communities, and the private sector appear to have participated less frequently in the national processes. Some exceptions to this exist, however, such as in the Pacific Islands, where the NBSAPs were generally developed through a bottom-up process based on community consultations. These consultations often included not only traditional chiefs and other community representatives but also women's and church groups.

The degree of participation and consultation varies widely along the spectrum between bottom-up and top-down approaches. Typically, NBSAPs provide little information about the effectiveness of the consultative process and the extent to which stakeholder views have actually been included in the final version.

There is a clear distinction between first- and second-generation NBSAPs concerning the degree of participation and consultation. The later NBSAPs have typically been prepared through a broader, longer and more structured preparatory process, often also including the provincial and local levels (see Box 9).

It is generally recognised that a process which adopts a bottom-up approach is the best way of getting stakeholders to feel commitment and ownership of the subsequent implementation of the NBSAP.

67 GEF 1999, *Interim Assessment of Biodiversity Enabling Activities: National Biodiversity Strategies and Action Plans*, Washington DC: GEF.

However, even in a bottom-up process some strategic guidance (top-down elements) needs to be included. The government, being ultimately responsible for the NBSAP, needs to draw up clear strategies and terms of reference for the process and to indicate clearly when meeting demands and expectations will not be possible. A lack of acceptance, ownership or 'buy-in' from the political level at the conclusion of the process is equally fatal. India's NBSAP preparation process provides some important lessons in this respect (see Box 10).

Box 10
Lessons learned from India's NBSAP preparation experience

In its scale, ambition, degree of decentralisation and popular participation, India's NBSAP preparation process was the biggest biodiversity planning exercise so far anywhere in the world. The Indian Ministry of Environment and Forests (MOEF) entrusted the task of coordinating the preparation of the NBSAP to a non-governmental organisation and accepted its proposal for a large-scale decentralised process across all states of India. As a result, a diversity of innovative tools and strategies were employed to reach out to thousands of people nationwide between 2000 and 2003, enabling more than seventy state, sub-state, eco-regional and thematic plans to be prepared in addition to the overall national plan. The consultation process was regarded as important as the final product, and was meant to increase awareness of biodiversity and empower people through participation.

However, when the three-year people-driven process was completed, the MOEF declined to approve the draft national plan prepared by the core group of the consultative process. The Ministry wished to await the finalisation of India's National Environmental Policy and was reportedly unhappy with parts of the draft plan, including the statement that India's current development paradigm was environmentally unsustainable.[68] The draft plan was labelled a 'technical report' in the process of preparing a new document which started in 2006 and was concluded in 2008 by the approval by Cabinet of a National Biodiversity Action Plan.[69]

Despite the fate of the draft NBSAP emanating from the consultative process, there are many positive lessons from the Indian experience. In itself the process has helped to build networks, increase awareness of biodiversity and empower people through participation. It demonstrated the potential of decentralised planning to generate positive spin-offs such as capacity-building.[70, 71] The NBSAP process also managed to challenge the assumption that huge amounts of money are needed for such a process, and demonstrated what is possible to achieve with limited resources.

The wider lessons identified by Apte for biodiversity planning with extensive stakeholder participation include the need to "balance a focus on marginalized voices with politically astute positioning, lobbying and creating a support base among powerful interest groups during the course of the decentralised planning process. In other words, a wider support base is needed, consisting not only of the voiceless and marginalised, but perhaps just as importantly those who unequivocally have a voice and are emphatically not marginalised." She notes that "the importance of politically astute positioning and lobbying in order to push for official acceptance of the final plan should not be underestimated and needs to be incorporated into the overall strategy of a plan-making process". This is consistent with the analysis of Carew-Reid (see Box 11).

It is at the local level that most of the decisions that affect biodiversity are taken and, as mentioned above, the Indian process also led to the remarkable achievement of seventy sub-national biodiversity strategies and action plans being prepared. Possibly the most serious shortcoming of the NBSAP consultative processes globally has been the lack of involvement at the provincial and local level.[72] Sub-national biodiversity strategies and action plans such as India's are important tools for involving local

68 Sharma, A. 2009, *Planning to Deliver: Making the Rio Conventions more Effective on the Ground: Climate Change, Biodiversity, Desertification*, GTZ, Eschborn, Germany, http://www2.gtz.de/dokumente/bib/gtz2009-0191en-climate-change-biodiversity-desertification.pdf, p.16.
69 India's National Biodiversity Action Plan 2008, www.cbd.int/doc/world/in/in-nbsap-v2-p1-en.pdf
70 Apte, T. 2006, 'A people's plan for biodiversity conservation: creative strategies that work (and some that don't)', IIED Gatekeeper Series 130.
71 Nikhil, A. 2006, 'Planning networks: Processing India's National Biodiversity Strategy and Action Plan', *Conservation & Society*, Vol.4.
72 Carew-Reid 2002, op cit.

communities and for taking into account specific local circumstances.[73] This issue will be discussed further in part 2.20.

2.6 National coordination structures

The ownership and commitment of key stakeholders that have been built up during a consultative NBSAP preparatory process will dissipate if there is no mechanism to involve these same stakeholders in the implementation phase.

This loss of momentum in the implementation phase seems to have been very widespread. A majority of countries report that they have created some form of national coordination structure to oversee implementation, but the number of such countries is considerably smaller than that of countries that have conducted a participatory preparation process. The structure often takes the form of a committee, with varying numbers of stakeholders. Generally, fewer stakeholders are involved than was the case in the preparatory process. Often the structure involves only the relevant government agencies and not the non-governmental stakeholders. In many cases, existing coordination structures for biodiversity and nature conservation are used.

At the regional NBSAP workshops, many countries reported that their NBSAP coordination structures did not function well, if they functioned at all. Some noted the low-level representation on the part of government bodies representing the economic sectors, with no mandate to decide on issues that affect their sectors. There seems to be a clear connection between the limited implementation of NBSAPs discussed below and the lack of efficient coordination mechanisms, with the latter being both cause and consequence.

Second-generation NBSAPs typically have more sophisticated and broader coordination structures, although their effectiveness remains to be determined.

2.7 Political level of NBSAP adoption

The degree of commitment to and political will to implement an NBSAP is linked to the political level at which the NBSAP is adopted. There has been a trend towards higher level of adoption, reflecting the increased political attention given to biodiversity mainly as a result of the global 2010 biodiversity target endorsement by heads of state at the Johannesburg World Summit on Sustainable Development in 2002. Some of the most recent NBSAPs, such as the revised NBSAPs of Vietnam, Croatia and the Netherlands, have been adopted by national parliaments, while the majority of the other second-generation NBSAPs have been adopted by government or cabinet.

It appears that the majority of first-generation NBSAPs were approved at the level of the minister having responsibility for the CBD (typically the minister for the environment), although there are also examples among the older NBSAPs of approval by parliament and government or cabinet. A number of the first-generation NBSAPs seem to have been approved only at the administrative level or by the committee that conducted the NBSAP process. Some of these do not include clear strategic objectives and actions but only recommendations for these, in the expectation that these will be decided upon later at the political level. Such decisions often appear not to have been taken.

73 Pisupati, B. 2007, *Effective Implementation of NBSAPs: Using a Decentralised Approach*, UNU-IAS, www.ias.unu.edu/resource_centre/Effective%20Implementation%20of%20NBSAPs%20-%20Pisupati.pdf

Some countries (e.g. Turkmenistan, Haiti, Antigua and Barbuda) reported at the regional NBSAP workshops that their NBSAPs have never been formally adopted, even many years after their preparation. However, they also reported that the draft NBSAPs had nevertheless influenced the biodiversity policy of their country.

While ownership at the higher political level is essential for successful biodiversity planning, the endorsement by parliament or cabinet of an NBSAP does not in itself guarantee that biodiversity planning has been conducted as a political process, or that the NBSAP will be successfully implemented. The high-level approval may be a rubber stamp rather than an expression of genuine political will. If the preparatory process has not created commitment and ownership among key stakeholders and if the NBSAPs are unfocused, not prioritised and without implementation mechanisms, they are likely to be ineffective regardless of the level of adoption.

Box 11
Biodiversity planning as a political process

- Conservation science may provide parameters of biodiversity planning, but planning is foremost a political process driven by economic and social factors.
- Decentralisation of responsibility without devolution of authority and accountability is not good for biodiversity planning and conservation.
- Political instability is often not good for biodiversity planning and conservation and, when it has occurred, it has led to increased biodiversity losses.
- The role and potential influence of local communities in biodiversity planning and conservation has often been overemphasised, while major economic forces shaping biodiversity use and degradation have not been effectively engaged in the process.
- Community management of biological resources has been shown to be positive for biodiversity planning and conservation where associated tenure arrangements and user rights are well defined and recognised.

From Carew-Reid 2002, Biodiversity Planning in Asia.

2.8 Revision

Of the 171 CBD Parties that have concluded NBSAPs, 35 have revised them. One (Japan) has made three revisions and therefore now has its fourth-generation NBSAP, while fifteen have reported they are in the process of revision.[74]

The majority of NBSAPs were concluded between 1996 and 2002, a year which marked the beginning of a new era in international biodiversity policy. The CBD Strategic Plan and the 2010 biodiversity target were adopted by COP-6 in 2002 and later that year by heads of state at the Johannesburg World Summit on Sustainable Development. COP-7 in 2004 adopted a set of goals to clarify and help assess achievement of the overall 2010 target. Additional NBSAP guidance was adopted, and in 2005 the Millennium Ecosystem Assessment was concluded, introducing new concepts and underlining the importance of biodiversity for human well-being through its underpinning of essential ecosystem services. The paucity of revised or updated older NBSAPs is symptomatic of limited national responses to these important advances in global understanding of the importance of biodiversity to sustainable human development and international security. This once again reinforces the conclusion that the generally low political priority

74 Status at 30 September 2010; see Annex 2. It is worth noting that COP has not determined what constitutes 'revision' or 'updating'. The expected call to revise NBSAPs in line with the Strategic Plan for 2011-2020 provides the opportunity to clarify what constitute the essential components of an NBSAP, such as the inclusion of an outcomes framework.

given to NBSAPs and to the conservation and sustainable use of biodiversity persists. The political visibility and momentum that seemed to have been gained during the preparation of NBSAPs appears to have been lost in many countries.

It is also noteworthy that some countries very active with regards to the conservation and sustainable use of biodiversity have chosen not to update their NBSAP. For example, Canada completed its National Biodiversity Strategy in 1995 and has not updated it since. Rather, Canada has developed a results-oriented Biodiversity Outcomes Framework, designed to guide implementation towards desired outcomes as agreed by stakeholders. The Outcomes Framework does not replace the 1995 Biodiversity Strategy but could instead be viewed as an addendum to it. This approach demonstrates that, while the National Biodiversity Strategy is viewed as a basic strategy for meeting Canada's obligations under the Convention, it is not the primary document guiding daily implementation. The Canadian case presents a different, and perhaps equally valid and practical, approach to revision and updating, one in which there is no attempt to amend the original strategy but rather to build on and complement it.

The small number of revisions is hard to reconcile with the fact that nearly all NBSAPs claim to be dynamic documents within a cyclical planning process. Many NBSAPs in their headings announce themselves as being time-bound. Typically, they foresee an operative life of between five and ten years, but if only few of them have been revised the majority must therefore have formally expired. Most NBSAPs provide for periodic reviews, often at yearly intervals, but this in most cases has not taken place.

The revised NBSAPs are often, as mentioned above, considerably different from the first NBSAPs, both in design and content, and reflect many of the new concepts on the international biodiversity agenda. They are more political and focused and therefore better instruments for implementation of the Convention.

Responding to new trends and CBD decisions has not been the only reason for NBSAP revision. Some countries have taken the opportunity to remedy unmanageable and unfocused NBSAPs, while others have made their first NBSAPs redundant simply by implementing them (see Box 12). In any case, with the adoption of the new strategic plan for biodiversity at COP-10, it is envisaged that all countries will update their NBSAPs by 2014.

Box 12
NBSAP revisions in the same region but from different perspectives

Guyana
Guyana prepared its National Biodiversity Action Plan (NBAP) in 1999. In 2004 the Guyana Environmental Protection Agency (EPA), assisted by UNDP, conducted an assessment of the 1999 NBAP and concluded that it was too ambitious and that the implementation process was slow. This was attributed to:

- Lack of funding
- EPA not having trained staff and demonstrating the expected leadership
- Weak participation from agencies
- Limited coordination, with the EPA at times not aware of activities of sector agencies and how these related to the CBD
- The National Biodiversity Advisory Committee not playing an effective enough role in guiding the implementation process.

The main recommendation of the review was that the second phase of the NBSAP should place special emphasis on agricultural land, forests, coastal and marine ecosystems, and freshwater resources.

The EPA conducted a multi-stakeholder process for preparing the second NBAP, adopted by cabinet in 2008. The overall goals and objectives of the first NBAP have been retained, with specific focus on the four themes mentioned above and eight cross-cutting areas. For each of the twelve areas one project concept and a log frame was prepared,

forming the basis of the second NBAP. The first NBAP included more than thirty different actions. The National Biodiversity Advisory Committee was expanded with representatives from the private sector and NGOs. Next steps include a financial strategy for implementation of the action plan.

St Lucia
St Lucia's first national biodiversity strategic action plan was developed in 2000. It focused on planning and policy formulation, research, monitoring, conservation, sustainable use, and education and public awareness. As part of the NBSAP, twenty-two projects identified by stakeholders as being of critical importance for biodiversity were initiated. Nineteen of these have either been completed or are in the implementation stages. The remaining three have not been implemented as a result of revised country priorities and/or limited financial resources. Specific outcomes related to the implementation of St Lucia's national biodiversity strategic action plan include, among others, the development of draft biodiversity legislation and biodiversity management frameworks, the selection of monitoring and management methodologies for various species, biodiversity guidelines for eco-tourism sites, the establishment of three protected areas and a review of the protected areas system.

Given the progress that was made in implementing the country's first NBSAP, the government decided to develop a new biodiversity strategy for the country as a means of identifying emerging biodiversity issues and of further refining the overall objective of the country's biodiversity strategy. As part of the development process, an assessment of the first NBSAP was conducted. This found that biodiversity issues had been mainstreamed into some national agendas but also that the NBSAP lacked targets and provisions for addressing climate change and invasive alien species, contained few provisions for traditional knowledge, lacked a coordination mechanism, and was missing two key components – environmental legislation and development legislation. The assessment also found that the monitoring and evaluation components needed to be more concise, that issues related to trade needed to be better taken into account and that knowledge management needed improvement. The main obstacles to the implementation of the first NBSAP were limited human capacity, the lack of coordination mechanisms and technical issues. Development of the new NBSAP was built upon the conclusions of this assessment and used situational analyses and integrated planning to develop a more concise framework for biodiversity management in St Lucia.

The new NBSAP was developed using a results-based approach and the same participatory process that was used during the development of the first NBSAP. The new NBSAP regards biodiversity management as an integral part of sustainable social, cultural and economic development and its management as a collective responsibility. The main goal for the NBSAP is that the conservation and sustainable use of biodiversity be incorporated into development strategies at all levels, including in the private sector. Specifically, the new NBSAP is expected to mainstream biodiversity issues into national development plans, maximise community participation in biodiversity management, enhance coordination and institutional frameworks, and support the efficient evaluation and monitoring of biodiversity. Already St Lucia's new NBSAP has contributed to the inclusion of biodiversity into key policies, including the National Environmental Policy, the Agriculture Sector Policy and Strategy, the Climate Change Policy and Action Plan, and the Water, Land and Tourism policies.

Sources: Guyana's second NBAP (2007) (www.cbd.int/doc/world/gy/gy-nbsap-v2-en.pdf); CBD Secretariat and St Lucia's presentation to the sub regional workshop on NBSAPs and mainstreaming of biodiversity, 3-7 November 2008, Port-of Spain, Trinidad & Tobago (www.cbd.int/doc/nbsap/nbsapcbw-car-01/nbsapcbw-car-01-lc-01-en.pdf).

2.9 Biodiversity planning through means other than stand-alone NBSAPs

Instead of preparing distinct NBSAPs, countries have the option of adapting existing strategies, plans and programmes to meet the objectives of the Convention if this is more appropriate to national circumstances (CBD Article 6).

It is generally recognised that conservation and sustainable use will only be achieved if these are mainstreamed into sectoral and cross-sectoral strategies, plans and programmes. The fact that this has happened to only a limited extent is argued to be one of the main causes of the continued loss of biodiversity. On this basis it could be argued that the long-term goal of mainstreaming could be

better served by the option of adapting existing strategies, plans and programmes to encompass biodiversity concerns, rather than preparing distinct NBSAPs. In this way countries would avoid time and resource-hungry NBSAP exercises, which in many cases have not resulted in much commitment beyond the environment community, and move directly to a mainstreaming exercise. This would also be in conformity with the emerging approach of development cooperation agencies, that is, to provide official development assistance in the form of budget support to broader, cross-sectoral plans and policies rather than earmarked projects.

However, this runs the risk of bypassing the need for each country to determine its particular vision for its biodiversity. In the absence of a scientifically robust first stage, the decision to attempt from the outset to achieve biodiversity goals through sectoral integration will possibly result in biodiversity planners lacking the basis for making a strong case for change in other sectors.

On the other hand it could be argued that, as long as biodiversity remains no higher on the political agenda than it currently is in most countries, there is still a need to prepare strategies and action plans for biodiversity in their own right as a vehicle for raising awareness and gaining political attention. An overall integration of various topics, including biodiversity, into economic, development and other sector plans when there is little awareness and understanding of the value of biodiversity could lead to the serious dilution of biodiversity concerns. So, in many cases it would not be a question of creating either distinct NBSAPs or adapting existing plans, but of doing both. Sectors would need guidance on how to mainstream biodiversity, and the NBSAPs should provide for this.[75]

Opting out of developing a stand-alone NBSAP would work best in countries where biodiversity has a high profile. This is the case in Brazil, Norway and Sweden (see Box 13), which are among the few countries that have chosen to conduct national biodiversity planning through means other than a stand-alone NBSAP.

National environment plans are well established planning documents in many countries. With the broad scope of the biodiversity agenda also involving the provision of ecosystems services, biodiversity-related issues inevitably cover a large part of such environmental plans. There could thus be good reasons to consider merging future national environment plans and NBSAPs; such integrated plans could also be a tool for the coordinated and coherent implementation of all three Rio conventions.

Box 13
Sweden – high-profile biodiversity policy without a stand-alone NBSAP

In 1997 the Swedish parliament adopted a strategy for biodiversity and a set of sectorally focused action plans were produced. However, since the parliament's adoption of an over-arching system of environmental objectives in 1999, biodiversity policy has been mainstreamed into these objectives, such that today there is no stand-alone Swedish national biodiversity strategy and action plan.

The fifteen environmental objectives adopted in 1999 include six objectives whose main focus is biological diversity, each for a specific ecosystem/nature type, as well as one objective with biodiversity as one of its main pillars. The remaining eight objectives focus on environmental threats, including threats to biodiversity. Together, the objectives constitute an environmentally sustainable development strategy for Sweden with a goal of reaching this by 2020 (2050 for the climate change objective). In March 2002 the parliament decided on a first set of concrete and measurable interim targets.

The system of environmental objectives and interim targets was evaluated for the first time in 2004. This resulted, among other things, in the adoption by parliament of a sixteenth objective called 'A rich diversity of plant and animal life'. The objective was adopted in order to take into account aspects of biodiversity that may not be easily dealt with under sectoral approaches. Since then the system has twice been further evaluated.

75 Carew Reid 2002, op cit, p.35, and GEF Biodiversity Program Study 2004, p.74.

A cornerstone in the Swedish strategy for biodiversity is sectoral integration. Objectives, targets and action plans have been largely produced and carried out within each sector, involving both government agencies and private actors in each sector.

Source: Sweden's Fourth National Report to the CBD, www.cbd.int/doc/world/se/se-nr-04-en.pdf

2.10 Knowledge about status and trends of biodiversity as the basis for NBSAPs

Assessment of the state of biodiversity within a country is an important step in the biodiversity planning process. This was recognised already before the CBD was adopted, and in 1993 UNEP published a first set of guidelines for country studies on biodiversity.[76]

The 2002 report on the regional workshops that were held in 1999 and 2000 as part of the assessment of Asian NBSAPs concluded that "countries in the region have not paid adequate attention to assessing the status and trends of their biodiversity resources. Consequently, NBSAPs are prepared with incomplete information and are less effective than they could be". On that basis, it was suggested that countries should be more creative in gathering information on biodiversity status and threats, and it was noted that a great deal of information is often available from existing published records.[77]

On an issue as complex and all-encompassing as biodiversity, the knowledge base will never be complete. The difficult question, therefore, is how much information on status and trends is needed to make an NBSAP effective. This present assessment (carried out ten years after the Asian review) suggests that most countries have obtained at least a basic understanding and knowledge of the status of their biodiversity at a level sufficient to identify the main causes of biodiversity loss in their countries and are thereby also able to identify in the NBSAPs the responses needed to combat biodiversity loss. Only a small fraction of countries have indicated in their NBSAPs that they still lack knowledge to take proper action and have therefore made the knowledge gap the main focus of their NBSAPs. In practice, however, this may mean that countries know which drivers are important threats to biodiversity and may have general information about rates of habitat loss, degradation and transformation, yet probably very few countries can convert this into quantified estimates of real biodiversity loss, even at the level of number of species lost.

It appears that the NBSAP process in most countries has been a good opportunity to improve the biodiversity knowledge base, primarily through collation and centralisation of existing records, although probably very few new 'in the field' surveys. The NBSAP processes have often included either full country studies or inventories of separate components of biodiversity. Generally speaking, considerable efforts have been made by countries to collect and systematise available data on biodiversity, and the NBSAPs often include rather comprehensive descriptions of the state of the country's biodiversity.

The assessment phase of the NBSAP process has at the same time given many countries an awareness of the huge gaps in their biodiversity knowledge, either because the knowledge is simply not there or because it is difficult to access. Hence, in a large proportion of NBSAPs, improvement of the knowledge base figures as one of the key objectives.

Clearly there is a need to provide more and better information on the status and trends of biodiversity and to better transmit this knowledge to decision-makers. Decisions should always be informed by

76 www.biodiv.org/doc/meetings/sbstta/sbstta-01/information/sbstta-01-inf-03-en.pdf
77 Carew-Reid 2002, op cit, Annex I.

the best available knowledge. This is also the rationale of the current UNEP process – to strengthen the science/policy interface by establishing an Inter-governmental Platform on Biodiversity and Ecosystem Services (IPBES).[78] But insufficient knowledge does not need to, and should not, limit countries from taking action to protect biodiversity. As mentioned above, this also seems to be a general understanding of countries in conformity with the precautionary principle reflected in the CBD preamble, and consistent with the concept of 'adaptive management' or 'learning by doing' embodied in the ecosystem approach.[79]

Box 14
Colombia's Biodiversity Information System (SIB)

When the Colombian government and its technical advisors began developing their NBSAP, they realised they needed a way to bring together the vast and detailed knowledge of numerous institutes and organisations that worked on biodiversity issues in the country. Colombia's Biodiversity Information System (SIB) was designed for this purpose, and to facilitate knowledge management so as to support research, education and policy-making on biodiversity. As part of Colombia's clearing-house mechanism, coordinated and implemented by the Alexander von Humboldt Biological Resources Research Institute (Humboldt Institute), the SIB is a product of a national alliance among Colombian biodiversity institutes at national and regional levels. Its functions revolve around three main axes: capacity, infrastructure, and content management.

Sources: CBD Secretariat, regional NBSAP workshop presentation and Sistema de Informacion Sobre Biodiversidad de Colombia website: www.siac.net.co

Box 15
GBIF – a global source of biodiversity information

The Global Biodiversity Information Facility (GBIF), based in Copenhagen, Denmark, is the world's largest network for scientific biodiversity data. The mission of GBIF is to facilitate free and open access to biodiversity data worldwide via the internet to underpin sustainable development.

GBIF provides three core services and products:

1. *An information infrastructure* – an Internet-based index of a globally distributed network of interoperable databases that contain primary biodiversity data – information on museum specimens, field observations of plants and animals in nature, and results from experiments – so that data holders across the world can access and share them
2. *Community-developed tools, standards and protocols* – the tools data providers need to format and share their data
3. *Capacity-building* – the training, access to international experts and mentoring programs that national and regional institutions need to become part of a decentralised network of biodiversity information facilities.

Currently GBIF provides access to approximately 175 million digital records held in databases worldwide. It is a decentralised system of biodiversity information facilities (BIFs) established and maintained by GBIF participants who include both countries and international organisations. Forty-seven countries and forty-one organisations now participate in the network.

GBIF calls on holders of biodiversity data around the world to prioritise the digitising and sharing of their data to deepen and broaden biodiversity data coverage of the whole globe available through the network and to increase the applicability and usefulness of the data.

Source: GBIF homepage, www.gbif.org

78 See www.ipbes.net/
79 Preambular paragraph 9: "Noting also that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat."

2.11 Coverage of the three objectives of the CBD

The CBD has three objectives: the conservation of biodiversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources. This section considers the extent to which the three objectives have been covered in the NBSAPs.

At the time it was negotiated, the CBD represented a paradigm shift in approaches to the protection of nature and natural resources. The CBD is a global convention and takes a comprehensive rather than a sectoral approach to conserving biodiversity. Its provisions go beyond the conservation of biodiversity per se to include the sustainable use of the components of biodiversity and the fair and equitable sharing of the benefits arising from the use of genetic resources. The scope of the Convention is thereby extremely wide and in fact covers the sustainable use of all living resources.

The first drafts of the Convention text focused mainly on conservation tools such as protected areas and the targeted protection of threatened species. Developed countries called for global lists of threatened species and habitats to be annexed to the Convention. It became clear early on, however, that developing countries were not prepared to consider just conservation aspects in the strict sense. They saw a developed-country focus on conservation alone as a potential impediment to their national development needs and argued for a shift in focus to biodiversity as a supplier of goods and services essential to meeting basic human needs, and for the need for the sustainable use of the components of biodiversity to become an objective of the Convention. Moreover, developing countries, conscious of the benefits historically obtained by developed countries from the exploitation of the rich biodiversity of the developing world and aware that their biological resources represented a potentially significant basis for future national development, argued for a new regime that could level the playing field. This position is embodied in the third objective of the CBD.

The tension between the conservation objective of the Convention and its sustainable use objective and, in particular, its role as an instrument to level the playing field between users and providers of genetic resources, permeates the Convention: its programmes of work, the negotiation processes, and the approaches of the various regional groups of countries. A second backdrop is provided by a parallel tension between the impulse to recognise the inherent, non-monetary values of biodiversity and the arguments for the 'commoditisation' of biodiversity through the attribution of economic values to the its components, to biodiversity-related knowledge and to ecosystem services as the strategy for their conservation. This report does not explicitly discuss these issues, but any consideration of the Convention needs to acknowledge their presence in the background.

The CBD does not explicitly define itself as an instrument based on the concept of sustainable development, but it is in fact one of those multilateral international agreements with this concept at its heart. The Convention includes a number of elements which are important components of the concept of sustainable development, such as mainstreaming and inter- and intra-generational equity, and several COP decisions clearly perceive CBD to be within the concept of sustainable development.[80]

In the negotiations leading to the adoption of the text of the Convention, there was much debate about the distinction between conservation and sustainable use. Many advocated that conservation should be used as a broad term which included sustainable use. In the end, sustainable use was included as a separate term and Article 2 of the Convention was formulated in such a way as to emphasise the overwhelming importance that developing countries in particular attached to the use of their biological

80 Koester, V. 2006, 'The Nature of the Convention on Biological Diversity and its Application of Components of the Concept of Sustainable Development', *The Italian Yearbook of International Law*, Vol.16.

resources.[81] By contrast, conservation is not defined, but the deliberate distinction made between the two concepts suggests that conservation should be understood mainly in its narrow traditional sense.

Tensions arising from the different weighting of the CBD objectives have continued amongst countries after the entry into force of the CBD. For example, developed countries have called for moving the issue of protected areas higher up on the CBD agenda, resulting in the establishment of an ad hoc, open-ended working group on protected areas by COP-7 in 2004,[82] despite the lack of enthusiasm of developing countries. The same applied to the issue of access to genetic resources and benefit sharing (ABS) where developing countries have been arguing for stronger measures and have criticised the reluctance of developed countries to contemplate these.

CBD negotiators and observers often hold differing views as to whether the three objectives have been given equal treatment since the entry into force of the Convention. Some argue that most countries give higher priority to the second (sustainable use) and third (benefit sharing) objectives than to the first (conservation). Others argue that the attention of COP and the subsidiary bodies of the Convention has been evenly focused on all three, but that progress on the first objective is facilitated by a longer history of conservation efforts and tools, whereas the second objective involves extremely complex political and economic issues surrounding the societal behaviour that constitutes the drivers of biodiversity loss, and the third objective requires the introduction of a new regime which all countries are having to consider from scratch (and with powerful vested interests involved). Nothing more natural, the argument goes, than to pick the low-hanging fruit and maximise the early benefits to be gained from moving ahead on the basis of existing communities of practice, research and implementation tools i.e. the conservation objective. It can be argued that the concept of ecosystem services that links biodiversity with human well-being, as demonstrated by the Millennium Ecosystem Assessment, brings the objectives of conservation and sustainable use closer together by providing a utilitarian justification for conservation.

Whatever the truth of the matter – and it is clear that, in terms of national and international resource allocation, over the life of the Convention most funding has gone to conservation activities – our purpose in this section is to see how the three objectives are treated in NBSAPs. As can be seen from what follows, the review of prioritisation of the three objectives in NBSAPs clearly indicates a predominant and therefore unequal focus on the first objective – the conservation of biodiversity.

Conservation

Topics falling under the first objective feature dominantly in nearly all NBSAPs and are addressed in much greater detail than topics falling under the other two objectives.

This applies in particular to protected areas, such that these constitute the main focus of a large proportion of NBSAPs. These typically include fairly concrete provisions for developing legislation, for the full implementation and management of existing protected areas, and for the designation of new protected areas. This is one of the few issues for which a number of countries have set quantitative targets, mostly pertaining to the dimensions of protected area coverage. In some cases targets are also time-bound.

As will be seen below, countries have generally been successful in expanding their protected area coverage. One reason why protected areas have been dealt with so extensively in the NBSAPs and with tangible results may be that the topic is less cross-sectoral than many of the other CBD topics. The main biodiversity agency (typically the ministry of environment or equivalent) responsible for the NBSAP will often also be the agency responsible for protected areas.

81 Glowka, L. et al 1994, *A Guide to the Convention on Biological Diversity*, IUCN Environmental Law Centre.
82 Decision VII/28.

Involvement of local and indigenous communities in the design and management of protected areas is important for avoiding conflicts and ensuring that the communities derive benefits from and are not disadvantaged by protected areas. This aspect of protected areas is not covered in most NBSAPs, but the NBSAP regional workshops revealed many positive case stories about community involvement in protected areas management including in Fiji, Vanuatu, Brazil, Pakistan and Panama.

Second-generation NBSAPs typically include the establishment of expanded protected area networks. As regards the conservation objective of the CBD, many NBSAPs also deal quite extensively with measures for species conservation. Older NBSAPs in particular include measures for "conservation outside protected areas". These measures are often difficult to distinguish from measures for sustainable use.

Box 16
Bhutan – a country with exceptional high coverage of protected areas

Bhutan has prepared two Biodiversity Action Plans – the first in 1998 and the second in 2002. The most significant achievements in implementing the two action plans have been the establishment of a network of protected areas, constituting about 15,192 square kilometres or 39.6 per cent of the country, including corridors connecting the core areas. The system is one of the most comprehensive in the world not only in terms of area coverage but also in terms of the balance and contiguity in distribution across the country. The system encompasses a continuum of representational samples of all major ecosystems found in the country, ranging from the tropical/sub-tropical grasslands and forests in the southern foothills through temperate forests in the central mountains and valleys to alpine meadows in the northern mountains. By 2013, about 48.5 per cent of the country will be under protection.

Source: Bhutan's Fourth National Report to the CBD, www.cbd.int/countries/?country=bt

Box 17
Are protected areas good or bad for local communities and development?

Establishment of protected areas (PAs) has often been criticised for ignoring and marginalising local people and eroding their living conditions. Yet an article published in *Science* in 2008 questions the widespread assumption that PAs often do not benefit local people. The authors found that average human population growth rates on the borders of 306 PAs in 45 countries in Africa and Latin America were nearly double average rural growth, suggesting that PAs attract, rather than repel, human settlement. According to the authors, higher population growth on PA edges is evident across eco-regions, countries and continents, and is correlated positively with international donor investment in national conservation programs and an index of park-related funding. In the view of the authors, these findings highlight the value of PAs for local people, but also highlight a looming threat to PA effectiveness and biodiversity conservation.

This article generated considerable debate and one response (Joppa et al) found "no evidence that human population growth near protected area boundaries is higher than in rural areas and show that Wittemyer et al's counter-result is methodologically flawed". These authors note that efforts to keep protected areas protected must increase as the global network becomes increasingly isolated and ever more in contact with growing human populations. As both the protected area network and human population grows, collisions between these areas and people struggling to find land on which to survive will continue. Connecting existing protected areas through corridors, creating future protected areas in places they can be most effective, and effectively managing all protected lands will be essential to ensure the future of biodiversity.

Sources: Wittemyer, G., Elsen, P., Bean, W.T., Coleman, A., Burton, O. & Brashares, J.S. 2008, Accelerated human population growth at protected area edges, Science, 4 July, Vol. 321. no.5885, pp.123-6; Joppa, L.N., Loarie, S.R. & Pimm, S.L. 2009, 'On population growth near protected areas', PLoS ONE, vol. 4, no. 1, pp. e4279.

Sustainable use

The second objective of the Convention, the sustainable use of the components of biodiversity, is the objective that most clearly places CBD within the broader concept of sustainable development. It is this

close relationship to poverty eradication and the notion of biodiversity providing basic human needs that represented a paradigm shift from earlier conservation-based international agreements.

Nevertheless, sustainable use measures are generally much weaker in NBSAPs than conservation measures. While it is an overall objective in nearly all NBSAPs, it is reflected in a more general way and often in the form of policy objectives rather than concrete commitments. The general principles on sustainable use adopted by COP-7 in 2004, the Addis Ababa Principles,[83] have been taken up by very few countries in their NBSAPs (see Box 18).

Sustainable use is closely related to the notion of mainstreaming biodiversity concerns within the economic sectors that utilise components of biodiversity; this will be discussed further below.

Box 18
The Addis Ababa Principles – a set of practical guidelines for sustainable use of biodiversity with limited impact so far

The Addis Ababa Principles and Guidelines for the Sustainable use of Biodiversity were adopted by COP-7 in 2004. They consist of fourteen interdependent practical principles, with accompanying operational guidelines and instruments for implementation, that govern the uses of components of biodiversity to ensure the sustainability of such uses.

The practical principles are:

1. *Supportive policies, laws, and institutions are in place at all levels of governance and there are effective linkages between these levels.*
2. *Recognising the need for a governing framework consistent with international national laws, local users of biodiversity components should be sufficiently empowered and supported by rights to be responsible and accountable for use of the resources concerned.*
3. *Internationalmand national policies, laws and regulations that distort markets which contribute to habitat degradation or otherwise generate perverse incentives that undermine conservation and sustainable use of biodiversity, should be identified and removed or mitigated.*
4. *Adaptive management should be practised, based on*
   I. *Science and traditional and local knowledge*
   II. *Iterative, timely and traditional and local knowledge*
   III. *Adjusting management based on timely feedback from the monitoring procedures.*
5. *Sustainable use management goals and practices should avoid or minimise adverse impacts on ecosystem services, structure and functions as well as other components of ecosystems.*
6. *Interdisciplinary research into all aspects of the use and conservation of biological diversity should be promoted and supported.*
7. *The spatial and temporal scale of management should be compatible with the ecological and socio-economic scales of the use and its impact.*
8. *There should be arrangements for international cooperation where multinational decision-making and coordination are needed.*
9. *An interdisciplinary, participatory approach should be applied at the appropriate levels of management and governance related to the use.*
10. *International and national policies should take into account:*
    I. *Current and potential values derived from the use of biological diversity;*

83 Decision VII/12.

II. Intrinsic and other non-economic values of biological diversity and

III. Market forces affecting the values and use.

11. Users of biodiversity components should seek to minimise waste and adverse environmental impact and optimise benefits from uses.

12. The needs of indigenous and local communities who live with and are affected by the use and conservation of biological diversity, along with their contributions to its conservation and sustainable use, should be reflected in the equitable distribution of the benefits from the use of those resources.

13. The costs of management and conservation of biological diversity should be internalised within the area of management and reflected in the distribution of the benefits from the use.

14. Education and public awareness programmes on conservation and sustainable use should be implemented and more effective methods of communications should be developed between and among stakeholders and managers.

Under each principle, practical guidance and a rationale for applying the principle are outlined.

The principles are meant to provide a framework to assist governments, resource managers, indigenous and local communities, the private sector and other stakeholders to ensure that their use of the components of biodiversity will not lead to the long-term decline of biological diversity. The principles are intended to be of general relevance, although not all principles will apply equally to all situations, nor with equal rigour. Their application will vary according to the biodiversity being used, the conditions under which they are being used, and the institutional and cultural context in which the use is taking place.

Only a few of the NBSAPs after 2004 have explicitly covered the Addis Ababa Principles; these include the NBSAPs of Finland, Belgium, South Africa and Guyana. Also, the third and fourth national reports indicate that few countries have taken steps to apply the principles explicitly and collectively. However, since each of the principles is also covered under other CBD thematic and cross cutting issues, many countries may well implicitly have taken steps to apply them.

Source: Secretariat of the Convention on Biological Diversity (2004) CBD Guidelines: Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity

The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources

Measures to implement the third objective of the Convention – access to genetic resources and benefit sharing (ABS) – are visibly weaker in NBSAPs than measures to implement the first two objectives. In most NBSAPs the objective either does not feature at all or appears in only very broad terms with no further elaboration and often as an issue to be taken up at a later stage. Similarly, the objective typically was not addressed in country presentations at the regional NBSAP workshops.[84]

The Pacific Island Countries are exceptions to this, however. They have had issues with biopiracy in the past and have included a strong benefit-sharing component in their NBSAPs. For example, the NBSAP of the Federated States of Micronesia (FSM) states that "[t]o date, foreign companies and countries have benefited both financially and academically from the use of the FSM's genetic resources with little if any of these benefits returning to the nation and the traditional resource owners. Furthermore, the ownership of these genetic resources now resides with outside interests". It is therefore not surprising that the FSM NBSAP contains a number of actions related to benefit sharing, including development of bioprospecting legislation, enforcement programmes and legislation.

ABS has been one of the most complex and challenging issues on the CBD agenda. The objective is of particular importance to developing countries as many of these believe with justification they have not

84 Article 6 requires Parties to "develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity". It does not include a reference to the third objective; however, NBSAP guidance developed by the COP includes all three objectives (decision IX/8).

fairly benefited from the use of their genetic resources in the past. Developing countries pushed strongly for inclusion of this objective during the negotiations of the Convention, arguing that they did not receive a fair share of the benefits derived from the use of their genetic resources for the development of products such as pharmaceuticals, new plant varieties and cosmetics. Not only was this situation unjust but, given that the greater part of global biodiversity is to be found in developing countries, it also reduced the incentive of biodiversity-rich developing countries to conserve and sustainably use their biodiversity. Developing countries also wished to make the point that genetic resources are not exempt from the general legal principal of national sovereignty over biological resources reaffirmed in the preambular text of the Convention.[85]

Developed countries, on the other hand, saw access rules and benefit sharing requirements as impediments to research and development.

Article 15 of the CBD spells out the sovereignty principle and the terms and conditions for access to genetic resources and benefit sharing. It provides that "access to genetic resources shall be subject to the prior informed consent of the Party providing such resources" and "shall be based on mutually agreed terms" regarding the sharing of benefits arising from the use of the genetic resources.

Because of the political difficulties around the ABS issue, for many years the COP moved cautiously in developing the ABS provisions. In 2002 COP-6 adopted the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization.[86] These guidelines are intended to assist countries when establishing legislative, administrative and policy measures on ABS and when negotiating contractual arrangements for access and benefit sharing.

Also in 2002 the World Summit on Sustainable Development agreed that countries should negotiate, within the framework of the CBD, an international regime to promote and safeguard the fair and equitable sharing of benefits arising out of the utilisation of genetic resources. Further years passed, with difficult discussions in the COP between developed and developing countries on the mandate for negotiating the international regime. This was finally agreed at COP-8 in 2006, which also set 2010 as the deadline for the conclusion of the negotiations.

An effective mechanism for providing benefit sharing in return for access to genetic resources at the national level requires national legislation and institutions. However, the level of implementation of the ABS provisions of the Convention is poor. In October 2010, 126 of 193 Parties have nominated ABS National Focal Points, 25 Parties have established Competent National Authorities and 50 Parties have officially notified the Secretariat of their relevant ABS measures. According to Young, only 12 per cent of Parties have adopted legal, regulatory or other ABS measures; such measures pertain to countries who are providers of genetic resources. Only to a minimal extent have countries taken measures directed at users under their jurisdiction who are utilising genetic resources originating in other countries, as called for in Article 15.7.[87] These measures are relevant to developed countries in particular. In addition, very few Parties have identified ABS issues as a priority in their proposals to the GEF.

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85 Before the negotiations of the Convention, developed countries pushed hard to invoke a principle of free access to genetic resources. This principle was recognised in the FAO Undertaking on Plant Genetic Resources from 1983, which, however, as a result of the controversy over this topic, remained a non-binding instrument. The FAO International Treaty on Plant Genetic Resources for Food and Agriculture, which came into force in 2004, recognises the principle of national sovereignty to genetic resources (www.planttreaty.org).

86 Decision VI/24.

87 Young, T. (ed) 2009, *Covering ABS: Addressing the Need for Sectoral, Geographical, Legal and International Integration in the ABS Regime, Papers and Studies of the ABS Project*, IUCN, Gland, Switzerland. Young notes that some countries have required disclosure of origin in patent application of genetic resources, but argues that, since such a measure does not include any requirement or recommendation for benefit sharing, it is not a "user measure" covered by Article 15.7.

There is thus a clear discrepancy between the considerable attention ABS has received at the international level, where some countries have elected ABS the most important issue on the CBD agenda, and the limited attention given to ABS at the national level.

Why have countries not given more attention to ABS in their NBSAPs and moved further with implementation? There may be different reasons:

- ABS is widely perceived as having a life of its own, distinct from other CBD issues. ABS is viewed in a broader, political North-South equity context rather than as an issue related to the conservation and sustainable use of biodiversity. This is evidenced by the fact that many countries at CBD meetings are represented by special ABS negotiators who do not participate in the negotiation of other matters on the CBD agenda. Much of the action which has taken place nationally on ABS appears therefore to occur outside the NBSAP context.

- ABS is an extremely complex issue and, notwithstanding the Bonn Guidelines, there are still unanswered questions on what countries should do to meet their ABS commitments.

- Countries have postponed their national implementation processes in anticipation of, first, the Bonn Guidelines, and now the international regime.

- Developed countries' longstanding reluctance to apply user measures in support of developing countries' access legislation has been a demotivating factor for the latter.

- On the other hand, developed countries' reluctance may be due to the limited number of developing countries that have enacted access legislation.

- Tangible benefits, especially monetary benefits, have been elusive and as a result general and political interest in the issue has waned.

- For some countries the issue may not be of such high relevance or priority. In the third national report to the CBD, countries generally ranked ABS low in their prioritisation of CBD provisions and markedly lower than provisions concerning conservation and sustainable use of biodiversity.[88] Similarly, although the GEF set ABS as a stand-alone Strategic Objective (SO4) in GEF-4, there was a notable lack of demand for ABS projects coming from countries – just three regional and two national capacity-building projects.

The NBSAPs reveal that some countries clearly attach importance to the goal of sharing the benefits derived from using components of biodiversity, but they express this in ways that are different to those of the Convention (see Box 19). These go beyond the third objective, but are consistent with the guidance developed under the convention for the ecosystem approach.[89]

88 UNEP/CBD/WG-RI/INF/1/Add.1.

89 The second point of operational guidance adopted under decision V/6 is: "Enhance benefit-sharing. Benefits that flow from the array of functions provided by biological diversity at the ecosystem level provide the basis of human environmental security and sustainability. The ecosystem approach seeks that the benefits derived from these functions are maintained or restored. In particular, these functions should benefit the stakeholders responsible for their production and management. This requires, inter alia: capacity-building, especially at the level of local communities managing biological diversity in ecosystems; the proper valuation of ecosystem goods and services; the removal of perverse incentives that devalue ecosystem goods and services; and, consistent with the provisions of the Convention on Biological Diversity, where appropriate, their replacement with local incentives for good management practices".

Box 19
Benefit sharing in NBSAPs with a different expression than the benefit sharing objective of the CBD

Some countries have included the issue of benefit sharing in their NBSAPs, but have given this in a different and sometimes broader treatment than the provisions of the CBD which address the utilisation of **genetic** resources alone and in a transboundary context.

Burundi in its NBSAP of 2000 includes as one of its five strategic objectives, "the equitable sharing of responsibilities and benefits from the management of biodiversity". The actions outlined to put this objective into practice primarily relate to the involvement of local communities in the management of nature, including protected areas and ecotourism activities (www.cbd.int/doc/world/bi/bi-nbsap-01-fr.pdf).

This broader notion of sharing both benefits and costs, including not only genetic resources but also other components of biodiversity, and covering not only the international, but also the national and local level, appears as one of seven guiding principles for biodiversity and development in a report issued in 2001 by the European Commission, IUCN and the UK Department for International Development (DFID). The guiding principles build on lessons from eleven case studies.

Source: Biodiversity in Development Project (2001). Guiding principles for Biodiversity in Development: Lessons from field projects. European Commission, Brussels, Belgium/IUCN, Gland, Switzerland and Cambridge.

2.12 Mainstreaming the NBSAP within other sectoral plans and policies

Mainstreaming of biodiversity across sectors lies at the heart of implementing the CBD. The comprehensive character of the Convention and its wide scope clearly distinguish it from earlier nature conservation treaties, meaning that it can only be implemented through the involvement of all sectors of society. The provisions of Articles 6(b) and 10 explicitly spell out the importance of mainstreaming.

While the CBD presupposes that mainstreaming into development policy and planning is essential for protecting biodiversity, the Convention also gives expression to a potential conflict between development and protection of biodiversity by stating in the preamble that "economic and social development and poverty eradication are the first and overriding priorities of developing countries". However, in the next preambular paragraph it states that "conservation and sustainable use of biological diversity is of critical importance for meeting the food, health and other needs of the growing world population for which purpose access to and sharing of both genetic resources and technologies are essential".

Since the time of the negotiation of the Convention, the international community's approach to biodiversity has changed. More than was previously the case, the conservation and sustainable use of biodiversity is considered an essential part of efforts to eradicate poverty and achieve sustainable development. Conservation and development are seen less as conflicting goals and more as interdependent. However, it is still a common perception outside the context of the Convention that measures to protect biodiversity are obstacles to development.

As mentioned above, the 2010 target was endorsed by heads of states at the World Summit on Sustainable Development (WSSD) in 2002, and the WSSD plan of implementation is specific about the importance of biodiversity for sustainable development and poverty eradication.[90]

90 Paragraph 44 of the WSSD Plan of Implementation: "Biodiversity, which plays a critical role in overall sustainable development and poverty eradication, is essential to our planet, human well-being and to the livelihood and cultural integrity of people …"

A further recognition of the importance of biodiversity for sustainable development and poverty eradication came in 2005 with the publication of the Millennium Ecosystem Assessment (MA) of the consequences of ecosystem change for human well-being. The MA clearly demonstrated the importance of biodiversity for maintaining healthy ecosystems and thereby ensuring continuity of ecosystem services, while simultaneously documenting the serious decline in the status of biodiversity, which plays a vital long-term resilience and insurance role in ecosystem service provision, especially in the face of a rapidly changing climate.[91]

In 2006, the UN General Assembly included the 2010 biodiversity target as a sub-target of Millennium Development Goal 7 on environmental sustainability (see Box 20)

Box 20
The Millennium Development Goals and biodiversity

The Millennium Development Goals (MDGs) are eight goals to be achieved by 2015 that respond to the main development challenges of our planet. They are:

- Goal 1: Eradicate extreme poverty and hunger
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
- Goal 5: Improve maternal health
- Goal 6: Combat HIV/AIDS, malaria and other diseases
- Goal 7: Ensure environmental sustainability
- Goal 8: Develop a Global Partnership for Development.

The MDGs are drawn from the actions and targets contained in the Millennium Declaration adopted by 189 nations and signed by 147 heads of state and governments during the UN Millennium Summit in September 2000. The eight goals break down into twenty-one quantifiable targets that are measured by sixty indicators.

In 2006, the 2010 biodiversity target was included by the UN General Assembly as a sub-target of Goal 7, a clear recognition at the highest political level that biodiversity is essential for environmental sustainability.

However, biodiversity is not only important for Goal 7 but, as argued by Pisupati and Rubian,[92] is also part of the solution for achieving the other seven goals.

For example, as only thirty crop species dominate global food production and 90 per cent of the supply of animal protein for food comes from fourteen mammal and bird species, continued biodiversity loss will threaten food security and hamper the achievement of Goal 1 (eradicate extreme poverty and hunger). And as 80 per cent of the world's population relies on traditional medicine derived from nature and often from traditional knowledge, conservation of medicinal plants is important for meeting the health-related goals (4, 5 and 6) while at the same time providing a source of income for rural populations.

Countries have so far had limited success in integrating biodiversity and other environmental concerns into their efforts to meet the MDGs. Pisupati and Rubian present a set of actions and strategies needed to make the 2010 biodiversity target work to achieve not just Goal 7, but all the MDGs. The proposed set of actions and strategies aligns the CBD framework of goals, targets and indicators with the MDG framework.

Development and poverty eradication concerns in NBSAPs

A good starting point for the wider mainstreaming of biodiversity within other policies is to consider the extent to which the role of biodiversity in ensuring sustainable development and poverty eradication is reflected in the NBSAPs. The importance of biodiversity for development and poverty eradication needs

91 www.maweb.org/en/Index.aspx
92 Pisupati, B. & Rubian, R. 2008 *MDG on Reducing Biodiversity Loss and the CBD's 2010 Target*, UNU-IAS.

to be recognised by biodiversity practitioners themselves before they will be able to convince decision-makers of the need for wider mainstreaming.[93]

However, this recognition cannot be taken for granted. Our assessment of NBSAPs reveals that only a small majority of NBSAPs consider biodiversity in a broader development policy context. Among these the degree of elaboration varies considerably, from thorough analysis and actions linked to development policy papers (e.g. Namibia, Costa Rica) to general statements with no elaboration or proposed concrete actions.

The proportion of NBSAPs that reflect development policies is greater among developed than developing countries, with the former often including the integration of biodiversity concerns into their development cooperation policies.

The degree to which development objectives have been reflected in NBSAPs does not necessarily reflect the degree to which biodiversity has actually been incorporated into national development policies. As discussed earlier, the status and the impact of NBSAPs on other policies vary according to many factors, including the nature of the preparatory process and the involvement of key stakeholders, the level of government ownership, the design of the NBSAP and the mechanisms for implementation. In many cases NBSAPs are more than ten years old and have lost their ability to influence national policy. The implication is that in some cases even robust language in NBSAPs on development concerns has not led to the integration of biodiversity into development policies, while in other cases this integration has taken place regardless of the NBSAP.

The majority of NBSAPs without any consideration of development and poverty eradication is made up of older NBSAPs. They seem to confirm views expressed by Swiderska, and other earlier NBSAP reviewers, that the first generation of NBSAPs did not effectively engage all major stakeholders, including mainstream government departments, and that many NBSAPs have been developed by biodiversity specialists who lack the capacity to engage economic sectors and to forge links with mainstream development planning.[94]

Mainstreaming biodiversity within development and poverty eradication policies

Even if the importance of biodiversity for economic development and poverty eradication were fully recognised and developed in NBSAPs, this would not have an impact on the ground unless biodiversity concerns had found their way into overall national development and poverty eradication policies. These policies are elaborated in various types of documents in individual countries. However, two types of documents seem particularly important for measuring the degree of biodiversity mainstreaming with the general policies: Poverty Reduction Strategy Papers (PRSPs) and Millennium Development Goals Reports (MDGRs).

Poverty Reduction Strategy Papers

Poverty Reduction Strategy Papers (PRSPs) were introduced in 1999 by the World Bank and the International Monetary Fund (IMF) as a new framework for enhancing domestic accountability for poverty reduction reform efforts. A PRSP describes the macroeconomic, structural, and social policies and programmes that a country will pursue over several years to promote growth and reduce poverty, as well as identifying external financing needs and the associated sources of this financing. Following the

93 However, it is important to keep the role of biodiversity in perspective. We need also to ask why broader development strategies and programmes are failing, at least in some regions, and why much apparent development may not be truly sustainable. While conserving and sustainably using biodiversity is a necessary condition for sustainable development, it is not the sole condition.

94 Swiderska 2002, op cit, p.10.

adoption of the MDGs in 2002, PRSPs were also considered to be important building blocks for achieving the MDGs.

Until 2004 the World Bank undertook assessments of the degree to which integration of environmental factors occurs in PRSPs and associated documents, including both interim and full PRSPs. The last assessment covered fifty-three PRSPs, of which thirty-nine were full and the remainder interim, and twenty-one progress reports.[95]

The assessment showed an average low level of environmental mainstreaming, but with considerable variation among countries. The level of attention paid to various environmental issues was also highly variable in the PRSPs assessed. Most attention was devoted to water supply and sanitation, vulnerability to national hazards, land tenure and institutional capacity; little attention was paid to biodiversity.

The review also revealed a tendency to greater environmental mainstreaming in full as compared to interim PRSPs, and found that there was very little positive correlation between the degree of mainstreaming in the PRSPs themselves and in the PRSP progress reports.

As part of the present assessment, a preliminary study was undertaken of forty-five PRSPs on the extent to which they mainstream environmental issues in general and biodiversity in particular. The sample mainly comprised full PRSPs, either in their first or second versions and often in the form of National Development Strategies, completed after 2004.

This assessment reveals that:

- The gradual improvement of environment mainstreaming in PRSPs has continued as countries have completed their full or second-generation PRSPs. Very few countries include no consideration at all of environmental issues in their PRSPs.
- Among environmental issues, water and sanitation issues are still given most attention and often warrant a separate chapter in the PRSPs.
- Other environmental issues still receive limited attention in PRSPs and are often covered in only one or two of the several hundred pages of the PRSP.
- Although still receiving limited attention and frequently with no specific mention of the term 'biodiversity', issues associated with biodiversity appear more clearly in the newer generation of PRSPs.
- Newer PRSPs are better aligned with the MDGs, including Goal 7 (environmental sustainability) than older PRSPs. This, however, does not apply to the target 7b of Goal 7 (to significantly reduce the current rate of biodiversity loss by 2010). A number of countries address the original Goal 7 targets in their PRSPs but have not included the biodiversity target and its associated indicators.
- There is limited correlation between NBSAPs and PRSPs on the question of mainstreaming biodiversity within overall national policies. While many countries do not consider the question fully either in their NBSAP or their PRSP, some countries (e.g. Burkina Faso, Lao PDR) give full consideration to mainstreaming in the NBSAP but do not include similar consideration in the PRSP. Conversely, some other countries (e.g. Zambia, Côte d'Ivoire, Bangladesh) give a strong emphasis to biodiversity-related issues in their PRSP but only limited consideration in their NBSAP. References to the PRSP in the NBSAP, and vice versa, rarely appear, suggesting that each document has been prepared in isolation.

95 Bojö, J., Green, K., Kishore, S., Pilapitiya, S. & Chandra Reddy, R. 2004, *Environment in Poverty Reduction Strategies and Poverty Reduction Support Credits*, The World Bank Environment Department, Paper No. 102.

Box 21
Lao PDR – strong emphasis in the NBSAP on the importance of biodiversity for poverty alleviation

The overall goal of the first Lao NBSAP (2004) is to maintain biodiversity for poverty alleviation. The NBSAP includes a number of objectives and actions that underscore the connection between biodiversity and poverty alleviation and the need to align the NBSAP with overall national policies.

However, the second Lao PRSP (2006), entitled National Socio-Economic Plan (2006–2010), does not reiterate the overall goal of the NBSAP. While it broadly recognises the need to manage natural resources sustainably, there are no provisions for biodiversity in the plan's strategy for natural resources and the environment.

Sources: Lao PDR NBSAP: www.cbd.int/doc/world/la/la-nbsap-01-en.pdf. Lao PDR PRSP: www.imf.org/external/pubs/ft/scr/2008/cr08341.pdf

Box 22
Madagascar – consistency between national biodiversity and development policy

Madagascar adopted its National Strategy for Sustainable Management of Biodiversity in 2002. The strategy is development oriented and includes, among other things, an objective of combating poverty. The strategy was revised to align with the Madagascar Action Plan 2007–2012, which is the overall development plan of the country.

Unlike in many other PRSPs and national development plans, environment and biodiversity feature prominently in the Madagascar plan. Under one of eight commitments in the plan – 'Cherish the Environment' – the following vision is expressed:

> Madagascar will be a world leader in the development and implementation of environmental best-practice. After many decades of exploitation and neglect, we have begun to turn the tide. We will become a green island again. Our commitment is to care for, cherish and protect our extraordinary environment. The world looks to us to manage our biodiversity wisely and responsibly – and we will. Local communities will be active participants in environmental conservation under the guidance of bold national policies. Given the Government's vision -- Madagascar Naturally -- we will develop industries around the environment such as eco-tourism, agri-business, sustainable farming practices, and industries based on organic and natural products. These industries and activities will minimise biodiversity damage and maximise benefits for the nation and the people.

Mainstreaming biodiversity is not only an overall goal but a reality in Madagascar. Each ministry has an environment unit, and environmental issues are integrated into the planning process for each sector of the economy.

The consistency between the biodiversity strategy and the action plan for development also applies to the importance attached to communication and raising awareness in both documents. In order to facilitate wide dissemination and engage multiple audiences, the strategy is available in several formats. The action plan appears in an educational and easily readable format which is quite different from similar documents of other countries.

Source: Madagascar country presentations at NBSAP regional workshop; Madagascar Action Plan: www.imf.org/external/pubs/ft/scr/2007/cr0759.pdf

Millennium Development Goals Reports

Countries are encouraged to report on progress in attaining the MDGs through Millennium Development Goals Reports (MDGRs). In 2006 UNDP issued a report on the extent to which Goal 7 (environmental sustainability) had been achieved, based on an assessment of 158 MDGs.[96] At that time Goal 7 included three targets:

- Integrate the principles of sustainable development into country policies and programmes; reverse loss of environmental resources

96 UNDP 2006, *Making Progress on Environmental Sustainability*, http://www.undp.org/fssd/docs/mdg7english.pdf

- Reduce by half the proportion of people without sustainable access to safe drinking water and basic sanitation
- Achieve significant improvement in lives of at least 100 million slum dwellers, by 2020.

Each of the three targets included a set of indicators. Two of the indicators included in the target to integrate sustainable development into country policies were directly related to biodiversity: the proportion of land area covered by forests, and the ratio of area protected in order to maintain biological diversity to total area of the country.

The report found that reporting on Goal 7 was weak overall. Very few countries reported on all the indicators, and the reporting seemed to be hampered by an actual or perceived lack of data. The report also concluded that, beyond the specific Goal 7, environmental issues were not highly integrated into the MDGRs.

Strikingly, in almost two-thirds of MDGRs, environmental issues were seen as constraints to development.[97] However, more than half of these also stated that improving environmental status had a positive impact on development.

Water and sanitation, followed by climate change and natural hazards, were the environmental issues that most countries integrated into their MDGRs. The report noted that biodiversity was also included in some MDGRs, but did not specify the precise extent. However, it did reveal that over half the countries reported on the biodiversity-related indicators of forest cover and protected areas, and that twenty-three countries had set targets for forests and twenty-two for protected areas, though these were not always quantitative and time-bound.

The present assessment has compared MDGRs with NBSAPs in regard to target setting. Of the seven countries that have reported quantitative and time-bound targets for protected areas in their MDGRs, only one (Viet Nam) has included a similar target in its NBSAP. Similarly, when it comes to quantitative and time-bound targets for forest cover, only one country (South Africa) out of twelve who have reported targets in their MDGRs has a corresponding target in the NBSAP.

In 2006 when the UN General Assembly decided to add target 7b of Goal 7, consistent with the target already endorsed by COP-6 and the World Summit on Sustainable Development in 2002 to "reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss",[98] the indicators for the Goal 7 targets were reformulated and reorganised. Four of the revised indicators are directly related to the 2010 target:

- Proportion of land area covered by forest
- Proportion of fish stocks within safe biological limits
- Proportion of terrestrial and marine areas protected
- Proportion of species threatened with extinction.

97 Although further research would be needed to clarify whether countries meant that environmental problems, such as pollution or erosion, were constraints to development or that responses to these problems, such as EIA requirements, were the constraint.

98 www.undp.org/mdg/goal7.shtml

After the 2006 UNDP report on MDGRs was released and the 2010 biodiversity target was added to the MDGs, only twelve new MDGRs have been posted on the MDGR website.[99] An examination of these 12 reports reveals that only one country (Sao Tome and Principe) has included the new target 7b and associated indicators. The other eleven refer only to the old set of targets and indicators under Goal 7 without the 2010 target. Nevertheless the majority of these refer, in varying degrees, to biodiversity in relation to the previous indicators on protected area and forest coverage.

In conclusion:

- Biodiversity is weakly reflected in the MDGRs as compared to other environmental issues, although a number of countries have included biodiversity-related targets and there is a trend towards greater recognition of the importance of biodiversity for development.
- The integration of biodiversity concerns into MDGs other than Goal 7 is extremely limited in spite of its relevance to these other MDGs. As proposed by Pisupati and Rubian, there is a need for better alignment of the CBD set of targets and indicators to the MDG set.
- There is little awareness that the 2010 biodiversity target was included in the MDGs as target 7b in 2006, as demonstrated by the fact that newer MDGRs have ignored target 7b.
- There is generally weak alignment between MDGRs and NBSAPs. This indicates a weak role for NBSAPs in national development policy.

It is worth mentioning that similar or worse patterns are evident in other sectoral plans, especially for important areas such as agriculture, fisheries and forestry; these are covered in part 2.17 below on mainstreaming within other productions sectors.

The lack of mainstreaming of biodiversity with climate change policies is another important measure of countries' efforts to mainstream biodiversity issues which is gaining more attention (see part 2.18 below for more discussion of this).

2.13 Impact assessment

Impact assessment is an important instrument for the practical mainstreaming of biodiversity concerns across projects, programmes and policies. It provides the process needed to balance social, economic and environmental considerations in decision-making. By including the consideration of biodiversity, impact assessment facilitates better-informed decisions and raises awareness of biodiversity and of potential threats posed by unsustainable development.

The COP has acknowledged the important role of impact assessment. Article 14 contains provisions on assessment of the impact on biodiversity impact at both the project level and the programme and policy level through, respectively, environmental impact assessment (EIA) and strategic environmental assessment (SEA) – see Box 23. In 2002 COP-6 adopted a set of guiding principles for incorporating biodiversity into EIA and SEA,[100] and these were revised and updated by COP-8 in 2006.[101]

99 www.undp.org/mdg/reports.shtml and www.undg.org/index.cfm?P=87
100 Decision VI/7-A.
101 Decision VIII/28.

Environmental impact assessment (EIA)

EIA is a process of evaluating the likely environmental impacts of a proposed project or development, taking into account interrelated socioeconomic, cultural and human health impacts, both beneficial and adverse.[102] EIA will necessarily involve the following stages:

- Screening (is an EIA required?)
- Scoping (what issues will the EIA address and how?)
- Assessment and evaluation of impacts and development of alternatives
- Reporting
- Review
- Decision-making
- Monitoring compliance, enforcement and environmental auditing.

EIA is today widely incorporated into national legislation and applied throughout the world. National EIA procedures in most cases include consideration of biodiversity, either explicitly or implicitly, through the use of other terms. This is supported by our assessment which revealed that consideration of EIA is included in a large majority of NBSAPs which state either that EIA for biodiversity impacts is already applied or will be as a result of the NBSAP.

In 2001, the UNDP/UNEP/GEF Biodiversity Planning Support Programme (BPSP) published a study on impact assessment as one of eight thematic studies designed to provide guidance to biodiversity planners for mainstreaming biodiversity within sectoral and economic policy development and planning.[103] The study undertook country studies of fifteen countries,[104] including an assessment of both good and bad practices related to impact assessment and in particular to EIA. This revealed that, while EIA in many cases had provided a way to better balance biodiversity concerns with development in decision-making, procedures and practical applications of EIA varied considerably and there were many constraints and shortcomings in taking biodiversity into account.

Strategic environmental assessment (SEA)

SEA can be described as a systematic process for evaluating the environmental consequences of proposed public initiatives in order to ensure they are fully included and appropriately addressed at the earliest possible stage of decision-making on a par with economic and social considerations.[105] SEA shares its roots and procedures with EIA, but identifies impacts on biodiversity further 'upstream' in the planning process. The implementation of properly integrated and complementary SEA and EIA processes allows for the application of environmental assessment to all levels of the decision-making process, from policy to planning and programme formulation, and then to project implementation.
The application of SEA is not nearly as widespread as that of EIA and, in spite of Article 14 and the obvious potential of SEA for mainstreaming biodiversity across sectors, the concept appears in only a very few NBSAPs. SEA has mostly been applied in developed countries, for example the European Union has comprehensive SEA legislation.[106]

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102 Commission for Environmental Assessment 2006, Biodiversity in EIA and SEA, Background document to CBD Decision VIII/28.
103 Treweek, J. 2001, *A Review of Experience and Methods: Integrating Biodiversity with National Environmental Assessment Processes*, Biodiversity Planning Support Programme, UNDP, GEF and UNEP.
104 Afghanistan, Argentina, Cameroon, Colombia, Guyana, India, Kyrgyzstan, Nepal, Niger, Romania, South Africa, Tanzania, UK, Uruguay and Yemen.
105 Presentation by the Director of the Elard Group, Mr Ramez Kayyal, at the Capacity Development Workshop for the Arab states on National Biodiversity Strategies and Action Plans (NBSAPs) and the Mainstreaming of Biodiversity, Cairo, Egypt, 14-18 December 2008.
106 Directive 2001/42/EC (known as the SEA Directive).

Development cooperation is probably the area which makes most use of SEA as an instrument to ensure mainstreaming. In recent years a shift of emphasis has taken place in development cooperation away from development projects and towards programme policy support. This has created new entry points for the application of SEA in development cooperation.[107]

Box 23
Characteristics of SEA and EIA

SEA	***EIA***
Takes place at earlier stages of the decision-making process	Takes place at the end of the decision-making cycle
Proactive approach to help development of proposals	Reactive approach to development of proposals
Considers broad range of potential alternatives	Considers limited number of feasible alternatives
Early warning of cumulative effects	Limited review of cumulative effects
Emphasis on meeting objectives and maintaining systems	Emphasis on mitigating and minimising impacts
Broader perspective and lower level of detail to provide a vision and overall framework	Narrower perspective and higher level of detail
Multi-stage process continuing and iterative, overlapping components	Well-defined process, clear beginning and end
Focuses on sustainability agenda and sources of environmental deterioration	Focuses on standard agenda and symptoms of environmental deterioration

Source: Commission for Environmental Assessment. Biodiversity in EIA and SEA. Background document to CBD Decision VIII/28 (2006)

The regional and sub-regional capacity-building workshops on NBSAPs and mainstreaming of biodiversity revealed that SEA is now also being applied in some developing countries, such as Benin (see Box 24) and South Africa (see Box 7).

Box 24
Strategic Environmental Assessment in Benin

Benin's Stratégie de Croissance pour la Réduction de la Pauvreté (SCRP) is the country's second poverty reduction strategy. The strategy places the environment among five thematic pillars that will enable Benin's transformation into an emerging economy by 2011. In addition to continuing the National Environmental Management Program (PNGE) begun in 2002, the strategy will put in place several important measures to protect biodiversity, including the improvement of the legal framework for sustainable natural resource management and the approval of laws on land tenure. It will also develop and implement a national reforestation program, strengthen local environmental management capacities, and create community-level biological reserves. An aspect of the SCRP that is particularly important for biodiversity is the decision to use SEA to integrate environmental considerations into all relevant plans, programs and projects derived from the SCRP. The use of SEA enables Benin's decision-makers to include environmental and sustainability concerns on an equal footing to economic and social concerns right from the beginning of the policy-making process.

Sources: CBD Secretariat and presentation given by Mr Bonaventure Guedegbe at the regional and sub-regional workshop on NBSAPs and mainstreaming for West Africa, Ouagadougou, Burkina Faso, 29 September to 3 October 2008, www.cbd.int/doc/nbsap/nbsapcbw-wafr-01/nbsapcbw-wafr-01-bj-02-fr.pdf. Benin: Poverty Reduction Strategy Paper- Growth Strategy for Poverty Reduction, IMF: Washington.

107 OECD 2006, *Applying Strategic Environmental Assessment, Good Practice Guidance for Development Co-operation*, DAC Guidelines and Reference Series, OECD.

Akwé: Kon Guidelines

In 2004 COP-7 adopted the 'Akwé: Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment 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'.[108]

These guidelines seem to have been largely ignored. In their third national reports nearly all countries state they have not taken steps to implement them, although some state that sacred sites are already covered under existing EIA legislation. The guidelines do not receive any attention in the fourth national reports and are rarely reflected in NBSAPs.

2.14 Use of economic instruments

Some experts estimate the value of the goods and services provided by ecosystems at €26 trillion a year, twice the value of human production yearly.[109] Traditionally, most of the services provided by nature have not been economically valued. A country could cut its forests and deplete its fisheries and this would show only as a positive gain in GDP without registering the corresponding decline in assets. However, the CBD in this regard represents a new paradigm and recognises that biodiversity is 'natural capital' that generates and helps to maintain ecosystem services that are essential for human well-being and economic development. Article 7 calls on Parties to assess biodiversity and includes economic valuation of biodiversity as a key element of this assessment. Article 11 requires Parties to adopt economic incentives for the conservation and sustainable use of biodiversity. Sharing the benefits from the use of genetic resources, the third objective of the CBD and elaborated in Article 15 is also seen as an incentive for conservation and sustainable use.

The recognition of economic measures as a cross-sectoral theme in the CBD is also based on a pragmatic rationale. Unless it makes demonstrable economic sense to conserve biodiversity, this will in many cases not be done.[110] This applies particularly when poverty is the main driver of biodiversity degradation.

The issue has been high on the agenda of many meetings of the COP, and in 2000 COP-5 adopted a programme of work on incentives measures.[111] However, negotiations on this issue have been politicised and complicated, mainly because of its relationship to international trade and the fear of some countries that economic instruments could act as disguised barriers to free trade. In 2004, COP-7 asked the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) to consider proposals for applications of positive incentives.[112] Parties, however, were not able to agree on such proposals, and thus very little concrete guidance has been adopted by COP on incentive measures.[113]

This assessment of NBSAPs shows that countries are generally well aware of the importance of demonstrating the economic value of biodiversity and ecosystems and of creating incentives for their conservation and sustainable use. Valuation and the creation of economic incentives are reflected in a large majority of NBSAPs. However, the reflections mostly take the form of general statements and rarely

108 Decision VII/16.

109 European Commission press release 'Biodiversity loss, facts and figures', 2004. Economists have disputed this figure, as the 1997 calculation by Constanza et al ('The value of the world's ecosystem services and natural capital', *Nature*, 387, pp.253-60) was similarly disputed. What often gets overlooked in such arguments around the value of ecosystem services is that these services are irreplaceable and without them there would be no economy to measure.

110 Carew-Reid 2002, op cit.

111 Decision V/15.

112 Decision VII/18.

113 Detailed guidance targeted to developed countries has been prepared by the OECD through several publications. See www.oecd.org/env/biodiversity

move beyond identifying a broad need to set in place economic measures in the future. Very few NBSAPs specify which measures are to be used and how.[114]

Box 25
Different types of economic measures for conservation and sustainable use of biodiversity highlighted by the CBD

Valuation
The true economic value of biodiversity and ecosystems has typically been regarded as a public good. Therefore the prices of many marketed goods and services have not adequately reflected the essential role of biodiversity in their production. Eliciting the economic value of biodiversity through appropriate valuation tools is therefore important not only to the internalisation of this value in decision-making but also as an incentive measure in its own right, since it raises awareness of these hidden values. Valuation can provide useful information about the underlying causes of biodiversity loss.

Positive incentives
These include incentive payments for organic farming, agricultural land set-aside schemes, public or grant-aided land purchases, conservation easements and payments for ecosystem services.

Negative incentives
These include mechanisms to discourage activities that are harmful for biodiversity; examples are user fees and pollution taxes.

Removal or mitigation of perverse incentives
'Perverse' incentives emanate from policies or practices that induce unsustainable behaviour that destroys biodiversity, often as unanticipated side effects of policies designed to attain other objectives. Such 'policy failures' can include government subsidies or other measures which fail to take into account the existence of environmental externalities, as well as laws or customary practice governing resource use.

Market creation
The creation and promotion of markets in biodiversity-based products creates important indirect incentives for conservation and sustainable use of components of biodiversity. Examples include, among others, individual transferable fishing quotas and other property right-based mechanisms, biodiversity prospecting, and the commercialisation of medicinal plants or other biodiversity-based products, possibly including the use of certification or eco-labelling.

Source: CBD website, www.cbd.int/incentives

The absence of specific measures and guidance in NBSAPs indicates that biodiversity is still undervalued and that incentives for conservation and sustainable use of biodiversity are rarely applied. This is supported by the third national reports, in which 'lack of economic incentive measures' is ranked as the second biggest challenge to the implementation of NBSAPs.[115]

The Economics of Ecosystems and Biodiversity (TEEB) study[116] is a major international initiative to draw attention to the global economic benefits of biodiversity, to highlight the growing cost of biodiversity loss and ecosystem degradation, and to draw together expertise from the fields of science, economics and policy to enable practical actions moving forward.

114 The assessment thereby confirms the result of an earlier review of a limited number of countries conducted in 2001 as part of the GEF Biodiversity Planning Support Programme mandated to provide technical assistance in the preparation and implementation of NBSAPs (Emerton, L. 2001, *National Biodiversity Strategies and Action Plans: A Review of Experiences, Lessons Learned and Ways Forward*, IUCN – The World Conservation Union, Regional Environmental Economics Programme for Asia, Karachi).

115 UNEP/CBD//WG-RI/2/2Add1. The most widespread challenge according to the third national reports is "lack of financial human and technical resources".

116 www.teebweb.org

The Interim Report of TEEB, released in May 2008, provided strong evidence for significant global and local economic losses and human welfare impacts attributable to the ongoing losses of biodiversity and degradation of ecosystems. It focussed largely on forests. Phase II of the study sets out to expand on the work begun in Phase I. It will be completed in 2010 and presented at COP-10 in Nagoya.

The TEEB for Policy Makers study released in 2009[117] notes that the cost of biodiversity losses is felt on the ground but can go unnoticed at national and international level because the true value of natural capital is missing from decisions, indicators, accounting systems and prices in the market. The lack of market prices for ecosystem services and biodiversity means that the benefits we derive from these goods (often public in nature) are usually neglected or undervalued in decision-making. This in turn leads to actions that not only result in biodiversity loss, but also impact on human well-being.

This provides a strong case for broad policy action. Put simply, making the benefits of biodiversity and ecosystem services visible to economies and society is necessary to pave the way for more efficient policy responses.

Perverse subsidies and the lack of monetary value attached to hugely important services provided by ecosystems have been important factors contributing to the loss of biodiversity. Through regulation and other measures, markets can and must be harnessed to create incentives to safeguard and strengthen, rather than to deplete, our natural infrastructure. The re-structuring of economies and financial systems following the global recession provides an opportunity for such changes to be made. Early action will be both more effective and less costly than inaction or delayed action.

Policy responses will include reviewing incentives – identifying options for positive incentives and removing perverse incentives. There are likely to be many opportunities for win-win outcomes, both in direct economic terms and also indirectly, through reducing risks to human health and security, conserving ecosystem services such as water supply and quality or pollination, or retaining social cohesion.

TEEB seeks to show that economics can be a powerful instrument in biodiversity policy, both by supporting decision processes and by forging discourses between science, economics and governing structures. The legitimate and effective use of economic instruments in biodiversity conservation depends on their appropriate application and interpretation. Several products to enable this are envisaged:

- The Economics of Ecosystems and Biodiversity Interim Report, presented at CBD COP-9 in May 2008
- The TEEB Climate Issues update, released prior to UNFCCC COP-15 in Copenhagen
- The TEEB for Policy Makers Report, released in November 2009
- The TEEB for Business Report, released in July 2010
- The TEEB for Local and Regional Policy Makers, released in September 2010.

TEEB notes that:

- Managing humanity's desire for food, energy, water, life-saving drugs and raw materials, while minimizing adverse impacts on biodiversity and ecosystem services is today's leading challenge for society. In effect the world's economy is a sub-set of the larger economy of the natural

117 The Economics of Ecosystems and Biodiversity: TEEB for Policy Makers – Summary: Responding to the Value of Nature, 2009.

resources and ecosystem services that sustain us. TEEB's interim report looked at the extent of losses of Natural Capital taking place as a result of deforestation and degradation. This was estimated at between *US$2-4.5 trillion per year*, every year – a staggering economic cost of taking nature for granted.

- It is estimated that for an annual investment of US$ 45 billion into protected areas alone we could secure the delivery of ecosystem services worth some US$5 trillion a year. When compared to current financial losses on the markets, this is not a big price to pay. Sound ecosystem and biodiversity management, and the inclusion of Natural Capital in governmental and business accounting, can start to redress inaction and reduce the cost of future losses.
- Actions taken now not only lay a foundation for further stimulation of the green economy, but can also help to address the needs of the rural poor who are particularly reliant on the sound functioning of local and regional ecosystems. Awareness and understanding of the economic value of ecosystems and biodiversity is the first step towards improving business performance, creating effective policies and implementing action at a local, regional and national level.[118]

Box 26
The environmental accounting system in Burkina Faso

With a growing recognition that the integration of economic and environmental considerations is required for sustainable development, the government of Burkina Faso has implemented a pilot environmental accounting system. The system allows the government to monitor environmental changes occurring in its soil, forests and semi-natural areas, and water resources. Spending on the protection and restoration of the environment is also monitored through this system. The main advantages of the system are that it allows the country to develop and use coherent concepts and definitions, provides greater capacity to harmonise statistics, generates comparable results, and integrates economic models into resource use.

Source: www.cbd.int/doc/nbsap/nbsapcbw-wafr-01/nbsapcbw-wafr-01-bf-02-fr.pdf

Box 27
Economic instruments in Pakistan's NBSAP

Pakistan's 1999 NBSAP is a notable exception to the general pattern that the use of economic instruments is reflected only in general and vague terms in NBSAPs. Pakistan includes the following objectives and actions on economic incentives:

Objective 14: ***Create an Integrated System of Incentives and Disincentives at the National and Local Level to Encourage the Conservation and Sustainable Use of Biodiversity***

Action 14.1 *Introduce a system of* ***direct incentives*** *to promote the conservation and sustainable use of biodiversity that could include:*

- the provision of subsidies to encourage farmers to retain local cultivars and crop varieties, and to adopt practices such as Integrated Pest Management, agro-forestry, and multi-species cropping;
- the provision of subsidies to encourage land owners to manage their properties in ways which are sensitive to biodiversity, or to refrain from changing existing land-uses;
- the provision of grants for the protection of threatened species or habitats, and the restoration of degraded lands;
- the development of programmes to ensure that local communities receive direct benefits from biodiversity e.g. through sustainable use activities;
- incentives to encourage ex-situ propagation/breeding programmes for traded species of wild plants and animals, in order to reduce the drain on wild populations;

118 TEEB Fact Sheet, July 2009, www.teebweb.org

- the provision of incentives for staff (particularly field staff) working in institutions dealing with biodiversity. Possibilities include: upgrading employees to regular functional staff; the provision of extra training opportunities; and public recognition for outstanding service.

Action 14.2 *Introduce a system of **indirect incentives** to promote the conservation and sustainable utilisation of biodiversity that could include:*

- **fiscal incentive measures,** such as tax exemptions or deductions for the conservation of particular habitats or species; tax reductions for the importation of equipment used in conservation programmes; and tax deductions for donations to conservation NGOs;
- **service-oriented incentives,** designed to link community development programmes with the conservation of biodiversity. For example, communities living adjacent to protected areas could be accorded priority for public education programmes and technical assistance in agriculture, forestry and other fields;
- **social incentive measures,** designed to improve quality of life. These include measures such as clarification of land tenure and the creation of new institutions to manage biodiversity.

Action 14.3 *Introduce a system of **disincentives** to discourage unsustainable utilisation and practices which deplete biodiversity. These could include:*

- increasing the size of fines for the violation of conservation laws;
- revising the tax schedule to penalise undesirable land-use practices;
- using fiscal disincentives (e.g. pollution and effluent charges) for activities which are damaging to biodiversity. This could also include the use of a "polluter pays" policy, requiring developers to take measures to mitigate the environmental damage caused by their activities;
- promoting and strengthening traditional customs and practices which serve as disincentives to unsustainable use.

Objective 15: ***Identify 'Perverse' Incentives and Minimise their Impacts on Biodiversity***

Action 15.1 *Carry out a comprehensive review of GoP programmes and policies, to identify 'perverse' incentives and suggest measures to ameliorate their impacts.*

Source: Pakistan Biodiversity Action Plan, 1999, www.cbd.int/doc/world/pk/pk-nbsap-01-en.pdf

2.15 The ecosystem approach

At COP-5 in 2000 the ecosystem approach was designated the primary framework for action under the Convention on the basis of twelve principles.[119] This was accompanied by operational guidance, which was expanded and refined by COP-7 in 2004.[120]

There is no authoritative and precise definition of the ecosystem approach. As shown in Box 28, the CBD description of the concept is not the only one. Adding to the lack of a precise understanding of the concept, the application of the ecosystem approach is considered to be highly flexible and dependent on the concrete circumstances pertaining to the ecosystem in question as underlined by the CBD operational guidance.

The concept to some degree overlaps with other generally acknowledged concepts and approaches for ecosystem management, such as 'sustainable forest management', 'ecosystem based management', 'integrated river-basin management', 'integrated marine and coastal area management' and 'responsible fisheries approaches'. The concept 'ecosystem services approach' also appears often, as does the term

119 Decision V/6.
120 Decision VII/11.

'plural ecosystems approaches'.[121] The CBD expression of the ecosystem approach has been described as a codification of earlier approaches and strategies. [122]

A simple common denominator for the different expressions of the ecosystem approach may be that when considering an ecosystem every element of it should be taken into consideration on the basis of recognition that all elements are linked. The approach thereby serves as a holistic framework for decision-making and action, promoting mainstreaming horizontally (across production sectors) and vertically (across the regional, national and local levels). Climate change adds to the need to apply the ecosystem approach, since investing in restoring and maintaining healthy ecosystems may be the best insurance against the effects of climate change.

Box 28
Different descriptions of the ecosystem approach

The CBD describes the ecosystem approach as "a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way" (www.cbd.int/ecosystem). However, a search on the internet reveals that a number of other definitions and descriptions of the concept exist, including the following:

- A resource planning and management approach that recognises the connections between land, air, water and all living things, including people, their activities and institutions.
  www.mnr.gov.on.ca/en/Business/FW/2ColumnSubPage/STEL02_168425.html
- Protecting or restoring the function, structure, and species composition of an ecosystem, recognising that all components are interrelated.
  www.fws.gov/midwest/Endangered/glossary/index.html
- Fishery management actions aimed at conserving the structure and function of marine ecosystems, in addition to conserving the fishery resource.
  www.nmfs.vt.edu/case_studies/mpa/glossary.php
- The ecosystem approach to fisheries management involves a consideration of all the physical, chemical and biological variables within an ecosystem, taking account of their complex interactions.
  www.fishonline.org/information/glossary/
- The integration of water quality management and natural resources management, across jurisdictional boundaries (State, Provincial, and Federal) in order to protect and restore the beneficial uses of [an] ecosystem
  www.epa.gov/lakeerie/glossary.html
- Is based on a multi-species framework, where emphasis is on long-term sustainability, integrating human activities and conservation of nature, including political, economic and social values, and should propose solutions which are socially acceptable
  www.helcom.fi/projects/on_going/details/ecoqo/en_GB/definitions/
- A strategy or plan to manage ecosystems to provide for all associated organisms, as opposed to a strategy or plan for managing individuals.
  www.msu.edu/~jaroszjo/greenway/glossary/glossary.htm
- A comprehensive and holistic approach to understanding and anticipating ecological change, assessing the full range of consequences.
  www.great-lakes.net/humanhealth/about/words_e.html
- An approach to management that recognises the complexity of ecosystems and the interconnections among component parts.
  www.dfo-mpo.gc.ca/oceans/publications/cosframework-cadresoc/page07-eng.asp

121 See for example World Resources Institute 2008, *Ecosystem Services – A Guide for Decision Makers*.
122 Smith, R.D. & Maltby, E. 2003, *Using the Ecosystem Approach to Implement the Convention on Biological Diversity: Key Issues and Case Studies*, IUCN, Gland, Switzerland & Cambridge.

Only very few countries, such as Cameroon, Vietnam and Peru, have applied the ecosystem approach as the primary management framework in their NBSAPs, and the majority of NBSAPs do not even make reference to the approach. This is partly because some NBSAPs pre-date the development of guidance on the ecosystem approach by COP and also because of the lack of easily comprehended practical tools to aid its application. Important elements of the ecosystem approach may have been included in the NBSAPs, but due to the complex nature of the concept it is difficult to assess the degree of such implicit application of the approach. However, many countries may in fact be implementing the ecosystem approach without calling it by that name. Many of the principles of the ecosystem approach are reflected in the concept of ecosystem services and tools developed under the Millennium Ecosystem Assessment, therefore this situation may now be improving (see next section).

In spite of the absence of references to the ecosystem approach in the NBSAPs, there are a number of concrete examples of explicit and implicit applications of the approach, both on the CBD website and as presented at CBD regional and sub-regional workshops on NBSAPs and mainstreaming of biodiversity. A number of the cases presented at the workshops were examples of regional and transboundary applications of the ecosystem approach (see Box 29).

Box 29
Regional application of the ecosystem approach in West Africa

The Volta River Basin covers an estimated area of 400,00 square kilometres of the sub-humid to semi-arid West African savannah zone. While the basin is shared by six countries, 85 per cent is shared by Ghana and Burkina Faso for whom its water is a key developmental resource.

PAGEV (Projet d'amelioration de la gouvernance de l'eau dans le bassin de la Volta, or 'project for improving water governance in the Volta River Basin'), is implemented by the IUCN under its Water and Nature Initiative and is financed by the Swedish International Development Cooperation Agency (Sida). The overall objective of the project is to improve water governance in the Volta River Basin through building a consensus on key water management principles and institutionalised coordination mechanisms.

PAGEV exploits all the twelve principles of the ecosystem approach included in the CBD guidance to address governance deficiencies, including:

- Uncoordinated management of the basin
- Competing use of land and water resources (potential sources of conflicts)
- Weak capacity to deal with transboundary environmental threats such as water pollution, deforestation and flooding.

The project has led to strategic partnerships, policy dialogues and the establishment of a local transboundary committee. This committee has created trust among and supported empowerment of local communities in both Burkina Faso and Senegal.

Source: PAGEV monitoring report, 2006 and presentation by IUCN at the CBD sub-regional workshop on NBSAPs and mainstreaming of biodiversity for West Africa, Ouagadougou 28 September to 3 October 2008.

2.16 The Millennium Ecosystem Assessment and its conceptual framework

As mentioned above, the launch of the Millennium Ecosystem Assessment (MA) in 2005 constituted a powerful recognition of biodiversity's role for human well-being and eradication of poverty. The MA demonstrates the important role biodiversity plays in how ecosystems function and thus in ensuring the continuity of the services they provide – services on which human societies depend. The assessment found that most of these services are in serious decline and that in the last half of the twentieth century

humans changed ecosystems more rapidly and extensively than in any comparable period of history. The benefits for humans resulting from these changes have come at an increasing cost, and further unsustainable patterns will threaten development goals. Workable solutions exist according to the MA, but they will require major policy changes.[123]

The MA created a conceptual framework of interactions among ecosystems services, human well-being and drivers of change. The framework could serve as a tool for sustainable management of ecosystems at all scales and thereby also for NBSAPs (see Box 25).

Only a limited number of NBSAPs have been submitted since 2005 when the MA was issued, and of these only three, those of Germany, Japan and Israel, have considered the MA and its findings. More countries are now using the MA findings and its framework in their biodiversity planning exercises. For example, Mexico has undertaken a very comprehensive update of its biodiversity country study using the MA framework, and is replicating the approach at the level of its thirty-one States. As a follow-up to its NBSAP, Japan has conducted a national ecosystem assessment based on the MA conceptual framework[124] and the United Kingdom has launched a national ecosystem assessment.

Box 30
A practical guide to sustainable management of ecosystems

In taking measures to pursue development goals such as reducing poverty, increasing food production and strengthening resilience to climate change, decision-makers often unwittingly act at the expense of nature. Ultimately the development goals could be undermined as the effects of these trade-offs, like loss of fish populations, deforestation, soil erosion and flooding, are felt by people who depend on nature for their livelihood and well-being.

The World Resources Institute (WRI) in 2008 issued *Ecosystem Services – A Guide for Decision Makers*. The guide explains how to improve the outcome of the different trade-offs in decision-making. It builds on existing experience with multiple-use ecosystem management, restoration and conservation planning, but identifies ecosystems more explicitly.

The guide develops the conceptual framework from the MA to help decision-makers gain a better understanding of how development goals both affect and depend on ecosystem services.

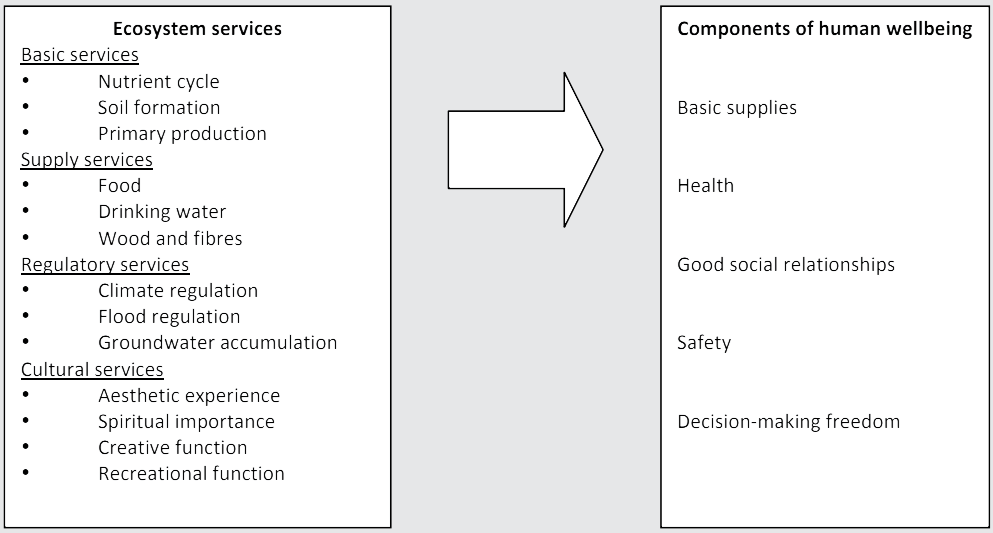
The guide tells a fictional story about a city confronted with difficult political challenges on how to address the challenges of ecosystem change while at the same time developing the city's economy.

Recently the WRI guide has been complemented by a "Manual for assessment practitioners" developed as part of the multi-agency follow up to the MA process. The manual is a stand-alone 'how to' guide to conducting assessments of the impacts on humans of ecosystem changes. In addition, assessment practitioners who are looking for guidance on particular aspects of the assessment process will find individual chapters of this manual to be useful in advancing their understanding of best practices in ecosystem assessment.

Sources: Ranganathan, J. et al 2008, Ecosystem Services – A Guide for Decision Makers World Resources Institute; Neville Ash et al (2010) Ecosystems and Human Well-Being, A Manual for Assessment Practitioners Island Press.

123 www.maweb.org/en/Index.aspx
124 The *Japan Biodiversity Outlook*, launched in May 2010.

Box 31
Ecosystem services



The above illustration shows the breadth of the spectrum of ecosystem services and the components of human well-being, as addressed in the multilateral environmental agreement (MEA). This affects all areas of society and also links together a rangeof issues from the natural and social sciences.

Source: German NBSAP, www.cbd.int/doc/world/de/de-nbsap-01-en.doc

2.17 Mainstreaming within production sectors

While the previous sections have described mainstreaming at the cross-sectoral level, this section will describe the extent to which NBSAPs have been mainstreamed within some of the individual production sectors directly affecting biodiversity.

In general, NBSAPs demonstrate a good understanding of the relationships of specific production sectors to the conservation and sustainable use of biodiversity. In line with Articles 6(b) and 10 of the CBD, they generally acknowledge the need to integrate concerns for biodiversity into sector policies, especially those sectors most directly dependent on the utilisation of natural resources. However, the extent to which this has materialised into strategic objectives and actions in the NBSAPs varies considerably, both in the level of commitment and across the different sectors.

As mentioned above, as the environment sector is usually the CBD competent authority, and is therefore both the main author of the NBSAP and responsible for protected areas designation and management, this is by far the most dominant feature of most NBSAPs. Even when considerations of sector mainstreaming are fully acknowledged and addressed in NBSAPs, this does not, according to national reports and country presentations at the regional and sub-regional NBSAP workshops and country studies, mean that NBSAPs have necessarily led to genuine understanding of, ownership of or commitment to protecting biodiversity by other sectoral authorities. However, once again, newer NBSAPs are generally much stronger on this issue than the older ones.

One way to enhance commitment to biodiversity planning by production sectors may be through letting the sector authorities themselves prepare sector-specific NBSAPs. Such NBSAPs may not always be as ambitious as the national biodiversity authority would wish, but the lower level of ambition could well be outweighed by better prospects for implementation through the awareness and responsibility obtained by the sector authorities during the preparation process. Some countries have applied this approach (either through preparing individual documents or by designing the NBSAP as a compilation of individual sector inputs), including Norway (see Box 32), Cambodia and, most recently, France.

Box 32
Norway – a pioneer in sector mainstreaming

While sector mainstreaming remains one of the biggest challenges for most countries in implementing the CBD, as early as 1994 seven Norwegian ministries responded to the CBD call for sector mainstreaming by each drawing up a sectoral biodiversity action plan.

In 2001, the Norwegian Parliament approved a white paper with an overall biodiversity action, this time based on the input of seventeen ministries.

Forestry

The NBSAPs reveal awareness by countries of the importance of forests for biodiversity – the fact that forests are home to 90 per cent of the world's terrestrial biodiversity and that the ecosystem services underpinned by forest biodiversity directly support the livelihoods of the majority of that part of the global population living in extreme poverty. Forestry is the production sector most comprehensively covered in NBSAPs, and nearly all countries with forest cover include forestry to some degree in their NBSAPs.

Some countries, such as Cambodia, have as part of their NBSAP introduced a moratorium on logging natural forests and have set measurable targets for expanding the forest cover.

Few NBSAPs consider the role of forests as carbon sinks or forest conservation as a tool for climate change mitigation and adaptation. Recently such services provided by forests have emerged to become one of the strongest incentives for attempting to reduce the rate of deforestation, with the recognition of the potential co-benefits for biodiversity and for human forest-dependent livelihoods (see Box 33).

Box 33
Conserving forests – a win-win-win situation for climate, biodiversity and human well-being

At the global level, issues related to forest conservation and sustainable forest management are addressed in a number of international forums, including the United Nations Forum on Forests (UNFF), the Food and Agriculture Organisation (FAO), the International Tropical Timber Organisation (ITTO), the UN Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD).

In recent years climate change has moved to the top of the global political agenda, and thus the contribution of deforestation and forest degradation to greenhouse gas emissions has also received growing attention. It is estimated that forest loss and degradation contribute almost 20 per cent of global greenhouse gas emissions, more than the transport sector.

The UNFCCC process has recognised that addressing this source of emissions will be vital if the world's climate is to be stabilised. As a result, various proposals have been made over the last five years designed to allow countries to benefit from reducing deforestation and degradation. Most prominent among these is the set of mechanisms and projects known as REDD activities (Reducing Emissions from Deforestation and Degradation).

REDD "is an effort to create a financial value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development.

REDD+ goes beyond deforestation and forest degradation, and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks" (UN-REDD Programme 'About REDD' at www.un-redd.org).

The Copenhagen Accord, the voluntary agreement resulting from the UNFCCC COP-15 in December 2009, recognises the crucial role of REDD. At COP-15, Australia, France, Japan, Norway, the UK and the US collectively pledged US$3.5 billion in funding for REDD+ over the period 2010–2012. Germany has also promised to devote 20–30 per cent of its overall 2010–2012 fast-start climate change funding to the initiative. The Interim Partnership Arrangements for REDD+ was launched shortly afterwards with the aim of developing detailed plans for the rolling out of a global REDD+ scheme in time for COP-16 in December 2010.

Besides climate change mitigation and adaptation, the REDD+ mechanisms potentially have enormous co-benefits for biodiversity and for the billions of people, including indigenous peoples, depending on forests. There are good reasons for taking these co-benefits into account: first, attention to co-benefits can strengthen REDD performance as a climate mitigation mechanism; and second, addressing and avoiding negative environmental impacts from REDD can help to make REDD more politically resilient in the medium to long-term. If REDD were to become associated with significant environmental harm, this could undermine the social and political support for its role in climate mitigation.

Source: Dickson, B., Dunning, E., Miles L. & Petorelli, N. 2009, Carbon Markets and Forest Conservation; A Review of the Environmental Benefits of REDD Mechanisms, UNEP World Conservation Monitoring Center. See also the UNFCCC REDD Platform, http://unfccc.int/methods_science/redd/items/4531.php; CBD REDD, www.cbd.int/forest/redd; UN-REDD Programme, www.un-redd.org; The Little REDD Book, www.globalcanopy.org/main.php?m=117&sm=176&t=1

Agriculture

Like forestry, agriculture and its relationship with biodiversity features in most NBSAPs. There are various kinds of relationships between agriculture and biodiversity:

1. Biodiversity is the basis of agriculture through its provision of genetic resources for crops and domesticated livestock.
2. Conserving wild biodiversity in agricultural landscapes is essential to sustaining agricultural ecosystem services such as pollination, generation and renewal of soil and soil fertility, and natural control of potential agricultural pests.[125]
3. Agriculture may enhance biodiversity through application of sustainable practices embodied in traditional socioecological production systems (such as *Satoyama* in Japan) and in organic farming practices.
4. Agriculture may lead to biodiversity loss through unsustainable practices and conversion of natural ecosystems, and thus represent a key driver of terrestrial biodiversity loss.

Of these four aspects, the first has by far received the most attention in NBSAPs, while the other three are either absent or addressed only in vague, general terms.

The primary focus on genetic diversity for agriculture is not surprising given its direct link with food security and poverty alleviation. The future food supply of the world depends on the continued availability of genetic resources for crop and animal improvement, and many farmers depend directly on harvesting the genetic diversity they sow.[126]

On this issue there seems to be considerably greater focus on crop genetic resources than on livestock, despite the fact that livestock resources account for 35-40 percent of total agricultural production

125 Gemill, B. 2001, Managing Agricultural Resources for Biodiversity Conservation for UNDP, UNEP and GEF as part of the Biodiversity Planning Support Programme, Ch.3.
126 ibid, p.7.

worldwide and that a large number of domesticated animal breeds have disappeared or are in serious decline.[127]

Fisheries

Aquatic ecosystems are under serious pressure worldwide, and many fish stocks important for human consumption are collapsing or declining to critical levels. Fishing has an important direct impact on marine biodiversity and also has a serious impact on freshwater biodiversity (where habitat loss is the main cause of biodiversity loss).[128] However, coverage of fisheries as a production sector affecting biodiversity is quite limited in most NBSAPs and often not covered at all. Compared to the other big natural resource-based production sectors, forestry and agriculture, the coverage is markedly weaker, and there seems to be less correlation between NBSAPs and national sectoral plans and programmes on fisheries than is the case for forestry and agriculture.

Considerations of fisheries in NBSAPs are generally broad and not specific on issues such as fishing fleets, methods and quotas. Marine protected areas seem to be the most common feature in the NBSAPs under the heading of fisheries.

Tourism

Tourism is a steadily growing industry affecting biodiversity both positively and negatively.

Tourism that has nature as the main attraction comprises roughly half of all tourism, and tourists are increasingly seeking unspoiled and less-visited areas with low tourist density, such as savannahs, rainforests and coral reefs.[129] There is a growing demand for ecotourism, a small-scale and locally-based form of tourism which has the potential of providing obvious win-win solutions for biodiversity and local livelihoods.[130] Potential positive contributions from ecotourism include raising local awareness of the value of biodiversity, creating new sources of jobs and incomes, and generating revenues for the conservation and sustainable use of biodiversity. For a number of countries, nature-based tourism not only benefits local development but is also a major industry within the national economy. Examples include Costa Rica, Ecuador, Kenya and Nepal (see Box 29).

The other side of the coin is the pressure that an increasing number of tourists put on sensitive ecosystems in the form of traffic, waste, pollution, and consumption of resources and land. This also includes ecotourism. Concerns have been raised that the growing demand for ecotourism often leads to lowering generally accepted standards and thereby to negative rather than positive impacts on local communities and biodiversity.

A large majority of NBSAPs address tourism as an actual or potential incentive for protecting biodiversity through the promotion of ecotourism or other forms of nature-based tourism. These include NBSAPs from countries which can generally be considered as having limited tourism potential.

Both the country studies and the regional and sub-regional CBD workshops on NBSAPs and mainstreaming revealed many cases of ecotourism projects that do generate incomes for local communities and incentives for conservation and sustainable use, usually within the context of protected area management, such as in Cameroon, Dominica and Nepal.

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127 Gemill, B. 2001, Managing Agricultural Resources for Biodiversity Conservation for UNDP, UNEP and GEF as part of the Biodiversity Planning Support Programme, p.7

128 Harvey, B. 2001, A Primer for Planners: Biodiversity and Fisheries for UNDP, UNEP and GEF as part of the Biodiversity Planning Support Programme, p.11.

129 Biodiversity Planning Support Programme (BPSP) 2001, *Integrating Biodiversity into the Tourism Sector: A Guide to Best Practice for Sectoral Integration*, UNDP/UNP/GEF, p.7.

130 There is no official definition of the term 'ecotourism'. The International Ecotourism Society (TIES) in 1990 defined ecotourism as "responsible travel to natural areas that conserves the environment and improves the well-being of local people".

However, it also appears that the high expectations with regard to ecotourism expressed in NBSAPs have generally not been met. Unless countries have multiple natural attractions and the infrastructure to cater for large numbers of tourists, the benefits of ecotourism seem to remain local, scattered and often quite modest. There are many examples of ecotourism investments having failed due to lack of revenues, and in many cases countries have never begun the ecotourism promotion envisaged in their NBSAPs. "Ecotourism is a rather unreliable source of revenue which in many cases will not be able to fully sustain the demand of recurrent costs for protected area management and community development."[131]

Only a few NBSAPs reflect on prevention and mitigation of the negative effects of tourism on biodiversity.

Box 34
Tourism benefiting local communities and biodiversity in Nepal

Tourism is the second biggest industry In Nepal and generates major income for both the government and local communities. Each year 500,000 tourists visit Nepal, with half of these visiting national parks and other protected areas. The country's sixteen protected areas cover nearly 20 per cent of Nepal.

There is general recognition that protected areas management cannot take place without the involvement of, and sharing of benefits with, local communities. Incentives have been created through returning 30–50 per cent of the revenues from national park entrance fees to local communities living in the buffer zones surrounding the parks. The arrangement is guaranteed by law, benefits 700,000 people and is administered by the National Parks and Wildlife Department. The total amount returned annually is US$3 million. The arrangement provides compensation for farmers who lose livestock to wild animals and has led to less conflict between local communities and the authorities.

Similar arrangements exist for other categories of protected areas through the Natural Trust for Nature Conservation, which was established in 1982 as an autonomous, non-profit organisation with a mandate to implement government conservation policies. The fund administers the revenues from entry fees to conservation areas and their allocation among local communities living in and around the areas in support of forests and wildlife, alternative energy production, conservation awareness and production, gender development, agrobiodiversity, heritage conservation, community development, tourism development and community health. The Annapurna Conservation Area, which is visited by 78,000 tourists per year, is one such example.

Source: Interviews as part of country study of Nepal with Mr Gopal Upadhaya, Director General, Department of National Parks and Wildlife Conservation and Juddha Bahadyur Gurung, Secretary, Natural Trust for Nature Conservation.

Box 35
Biodiversity Planning Support Programme for sectoral integration

The Biodiversity Planning Support Programme (BPSP) was an information exchange and dissemination network established to strengthen the capacity of countries to prepare and implement NBSAPs. The two-year project was initiated in 1999 by UNDP and UNEP with core financial support from the GEF, and the network remained active for a number of years.

One of the primary aims of the BPSP was to generate information to assist national biodiversity planners with sectoral integration of NBSAPs into the broader national development framework. In order to do this, a series of thematic studies was produced. Each study focused on one aspect of sectoral integration: agriculture, fisheries, forestry, tourism, environmental assessment procedures, use of economic tools, improved financial planning and harmonisation of legal obligations under biodiversity-related multilateral environmental agreements. Over the course of the two-year implementation of the BPSP, there was an increase in the use of electronic communication, and the programme established a sound base for an information exchange and dissemination network through the BPSP global website, with links to regional partner sites and, through BIOPLAN (a global list server), to a large number of biodiversity planning information sources.

Source: Faisal Abu-Izzeddin (2002) BPSP Final Independent Evaluation (GLO/98/G32/C/1G/31)UNDP

131 GEF Biodiversity Study Programme, 2004, p.80.

Other sectors affecting biodiversity

Hunting

Hunting is addressed in a large number of NBSAPs, both in terms of regulations to avoid unsustainable hunting and the promotion of sustainable hunting as an incentive for conserving and sustainably using biodiversity.

Exploitation of medicinal plants

Exploitation of medicinal plants is a topic that also features in many NBSAPs. In many countries a considerable body of traditional knowledge exists on the identification and use of medicinal plants, together with both high levels of unsustainable harvesting and untapped potential for generating revenues and conservation incentives for local communities.

In spite of their severe impacts on biodiversity, the extractive and energy sectors feature very rarely in NBSAPs. This includes the important issue of production of biofuels and the impact on biodiversity, an issue which has come to prominence only recently.

Business and biodiversity

A direct way of promoting biodiversity mainstreaming within the production sectors and creating market-based approaches to biodiversity conservation is through active engagement and ownership of the issue by the business community itself. In 2008, COP-8 adopted a decision on private-sector engagement, urging countries to engage business in the development and implementation of NBSAPs.[132] Since then the business and biodiversity agenda has gained momentum, and a plethora of different national and international initiatives have begun, such as in Canada (see Box 36).

Box 36
Canadian Business and Biodiversity Program

The Canadian Business and Biodiversity Program (CBBP) is a concrete example of a government-business-NGO-academia partnership to assist business in conserving biodiversity. The CBBP encourages good environmental stewardship practices based on sound science by sharing best practices and lessons learned, and by showcasing successful results. Initiatives thus far include a business and biodiversity conservation guide, a corporate biodiversity awards program, case studies from different sectors, and consolidated lessons learned from those case studies.

Some lessons learned for business to consider include:

- Social licence – the need for businesses to operate, over the long-term, in harmony with their social and ecological surroundings
- Corporate leadership – the need for highest levels of management to be enthusiastic supporters
- Corporate policy and strategy, which needs to be flexible and adaptive, and include goals and objectives as well as accountability and periodic assessment
- Supply chain and business partners – the life cycle approach is essential to address direct and indirect impacts of business activities on biodiversity; thus suppliers and partners must be following the same policies
- Community engagement, including partnership with respected environmental organisations
- Data and information to measure progress against objectives
- Communications on progress and directions taken in conservation, including support of scientific research
- Building trust with a broad range of groups by means such as independent verifications and audits.

Source: Canadian Business and Biodiversity Program (2010) Case Studies Compendium, Volume 1 (online at www.businessbiodiversity.ca/documents/CBBP-CaseStudies.pdf). See also www.businessbiodiversity.ca

132 Decision VIII/17.

Because of the limited attention to this topic in the earlier days of the CBD, when most NBSAPs were produced, reflections on business and private sector involvement are only found in some of the most recent NBSAPs. Thus the topic could be an important element to be included in a new generation of NBSAPs. A number of specific tools for mainstreaming by sectors have been developed (see Box 37).

Box 37
Selected tools and approaches for mainstreaming biodiversity concerns into the work of sectors

Tool/approach	Example(s)	Description
Codes of conduct	FAO Code of Conduct for Responsible Fisheries	The code sets out principles and international standards for responsible fishing practices, with due respect for the ecosystem and biodiversity (www.fao.org/docrep/005/v9878e/v9878e00.HTM).
Sector-specific versions of the ecosystem approach	Ecosystem Approach to Fisheries (EAF) and Sustainable Forest Management (SFM)	The purpose of EAF is to plan, develop and manage fisheries in a manner that addresses the multiple needs and desires of societies without jeopardising the options for future generations to benefit from the full range of goods and services provided by marine ecosystems (ftp://ftp.fao.org/docrep/fao/006/y4773e/y4773e00.pdf). The FAO defines SFM as "the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfill, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems" (www.fao.org/forestry/sfm/24447/en).
Spatial planning	Zoning, marine spatial planning, protected areas, marine protected areas	Clear zoning of activities can reduce conflicts between user groups and provide opportunities both for sustainable resource use and for refugia that promote the recovery of resources and biodiversity.
Certification schemes	Forest Stewardship Council, Marine Stewardship Council	Certification of fisheries or forestry operations provides consumers with a choice to buy timber or fish harvested sustainably. A forest area or fishery that is certified is managed in such a way as to reduce biodiversity impacts (www.msc.org, www.fsc.org).
Management on the scale of ecological processes	Management of Large Marine Ecosystems (LMEs)	Management of LMEs in an ecosystem approach context provides an opportunity for cooperation between all sectors utilising the LME space, as well as environmental agencies and other stakeholders (www.lme.noaa.gov).
Integrating biodiversity concerns into impact assessment	Environmental impact assessment (EIA) and strategic environmental assessment (SEA)	Integrating EIA into development planning can be a powerful mainstreaming tool. The CBD has published voluntary guidelines on biodiversity-inclusive impact assessment (www.cbd.int/doc/publications/imp-bio-eia-and-sea.pdf).
Participatory (co) management	Participatory fisheries management	This approach, which is particularly suitable for small-scale fisheries, promotes the active participation of resource users and communities in the design, implementation and enforcement of fisheries management regulations.
Economic tools	Fostering better understanding of the economic benefits of biodiversity	Studies such as The Economics of Ecosystems and Biodiversity (TEEB) study help draw attention to the global economic benefits of biodiversity, highlight the growing costs of biodiversity loss and ecosystem degradation, and draw together expertise from the fields of science, economics and policy to enable practical actions moving forward (www.teebweb.org).

2.18 Synergies with the implementation of the other two Rio conventions

The UN Conference on Environment and Development in Rio de Janeiro in 1992 (the 'Earth Summit') led to the adoption of three conventions covering three of the most serious global environmental problems: human-induced climate change, desertification and loss of biodiversity. While climate change in recent years has received far more political attention than desertification and loss of biodiversity, there has been growing attention given to the linkages between the three issues and the need to tackle them hand in hand rather than in isolation, as has generally been the case so far. It can be argued that the issues are so interwoven and form such a large part of the overall sustainable development agenda that trying to address each in isolation from the others and from other development processes is treating symptoms rather than root causes.[133]

While some efforts have been made at the international level to foster closer collaboration linking between the three Rio conventions, for example by establishing a liaison group between Secretariats and by the respective COPs adopting a number of decisions on enhanced collaboration, the potential for synergies will only be realised if countries are able to integrate their policies at national level. All three conventions have promoted the development and adoption by Parties of national strategies and action plans as frameworks for national planning and implementation.

The following will discuss the extent to which NBSAPs correlate to the implementation of the other two Rio conventions.

Synergies between biodiversity and climate change policies

The correlations between biodiversity and climate change policies are found in the following ways:

1. Climate change has become a major driver of biodiversity loss. According to the Inter-governmental Panel on Climate Change (IPCC), 20–30 per cent of species would be at risk of extinction if the average temperature rose more than 1.5 to 2.5 degrees Celsius.[134] Thus, reducing climate change is important for safeguarding biodiversity and ecosystem services.
2. Protecting biodiversity can prevent and reduce climate change. This is especially true in the case of protecting ecosystems such as tropical forests and peat lands.
3. When it is too late to prevent climate change, protecting biodiversity and keeping ecosystems intact and robust are important means of adapting to the consequences of climate change.
4. Policies for climate change mitigation and adaptation may harm biodiversity if they are poorly planned and shortsighted and will thereby be counterproductive in the long-term (e.g. biofuel development can be detrimental to biodiversity and to sustainable development in general).

Only a minority of NBSAPs address climate change and, where they do, this is mostly in the form of simply reflecting on the impact of climate change on biodiversity and not in the form of specific objectives and actions. Very few NBSAPs emphasise the role of diverse natural ecosystems in mitigating and adapting to climate change

The limited attention to climate change in NBSAPs can perhaps be explained by the fact that most NBSAPs were prepared at a time where the linkages between climate change and biodiversity received much less attention than they do today. Such limited attention possibly also reflects the fact that

133 Sharma 2009, op cit.

134 IPCC, 2007, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.

developing countries constitute the majority of countries and are not, or are only in a few cases, major contributors to climate change.

However, it is surprising that this limited attention also applies in the case of countries for which climate change will have the most direct impact on their biodiversity and people: small island developing states (SIDS). These states are critically vulnerable to climate change impacts such as sea level rises and increased frequency of cyclones and extreme weather events. While there is a common acknowledgment that conservation measures to maintain healthy and resilient ecosystems both on land and at sea are key adaptation activities, this is only reflected in a small number of SIDS NBSAPs, such as that of Dominica.[135] However, as can be seen below, nature-based adaptation measures may well be reflected in other national policies.

Integration of biodiversity with national adaptation programmes of action

National adaptation programmes of action (NAPAs) were instituted under the United Nations Framework Convention on Climate Change (UNFCCC) in 2001 as a means of creating a process for least developed countries (LDCs) to identify priority activities to respond to their urgent and immediate needs in terms of adaptation to climate change. The rationale for NAPAs rests on the limited ability of LDCs to adapt to the adverse effects of climate change. NAPAs are intended to be complementary to existing national plans and programmes, such as NBSAPs and national action plans under the United Nations Convention to Combat Desertification (UNCCD), and to promote synergies in the implementation of all three Rio conventions.[136]

To date forty-four NAPAs have been submitted and, as most of these were prepared between 2006 and 2008 (i.e. much later than most NBSAPs), the links made in these plans between climate change and biodiversity should illustrate the extent that biodiversity policy has been mainstreamed into national climate change policy making.

In 2008 the CBD Secretariat prepared an analysis of the extent to which the thirty NAPAs existing at that time addressed biodiversity concerns.[137] The analysis revealed that twenty-five NAPAs included projects related to biodiversity, with twenty-four mentioning projects related to forestry, ten to fisheries and four to tourism. Of the twenty-five NAPAs linking adaptation to biodiversity, eight were those of SIDS.

This analysis of NAPAs also revealed that, in areas where biodiversity is closely linked to livelihoods, governments are already prioritising projects linking biodiversity and adaptation. In countries where livelihoods are more reliant on managed systems, however, such as the case of agriculture in Bangladesh, there are few or no adaptation projects that refer to biodiversity.

A preliminary review of some of the subsequently submitted NAPAs seems to confirm the general findings of the CBD Secretariat. Although adaptation projects related to biodiversity are rarely ranked as a top priority, there is a growing recognition of nature-based adaptation and the potential for creating synergies. Nevertheless, nearly a third of NAPAs do not mention biodiversity-related aspects.

135 At COP-9 in 2008 the Executive Secretary was requested to convene a workshop of SIDS to integrate considerations on the impacts of climate change mitigation and adaptation activities within programmes of work and NBSAPs (IX/16). The Executive Secretary responded by including climate change integration in the regional workshops on NBSAPs and mainstreaming for the Caribbean and the Pacific regions held in November 2008 and February 2009.

136 UNFCCC Decision 28/CP.7.

137 Mainstreaming Biodiversity within Climate Change Adaptation, review by the Secretariat of the Convention on Biological Diversity (undated).

Box 38
Adaptation to climate change through biodiversity conservation in the Maldives

"The Maldives is among the most vulnerable to predicted climate change and non-action is not an option for the country." These are the introductory words of the Maldives NAPA. The vulnerability relates mainly to the effects of sea level rise on this low-lying country in which 80 per cent of the area is below one metre. But it also relates to the effects on coral reefs: the two main industries in the country, tourism and fishery, provide more than 80 per cent of total revenues and are completely dependent on the coral reefs.

The Maldives is an archipelago of twenty-five coral atolls. There are 1,190 small tropical islands, out of which 358 are currently utilised mainly for human settlement, infrastructure and economic activities. The largest island, Gan, is barely 6 square kilometres.

Coral reef ecosystems of the Maldives form the seventh largest reef system and are among the richest in the world in terms of species diversity. The NAPA contains a complete vulnerability assessment of coral reef biodiversity, revealing that by 2010, mean April sea surface temperature will exceed the temperature at which corals become susceptible to bleaching. Activities within the NAPA to promote the adaptation of reef biodiversity include the establishment of marine protected areas, the enforcement of the coral mining ban, and enhanced capacity for sewage treatment.

Source: Republic of Maldives (2006) National Adaptation Plan of Action, Ministry of Environment, Energy and Water.

Synergies between biodiversity and desertification policies

One of the severe effects of desertification is loss of biodiversity and the consequent loss of ecosystem services for people often already living under very harsh conditions. For countries with large areas of dryland and exposed to desertification, policies for combating desertification will obviously need to go hand in hand with policies for conservation and sustainable use of biodiversity (and, since climate change is a main driver of desertification, with policies to adapt to climate change). The NBSAPs of such countries (e.g. Niger and other Sahel countries) seem to reflect this quite well by placing considerable emphasis on measures to combat desertification and thus on implementation of the UNCCD.

A preliminary analysis of the extent of biodiversity integration within national action plans under the UNCCD[138] reveals good correlation between these plans and NBSAPs.

In 2009 German Technical Cooperation (GTZ) published a report, 'Planning to Deliver: Making the Rio Conventions more Effective on the Ground', which concerned the national planning processes for all three Rio conventions and the need for these to be interrelated. GTZ's starting point is that national action plans under the three conventions can only fulfil their promises if they are the result of nationally-coordinated and nationally-owned processes, rather than being driven solely by the logic of an individual international policy process. The paper demonstrates how and why this has not been the case so far and offers recommendations on how the planning processes related to climate change, desertification and biodiversity could be better internalised.[139]

2.19 Synergies with the implementation of the other biodiversity-related conventions

Institutions and treaties established to protect the environment have not been created systematically but rather have been negotiated in an ad hoc manner as environmental problems have appeared on

138 A requirement under CCD Article 5(b).
139 Sharma 2009, op cit.

the political agenda. The result of this piecemeal approach has been fragmentation in the design and application of legal and policy instruments at both national and international levels, with overlapping and occasionally conflicting obligations.[140]

This applies in particular to biodiversity-related conventions. Looking at biodiversity in the widest perspective, 155 conventions at both global and regional levels deal with biodiversity in some form or other.[141] The following six global conventions, which address the conservation and sustainable use of biodiversity and which already cooperate at the secretariat level through the Biodiversity Liaison Group, are normally referred to as 'the biodiversity-related conventions':

- Convention on Biological Diversity (CBD)
- Convention on International Trade in Endangered Species (CITES)
- Convention on Migratory Species (CMS)
- Ramsar Convention on Wetlands (Ramsar Convention)
- World Heritage Convention (WHC)
- International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA).

Over the last decade, the need to enhance international environmental governance and improve coordination and coherence between multilateral environmental agreements (MEAs) with comparable areas of focus has come up repeatedly in academic and policy discussions. At the 2005 UN World Summit, heads of state agreed to work towards a more coherent institutional UN framework for environmental activities; a follow-up process was initiated and is still ongoing.[142]

To date the most promising example of how to increase synergies between MEAs is the clustering of the global conventions dealing with chemicals and waste (the Basel,[143] Rotterdam[144] and Stockholm[145] conventions). The COPs have agreed on a number of joint programmatic and administrative activities, such as harmonisation of national reporting and joint capacity-building and outreach activities. Simultaneous extraordinary meetings of their COPs were held in Bali in February 2010.[146]

Within the 'biodiversity cluster', memoranda of cooperation have been signed between the conventions, a number of joint work programmes have been adopted, a liaison group between the secretariats has been established, and meetings have been organised between the chairs of the subsidiary scientific bodies of the conventions.

In 2009 the Nordic Ministers of the Environment, inspired by the experience of the chemical and waste conventions, commissioned a study on the possibilities for further enhanced cooperation and coordination among the biodiversity-related conventions. The study made 12 recommendations but also advised that the experience of the chemical and waste conventions could not be directly transferred to the biodiversity-related conventions. Among the reasons for this are the greater number and scope of the biodiversity-related conventions and the scattered locations of their secretariats.[147]

140 Diaz, C.L. 2002, *Legislative Complementarity and Harmonisation of Biodiversity-related Multilateral Environmental Agreements*, UNEP/UNDP/GEF Biodiversity Planning Support Programme, p.5.
141 Urho, N. 2009, *Possibilities of Enhancing Co-operation and Co-ordination among MEAs in the Biodiversity Cluster*, study prepared for the Nordic Council of Ministers, p.13.
142 A/RES/60/1 (para 169).
143 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, www.basel.int
144 Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, www.pic.int
145 Stockholm Convention on Persistent Organic Pollutants, www.pops.int
146 See excops.unep.ch
147 Urho 2009, op cit.

Discussions on enhancing international environmental governance and promoting greater coherence between MEAs have so far focused very much on processes at the international level. Much less attention has been paid to the key issue for achieving the objectives of the various MEAs in a coherent and resource-effective way – how to enhance cooperation and coordination at the national level. The best cooperation and coordination between secretariats and convention bodies will have no impact on the ground if those responsible for national implementation of the conventions are not acting in a coordinated and consistent way.

NBSAPs are the appropriate instruments for achieving coordinated and consistent implementation of the biodiversity-related conventions: the broad scope of the CBD encompasses the objectives and provisions of the other conventions and only the CBD requires NBSAPs as tools for national planning.

The review of NBSAPs reveals that a majority do not explicitly incorporate measures to implement the other biodiversity-related conventions. Where they do, it is mostly in rather general terms and rarely as part of strategic objectives and actions.

The Ramsar Convention receives more attention in the NBSAPs than any of the other biodiversity-related conventions, often in the context of the protected areas that feature prominently in a large number of NBSAPs.

The ITPGRFA entered into force in 2004, after the preparation of most NBSAPs, but the first objective of this treaty - the conservation and sustainable use of plant genetic resources for food and agriculture - is implicitly covered by a large number of NBSAPs.

Box 39
Streamlined and coherent implementation of the biodiversity-related conventions through the TEMATEA project

National implementation of the numerous obligations resulting from the biodiversity-related conventions has proven to be a major challenge for many countries, mainly because of limited financial and human resources. There is widespread agreement on the need for more coherence between the convention processes, and countries have expressed the need for tools to support and streamline the implementation of the different conventions.

UNEP and IUCN have therefore developed the TEMATEA project to provide issue-based modules for the coherent implementation of biodiversity-related conventions. These modules provide structured information on common issues by identifying and grouping articles, decisions, resolutions and recommendations of different agreements of relevance for those issues. So far, modules for the following thematic issues have been developed: inland waters, invasive alien species, sustainable use, biodiversity and climate change, protected areas, and access and benefit-sharing. The use of the issue-based modules is further supported at the country level in order to promote national cooperation and communication across sectors and conventions.

Source: www.tematea.org

2.20 Sub-national and local biodiversity strategies and action plans

Decisions and actions that affect biodiversity are most often taken at the local level, and the effects of biodiversity loss are similarly felt most directly at this level. NBSAPs will have limited impact on the ground if they are not translated into action at the appropriate sub-national level. This vertical mainstreaming is as important as horizontal mainstreaming across sectors, which tends to have received more attention in the NBSAPs. Support by sub-national institutions could be best achieved through preparation of provincial, state and/or local biodiversity strategies and action plans (BSAPs). These could

serve as sub-national tools for implementation of the NBSAPs while at the same time taking special regional or local concerns into account. Sub-national BSAPs could promote better public awareness about biodiversity, better involvement of local and indigenous communities in natural resources management and, not least, better sectoral and cross-sectoral mainstreaming. At the local level there is a more evident demand for integration since the very nature of 'livelihoods' at the local level is cross-sectoral.[148]

In addition, devolution of biodiversity planning responsibility to the sub-national level could promote the integration of biodiversity concerns into spatial planning, an important planning instrument with as yet unfulfilled potential.

Finally, sharing the burden of NBSAP implementation between the national and sub-national levels is more cost-effective than giving central government full responsibility.[149]

Sub-national BSAPs are particularly relevant to large countries with diverse landscapes, ecosystems and cultures,[150] but are actually relevant to all countries of a minimum size and decentralised structures.

First-generation NBSAPs generally place a strong emphasis on planning at the national level. Although only a minority of NBSAPs explicitly acknowledge the benefits of sub-national BSAPs, the geographical spread of these examples of a focus on devolution is wide: Japan, India, Mexico, Peru, Federated States of Micronesia, South Africa, and the UK. However, the format of many action plans – lists of concrete project proposals rather than measures to translate national policies into action across sectors – has not been helpful in securing commitment at the provincial and local levels.

Those countries that have actually introduced systems of sub-national BSAPs are mainly larger countries with a federal or other form of clearly decentralised structure, such as Australia, Brazil, Canada, India, Indonesia, Malaysia, Mexico, Pakistan, South Africa and a number of European countries, including the UK (see Box 40). These are also the countries that have been most successful in the integration of biodiversity concerns into spatial planning. In some cases (e.g. Canada), sub-national BSAPs are more forward-thinking and strategic than the NBSAP, for example in regard to containing measurable targets.

Even for countries that clearly acknowledge the need for local co-responsibility for biodiversity planning, the actual communication of the NBSAP to the sub-national authorities and the empowerment of these to act has often been unsuccessful. This has been a major constraint on implementation of NBSAPs. The causes for this include the following:

- Some countries simply do not have sub-national institutions in place to deal with NBSAPs. In some countries the institutions are local offices of central government institutions which may have limited support from the local populations.
- Decentralisation of responsibility may have taken place on paper, but without a genuine devolution of authority, accountability and capacity to the sub-national authorities.
- Sub-national authorities have often not been sufficiently involved in the preparatory NBSAP process, leading to the failure of the NBSAP to reflect specific sub-national concerns and resulting in a lack of ownership among sub-national institutions.
- The technical rather than political processes of many NBSAP preparations have often been difficult for the sub-national authorities to comprehend. In some countries, during

148 Swiderska 2002, op cit, p.13.
149 Pisupati 2007, op cit.
150 ibid.

implementation there have been shortcomings in translating central government guidance and requests into language that local authorities are able to comprehend.

- National governments and local authorities do not always share interests.
- Local authorities and communities are reluctant to support NBSAP implementation if they have limited rights to land and natural resources, as is often the case.[151]

Pisupati states that many countries are now in the process of devolution of powers to enable local level decision-making in a wide range of development issues in many countries. This trend has been confirmed by examination of the most recent NBSAPs, by the regional and sub-regional NBASP workshops and by country studies carried out as part of this assessment. The country studies revealed, however, that major shortcomings persist in this area.

In a new generation of NBSAPs the issue of devolution should be highlighted; Pisupati includes a set of guidelines for the preparation of sub-national BSAPs.

The overall national process to prepare the NBSAPs together with sub-national BSAPs should be carefully planned as good planning will be crucial to the success of true sub-national involvement. Countries should learn from both the good and bad lessons of preparing first-generation NBSAPs. Sub-national authorities should be involved from the start in the preparation of the NBSAP, and the NBSAPs should not prescribe the content of the strategies and plans at the lower level, but instead provide a framework for sub-national action.

The experience of India in NBSAP preparation has been mentioned above as unique in terms of the extent of public participation. The process was also unique in terms of decentralised biodiversity planning. It represents the best example of genuine local participation and ownership, with more than 70 state, sub-state, eco-regional and thematic plans serving as building blocks for a draft NBSAP.

Box 40
Decentralised biodiversity planning in the UK

The UK's first Biodiversity Action Plan was prepared in 1994. Since 1998 environmental regulation in the UK has been the responsibility of the devolved administrations for England, Northern Ireland, Wales and Scotland.

Following devolution and a number of other top-level drivers, such as the 2010 targets, the findings of the Millennium Ecosystem Assessment and the greater need to address the effects of climate change, a new strategic framework at the national level was published in 2007, 'Conserving Biodiversity – the UK Approach', based on the twin principles of partnership and the ecosystem approach. It sets out a vision and shared purpose in tackling the loss and restoration of biodiversity, the guiding principles that are to be followed to achieve it, the priorities for action in the UK and internationally, and indicators to monitor the key issues on a UK basis.

Underpinning the UK framework are country strategies for biodiversity and the environment in each of the four countries of the UK. These include further priorities and are supported by additional measures and indicators, reflecting the countries' different responsibilities, needs and views. The overall objectives of the strategies are to:

- Halt the loss of biodiversity and continue to reverse previous losses through targeted actions for species and habitats
- Increase awareness, understanding and enjoyment of biodiversity, and engage more people in conservation and enhancement
- Restore and enhance biodiversity in urban, rural and marine environments through better planning, design and practice

151 ibid.

- Develop an effective management framework that ensures biodiversity is taken into account in wider decision-making
- Ensure knowledge on biodiversity is available to all policy makers and practitioners.

From 2006 all local and other authorities in England and Wales have been obliged by the 'Biodiversity Duty' under the *Natural Environment and Rural Communities Act* to have regard to the conservation of biodiversity in exercising their functions. The duty aims to raise the profile and visibility of biodiversity, to clarify existing commitments with regard to biodiversity, and to make it a natural and integral part of policy- and decision-making.

To help local authority staff fulfil the duty, in 2007 the UK Department for Environment, Food and Rural Affairs (DEFRA) issued the publication 'Guidance for Local Authorities on Implementing the Biodiversity Duty', with the following key messages:

- Biodiversity is at the very heart of sustainable development and can contribute positively to social cohesion, community well-being and quality of life.
- A key opportunity of local authorities is to recognise the quality of the benefits by establishing and maintaining biodiversity as a local priority and integrating biodiversity throughout a range of functions and services.
- There is a need to integrate biodiversity within corporate priorities and internal policy.
- There are opportunities to deliver biodiversity conservation through Local Strategic Partnerships, Sustainable Community Strategies and Local Area Agreements.
- It is important to make best use of the Local Biodiversity Action Planning process.

Source: UK Fourth National Report (2009) and DEFRA Guidance for Local Authorities on Implementing the Biodiversity Duty (2009), www.defra.gov.uk/environment/biodiversity/documents/la-guid-english.pdf

An aspect of decentralised biodiversity planning that should not be overlooked concerns that in overseas territories or areas of countries physically separate from the metropolitan portion and in a different biogeographical zone. Most, though not all, of such cases involve island territories and, given the special importance of island biodiversity, thereby constitute priority areas for biodiversity planning. Examples are to be found worldwide in the Atlantic, Antarctic, Arctic, Caribbean, Indian and Pacific oceans. Whatever the nature of the relationship between the metropolitan country and the overseas territory (and this is not always that of former colony and colonial power),[152] the biodiversity planning challenges are of a different order and the stakes are high. IUCN has recently carried out a study of the status of implementation of the CBD in overseas entities linked to EU Member States (see Box 41).

Box 41
Implementing the CBD in the EU Overseas Entities: a Review by IUCN

There are thirty overseas entities that are linked to six Member States of the European Union (EU).[153] They cover a land area of 4.4 million square kilometres, equivalent to continental Europe, and a combined exclusive economic zone of over 15 million square kilometres. They range from small islands to large land areas and are located across all major regions, in major biodiversity hotspots (Caribbean, Oceania, West Indian Ocean), and in key regions for polar ecosystems and fish stocks. Together, they host more than 10 per cent of the world's coral reefs and lagoons, and many more species than mainland Europe.

Because of their rich biodiversity and constitutional and institutional peculiarities, IUCN saw the need to carry out an in-depth review of the status of implementation of the CBD in the EU Outermost Regions (OR) and Overseas

152 Take, for example, Socotra (Yemen), the Andaman and Nicobar Islands (India), the Galapagos Islands (Ecuador) or Fernando de Noronha (Brazil).
153 Denmark, France, Netherlands, Portugal, Spain and the United Kingdom.

Countries and Territories (OCT),[154] as part of its Programme on EU overseas entities, which is funded by the Government of France. This review builds on IUCN's earlier efforts in support of biodiversity conservation and adaptation to climate change in the EU overseas entities, notably with the hosting of the Conference on *"The European Union and its Overseas Entities: Strategies to Counter Climate Change and Biodiversity Loss"* in Reunion Island in July 2008, and the publication of a comprehensive report entitled "*Climate Change and Biodiversity in the European Union Overseas Entities*".

Preliminary results show that while much has been achieved in biodiversity conservation towards meeting some of goals and targets of the CBD Programme of Work on Island Biodiversity, thanks to a combination of local, national and international initiatives, situations differ greatly between EU Member States and between individual overseas entities. Three main issues emerge, with the potential to leave important elements of global and, in particular, island biodiversity deprived of adequate policies and programmes:

- *A constitutional and institutional gap*: most EU overseas entities are included in the ratification of the Convention by the EU Member State they are attached to, and hence are implicitly covered by the provisions of the Convention. There are however cases of EU OCTs that have effectively been excluded by the process of ratification by the Party;
- *A policy gap*, which manifests itself principally at three levels: (a) in the relationship between the EU Member State and its overseas entities, as national policies and plans are in several instances not translated at local level; (b) within geographic regions, because overseas entities do not fully participate in regional processes and institutions; and (c) within the overseas entities themselves, because the frequent absence of biodiversity policy and planning instruments means that biodiversity considerations and objectives are not mainstreamed in local development processes;
- *An implementation gap*, because the disconnect between planning and action, which has been identified as a challenge for CBD and NBSAP implementation in many countries is, in the case of overseas entities, often exacerbated by physical distance and remoteness, limited capacity and guidance, the absence of dedicated funding, and more generally the lack of a local integrated biodiversity strategy.

Source: IUCN.

2.21 Gender mainstreaming

Women play a key role in managing local biodiversity, especially in meeting food and health needs. In many countries they also play a crucial role in managing agriculture and are the primary savers and managers of seeds. Furthermore, they are responsible for the control, development and transmission of significant traditional knowledge.[155]

The importance of gender mainstreaming in environmental and poverty eradication policies has been recognised in a wide range of global agreements and forums, including the CBD, which in its preamble recognises the vital role that women play in the conservation and sustainable use of biodiversity, and affirms the need for the full participation of women at all levels of policy-making and implementation.

154 Overseas Countries and Territories (OCTs) refer to those entities which are not part of, but are associated with, the European Union under Part IV of the Treaty of the European Union, as opposed to Outermost Regions (ORs), which are an integral part of the European Union under the same Treaty. These appellations are commonly used to simplify the complex status of overseas entities in each EU Member State. The nine ORs are: the Azores, the Canary Islands, Guadeloupe, French Guiana, Madeira, Martinique, Reunion, Saint-Barthelmy and Saint-Martin. The twenty-one OCTs are: Anguilla, Aruba, Bermuda, British Antarctic Territory (BAT), British Indian Ocean Territory (BIOT), British Virgin Islands (BVI), Cayman Islands, Falkland Islands (Malvinas), French Polynesia, French Southern and Antarctic Territories (Terres Australes et Antarctiques Françaises (TAAF)), Greenland, Mayotte, Montserrat, Netherlands Antilles, New Caledonia, Pitcairn Island, Saint Helena -Tristan da Cunha – Ascension Island, Saint-Pierre-et-Miquelon, South Georgia and the South Sandwich Islands, Turks and Caicos Islands, and Wallis and Futuna.

155 Sasvari, A., Aguilar, L., Khan, M. & Schmitt, F. 2010, *Guidelines for Mainstreaming Gender into National Biodiversity Strategies and Action Plans*, Secretariat of the Convention on Biological Diversity, CBD Technical Series No.49, CBD and IUCN.

A number of COP decisions and recommendations by SBSTTA address consideration of women's practices and knowledge, equal presentation and gender roles. In 2008, COP-9 approved the Gender Plan of Action under the Convention on Biological Diversity. This defines the role the CBD Secretariat is to play in promoting and facilitating efforts to overcome constraints and in taking advantage of opportunities to promote gender equality.[156]

At the request of the CBD Secretariat, the IUCN Senior Gender Advisor's office, in close cooperation with Secretariat staff, developed the CBD Technical Series No. 49, 'Guidelines for Mainstreaming Gender into National Biodiversity Strategies and Action Plans',[157] to answer the demand for supporting national authorities involved in NBSAP development to adopt a coherent and systematic approach towards the mainstreaming of gender. These guidelines are designed to be applied in conjunction with other guidelines issued by the CBD.

As a basis for these guidelines, a detailed analysis of the inclusion of gender issues in the existing NBSAPs was made. The analysis showed that, while some NBSAPs have led to some significant successes in gender mainstreaming, in Liberia and Botswana for example, gender issues remain largely absent from NBSAPs.[158]

2.22 Consideration of indigenous and local communities and traditional knowledge

The CBD has a strong focus on indigenous peoples and local communities. In its preamble the Convention recognises the close and traditional dependence of many indigenous and local communities on biological resources.[159] There is also a broad recognition of the contribution that traditional knowledge can make to the sustainable use of biodiversity.

Article 8(j) commits Parties to respect, preserve, maintain and promote the wider use of traditional knowledge with the approval and involvement of the users of such knowledge. Article 10(c) calls on Parties to protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements.

A Working Group on Article 8(j) and Related Provisions was established in 1998 to enhance the role and involvement of indigenous and local communities in the achievement of the objectives of the Convention.

The UN Declaration on the Rights of Indigenous Peoples, adopted in 2007, proclaims that indigenous peoples have the right to conservation and protection of the environment and the productive capacity of their lands or territories and resources. The Declaration also proclaims that indigenous peoples have the right to maintain, control, protect and develop their traditional knowledge, including their knowledge of genetic resources and the properties of fauna and flora.[160]

Only a minority of NBSAPs include consideration of indigenous and local communities and traditional knowledge. However, it needs to be acknowledged that the applicability of this issue varies among countries, and countries with a significant number of indigenous peoples embodying traditional lifestyles typically do include the topic in their NBSAPs.

156 Decision IX/24 and document UNEP/CBD/COP9//INF/12.
157 www.cbd.int/doc/publications/cbd-ts-49-en.pdf, also available in French and Spanish.
158 ibid.
159 Preambular paragraph 12.
160 UN Declaration on the Rights of Indigenous Peoples (2007), Articles 29 and 31.

Pacific Island Countries, such as Fiji (see Box 42), are unique in placing a high degree of emphasis on indigenous and local communities and traditional knowledge. All the Pacific Island NBSAPs were developed following extensive community consultations, and give communities and their traditional knowledge a prominent role in implementation. Furthermore, the loss of traditional knowledge is often cited as a cause of degradation and loss of biodiversity, and most Pacific Island NBSAPs call for strengthening these knowledge systems and using them as a basis for management alongside scientific research. Asian country NBSAPs also show a high degree of coverage of this topic.

Box 42
Local management of protected areas in Fiji

More than 80 per cent of Fiji's land area and large parts of its marine zone are under village ownership, and nearly all conservation activities in the country take place in these areas. Accordingly, the NBSAP has a strong emphasis on the direct participation and leadership of land and resource rights holders in conservation and management. This inversion of the more conventional top-down approach is the key to the success of biodiversity conservation in Fiji.

Source: Fiji's NBSAP and NBSAP workshop presentation for the Pacific region 2 to 6 February 2009, Nadi, Fiji.

Typically, NBSAPs express the need for the active involvement of local communities in the management of natural resources and biodiversity and the value of traditional knowledge in this regard. Yet NBSAPs rarely reflect on the core issue of Article 8(j) – giving legal protection to the holders of traditional knowledge, for example through recognition of customary law and the establishment of *sui generis* systems for recognising community ownership of traditional biodiversity-related knowledge.

As shown in Box 43, the regional and sub-regional workshops on NBSAPs revealed a number of good examples of the involvement of indigenous and local communities.

Box 43
Examples of involvement of indigenous and local communities in natural resources management

The regional and sub-regional capacity-building workshops on NBSAPs and the mainstreaming of biodiversity organised in 2008 and 2009 by the CBD Secretariat demonstrated a number of case studies of good practices, including cases of involvement of indigenous and local communities in natural resources management:

- In *Panama,* indigenous groups are taking part in the conservation of the Panamanian part of the Mesoamerican Biological Corridor. Around 50 per cent of the area is indigenous territory, and the National Environmental Authority has made agreements with several indigenous groups. Under these agreements, programmes have been developed for the co-management of the protected areas in question, and in addition the government has initiated a number of projects to improve the communities' living conditions.
- In *Pakistan,* in the area of Torghar, one of few locations where the Suleiman Markhor goat and the Afghan Urial sheep species still exist, tribal elders have banned uncontrolled hunting of these species by local and nomadic tribes. Instead they have put in place controlled trophy hunting in order to fund a conservation programme in the area. The controlled hunting has allowed the two endangered species populations to recover and has generated income for the local communities.
- In *Brazil*, as in other countries, the establishment of marine protected areas (MPAs) has created conflicts between traditional fishing communities and the managers of the protected areas. Brazil has therefore introduced marine extractive reserves (MERs), a marine/coastal variant of the terrestrial forest extractive reserve concept. The MERs differ from MPAs in that they are only set up at the request of traditional fishing communities, they are sustainable use areas rather than no-take areas, they aim to improve the

living conditions of the people in the communities, and they reinforce the rights of access of traditional fishing communities to fishery resources. In these areas, coastal and marine resources are co-managed by artisanal fishermen and government scientists.

Sources: CBD Secretariat and NBSAP workshop presentation for Central America 26 to 27 March 2008, Mexico City : 'CMAP – Las Comunidas Indigenas y la Gestion en las Areas Protegidas'. CBD Secretariat and presentation and short film presented at NBSAP workshop for Central Asia, 9 to 13 March 2009 in Ramsar, Iran. CBD Secretariat and Antonio Carlos Diegues, Marine Protected Areas and Artisanal Fisheries in Brazil.

2.23 Communication, education and public awareness

Communication, education and public awareness (CEPA) are the tools for making biodiversity and its importance understandable to decision-makers and the public, and thereby a prerequisite for action to conserve and sustainably use biodiversity.

Article 13 of the CBD calls on Parties to carry out CEPA, and COP-6 in 2002 adopted a programme of work on CEPA.[161] In 2007 a comprehensive CEPA Toolkit for National Focal Points and NBSAP coordinators was released.[162] The toolkit was developed by IUCN at the request of the CBD Secretariat and provides guidance on where, when and how to use a wide range of education and communication interventions.

A well-designed participatory process to prepare an NBSAP is in itself an important CEPA activity, and in this regard the Indian NBSAP process once again stands out. The Indian Ministry of Environment and Forests entrusted the process to the NGO Kalpavriksh Environmental Action Group and accepted its proposal for a large-scale decentralised process across all states of India. The process was built on the premise that biodiversity has value and impinges on every citizen, and that biodiversity planning should therefore be owned and shaped by as many people as possible, including enabling the most marginalised voices to be heard; regardless of what might come out of the process, it would increase awareness of biodiversity.[163]

NBSAPs generally acknowledge the importance of CEPA, and the issue features prominently in nearly all NBSAPs. However, most often they discuss more what to communicate and less where, when and how. The CBD-IUCN toolkit for CEPA mentioned above is therefore well suited for assisting countries in preparing the next generation of NBSAPs.

While there is clear recognition in most NBSAPs of the need to promote understanding of the importance of biodiversity more generally, only a few countries, such as Botswana, Cambodia, Indonesia, Madagascar and Malawi, have developed communication strategies for raising awareness of the NBSAP itself. This is perhaps one of the fundamental reasons for the limited visibility of NBSAPs in most countries.

2.24 Prioritisation within NBSAPs

Biodiversity planning is a complex issue that requires difficult political choices with limited resources. To be effective, NBSAPs therefore need to be strategic and prioritised. Most NBSAPs refer to all their policy objectives and actions as 'priorities', but only a minority prioritise among these objectives and actions.

161 Decision VI/19.
162 Hesselink, F.J. e.a., Communication (2007).
163 ibid. and Sharma 2009, op cit.

Since many NBSAPs are quite comprehensive and prescriptive in their form, this leaves the national authorities responsible for implementation with a difficult challenge.

Overall, NBSAPs vary considerably in design. Existing NBSAP literature has often given special attention to those NBSAPs with long lists of unprioritised project proposals depending totally on funding from external donors, leaving the impression that these form the majority of NBSAPs.[164] While this type of NBSAP is very common, it is not the only type (see Box 44). In some cases the project proposals have been prioritised but the proposed projects are so numerous as compared to available resources that even priority actions have not been implemented.

Many NBSAPs, including a large proportion of European NBSAPs, are made up of strategies with policy objectives but no action plan. In many other NBSAPs, the part referred to as the action plan does not really live up to this name and contains policy statements, objectives or goals rather than concrete actions.

In some cases, rather than attempting to set out a comprehensive list of priority actions to be implemented, the NBSAP (or equivalent instrument(s)) provides a framework, including institutions, for determining those priority actions later, on the basis of good scientific information and stakeholder consultations. Arguably, this more flexible approach is superior in that it enables an ongoing process rather than developing a static document.

Box 44
Prioritisation of action in Malawi

Malawi's 2006 NBSAP belongs to the new generation of NBSAPs that have a more strategic and integrated approach than the first generation. Unlike in many older NBSAPs, the actions are not lists of proposed projects targeted to external donors, but measures to support the policy agenda outlined in the strategic part of the NBSAP. It is one of the very few NBSAPs to link its goals and actions to the programmes of work and decisions of the CBD.

The NBSAP is built around four main goals, under which 192 actions are identified. Acknowledging the limited resources and capacities in this least developed country, twenty-three actions are prioritised that address existing gaps and inadequacies in Malawi's biodiversity management and that would contribute more towards achieving national and global biodiversity goals than the remaining actions. Each of the twenty-three actions includes a time-bound and quantifiable target. The priority actions are grouped into the following five areas: enhancement of protected areas management, promotion of sustainable use of genetic resources, enhancement and maintenance of partnerships, enhancement of governance in biodiversity conservation, and strengthened infrastructure and human capacity.

Source: Malawi NBSAP, www.cbd.int/doc/world/mw/mw-nbsap-01-en.pdf

2.25 Quantitative and time-bound targets

Already in 1995 COP-3 had invited countries to set measurable targets for the conservation and sustainable use of biodiversity.[165] NBSAPs and national reports alike include several references to national targets, but very few are measurable or quantitative. The majority of such targets relate to forest cover and protected area coverage.

The target to significantly reduce the current rate of biodiversity loss by 2010 was adopted by COP-6 in 2002[166] and endorsed the same year by heads of state at the World Summit on Sustainable Development

164 UNEP/CBD/WG-RI/2INF/9, 2007: *National Biodiversity Strategies and Action Plans: A Meta-Analysis of Earlier Reviews*.
165 Decision III/9.
166 Decision VI/26.

in Johannesburg. In 2004, COP-7 adopted a framework of goals and targets to clarify and help assess the overall 2010 target, and Parties were invited to develop their own national goals and targets within that flexible framework. Of forty NBSAPs developed or revised since 2004, only those of Germany, South Africa and Liberia have included a system of measurable and quantitative targets, while those of Palau and Mauritius have included such targets for protected area coverage. Some countries, such as Austria, Brazil and Canada have adopted targets outside the framework of a stand-alone NBSAP document, but nevertheless as part of an overall biodiversity planning framework.

2.26 Regional and sub-regional cooperation

Most NBSAPs outline a role for regional and/or sub-regional cooperation relating to the conservation and sustainable use of biodiversity. At the regional and sub-regional workshops on NBSAPs many cases of cooperation were presented, and it appears that the level of cooperation is increasing, mainly through the increasing involvement of regional and sub-regional organisations with mandates for biodiversity-related matters. Those who made presentations at the workshops included:

- Association of Southeast Asian Nations (ASEAN)
- ASEAN Centre for Biodiversity (ACB)
- Economic Community of West African States (ECOWAS)
- Central African Forests Commission (COMIFAC)
- Caribbean Community (CARICOM)
- Council of Arab Ministers Responsible for the Environment (CAMRE)
- Secretariat of the Pacific Regional Environment Programme (SPREP)
- European Union (EU)
- Amazon Cooperation Treaty Organisation (OTCA)
- Southern Common Market (MERCOSUR)
- Central American Commission on Environment and Development (CCAD)
- Regional offices of the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP) and the World Conservation Union (IUCN).

Cooperation in this case includes both regional policy-making and management of shared ecosystems. The most advanced regional cooperation takes place in Europe under the EU, which has joint legislation. The EU biodiversity strategy, set up in 1998, lays down a general framework for developing EU policies and instruments to fulfil the EU's obligations under the CBD. It is developed around four major themes reflecting the principal obligations which the EU assumes under the CBD. It also specifies the objectives which need to be met to fulfil these obligations. The themes are: conservation and sustainable use of biodiversity; sharing of benefits arising out of the utilisation of genetic resources; research, identification, monitoring and exchange of information; and education, training and awareness.

Although the EU provides a rare example of biodiversity policy-making that is legally binding on member states, it is by no means the only example of a regional NBSAP. See for example the Regional Strategy for the Conservation and Sustainable Use of Biodiversity in Mesoamerica,[167] the Regional Biodiversity

167 Estrategia Regional para la Conservación y Uso Sostenible de la Biodiversidad en Mesoamérica, www.ccad.ws/pccbm/docs/Informe_final/04-ERB%20ingles.pdf

Strategy for the Countries of the Tropical Andes[168] and the Mercosur Biodiversity Strategy, adopted at an extraordinary meeting of Mercosur environment ministers held during COP-8 in Curitiba, Brazil.[169]

In the Pacific region the first Pacific Islands Action Strategy for Nature Conservation was adopted in 1986. The second Action Strategy (2003) focused on mainstreaming conservation and sustainable development; its vision, mission and goals were endorsed by the Pacific Island governments at a SPREP Governing Council meeting in September 2003.

In 2007 the Action Strategy for Nature Conservation in the Pacific Islands Region 2008–2012[170] was adopted following a region-wide consultation process. The strategy's objectives establish five-year interim milestones for achieving its thirty-year goals. These objectives were drawn from the 2003 Action Strategy and common priorities identified in completed Pacific Island NBSAPs. The Pacific Islands Round Table for Nature Conservation has committed to visiting three countries each year and working with national stakeholders to develop a platform for coordination and implementation of the NBSAPs.

The regional and sub-regional NBSAP workshops organised by the CBD Secretariat were themselves examples of successful cooperation and capacity-building at regional and sub-regional level. The fact that there are large variations between preparation, content and implementation of NBSAPs even within regions, and with NBSAP 'champions' in each region, is a further reason for strengthening regional and sub-regional cooperation to share experience and best practices.

Box 45
COMIFAC, a forum for sub-regional conservation and sustainable use of forests and biodiversity in Central Africa

The dense rainforests of the Congo Basin in Central Africa cover an area of over 2 million square kilometres and form one of the three main tropical rainforest systems of the world. The Congo Basin is home to around 100 million people and produces 12 million cubic metres of wood products per year. The area has at least 400 mammal, 1,300 bird, 336 amphibian, 400 reptile and 20,000 plant species recorded. Of the plant species, approximately 8,000 are endemic.

The Central African Forests Commission (COMIFAC) was established in 2005 at a summit of Central African heads of state in Brazzaville to act as a regional forum for the joint conservation and sustainable management of forest ecosystems in Central Africa. The participating countries are Cameroon, Central African Republic, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Chad, Burundi, Sao Tome and Principe, and Rwanda. COMIFAC is the primary authority for decision-making and coordination of sub-regional actions and initiatives on conservation and sustainable management of the Congo Basin forests.

The legal basis for COMIFAC was established in 1999 when the heads of state of the Republic of the Congo, Chad, Equatorial Guinea, Sao Tome and Principe, Gabon and the Central African Republic convened to adopt the Yaoundé Declaration. The declaration recognises the protection of the Congo Basin's ecosystems as an integral component of the development process and reaffirms the signatories' commitment to work cooperatively to promote the sustainable use of the Congo Basin's ecosystem in accordance with their social, economic and environmental agendas.

COMIFAC adopted in February 2005 a convergence plan for better management and conservation of forests in Central Africa. Based on the plan the following priority themes were identified: harmonisation of forest policy and taxation, inventory of flora and fauna, ecosystem management, conservation of biodiversity, sustainable use of natural resources, capacity-building and community participation, research and innovative financing mechanisms.

168 Estrategia Regional de Biodiversidad para los Paises del Tropico Andino. www.comunidadandina.org/normativa/dec/anexoDEC523.pdf
169 Estrategia de Biodiversidad del Mercosur, www.cbd.int/doc/meetings/nbsap/nbsapcbw-sam-01/other/nbsapcbw-sam-01-declaracion-ministros-mercosur-es.pdf
170 www.sprep.org/att/publication/000755_RoundtableActionStrategy.pdf

COMIFAC has facilitated the establishment of national environmentally sustainable strategies, and has informed and trained key actors participating in policy formulation. It has also carried out sub-regional surveillance and monitoring, evaluated efforts to combat desertification in the region, and strengthened national systems for the collection and analysis of data on desertification.

In addition, COMIFAC identifies and values traditional knowledge of local people for conserving natural resources and fighting land degradation, using the technical and scientific potential of the sub-region and information and communication technologies to improve diffusion of research findings on land durability. COMIFAC has encouraged the exchange of information between the Committee of Science and Technology of the UNCCD and national research institutions in the sub-region to maximise benefits from research done at an international level.

Source: www.comifac.org

2.27 Finance mobilisation and capacity-building

Objective 2.1 of the CBD Strategic Plan of 2002 is that "all Parties have adequate capacity for implementation of priority actions in national biodiversity strategy and action plans" and Objective 2.2 is that "developing country P,arties in particular the least developed and the small island States among them, and other Parties with economies in transition, have sufficient resources available to implement the three objectives of the convention". The COP has so far not estimated what constitutes 'adequate' and 'sufficient' in terms of funds, but IUCN has estimated that US$20–30 billion will be needed annually over the next thirty years simply to establish a comprehensive protected area network system.[171]

Countries are far from having this order of funds available for biodiversity. There are no calculations of total national expenditures on implementing the CBD, but as for its first objective (conservation) an estimate of a total of between US$5.3 and $7.6 billion in national expenditures has been made (2005). With developed countries' aid to developing countries included, the estimate rises to between US$6.5 and $10 billion.[172] It is generally estimated that funding has remained largely static or has even decreased since the adoption of the Strategic Plan and its 2010 biodiversity target in 2002.

Both the third and fourth national reports by Parties identify the lack of financial, human and technical resources as the most widespread obstacle to implementation of NBSAPs and the Convention in general. This applies to both developed and developing countries.

Only a minority of NBSAPs include strategies to finance their implementation, and this, in combination with the widespread lack of endorsement of NBSAPs at a higher government level, makes the prospects of raising sufficient funds appear remote in the case of many NBSAPs. Some NBSAPs have postponed the question of resource allocation, but have then rarely managed to raise the necessary funds.

A number of developed country NBSAPs state that the costs of their implementation will be met under existing budgets. Combined with the frequent lack of action plans in these NBSAPs, this indicates that many developed countries do not consider there to be a need for major additional efforts to implement the Convention.

Many early developing country NBSAPs seem to have anticipated that the costs of their implementation would be covered fully or mostly by external donors. As mentioned above, many NBSAP action plans

171 The fifth IUCN World Parks Congress (8-17 September 2003, Durban, South Africa), Recommendation 5.07, Financial Security for Protected Areas.

172 UNEP/CBD/COP/9/INF/14, *Submission from the Secretariat of GEF to the Draft Strategy for Resource Mobilization in Support of the Achievements of the Convention's Objectives*, p.11.

are lists of often unprioritised biodiversity projects with little relation to the NBSAP strategy or the involvement of government sectors, local authorities and communities.

Commentators such as Carew-Reid, Swiderska and mostly recently Sharma[173] have demonstrated how this NBSAP approach is likely to be a recipe for failure. Action plans that are no more than project proposals directed at donors risk undermining the political purpose of NBSAPs as tools for mainstreaming across sectors and beyond individual projects. Viewing the NBSAP process as a fundraising exercise with the expectation of attracting donors rather than as a national planning exercise is not the right way to go about obtaining broad national ownership of the NBSAP and its consistency and coordination with other national plans and strategies. By bypassing the national budget, the NBSAP may also be bypassing accountability to the national parliament. Finally, this approach is at odds with the growing trend in official development assistance to providing budgetary support rather than earmarking assistance to specific purposes and projects.

The national reports, country studies and presentations at the regional workshops have confirmed that this approach has not been particularly successful. A number of countries indicated at the workshops that few, and in some cases none, of the projects proposed in their NBSAPs had been implemented. It sometimes appears as if no serious attempts were made to raise funds from external donors for project execution. If at the same time the NBSAP has not managed to raise awareness or to engender ownership among national stakeholders, it might well be argued that this type of NBSAP has in fact hindered rather than advanced biodiversity planning.

It is fair to point out that second-generation NBSAPs generally take another approach. Although not always featuring concrete strategies for financing the NBSAP, they tend not to consider external funding as the main source of resource mobilisation, and the action plans consist of concrete measures to implement the strategy, rather than project proposals.

Availability and sources of financial resources
a) National financial support

Although most countries have not budgeted directly for implementation of their NBSAPs, most have also reported that they provide some kind of financial support and incentives to conserve and sustainably use biodiversity, although more often through sectoral budgets than through budgets for biodiversity per se. As mentioned above, recently prepared NBSAPs place greater emphasis on domestic resource mobilisation than do earlier NBSAPs.

In some countries there have been serious cuts in budgets related to environmental protection, while in others these budgets have increased.[174]

About one-third of the countries reporting to the CBD have adopted tax-exemption status for biodiversity-related donations.[175] Some countries, such as Bhutan and Bolivia, have established national environmental funds to support environmental protection, including conservation and sustainable use of biodiversity, while others have called in their NBSAPs for the establishment of such funds. It appears, though, that in many cases such funds have either not been established or have never begun functioning.

In addition to other benefits, sectoral and cross-sectoral integration measures may serve to reorient and mobilise resources from sectoral budgets and finances. The impacts of such measures occur at

173 Carew-Reid 2002, Swiderska 2002, Sharma 2009, op cit.
174 UNEP/CBD/WG-RI/2/2.
175 UNEP/CBD/WG-RI2/INF/4.

the interface between sectoral development pursuits and the conservation and sustainable use of biodiversity.

The lack of financial resources is a major impediment to achieving the objectives of the CBD, and the COP has adopted a strategy for resource mobilisation to substantially enhance international financial flows and domestic funding for biodiversity.[176] Examples of innovative financial mechanisms under discussion are shown in Box 46.

Box 46
Innovative financial mechanisms

In recent years a lot of focus has been given to the promotion of innovative financial mechanisms. These constitute an important part of the strategy for resource mobilisation 2008–15, adopted by COP-9 in 2008 (Decision IX/11). These mechanisms include:

- *Payment for ecosystem services (PES*) – understood as a voluntary arrangement under which providers of an ecosystem service will receive agreed compensation from beneficiaries conditional upon maintaining the provision of the ecosystem service. Such payments can be an important source of financing action for biodiversity. Mechanisms for carbon trading are an example of international payments for ecosystem services, as is the proposed system for compensating reductions in deforestation and forest degradation and enhancement of carbon stocks, thereby reducing CO2 emissions (REDD+). PES is not yet widely applied, but it has been explored and tested in many countries, such as in China, where it has been used to compensate local governments and farmers for returning land to forest and grassland in order to reduce the risk of flooding.
- *Biodiversity offsets* – measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken. The goal of biodiversity offsets is to achieve no net loss. Conservation banking (including habitat banking and species banking) and the use of biodiversity credits are means of implementing biodiversity offsets. Over thirty countries or states have enacted laws or introduced policies that specifically require biodiversity offsets or compensatory conservation for specific categories of impacts. There is also a small but growing number of companies undertaking biodiversity offsets voluntarily. The Business and Biodiversity Offsets Programme (BBOP) is a partnership between companies, governments and conservation experts to develop, share and encourage the use of best practice on biodiversity offsets and conservation banks, including principles, guidelines, methodologies, standards and case studies. In addition, BBOP completed a methodology toolkit in May 2009 which includes three core handbooks on offset design and implementation.
- *Ecological fiscal reforms* – a range of taxation and pricing measures, such as taxes on natural resource use, and use charges or fees, which can raise fiscal revenues while furthering environmental goals. The basic idea consists of setting incentives for resource use while providing financial resources for both ecologically and socially motivated goals. Fiscal measures have been increasingly used in developed countries, but to a lesser extent in developing countries.
- *Markets for 'green' products* – a reflection of the increasing awareness of many consumers and producers that conventional production and consumption practices threaten the long-term viability of ecosystems and biodiversity. Market mechanisms have therefore developed for 'green' products and services that can convincingly distinguish themselves from their competitors through demonstrating their credentials vis-à-vis conservation and sustainable use of biodiversity. Products from certified forests and organic agriculture are examples of these.
- *Biodiversity in new sources of international development finance* – which in recent years have benefited a number of initiatives, with some already yielding positive results; biodiversity, however, has not yet benefited much from this emerging trend. Yet the ideas behind the innovations in international development finance still provide useful leads in exploring new and innovative sources of international development finance for biodiversity objectives.

176 Decision IX/11.

- *Biodiversity in funding mechanisms for climate change* – such as carbon storage and sequestration, which is an ecosystem service provided by forests and other ecosystems. Maintaining healthy ecosystems is also an important measure for adaptation to climate change. This offers obvious opportunities for integrating concerns for biodiversity into existing or new sources of finance for climate change mitigation and adaptation (such as REDD+ schemes) and thereby for maximising ecosystem services.

Source: UNEP/CBD/WS-IFM/1/3, Issue document for a CBD workshop on Innovative Financial Mechanisms, Bonn, 27-29 January 2010.

b) Support from the Global Environmental Facility

The Global Environmental Facility (GEF) was established as the financial mechanism for resolving the issue of the additional cost of incorporating global environmental benefits into national sustainable development policies. The GEF serves as the financial mechanism of both the CBD and the UNFCCC, and also has land degradation and thereby desertification as a focal area. The GEF is the only international funding mechanism to respond directly to the CBD while simultaneously being in a position to promote synergies among the three Rio conventions and its other focal areas.

By 2008, the GEF had provided approximately US$2.3 billion in grants for biodiversity and had helped raise a further US$5.36 billion in co-financing in support of 790 projects in more than 155 countries. Biodiversity is the biggest of the GEF focal areas.[177]

Through its funds for enabling activities, the GEF has supported a large majority of developing countries and countries with economies in transition to prepare their NBSAPs.

c) Support through Official Development Assistance

According to data from the OECD Development Assistance Committee (DAC), about US$12.5 billion has been provided from developed countries and the European Commission for biodiversity-related assistance for the period 1998 to 2007. A number of donor countries have set cooperation programmes for biodiversity.[178]

Although biodiversity assistance has been steadily increasing over the years, it only accounts between 2 and 3 per cent of annual total official development assistance.

Bilateral development cooperation agencies are increasingly emphasising programme-based over project-based finance through the provision of general budget support, linked to the implementation of agreed national strategies such as poverty reduction strategies and strategies for implementation of the Millennium Development Goals. This implies fewer opportunities for finance to be earmarked for biodiversity. Biodiversity-related initiatives will only be funded if they are identified as priorities by the recipient countries themselves. This clearly underlines the importance of mainstreaming biodiversity into broader national planning processes and getting support for biodiversity at the highest political level. This appears to be a challenge in many recipient countries since the ministries responsible for biodiversity and CBD implementation often do not have much influence over the use of development assistance funds.

Debt-for-nature swaps are financial transactions in which a portion of a developing nation's foreign debt is forgiven in exchange for local investments in conservation measures. A commercial debt-for-nature swap involves a non-governmental organisation that purchases debt titles from commercial banks on the secondary market. The NGO transfers the debt title to the debtor country, and in exchange the country agrees to either enact certain environmental policies or endow a government bond in the name of a

177 Global Environment Facility 2008, *Financing the Stewardship of Global Biodiversity*.
178 OECD DAC, 2009.

conservation organisation, with the aim of funding conservation programs. Bilateral debt-for-nature swaps take place between two governments when one country forgives a portion of the public bilateral debt of a debtor nation in exchange for environmental commitments from that country.[179] (For an example of a recent debt-for-nature swap, see Box 47.)

Box 47
Debt-for-nature swaps in Gabon

Debt-for-nature swaps are generally understood as agreements in which a part of a country's foreign debt is forgiven in exchange for conservation measures.

The central Africa country of Gabon was heavily indebted to the Paris Club group of creditor countries. Much of the government's revenues were going into servicing these debts, leaving few funds for environmental conservation and social services. Meanwhile, Gabon's tropical forests, covering approximately 200,000 square kilometres and home to some 8,000 plant species, of which 20 per cent are endemic, were being logged at an alarming rate.

To address this situation, the government of Gabon sought to convert part of its foreign debt into a source of financing for the conservation and sustainable exploitation of its forests. In 2007, it negotiated a debt-for-nature swap with the government of France in the order of €50 million, or 5 per cent of Gabon's foreign debt. The funds made available through this debt conversion will be invested in biodiversity conservation, research, strengthening of environmental governance, national park management, ecotourism and payment for environmental services. In addition to these activities, the government intends to strengthen its forestry sector, which it sees as a possible alternative to oil revenues and which, if managed sustainably, can enable the reconciliation of economic and environmental functions.

Source: CBD Secretariat and presentation at the Regional and Sub-Regional Capacity-Building Workshops on Implementing NBSAPs and Mainstreaming Biodiversity for Central Africa, Limbé, Cameroon, from 22 to 25 September 2008: Intégration de la Biodiversité dans la Planification Budgétaire: étude de cas, by M. Mapangou, www.cbd.int/doc/nbsap/nbsapcbw-cafr-01/nbsapcbw-cafr-01-ga-02-fr.pdf

2.28 CBD decisions, programmes of work and guidelines as references for NBSAPs

The Conference of the Parties (COP) is the governing body of the Convention with the responsibility of keeping implementation of the Convention under review. Through its decisions it provides guidance to Parties on how to fulfil the objectives of the Convention.

To date, the COP has held nine ordinary meetings and has taken a total of 252 decisions on thematic and cross-cutting work programmes, guidelines, guiding principles and cooperation with other instruments and processes. Although such decisions are not legally binding, Parties generally consider them to have some legal weight and a political effect.

Even so, many of the COP decisions, and in particular the different thematic programmes of work, are very rarely used as points of reference in the NBSAPs or even referred to at all. Many of the thematic and cross-cutting programmes of work and other decisions were adopted after the majority of NBSAPs were prepared, but even so it is striking how little they seem to have influenced national biodiversity planning. Notable exceptions include the NBSAPs of Turkey and Malawi.

Clearly there is a time lag between the adoption of decisions and their incorporation into national biodiversity planning and policies. One reason for this probably has to do with the length and number

179 Deacon, T. & Murphy, P. 1997 'The structure of an environmental transaction: The debt-for-nature swap', *Land Economics*, 73(1), 1-24.

of each set of new COP decisions adopted every two years which, when taken together with previous decisions, often constitute confusing and occasionally contradictory guidance.

Box 48
The CBD Programme of Work on Forest Biological Diversity – little apparent influence on what happens on the ground?

Our assessment of NBSAPs found that very few NBSAPs use CBD programmes of work and other COP decisions as reference points, or even refer to them, indicating either that awareness of these work programmes is low or that their relevance is questioned. This assumption is confirmed by independent monitoring from 2008 of the implementation of the CBD Expanded Programme of Work by the Global Forest Coalition on the basis of research in twenty-two countries. The main conclusion was that the level of knowledge of the work programme is very low in many countries, and that the programme of work does not appear to be an important global initiative for integration into domestic policy or given high priority. The summary report states:

> Even those countries that have a well developed national forest strategy and appropriate institutional and legal arrangements, such as Canada, Cameroon, Germany and the Russian Federation, seem to fall at the implementation hurdle.
>
> Other countries, such as Bulgaria and Georgia, seem to have no official implementation process of any kind.
>
> Yet others, such as Aotearoa/New Zealand and Australia for example, seem to regard their existing or other biodiversity-related policies as sufficient. In this context, some other countries that take the same approach, such as Brazil and Panama, fail to make the links between what they are actually doing and the CBD/POW objectives, making it difficult to assess whether or not they are in fact meetings those objectives.
>
> There was a startling lack of information about the CBD/POW in many countries, and evidence of capacity-building was meagre.

Source: Lovera, M (ed.), Forest and the Biodiversity Convention: Independent Monitoring of the Implementation of the Expanded Programme of Work. Global Forest Coalition, Amsterdam, 2008.

Part 3 – Conclusions and recommendations

3.1 Concluding remarks

The COP has deemed NBSAPs to be the tool for the cross-cutting and complex exercise of biodiversity policy planning, and 88 per cent of CBD Parties have now have been through this exercise.

Achievements

The large number of NBSAPs is in itself an achievement and an indispensable step on the road to implementation. NBSAPs have generated important results in many countries, including a better understanding of biodiversity, its value and what is required to address threats to it. Legal gaps in implementation have been filled, the coverage of protected areas has been considerably extended, and in many countries better protection of endangered species has been introduced.

Recently, the fourth national reports and the regional and sub-regional capacity workshops on implementing NBSAPs and mainstreaming biodiversity provided new information on a plethora of actions for biodiversity throughout the world. This includes action related to mainstreaming biodiversity into sectoral and cross-sectoral activities at both national and sub-national levels and is an indication of a positive trend in CBD implementation, though one not always tied to NBSAPs.

Shortcomings

In spite of these achievements and the positive trend, the general conclusion in 2010 is similar to those of earlier NBSAP reviews: NBSAPs have not seriously affected the main drivers of biodiversity loss. Political attention to biodiversity and its importance for sustainable development is growing, and biodiversity-related concerns are increasingly being integrated into national development policies, but this is rarely due to NBSAPs.

Many NBSAPs quickly lost their momentum and, since most have not been revised and are more than eight years old, they have also been unable to serve as implementation mechanisms for some of the most important and far-reaching CBD decisions taken since they were developed. This includes key areas such as the Strategic Plan, with its global 2010 target and its request for countries to adopt national goals and targets, as well as several thematic and cross-cutting work programmes adopted at COP-6 and subsequent meetings.

For many of the first generation of NBSAPs in particular, the shortcomings of NBSAPs in influencing mainstream development are largely attributable to weaknesses in the process of their development. Many processes were often more technical than political, and did not manage to sufficiently influence policy beyond the remit of the national agency directly responsible for biodiversity. The need for mainstreaming across sectors is generally recognised in NBSAPs but often in general and aspirational terms, with little direction on how this mainstreaming is going to take place. Coordination structures may formally exist but often with limited political and cross-sectoral ownership as well as limited ownership at the sub-national level. Many NBSAPs are overly ambitious and prescriptive while at the same time lacking a strategy for financing implementation. They often appear to have been addressed to external funding agencies rather than national decision-makers.

However, the development process is not the only factor determining whether implementation will be successful. A number of countries have conducted excellent processes with extensive stakeholder

involvement and well-structured NBSAPs, but are still faced with implementation constraints mostly in the form of lack of institutional, technical and financial capacity.

Learning from experience

On a positive note, many countries have learned from the shortcomings of first-generation NBSAPs. Although less than a third of NBSAPs have been revised, second-generation NBSAPs are generally very different from first-generation ones in terms of more inclusive stakeholder involvement in their preparation, approval at a higher political level, focus on mainstreaming, alignment with other relevant plans and policies, inclusion of monitoring tools, and inclusion of strategies for communication and financing. It is however striking that, in spite of recent strong calls to set time-bound and measurable targets for biodiversity conservation and the many COP decisions to this effect, very few new NBSAPs include such targets. While some of the new NBSAPs are starting to demonstrate results, it is still too early to assess the impact of second-generation NBSAPs on the status of biodiversity and the main drivers of biodiversity loss.

There seems to be general consensus that the CBD should focus more on implementation than has been the case until now. Substantial resources have been put into policy development in the form of the negotiation, adoption and revision of decisions, work programmes and guidelines. Increasingly the view is being expressed that the Convention now needs to move beyond the stage of refining its guidance and producing documents to focusing on delivering tangible results on the ground. Indeed, when countries were asked in the fourth national reports to present implementation outcomes, they tended to report the development of new plans, programmes and strategies rather than concrete action to meet their commitments under the Convention.

However, the action needed to halt the loss of biodiversity will have to seriously address the root causes of biodiversity, and addressing root causes and not just treating symptoms is a complex cross-sectoral issue that requires a political and economic planning process with compromises and trade-offs. This planning process is envisaged in Article 6 of the CBD, but did not take place or took place with only limited success in most countries in the first phase of the life of the CBD. A new strategic plan for the post-2010 period, with new targets, should provide a framework for a new phase of national biodiversity planning that can address the issues that have not been properly addressed so far. A number of recently prepared NBSAPs have already begun to pave the way. This is not a question of delivering yet another document, but of establishing an ongoing, cyclical, participatory process with regular reviews.

Do NBSAPs provide the right framework?

The question is thus whether an NBSAP is the right framework for national biodiversity planning. The fact that better mainstreaming of biodiversity concerns across sectors is the key measure of success, and that such progress towards mainstreaming is largely missing in most countries, points to the option of using or adapting other, broader and politically more visible frameworks to achieve the objectives of the CBD. This is a possibility that the CBD allows.

Yet there is no clear answer as to which approach is best. It depends fully on national circumstances. In most countries, stand-alone strategies and action plans for biodiversity may probably still serve biodiversity best because of their important role in raising the generally low levels of awareness of biodiversity and its importance for sustainable development. Integration of biodiversity concerns into broader policies without this awareness, and in competition with many other concerns, could lead to a dangerous disregard of biodiversity. Moreover, NBSAPs have been efficient frameworks for more conventional nature protection tools, such as the designation and management of protected areas, and these will continue to be important.

As already demonstrated by some countries, an approach whereby biodiversity is directly integrated into sectoral and cross-sectoral plans and policies could work well where there is already high awareness of and political attention to biodiversity.

In any case, the function is more important than the form. The nub of the matter is to fully align the biodiversity planning process with the mainstream national planning process.

As well as aligning NBSAPs and broad national development plans, there is also in most countries a clear need to create frameworks for the integrated and coherent implementation of all three Rio conventions in order to address in a coordinated and mutually consistent way the issues of climate change, desertification and biodiversity loss. The three issues and the ways to deal with them are inextricably linked. The fact that each has its own convention highlights how important they are considered to be, but at the same time this has unfortunately led to widespread fragmentation in national implementation at the expense of mutually supportive and cost-effective action.

3.2 – Recommendations

There are good reasons why the only unqualified binding commitments on Parties to the CBD are the obligation to develop an NBSAP and the obligation to report on measures taken to implement the provisions of the Convention and the effectiveness of these. National biodiversity planning and reporting to other Parties on the effectiveness of this are the two central mechanisms for implementing the Convention. Given the multiplicity of links between biodiversity and the social, economic and ethical issues a government needs to address, these are really the only feasible global commitments possible under the current system of state-based international governance. Ensuring that these two mechanisms are useful, efficient and effective is central to ensuring that the CBD is useful, that it makes a difference and that biodiversity is maintained.

This report, based on our assessment of NBSAPs, has sought to highlight their successes and failures. In 2010, COP-10 can and should mark the start of a new era in the life of the Convention. If the new strategic plan and the new targets for reducing biodiversity loss to be adopted in Nagoya are to be implemented and action is to be mobilised on the ground, a new generation of NBSAPs will be needed. Clearly the lessons of the last twenty years of biodiversity management must play an important role in shaping the approach for the next twenty years.

Despite the various challenges and opportunities each Party faces, based on the experience so far, there are some general lessons and issues that every Party will need to consider regarding its NBSAP. The following recommendations are offered as relevant to all Parties and all NBSAPs.

1. A new generation of NBSAPs should be prepared in response to the new Strategic Plan for Biodiversity.

The Strategic Plan for Biodiversity for 2011-2020 to be adopted by COP-10 marks a new beginning for the CBD. Progress made under the first Strategic Plan was insufficient to meet the 2010 biodiversity target and the rate of loss of biodiversity at global and national levels remains high, with the consequent risks for human well-being and security. A new generation of NBSAPs should be prepared as national policy tools for implementation of the CBD and the other biodiversity-related conventions. Many existing NBSAPs are outdated, have lost momentum or are insufficiently strategic or comprehensive. Countries should revise and update existing NBSAPs. Those that have no NBSAP in place should develop and adopt one as a matter of urgency. A new generation of NBSAPs should be adopted and under implementation at the earliest possible date, but no later than 2014.

2. NBSAPs should be comprehensive and designed to cover all the provisions of the CBD, in particular its three objectives, and the strategic goals and targets of the Strategic Plan; they should include time-bound and measurable targets, and measures for monitoring and implementation.

Existing NBSAPs vary considerably in design and content, which makes it difficult to measure and compare progress in their implementation. To the extent possible, whilst acknowledging that each NBSAP will represent the outcome of nationally-specific circumstances and processes, the new generation of NBSAPs should include common elements that clearly correspond to the strategic goals and targets of the Strategic Plan, in particular through inclusion of time-bound and measurable national targets and of mechanisms for monitoring and implementation. They should cover all the components identified in the guidance provided by the COP-9 in its decision IX/8. This guidance is still valid, but has had limited impact as nearly all existing NBSAPs predate 2008. NBSAPs should include strategies and action plans for undertaking the CBD programmes of work relevant to the country.

3. NBSAPs should be strategic and prioritised

If a country is unable to develop or implement a fully comprehensive NBSAP through a lack of resources, capacity or scientific knowledge, it should focus in the first instance on those goals that are achievable. To the extent possible, these should be priority goals for reducing biodiversity loss. Countries that have developed a fully comprehensive NBSAP will nonetheless need to prioritise in terms of the allocation of financial and human resources and investment in consensus-building. First order priorities should be those where successful outcomes will result in the greatest biodiversity gains or where business-as-usual constitutes the greatest risk to biodiversity. Mechanisms to review and update the NBSAP and its priorities in the light of the experience of implementation or improved scientific knowledge are essential.

4. NBSAPs should address both the direct and indirect drivers of biodiversity loss and focus on stemming the loss of biodiversity as an absolutely vital requirement for the maintenance of ecosystem services in a rapidly-changing world.

While not neglecting direct nature conservation measures such as protected areas, new NBSAPs should put greater emphasis on tackling the drivers of biodiversity loss and thereby promote the mainstreaming of biodiversity across sectors and the acknowledgement of the role of biodiversity in guaranteeing ecosystem services. NBSAPs should constitute the means for decoupling the indirect drivers of biodiversity loss (such as consumption and production patterns) from the direct drivers (such as habitat loss, overexploitation and pollution).

5. NBSAPs are not ends in themselves, but dynamic and adaptive instruments for achieving the three objectives of the CBD.

An NBSAP is a framework for national biodiversity planning and action designed to achieve the objectives of the CBD. It should not be thought of as a one-off process leading to the adoption of a document, but rather as a comprehensive, participatory and cyclical mechanism that involves all relevant stakeholders and allows for the NBSAP to be reviewed and updated in accordance with evolving conditions.

6. NBSAPs should be developed through a wide but targeted participatory process which should allow enough time to ensure full transparency and widespread ownership.

Most existing NBSAPs have been prepared through stakeholder involvement, but some key stakeholders such as women, the private sector, indigenous communities and sub-national authorities have not been effectively engaged. Due to donor requirements many NBSAP preparation processes were rushed, which may underlie the lack of broad ownership and the weak implementation of many NBSAPs. It needs to be accepted that a new round of national biodiversity planning will take time, not least because of the need

in many cases to identify and involve sub-national stakeholders in the national process. However, whilst it is essential that the development and adoption of NBSAPs be done properly, it is equally essential that the urgency of their development and adoption be recognised and that the process be completed in as timely a way as national circumstances permit.

7. A national biodiversity planning framework can be adopted through means other than an NBSAP if this is better suited to national circumstances.

The biodiversity agenda has a very wide scope and, with the growing understanding of the links between biodiversity and ecosystem services, the scope has become even wider and largely overlaps with the general 'environment' agenda. If this is better suited to national circumstances, countries are not obliged to prepare a stand-alone NBSAP, but to adopt a framework for achieving national implementation of the Strategic Plan through the inclusion of biodiversity concerns into wider strategies and plans, such as national environmental plans or joint plans for the Rio conventions. Form should follow function, and the important thing is to get the process and content right. It is important, however, that such an approach does not lead to a delay in defining biodiversity policies or to a downgrading or dilution of the importance or effectiveness of biodiversity policies and actions.

8. NBSAPs should be approved at the highest political level and implemented by law.

The 'ownership' of the NBSAP needs to occur across government departments and throughout the national society. This implies that it needs to be adopted at the highest political level. In recognition of its importance and its cross-cutting political nature, and of the fact that its implementation will often need to be supported by adoption of new legislation, the NBSAP itself should be enacted into law. In many countries this will enable monitoring of the effectiveness of implementation by parliamentary or other oversight mechanisms.

9. High-level inter-ministerial and stakeholder steering committees should be established for the preparation of the NBSAP and as elements of an overall national implementation mechanism.

The cross-sectoral nature of biodiversity planning requires strong coordination structures. On paper, most existing NBSAPs provide for coordination structures across ministries and interest groups, but often these have had limited or no effect on coordination and implementation. A high-level inter-ministerial body and a stakeholder committee, or a combination of the two, should be established to ensure comprehensive coverage and political buy-in for the development of the NBSAP and subsequently to oversee implementation. Whether these are deliberative or advisory bodies is for the country to decide; the important thing is to ensure the broadest level of participation and buy-in, create permanent forums for considering new scientific information and policy options, and ensure effective monitoring and oversight. Where there are sub-national BSAPs, similar mechanisms should also be established at the appropriate level.

10. Biodiversity policies, goals and targets should be incorporated into wider strategies and action plans to ensure that biodiversity receives high attention and that the Strategic Plan framework is applied across all relevant economic sectors.

Effective mainstreaming will not occur just through the adoption of broad policy objectives in the NBSAP. The NBSAP process should directly provide for incorporation of biodiversity concerns into sectoral and cross-sectoral plans and programmes including overall national environment, poverty alleviation and MDG plans. Strategic Environmental Assessment (SEA) is a key tool for this.

11. NBSAPs should provide for sub-national BSAPs.

Decisions and actions that affect biodiversity are often taken at the local level, and the overall NBSAP will only be implemented if corresponding strategies and action plans are also developed and implemented at the relevant sub-national level(s). Decentralisation of biodiversity planning to sub-national levels has been largely neglected in existing NBSAPs and this is one of the main causes of poor NBSAP implementation.

12. NBSAPs should recognise the need to integrate the economics of biodiversity.

Biodiversity should be treated as a natural capital asset and the economic costs of the loss of biodiversity acknowledged. The NBSAP should be an instrument for ensuring that the true value of biodiversity is incorporated into decision-making, indicators, accounting systems and prices. While exercises to estimate the economic value of the ecosystem services guaranteed by biodiversity can be an important pedagogical tool for demonstrating to planning and production sectors the importance of biodiversity, the NBSAP should also make clear that such valuation exercises are ultimately academic, as the ecosystem services in question are essential to human well-being and survival, irreplaceable and therefore priceless.

13. NBSAPs should include clear provisions for communication, education and public awareness (CEPA).

Action to reduce biodiversity loss will only take place if decision-makers and the public understand its importance. CEPA features prominently in all NBSAPs, but rarely in the form of concrete provisions on how to raise awareness among the various target groups. NBSAPs rarely include a strategy to communicate the NBSAP itself. Education and communication experts have an important contribution to make to the development of NBSAPs that contain effective provisions for communication, education and public awareness. The 2007 CBD/IUCN CEPA toolkit provides useful guidance.

14. NBSAPs should address the ecological footprint of the country on other countries.

This applies, in particular but not solely, to the ecological footprint of developed countries and should include examination of whether and how trade policies and national consumption and production patterns contribute to biodiversity loss in other countries and how such impacts can be minimised or eliminated.

15. NBSAPs should be integrated with biodiversity, climate change and land degradation policies, including REDD+ policies, and thereby promote coherence in the implementation of all three Rio conventions.

The issues each of the three Rio conventions addresses are inextricably linked. Biodiversity is increasingly threatened by climate change, not least through desertification. Climate change increases the risk of greater levels of desertification. The maintenance of healthy ecosystems is simultaneously crucial for halting biodiversity loss, for climate change mitigation and adaptation, and for combating desertification. Nevertheless, very few countries align their biodiversity, climate change and land degradation policies. There is unexploited potential for win-win-win solutions, including through the design of REDD+ policies. Rather than developing strategies and action plans for each of the three conventions, a country could develop a unified Rio conventions strategy and action plan if this is best suited to national circumstances.

16. NBSAPs should be an instrument for implementation of all the biodiversity-related conventions and thereby promote coherence in national implementation of these.

The creation of a biodiversity cluster through enhanced cooperation and coordination among the global biodiversity-related conventions is currently being discussed as part of the wider review of international environmental governance arrangements. Whatever the future outcome of these discussions, countries

should promote coordinated and coherent action at the national level to meet their commitments under the various conventions. NBSAPs should provide the overall framework for national biodiversity planning and should be an instrument for achieving the objectives of all the global biodiversity-related conventions to which the country is a party. Countries may find useful the UNEP/IUCN TEMATEA tool which structures the various commitments and obligations of the biodiversity-related agreements into a logical issue-based framework.

17. Gender issues should be mainstreamed into NBSAPs.

Most NBSAPs lack any consideration of gender issues despite the role of women as the primary land and resource managers in many parts of the world. Gender considerations need to be given much greater attention in the new generation of NBSAPs, in line with the 2010 CBD Guidelines for Mainstreaming Gender into NBSAPs.

18. NBSAPs should highlight the need for community-based management and conservation and for preserving traditional knowledge.

Existing NBSAPs generally recognise that community-based management and traditional knowledge is essential for the conservation and sustainable use of biodiversity, and many examples from the ground attest to this. However, because the links between the national and local levels have often been missing in NBSAP preparation and implementation, the benefits of community management of biodiversity have not been demonstrated. As a consequence, inappropriate policies determined at the national level are often ineffective or ignored at the local level. A wider use of sub-national BSAPs would help address this issue.

19. NBSAPs should provide a platform for national implementation of the CBD provisions on access to genetic resources and benefit sharing (ABS), especially if the International Regime is adopted at COP-10.

The third objective of the CBD has been largely neglected in existing NBSAPs and a legal vacuum exists in many countries as a large number – of both provider and user countries – have not adopted the basic legislation to implement the provisions. Implementation of the ABS provisions should form part of the NBSAP and the provisions should be implemented as a matter of urgency, regardless of when negotiations on the international ABS regime are finalised.

20. NBSAPs should be realistic, prioritised and clearly distinguish between actions that can be achieved within existing budgets and capacity and those which will require external funding and/or capacity development.

Many early NBSAPs contained long, un-prioritised and over-ambitious lists of project proposals that depended entirely on external funding that was never forthcoming. Clearly, greater financial flows are required in the case of many countries to enable them to implement their NBSAPs. However, in biodiversity planning, as in other areas, locally-determined and implemented activities are often more cost-effective and lead to better outcomes than nationally-determined and managed projects. This is another reason for the NBSAP process to include all relevant stakeholders in its development and implementation. By recognising local knowledge and expertise and by being open to new ways of doing, countries may often be better placed than they realise to reduce dependence on external funding and promote self-reliance. This is, however, not to deny the fact that successful implementation of NBSAPs and meeting the goals and targets of the Strategic Plan will depend on agreement on an ambitious resource mobilisation strategy for biodiversity and its early and effective implementation.

21. The operations of the CBD should be re-oriented from a focus on negotiations to a greater emphasis on supporting and facilitating implementation.

The greater part of the available time at COP and subsidiary body meetings has been devoted to lengthy negotiations on decisions and programmes of work and their subsequent revision. Far less time and attention has been paid to providing for and reviewing their actual implementation. This assessment has revealed that the programmes of work and other COP guidance have had limited impact on national biodiversity policies. The GBO-3, fourth national reports and this assessment all identify a large implementation deficit. The time has arrived for the COP to now devote the greater part of its attention to facilitating and reviewing national implementation, in line with Article 23 of the Convention.

22. There needs to be increased support for capacity development and this should be targeted to strengthening national implementation capacities, especially with regard to mainstreaming biodiversity into broader plans and policies and to sub-national implementation.

Lack of financial, technical and human resources and capacities is the main obstacle to NBSAP implementation, and increased support to developing countries to overcome these constraints is clearly needed. A lot of the support has so far gone into analyses, plans, policies and other types of enabling activities. Whilst plans and policies are clearly essential, there is a serious lack of action on the ground, and capacity-building should therefore be targeted to developing capacities to increase understanding of biodiversity and to plan, implement, monitor and enforce policies and programmes. Capacity development is needed in particular to ensure that biodiversity is properly addressed in the implementation of sectoral and cross-sectoral plans and policies, and in taking action for biodiversity at the sub-national level.

23. An NBSAP support mechanism should be established to assist countries to develop and implement their NBSAPs and to monitor and analyse the experience of implementation.

At previous meetings the COP has invited a number of international organisations and other partner organisations with relevant expertise to contribute to activities in support of implementation. However, support provided to countries for biodiversity planning has often been fragmented and uncoordinated. To maximise the opportunities for meeting the goals and targets of the new Strategic Plan for Biodiversity, greater efforts should be made to promoting coordination and coherence. There need to be arrangements in place for ensuring that available capacities are effectively employed to the greatest effect, that an overall picture of ongoing support initiatives is available, that gaps and unmet needs are identified, and that lessons learned are systematised and disseminated. Given its existing expertise and capacity, the CBD Secretariat is the organisation best placed to facilitate such a network. The two-year action plan to support national implementation of the CBD, recently agreed by the Secretariat and UNDP, is indicative of how such a support mechanism could operate.

24. Countries should be able to call upon the support mechanism for advice.

Many countries were formerly cautious about discussing constraints to national implementation. However, this earlier reluctance to reveal problems and seek advice appears to be changing. Many countries have provided frank self-evaluations of their NBSAPs in the fourth national reports and at regional and sub-regional NBSAP workshops. Countries should be able, on a voluntary basis, to ask the Secretariat to identify sources of advice and assistance. Such sources could include international and regional organisations, biodiversity planners from other countries, scientific and research organisations, non-governmental organisations or any other source of relevant expertise. Any advice or assistance given would be by mutual agreement.

25. Regional cooperation for the preparation and implementation of NBSAPs should be facilitated and enhanced.

The regional and sub-regional NBSAP workshops organised between 2008 and 2010 were important for reinforcing the importance of NBSAPs and the need for their revision and updating. They brought national biodiversity planners together, were important learning experiences and revealed a high potential for enhanced regional cooperation. Greater opportunities for regional cooperation are seen as a priority by most national biodiversity planners and such cooperation should be supported. The quality of existing NBSAPs varies considerably even within regions, and countries will benefit from the exchange of experiences and best practices within their region, as well as the possibilities this creates to better coordinate trans-boundary actions.

26. A biodiversity planning knowledge network should be established.

Most countries report insufficient human resource capacity for implementation of the CBD and the NBSAP. They have insufficient staff to effectively meet the full range of responsibilities and these in turn often have only limited access to the information they need and insufficient resources to analyse this information. However, as this assessment has confirmed, there is in fact a wealth of information, expertise and experience residing in countries and in partner organisations. The challenge is to marshal this knowledge and experience to support implementation of NBSAPs. This will involve enhancing the CBD clearing-house mechanism and supporting regional and national clearing-house mechanisms, and enabling these to facilitate scientific and technical cooperation to promote access to and transfer of technology, and the exchange of information as envisaged by the Convention. Such a biodiversity planning knowledge network would enable all countries, in particular the developing countries, to access and use high quality information that would better enable them to develop and implement their own NBSAPs. The collection, systematisation and dissemination of such information would form part of the overall clearing-house mechanism provided for by the CBD and would build upon existing good practice for knowledge management that already exists in a number of countries and organisations. It would focus on information to support national implementation and complement, not compete with, scientific information facilities such as GBIF or the proposed intergovernmental science-policy platform on biodiversity and ecosystem services.

27. Practical, user-friendly guidelines for integrated biodiversity planning should be developed.

A new generation of streamlined NBSAPs focussing mainly on mainstreaming of biodiversity concerns across sectors requires new consolidated, practical and user-friendly guidance. Decision IX/8 provides guidance primarily on which components should be included in the NBSAP rather than on the practical cross-cutting planning process. There is a wealth of guidance from both within and outside the CBD context which explicitly or implicitly addresses integrated biodiversity and ecosystem services planning. This includes guidance on economic valuation and incentives, operational guidance on the ecosystem approach, the Addis Ababa Principles on sustainable use, guiding principles for Environmental Impact Assessment and Strategic Environmental Assessment and, outside the CBD context, the conceptual framework of the Millennium Ecosystem Assessment. In most cases, however, these guidelines and principles need to be translated into advice and recommendations for their practical use, based on existing experiences of application. Guidelines or toolkits reflecting best practices should be designed and widely disseminated. This should be a priority activity for the support mechanism and its knowledge management mechanism.

28. The support mechanism should assist eligible countries upon request with biodiversity-enabling activities.

Objective Five of the GEF-5 Biodiversity Strategy is to "integrate CBD obligations into national planning processes through enabling activities". The enabling activity funding available in the period 2011-2014 can assist eligible countries to revise and update their NBSAPs as recommended by COP-10. GEF Implementing Agencies and other partner organisations should encourage countries to apply for enabling activity support and be ready to assist countries, upon request, with designing and implementing national planning processes to improve national capacity to implement the CBD.

Part 4 – Case studies

4.1 Introduction

The intention of the authors from the start was to include a representative set of country case studies as part of the overall assessment. We felt that such studies, involving interviews on the ground with those involved in developing and implementing the NBSAP, would provide an essential contribution to the overall study by looking in greater depth at the national experience and comparing information gained at first hand with the conclusions emerging from the desk study of NBSAPs.

The nine case studies that follow were undertaken between December 2009 and June 2010, at a phase when the bulk of the desk study had been completed and a set of conclusions was taking shape.

With 193 Parties to the CBD, it was always going to be a challenge putting together a representative but manageable sample of case studies. We used a number of criteria – geographical distribution, language, development status, size, and (for want of a more scientific criterion) 'successful' and 'less successful' NBSAP status. Ideally we would have liked to be able to present a larger sample, but the realities of available time and resources, plus those of logistics and stamina, played their part. Nevertheless, the authors feel confident that the nine case studies that follow do indeed constitute a representative sample of the NBSAP experience, bring out useful and interesting lessons and, to the extent that a sample of 5 per cent of the total number of Parties can do so, serve to reinforce the overall conclusions arising from the desk study.

Two of the nine case studies are of developed country NBSAPs. As our report makes clear, there is no predetermined differentiation between developed and developing country NBSAPs. All countries are learning by doing and the authors felt that including developed countries in the sample was both logical and, as it turned out, highly illustrative of a series of issues common to all countries. However, in agreement with the project donors whose resources were earmarked for case studies of developing country NBSAPs, UNU-IAS undertook these two with other resources.

4.2 Australia

Introduction

Home to almost 10 per cent of the world's known species, Australia is probably the most megadiverse of developed countries.[180] While conservation efforts within Australia have increased in recent years, more than 30 per cent of ecosystems of a large proportion of Australia's bioregions are described as 'threatened', and Australia has the highest rate of mammal extinction in the world. More than half of the ecosystems in developed coastal areas and the Murray-Darling Basin (incorporating Australia's three longest rivers) are under 'severe pressure', and altered water flow regimes have resulted in the loss of 90 per cent of floodplain wetlands in the Murray-Darling Basin.[181]

Australia is a federation of six self-governing states and two self-governing mainland territories. It has seven external territories, including the Australian Antarctic Territory. Australia's geographical size, colonial history of resource exploitation, wide distribution of population, and constitutional and legislative devolution of federal powers to state government, pose challenges to the institution of an effective, integrated national biodiversity action plan. Australia's biodiversity plays an important part in it's indigenous cultures, and constitutes a significant aspect of the country's economy.

The Australian government is implementing its obligations under the Convention on Biological Diversity (CBD) through the 1996 National Strategy for the Conservation of Australia's Biological Diversity (NSCABD). The NSCABD has recently been reviewed and a revised strategy proposed: Australia's Conservation Strategy 2010-2020 (Draft Strategy).[182] The Australian government aims to adopt the Draft Strategy in late 2010.

NBSAP preparation process

Engagement of stakeholders

The NSCABD was prepared by the Australian and New Zealand Environment and Conservation Council (ANZECC) in consultation with the Agriculture and Resources Management Council of Australia and New Zealand, the Australian Forestry Council, the Australian and New Zealand Fisheries and Aquaculture Council, the Australian and New Zealand Minerals and Energy Council, and the Industry, Technology and Regional Development Council. Business, industry and conservation groups were also invited to participate, and the provisions of the CBD and the draft national strategy prepared by the Biological Diversity Advisory Committee were taken into account.

Level of approval within government

The NSCABD was prepared by the ANZECC in 1996, and was endorsed by the Council of Australian Governments.

Revision

Australia has not revised its NSCABD since its inception in 1996, but it has been reviewed at five-yearly intervals. The ANZECC carried out the first review in 2001 and found that, while some advances had been made, several objectives had not been met. These gaps were formalised by the ANZECC and set out as ten priority outcomes in a new plan, National Objectives and Targets for Biodiversity Conservation 2001–2005 (2001–2005 National Targets). This plan was endorsed by most governments, including the

180 Chapman, A.D. 2005, *Numbers of Living Species in Australia and the World*, Department of the Environment and Heritage, Canberra, Australia.
181 Inland Rivers Network 2007, *Wetlands in Crisis,* www.irnnsw.org.au/pdf/WetlandsInCrisis_ReportCard.pdf
182 www.environment.gov.au/biodiversity/strategy/draft-strategy.html

Australian government, the Australian Capital Territory government and the governments of Victoria, New South Wales (NSW), South Australia and Western Australia.

In 2006, the second review of the NSCABD and 2001-2005 National Targets, carried out by the National Biodiversity Strategy Review Task Group (NBS Task Group), reported to the National Resource Management Ministerial Council that there was a need for increased focus on marine issues, identification of information gaps, and revision of the NSCABD using market-based or spatially explicit approaches to biodiversity conservation. This advice coincided with the 2006 *State of the Environment Report*, produced by the Australian government, which found biodiversity to be in serious decline. Similarly, a second environmental performance review of Australia by the Organisation for Economic Co-operation and Development (OECD) reported in 2008 that this decline is continuing and that some major pressures on biodiversity had not been relieved since its review in 1998. The Australian government's *Assessment of Australia's Territorial Biodiversity* (published in 2009) reported that these pressures on biodiversity are being further compounded by climate change. Australia's Fourth National Report to the CBD was submitted in 2009.

The NSCABD has recently been reviewed and, in response, the Draft Strategy proposed. This lists key events and processes that informed its development. Landscape scale connectivity and cross-sectoral integration are new areas of focus, and the Draft Strategy is organised around six 'priorities for change':

1. Building ecosystem resilience
2. Mainstreaming biodiversity
3. Knowledge for all
4. Getting results
5. Involving indigenous peoples
6. Measuring success.

The Draft Strategy declares that it will meet these priorities by protecting habitats and reducing existing pressures; facilitating the adaptation of species to climate change; mainstreaming biodiversity issues in the government, business, scientific and education sectors; implementing an ongoing national campaign; establishing baseline datasets and long-term monitoring sites; building partnerships with the community and the private sector; recognising traditional indigenous knowledge and expertise; and improving the ability of governments to measure success.

National coordination structures for overseeing implementation

Implementation of the current and proposed Australian Biodiversity Strategy requires collaboration on the federal, state and local levels. It also requires coordination between governmental and non-governmental stakeholders, as well as with funding bodies.

While environmental powers are not the sole responsibility of any single level of government, the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) establishes a national scheme of environment and heritage protection, and biodiversity conservation. The Biological Diversity Advisory Committee, a ministerial advisory committee replacing the (pre-2000) Biological Diversity Advisory Council, was established under the EPBC Act; this committee has not been in operation since

February 2007.[183] Caring for our Country[184] is an ongoing Australian government initiative that provides $2.25 billion in grants from 2008 to 2013 to implement some aspects of the NSCABD. It focuses on six national priority areas:

1. Building Australia's national reserve system
2. Biodiversity and natural icons
3. Coastal environments and critical aquatic habitats
4. Sustainable farm practices
5. Natural resource management in remote and northern Australia
6. Community skills, knowledge and management.

Under this initiative, for example, the Community Coastcare Grants Program provides small grants for protecting and rehabilitating coastal environments and critical aquatic habitats and enhancing community skills, knowledge and engagement with indigenous Australians, volunteers and coastal communities. The National Reserve System 2009-2030 is a network of parks, reserves and protected areas representing a full range of native Australian ecosystems, covering more than 11 per cent of the continent. A separate programme exists for marine protected areas, called the National Representative System of Marine Protected Areas. Also funded under Caring for our Country, the Reef Rescue Program includes five integrated components: water quality grants, reef partnerships, land and sea country indigenous partnerships, reef water quality research and development, and water quality monitoring and reporting. Australia also contributes to the Millennium Seed Bank Project and the Global Taxonomy Initiative.

Land and Water Australia, which promoted public research on land, water and biodiversity at the national level, was closed down in 2009. In February 2010, the government announced that the future research investment from the Commonwealth Environment Research Facilities (CERF) will focus on biodiversity, coinciding with the International Year of Biodiversity. This investment will be delivered through the National Environmental Research Program (NERP), a government grants programme that will provide around $20 million per annum for environmental research to improve national capacity to understand, manage and conserve Australian biodiversity and ecosystems.[185] Under the NERP, research hubs will be established to examine emerging biodiversity issues, including in terrestrial and marine ecosystems, across Northern Australia, and the Great Barrier Reef and Torres Strait. Future NERP investments will be decided following the 2010 Federal Election.

Cross-sectoral integration

The EPBC Act 1999 is the primary national mechanism for ensuring the consideration of biodiversity conservation in planning and decision-making processes across all sectors. All Australian states and territories apply biodiversity principles in the creation and application of planning instruments and policies. Under the EPBC Act, development that impacts on a matter of 'national environmental significance' (these matters generally relate to Australia's international treaty obligations and include listed threatened species and ecological communities, listed migratory species, internationally important wetlands, the Commonwealth marine environment, World Heritage properties and National Heritage sites) triggers the need for consideration of biodiversity conservation through environmental impact assessment.

183 "Membership of the Biological Diversity Committee lapsed in February 2007. The Minister for the Environment and Water Resources will appoint new members in due course," www.environment.gov.au/biodiversity/science/bdac/index.html, accessed 13 September 2010.

184 www.nrm.gov.au

185 www.environment.gov.au/about/programs/nerp/about.html

The EPBC Act aims to:

- Conserve Australia's biodiversity
- Protect biodiversity internationally by controlling the international movement of wildlife
- Provide a streamlined environmental assessment and approvals process for matters of national environmental significance
- Protect world and national heritage
- Promote ecologically sustainable development.

In December 2009 an independent review of the EPBC Act was tabled in parliament.[186] The review report recommends a reform package based on a nine-point plan to:

1. Redraft the Act to reflect better the Australian government's role, streamline its arrangements and rename it the *Australian Environment Act*
2. Establish an independent Environment Commission to advise the government on project approvals, strategic assessments, bioregional plans and other statutory decisions
3. Invest in the building blocks of a better regulatory system, such as national environmental accounts, skills development, policy guidance and acquisition of critical spatial information
4. Streamline approvals through earlier engagement in planning processes and provide for more effective use and greater reliance on strategic assessments, bioregional planning and bilateral agreements
5. Set up an Environment Reparation Fund and national 'biobanking' scheme
6. Provide for environmental performance audits and inquiries
7. Create a new matter of national environmental significance for 'ecosystems of national significance' and introduce an interim greenhouse trigger
8. Improve transparency in decision-making and provide greater access to the courts for public interest litigation,
9. Mandate the development of foresight reports to help government manage emerging environmental threats.

The proposed new Act will also incorporate Australia's existing access and benefit sharing system for the utilisation of its genetic resources as currently established by regulations made under the EPBC Act.

Integration of the NBSAP with implementation of other biodiversity-related conventions

Biodiversity-related conventions to which Australia is a signatory include the World Heritage Convention, the Ramsar Convention, the Japan-Australia Migratory Bird Agreement, the China-Australia Migratory Bird Agreement, the Bonn Convention, the Convention on International Trade in Endangered Species (CITES) and the CBD. Australia's obligations under these agreements are implemented through the EPBC Act. The Department of Environment, Water and Heritage, for example, works closely with partner agencies, including state and territory wildlife authorities, the Australian Customs Service, and Australian Federal Police, overseas CITES management authorities, Interpol, and some non-government organisations (such as TRAFFIC) to meet its obligations under CITES. As another example, Australia manages its Ramsar wetlands through the National Guidelines for Ramsar Wetlands, ecological character descriptions and management plans for Ramsar sites, and a rolling review of the condition of the sites.

186 www.environment.gov.au/epbc/review/publications/final-report.html

Threatened and endangered species

The Australian government and state and territory governments both maintain lists of threatened species. The Australian government has partnerships with South Australia, Western Australia, the Northern Territory, Tasmania and Victoria to prepare information on threatened species and achieve consistency between the lists. There is similar multi-jurisdictional coordination between the national and state governments to identify ecological communities for protection under the EPBC Act.

Native vegetation and forestry

The area of native forest in formal nature conservation reserves has increased from 13 per cent to 16 per cent of all Australia's forests since 2004. Over 73 per cent of known old-growth forests are now in conservation reserves. Over 60 per cent of all land in Australia, upon which much of Australia's native vegetation exists, is held privately.

Unless the clearing of vegetation impacts upon a "matter of national environmental significance" under the EPBC Act, the clearing of native vegetation falls under the responsibility of state and territory governments. State and territory governments have codes of forest practice and other regulatory frameworks for public native forest, and some states have similar codes of practice and regulations for privately managed forest. The condition and connectivity of vegetation as habitat has nonetheless declined in many areas,[187] with major implications for biodiversity.

In 2008 the Natural Resource Management Ministerial Council (NRMMC) confirmed the importance of the National Framework for the Management and Monitoring of Australia's Native Vegetation for achieving a reversal in the long-term decline of Australia's native vegetation, and directed that a review of the framework be undertaken. The revised framework will be a national policy document that will:

- Guide the ecologically sustainable management of Australia's native vegetation and help align efforts to address the increasing challenges of climate change and other threats,
- Take into account new approaches to biodiversity conservation and align with the revised National Strategy for the Conservation of Australia's Biological Diversity and *Australia's Biodiversity and Climate Change: A Strategic Assessment of the Vulnerability of Australia's Biodiversity to Climate Change*.[188]

In 2001 the Natural Resource Management Ministerial Council (NRMMC) adopted the National Framework for the Management and Monitoring of Australia's Native Vegetation. In 2008 the NRMMC confirmed the importance of the Native Vegetation Framework as the national policy document for achieving "a reversal in the long-term decline of Australia's native vegetation" and "an improvement in the condition of existing native vegetation" and decided to review to 2001 framework. In late 2009 it endorsed for public consultation a draft Native Vegetation Framework developed to replace the 2001 framework.

The draft framework sets out five goals to meet its vision:

Goal 1 Increase the national extent of native vegetation to build ecosystem resilience and improve the productive capacity of the landscape

Goal 2 Maintain and improve the condition of native vegetation

Goal 3 Maximise the native vegetation benefits of carbon markets

187 Beeton R.J.S., Buckley K.I., Jones, G.J., Morgan, D., Reichelt R.E. & Trewin, D. 2006, *Australia: State of the Environment 2006*, Independent report to the Australian Government Minister for the Environment and Heritage, Department of the Environment and Heritage, Canberra, www.environment.gov.au/soe/2006/publications/report/index.html

188 www.climatechange.gov.au/publications/biodiversity/biodiversity-climatechange.aspx

Goal 4 Build capacity to understand, value and effectively manage native vegetation by all relevant stakeholders

Goal 5 Progress the engagement and inclusion of indigenous peoples in management of native vegetation.

The period of public consultation ran from February to April 2010 and the NRMMC sought suggestions on national measurable targets for each of the five goals of the framework. The framework is currently being finalized and once approved by the NRMMC, more specific guidelines will be developed to support the framework.[189]

Forestry codes of practice and regulations apply in each jurisdiction. Legislation to reduce land clearing has been implemented by states and territories, and broad scale clearance is slowing down. In 1992 the Australian, state and territory governments agreed on a National Forest Policy Statement.[190] Emerging out of this statement were regional forest agreements (RFAs), of which ten have been signed in Australia, all between 1997 and 2001. The RFAs are twenty-year plans for the conservation and sustainable management of Australia's native forests. Under an RFA, forest operations undertaken in accordance with it are exempt from provisions under the EPBC Act.

Taking the case of RFAs signed in Victoria as an example, parties are obliged to report annually on milestones laid out in those RFAs, and the RFAs are also subject to five-yearly reviews. Since 1997 a total of five annual reviews and no five-yearly reviews have been carried out. In 2002 the Victorian Environmental Protection Authority (EPA) first began the process of finding independent environmental auditors to audit compliance to the Code of Forest Practices on public land in Victoria. In 2004 the EPA released an audit report on the Victorian Department of Sustainability and Environment's compliance during the 2002/2003 logging season which showed only 56 per cent compliance to rainforest buffers. A further 'Special Forest Audit', held in 2005, found that government forest operations had resulted in illegal logging in national parks, destruction of old-growth trees in special protection zones, and multiple breaches of procedure. These failures have important ramifications for biodiversity conservation and protection.

Water

Activities such as shipping, oil and gas exploration, pulp mill operations, agriculture and urban development cause oil, sewage, invasive species, marine debris, chemicals and nutrient/fertilisers to pollute coastal and marine environments in Australia. Riparian habitats for biodiversity are threatened by the combined effects of river regulation, over-allocation of water for consumptive uses, drought and climate change, pollution, invasive species and habitat degradation.

The Intergovernmental Agreement on a National Water Initiative[191] is Australia's blueprint for national water reform. This agreement was signed by all governments in 2004, except for Tasmania, which signed in 2005, and Western Australia, which signed in 2006. It commits to restoring water systems to sustainable levels, more cost-effective and flexible recovery of water to achieve environmental outcomes, and more comprehensive water planning. The Water for the Future programme[192] outlines an Australian government investment of AU$12.9 billion over ten years to support water reform. Its four priorities are to take action on climate change, to use water wisely, to secure water supplies and to support healthy rivers.

189 www.environment.gov.au/land/vegetation/review/index.html
190 www.daff.gov.au/forestry/policies/statement
191 www.nwc.gov.au/www/html/117-national-water-initiative.asp
192 www.environment.gov.au/water/australia/index.html

The Water Act 2007 (Cth) enables water resources in the Murray-Darling Basin to be managed in the national interest. It establishes an independent Murray-Darling Basin Authority with the functions and powers to ensure that basin water resources are managed in an integrated and sustainable way. It establishes mandatory content for a strategic plan which will place limits on the amount of water that can be taken; identify risks to water resources; establish rules for the trading of water rights; and establish an environmental watering plan, a water quality plan and a salinity management plan. Australia's river restoration programme commits a total of AU$700 million over five years to recover an annual average of up to 500 gigalitres of water for environmental use.

Other key agreements and plans regulating water use in Australia include the National Water Quality Management Strategy (1992), the Lake Eyre Intergovernmental Agreement (2000), the Great Artesian Basin Strategic Management Plan (2000) and the Intergovernmental Agreement on Murray-Darling Basin Water Reform (2008). The NSW Wetland Recovery Program is a suite of projects that aim to restore the ecological health of two of Australia's iconic inland wetlands. The NSW Rivers Environmental Restoration Program builds on the Wetland Recovery Program, purchasing water access licences through the existing water market (with AU$101.5 million of NSW government funding and AU$71.7 million Australian government funding). This water is directed to the targeted wetlands.

Fisheries

Environmental management for the seafood industry is supported by partnerships with the Australian Government Department of Agriculture, Fisheries and Forestry, and the Fisheries Research and Development Corporation. Under the EPBC Act, assessments of fisheries take into account impacts on protected marine species pursuant to the Guidelines for the Ecologically Sustainable Management of Fisheries.[193] The Harvest Strategy Policy[194] provides for an evidence-based precautionary approach to setting total allowable catch levels in all Commonwealth fisheries.

Other relevant policies and programs include the Fisheries Ecologically Sustainable Development Program, the Indigenous Fisheries Policy, the National Plan of Action for the Conservation and Management of Sharks, the Threat Abatement Plan for the Incidental Catch (or by-catch) of Seabirds during Oceanic Longline Fishing Operations, the Commonwealth Bycatch Policy, Recovery Plans for listed threatened marine species, and the National Strategy to Address Interactions between Humans and Seals: Fisheries, Aquaculture and Tourism. The National System for the Prevention and Management of Marine Pest Incursions seeks to minimise the risk of species' incursion into or translocation in Australia. Introduced marine pests that have already established viable populations within Australia and are having, or are expected to have, significant impact are managed through national control plans.

Industry

Some agricultural industries are working with governments to meet environmental and national resource management legislative requirements by developing sustainability policies and strategies. These industries include cotton, rice (notably the Biodiversity Strategy for the Australian Rice Industry), dairy (notably Dairying for Tomorrow: A National Strategy for Sustainable Resource Management), wine (notably Sustaining Success: The Australian Wine Industry's Environmental Strategy), tourism, sugar, meat and livestock, and wool. Submissions to the Draft Strategy suggest that the threat posed to biodiversity by the use of pesticides and herbicides in particular should also be acknowledged as a threat to biodiversity conservation.

193 www.environment.gov.au/coasts/fisheries/publications/guidelines.html
194 www.daff.gov.au/fisheries/domestic/harvest_strategy_policy

The mining industry, through the Minerals Council of Australia, has developed Enduring Value – The Australian Minerals Industry Framework for Sustainable Development.[195] The Minerals Council of Australia represents over 85 per cent of minerals production in Australia, and has thirty-nine leading minerals signatories to this framework. Principles of the framework include"disseminating scientific data on and promoting practices and experiences in biodiversity assessment and management" and "supporting the development and implementation of scientifically sound, inclusive and transparent procedures for integrating approaches to land use planning, biodiversity, conservation and mining". The framework does not include any binding obligations or action plans.

Regulations under the EPBC Act control the taking of genetic resources in Commonwealth areas and ensure benefit sharing. The NRMMC endorsed an intergovernmental agreement called the Nationally Consistent Approach for Access to and the Utilisation of Australia's Native Genetic and Biochemical Resources[196] in 2002. This establishes a common approach to genetic resource management in Australia, with which legislation in Queensland, the Northern Territory and Victoria is aligned.

Development aid

The Asia-Pacific region includes seven of the world's seventeen megadiverse countries. Over 250 million people in South-East Asia and the Pacific live within 30 kilometres of the coast, and are highly dependent on marine and nearshore resources. Many coastal zones in the Asia-Pacific region, including coral reefs, mangroves, estuaries and small islands, are already significantly degraded and are directly linked to loss of marine and aquatic biodiversity, including important economic species. Current pressures are significantly reducing the resilience of coastal ecosystems and communities to climate change.

MDGs are implemented through Australia's AusAID program. The Australian government's administration of aid must comply with the legislative and regulatory requirements of the EPBC Act. In its 2005 MDG Progress Report to the UNDP, there is no specific mention of biodiversity within the discussion of Australia's environmental aid projects. The 2007 Environment Strategy for Australian Aid[197] contains various environmental objectives, including the conservation of biodiversity through the reduction of greenhouse gas emissions through reforestation and avoided deforestation (Objective 3), the improvement of knowledge about aquatic biodiversity through strengthened water resources management (Objective 5), and the protection of biodiversity through a strengthening of institutional capacities for environmental management (Objective 6).

Australia is a member and major donor of the Pacific Regional Environment Programme, supporting ongoing marine biodiversity conservation activities in the Pacific region. Australia contributes to a range of regional marine and coastal biodiversity-related forums, both financially and with technical assistance. Contributions are made through the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security; the APEC Marine Resources Conservation Working Group; the Pacific Regional Environment Programme; the Pacific Islands Forum Fisheries Agency; the Regional Plan of Action to Promote Responsible Fishing Practices and Combat Illegal, Unreported and Unregulated Fishing in the Region; the High Seas Task Force; and collaborations with non-governmental organisations such as The Nature Conservancy and WWF.

The Australian government considers the Global Environment Facility (GEF) to be the primary multilateral mechanism for funding environmental projects in developing countries. Australia has provided over $240 million in financial support from 1991 to 2007, including $60 million towards the fourth replenishment of the facility's trust fund in 2006. Australia has also pledged financial support to other funds managed

195 www.minerals.org.au/enduringvalue
196 www.environment.gov.au/biodiversity/publications/access/nca/index.html
197 www.ausaid.gov.au/publications/pdf/env.pdf

by the GEF, such as $7.5 million to the Least Developed Countries Fund in June 2007 to support least developed countries in assessing and adapting to the impacts of climate change.

In recognition of the climate adaptation challenge faced by developing countries, and particularly those in its region, Australia invested $150 million in 2008 and 2009 to meet high-priority needs in vulnerable countries. Australia's current International Climate Change Adaptation Initiative[198] builds on existing programs in the Asia-Pacific, including ongoing monitoring and adaptation activities in the Pacific and Mekong regions. Over a number of years, Australia has helped to strengthen the capacity of the Mekong River Commission to better manage the resources of the Mekong River Basin, for example by supporting expert inputs from the Murray Darling Basin Authority. Through the Australia-China Environment Development Program, Australia also supports water resources management in China, developing beneficial partnerships between Australian and Chinese agencies to improve river management.

Australia's $273 million International Forest Carbon Initiative[199] makes a key contribution to global action on the reduction of emissions from deforestation and forest degradation in developing countries (REDD). The initiative is administered by the Australian Department of Climate Change and Energy Efficiency, and AusAID. A central element of the initiative is taking practical action on REDD through collaborative forest carbon partnerships with Indonesia and Papua New Guinea. These partnerships demonstrate how the technical and policy hurdles to REDD might be addressed and provide useful experience to inform international efforts to design a REDD financial mechanism under the UNFCCC.

Health

The Draft Strategy does not appear to envisage integration with policies on health and well-being. Some submissions to the Draft Strategy have suggested that the impacts of climate change, ecosystem degradation and biodiversity loss on human health should be acknowledged and an action plan integrated with national health policies.

Integration of the NBSAP with climate change policies

Australia's natural ecosystems contain some of the highest carbon densities of any in the world, but a reduction in the rates of clearance of native forest and of land conversion for agriculture and urban development has reduced land use change as a source of greenhouse gas emissions, such that in 2005 the land use and forestry sector sequestered slightly more carbon than it emitted. In 2005 the sector was responsible for an estimated 9 per cent of total national greenhouse gas emissions, compared to the IPPC's estimated 20 per cent global contribution from such sources.[200] The NSCABD was developed prior to, and operates alongside, national climate change policies providing for biodiversity conservation.

The NRMMC has identified a number of priority actions, including assessing the implications of climate change for Australia's world heritage properties, evaluating the vulnerability of coastal biodiversity to climate change, examining how refuges can reduce the risk posed by climate change for Australia's biodiversity, and assessing the vulnerability of Australia's forests to the impacts of climate change. A series of reports on the impacts of climate change on biodiversity have also been released over the past four years.

Australia's 2007 National Climate Change Adaptation Framework[201] includes several actions relevant to biodiversity: a review of the National Biodiversity and Climate Change Action Plan 2004-2007 (which provides an overall framework for coordinating the activities of different jurisdictions), the production of

198 www.ausaid.gov.au/keyaid/adaptation_initiative.cfm
199 www.climatechange.gov.au/government/initiatives/international-forest-carbon-initiative.aspx
200 http://adl.brs.gov.au/forestsaustralia/facts/carbon.html, accessed 14 September 2010.
201 www.coag.gov.au/coag_meeting_outcomes/2007-04-13/docs/national_climate_change_adaption_framework.pdf

a Climate Change Action Plan for the Great Barrier Reef, and assessment of the vulnerability of Australia's World Heritage properties and Ramsar wetlands. A Global Strategy for Plant Conservation has also been created for Australia's botanical gardens under this framework. Research networks have been established across the country for terrestrial biodiversity, marine biodiversity and resources, and water resources and freshwater biodiversity. Associated national adaptation research plans are currently being developed.

While the Draft Strategy recognises the threat of climate change to biodiversity, it does not emphasise the role of biodiverse natural ecosystems in mitigating climate change. NGO submissions to the Draft Strategy have suggested that it should recognise the importance of natural ecosystems as permanent stores of carbon, as well as their roles in protecting biodiversity, water and other values. They have also suggested that biodiversity conservation could be improved by introducing a package of measures that includes an end to broadscale clearing and industrial logging of native forests and a REDD Plus fund to secure the permanent protection of green carbon stores by providing an income stream to manage legally protected native forests, and transition assistance for affected workers and industries.

Australia's proposed Carbon Pollution Reduction Scheme Bill (CPRS Bill), introduced into the House of Representatives in 2009, focused primarily on contributing to the government's mitigation objectives. The CPRS Bill did not propose any measures additional to those already in place for biodiversity conservation. After being twice rejected by the Senate in 2009, the scheme has now been shelved until at least 2012.

Engagement with indigenous peoples

The current NSCABD acknowledges the importance of indigenous knowledge of the environment, and one of its objectives is "to recognise and ensure the continuity of the contribution of the ethnobiological knowledge of Australia's Indigenous peoples to the conservation of Australia's biological diversity". The role of indigenous people in the conservation and sustainable use of Australia's biodiversity is formally recognised in the EPBC Act, which establishes an advisory committee made up of indigenous Australians with expertise in indigenous land management, conservation and cultural heritage management.

Currently, the Indigenous Australians Caring for Country funding initiative[202] provides for the employment of indigenous rangers, assists indigenous Australians to prepare sea country plans in the Great Barrier Reef, expands the Indigenous Protected Area network (currently around 20 million hectares of land managed by indigenous communities), assists indigenous Australians to enter the carbon trading market, and provides ongoing support for an Indigenous Land Management Facilitator network. The Indigenous Heritage Program supports the identification, conservation and promotion of indigenous heritage values of places important to Aboriginal and Torres Strait Islander people.

Three national parks are jointly managed by the Australian government and the traditional owners of the parks. Over seventy coastal Aboriginal and Torres Strait Islander groups maintain strong cultural relationships to the Great Barrier Reef region. They are encouraged to develop traditional use of marine resource agreements, which describe how individual groups will sustainably manage the marine resources in their sea country areas. Indigenous-managed land includes about 21 million hectares of forest. In 2005, the National Indigenous Forest Strategy [203] was launched to encourage indigenous participation in the forest industry.

The increased intensity and frequency of fires in Australia since European settlement (impacting on the ability of indigenous Australians to carry out their longstanding fire management practices) have adversely impacted on biodiversity. Climate change will continue to alter the frequency of high-fire-

202 www.environment.gov.au/indigenous/index.html (not to be confused with the Caring for our Country initiative previously referred to, although there are joint activities).
203 www.daff.gov.au/forestry/policies/nifs

danger weather, further affecting biodiversity. It is now recognised that the regular, cooler early season fires managed by indigenous Australians promoted biodiversity, and indigenous Australians are now being supported by government funding to re-establish traditional fire regimes.

The Australian Fourth National Report states that "Indigenous Australians are well aware of their rights under Article 8(j) of the CBD and have been vocal …" The Indigenous Advisory Committee, however, states in the same report that "the implementation of the CBD is not well known (if at all) to Indigenous people to have an impact on the improvement of conservation of biodiversity and while they are interested parties and would embrace fair and equitable sharing benefits, they are not included in such consultations and negotiations for this to happen". WWF-Australia notes in its submission to the Draft Strategy that it is difficult to see how it facilitates or enables real engagement by indigenous communities in the ongoing processes required to record, monitor and protect biodiversity.

Integration of the NBSAP with the sub-national level

The overwhelming trend in all jurisdictions is towards increasingly uniform regulation of threats to biodiversity, and increasing consistency with the current NSCABD. Challenges remain, however, and key among them is the need for comprehensive protection for all known threatened species and ecological communities through the timely development of recovery plans.

At the time of writing it is unclear whether the Draft Strategy would improve the integration of national-level plans with sub-national BSAPs. The Draft Strategy issued for consultation does not articulate how its vision will fit with existing recovery plans, threat abatement plans, local and state environment plans, water sharing plans, catchment management plans and bioregional plans. It does not outline how landscape connectivity will be achieved across jurisdictions. It does not describe the ways in which various stakeholder groups across the broad range of these planning processes will be involved. It may be that specific targets and timeframes for species and ecosystem recovery, and the levels of government responsible for achieving them will be identified in the final Strategy or its implementation.

Submissions to the Draft Strategy suggest that the Australian government should express its own role in biodiversity conservation more clearly. The suggested new multidisciplinary body charged with engagement in key assessment and approval decision-making for 'threatening processes' may help in this regard.

Tools for implementation

Communication, education and public awareness

There are many reports produced by the various government departments and bodies overseeing the implementation of the programs and policies described in this case study. The main national tool for communicating Australia's progress on environmental protection is the five-yearly *State of the Environment Report*, last produced in 2006. The next report is due in 2011. Biodiversity-specific reports include the Australian government's *Assessment of Australia's Territorial Biodiversity* (published in 2009) and Australia's Fourth National Report to the CBD, submitted in 2009.

Governments, NGOs, schools, universities, cities, zoos and other entities run a wealth of educational and awareness programs relevant to biodiversity. The Draft Strategy acknowledges the importance of communication, education and public awareness, but does not propose specific actions or commit funding relating to this. Among other actions, reform of public participation mechanisms in assessment and approval (of actions impacting on biodiversity) is needed, including, for example, reform on rules surrounding the allocation of costs in public interest environmental litigation.

Legislation

There is no single piece of legislation that relates only to biodiversity or to ecosystems as a whole. The main biodiversity-related legislation is the EPBC Act, discussed above. The Draft Strategy does not include any commitments for governments to revise legislation with a specific view to improving biodiversity protection, although this may be regarded as inherent in any final strategy.

Environmental impact assessment

Development proposals on Commonwealth land, and Commonwealth actions, must consider impacts on biodiversity under the EIA triggers provided in the EPBC Act ("matters of national environmental significance"). All Australian states and territories also include biodiversity (or related issues such as impacts on species and habitats) as a matter for consideration in EIA. The threatened species laws of each state also apply EIA (or species impact assessment), aligned with planning, development and resource management laws through EIA standards and governance provisions.

Spatial planning

With more than 80 per cent of Australia's population of over 21 million living in urban centres and most of them within 50 kilometres of the coastline, land use and population growth are placing significant pressure on the biodiversity of coastal ecosystems. In practice, spatial planning is undertaken in Australia through land-use planning and, in the marine environment, through the National Representative System of Marine Protected Areas. The Draft Strategy acknowledges the impact of Australia's urban sprawl upon biodiversity, but does not make any specific commitments to mitigate that impact, although the first three priority actions under the draft Strategy are directed to building ecosystem resilience.

Application of the ecosystem approach

There is a critical need to determine Australia's biodiversity priorities for each of its eighty-five bioregions. Strategies to establish such priorities should include (a) an assessment of biodiversity values, conditions and trends, and threats, and (b) the identification of appropriate conservation measures and opportunities, including measures needed to adapt to climate change; the assessment of the cost-effectiveness of conservation measures and financial needs and responsibilities of all relevant parties; and provision for effective long-term monitoring. While the Draft Strategy acknowledges the importance of the ecosystem approach as a fundamental principle underpinning the strategy, it does not outline any funding commitments, estimates or responsibilities to develop biodiversity action plans on an ecosystem basis.

Incentive measures

While the Draft Strategy refers to the "development of new markets for protecting native habitat on private land", such new markets are currently small or non-existent. Increased incentives may be needed to accelerate biodiversity conservation on private land to conserve national identified biodiversity priorities and in identified corridor zones between protected areas.

Valuation

There is a knowledge gap in valuing biodiversity which becomes difficult to address when Australia's taxonomic workforce has declined by 14 per cent since 1991 and is forecast to fall by between 30 per cent and 50 per cent over the next ten years. This is an international problem. Recent investment by the Australian Government in the development of the digital *Atlas of Living Australia* seeks to address this problem by accelerating the development and distribution of taxonomic information (Rapid Attack Taxonomy) and drawing on both molecular and classical taxonomy.

Financing

Submissions make the point that efforts at biodiversity conservation in Australia have been hampered by chronic underinvestment. There are no specific funding commitments or allocations under the Draft Strategy.

National targets

The Draft Strategy proposes general objectives, and no specific national targets.

Monitoring and review

The EPBC Act is reviewed every five years. In December 2009 the 'Hawke Review' found that, with regard to biodiversity conservation, recovery planning is not as effective or as efficient as it could be due to insufficient resourcing and poor information. It also found broad support for multi-species-based, landscape-based and ecosystem-based approaches to conservation planning.

The Draft Strategy states that the NRMMC will monitor its implementation and formally review it every five years, with the advice of an independent panel. It also provides for interim independent reviews if necessary. State and territory governments will report annually to the NRMMC, and the Australian government will publish consolidated reports. This proposed process for the Draft Strategy provides neither specific actions against which progress will be monitored and reviewed, nor direction as to who will be carrying them out. The Draft Strategy does not provide for bioregional assessments. It does, however, commit to building baseline data sets and key indicators to measure conditions and trends and to implementing monitoring protocols.

Implementation and obstacles encountered

Obstacles to the effective implementation of the current NSCABD can be described as information-, integration- and institution-related:

- *Information:* Over 75 per cent of Australia's native species remain undiscovered or undescribed; 45 per cent of Australia's landmass and the vast majority of Australia's Exclusive Economic Zone have not been, or have only partially been, biologically surveyed.
- *Integration:* Cross-sectoral integration and mainstreaming of biodiversity concerns (particularly among industry stakeholders) are limited, particularly in relation to climate change, planning schemes and alignment with the interests/expertise of indigenous Australians.
- *Institution:* Limited funding and industry resistance hamper actions taken to mitigate the effects of ongoing and cumulative pressures on biodiversity. The listing of threatened species and ecological communities and the implementation of species recovery plans as part of ecosystem recovery plans need to be increased.

The Draft Strategy as developed to date is less a strategy than a broad vision. It does not identify gaps in biodiversity conservation or evaluate the human and institutional capacity needed for effective conservation, and it does not provide for systematic bioregional biodiversity planning in any detail. It fails to specify responsibilities, actions, measurable targets and timeframes except in broad terms, and does not include any budgetary commitments by Commonwealth and state governments.

The key points arising out of submissions to the proposed Draft Strategy are:

- *Preparation:* The Draft Strategy is aspirational in tone and insufficiently critical of the rapidly declining state of biodiversity in Australia. Although identifying climate change as a main

threat to biodiversity it does not acknowledge or quantify the severity of the threat posed to biodiversity by climate change. It does not identify gaps in biodiversity conservation, or evaluate the human and institutional capacity needed for effective conservation, but rather sets out a process to do so.

- *Implementation:* While there is a general acknowledgement of the need for cross-sectoral integration and ecosystem-based implementation of the CBD's objectives, the Draft Strategy does not outline how these approaches will be implemented in practice. It does not specify any quantitative goals, timelines, responsibilities, monitoring systems or future funding commitments. Instead, these are identified as priority actions for the first years of the implementation of the Strategy.

Conclusion

Since 1996, Australia has been implementing its CBD obligations through the NSCABD. While much progress has been made, Australia's biodiversity is still in serious decline, as noted in the Government's 2009 report to the CBD.

The Australian government has recently reviewed the NSCABD and proposed the Draft Strategy. Submissions from external stakeholders have been received, and although the Australian government had expected to endorse the Draft Strategy in mid-2010, this has been delayed by the electoral process.

The Draft Strategy as it currently stands may be considered as weaker in ambition than both the National Strategy for the Conservation of Australia's Biodiversity 1996 and the National Objectives and Targets for Biodiversity Conservation 2001-2006.

If the Australian government is to effectively implement its obligations under the CBD, the new Strategy should address the broad concerns highlighted in submissions to the Draft Strategy, and present them in a clear, direct and crisp manner, and to improve upon, rather than draw back from, the current NSCABD. If biodiversity conservation is to remain a core aspect of Australia's sustainable development, it will continue to need to be supported by a more integrated and action-driven strategy driven by the Australian government.

4.3 Benin

Introduction[204]

Benin is a coastal West African country with an area of 115,762 square kilometres bordered to the south by the Atlantic Ocean, to the north and northwest by Niger and Burkina Faso, to the east by Nigeria and to the west by Togo. Benin has a population of approximately 6.8 million people and a population density of fifty-eight people per square kilometres. More than half of the population is concentrated in the southern coastal region of the country, which represents only 10 per cent of the national territory. Benin is classified as a least developed country and in 2004 its gross domestic product per capita was approximately US$600.[205]

Benin ratified the CBD in 1994. Forests and woodlands cover 61,860 square kilometres – more than half the national territory. Benin has established several protected areas under various categories that comprise 21 per cent of its total area. The country has approximately 3,000 higher plant species, 449 marine and 180 freshwater fish species, and 371 bird species. In addition, 47 species of mammal weighing more than 5kg have been identified.

Benin's biodiversity is declining rapidly due to habitat destruction and overexploitation of flora and fauna, allied to weak enforcement of legislation, despite the conservation efforts made and various sectoral and cross-sectoral strategies developed. Several species are seriously threatened, including the red-bellied monkey (*Cercopithecus erythrogaster*), the cheetah (*Acinonyx jubatus*), the African wild dog (*Lycaon pictus*) and the African manatee (*Trichechus senegalensis*). Studies of the different vegetation zones shows that in the last twenty years forested areas have been extensively degraded, with a loss of 9,876 square kilometres, while 19,451 square kilometres of savannah areas have been lost. Various activities and waste disposal operations threaten 38 per cent of the coastal area ecosystems, above all the mangrove forests.

Benin's Fourth National Report to the CBD notes that current trends of biodiversity decline show no sign of slowing and that climate change will only add to this trend. The report further states that the loss of biodiversity could both directly and indirectly undermine the well-being of the population – directly through an increased risk of environmental changes, such as a collapse of fish stocks, floods, droughts, forest fires and diseases; and indirectly in the form of conflicts resulting from food insecurity and water scarcity.

NBSAP preparation process

Engagement of stakeholders

The NBSAP was adopted in 2002 and briefly refers to the fact that it had been prepared in a consultative process that included workshops and seminars, but does not specify who took part. Interviews with NGOs in Benin revealed that at least part of the NGO community did not feel sufficiently involved in the process of its development and continues to feel the same about the implementation process.

The Fourth National Report notes that, as part of the preparation of the report, a mechanism for consultation and permanent dialogue with stakeholders was established.

204 The main sources for this study are the Cameroon National Biodiversity Strategy (2002) and the Cameroon Fourth National Report to the CBD (2009), both available at www.cbd.int/countries/?country=bj, and interviews with key stakeholders.

205 Global Environment Facility Evaluation Office 2008, GEF Country Portfolio Evaluation: Benin (1991–2007).

Level of approval within government

The NBSAP was approved in the form of a Communication (1942/02) announcing its adoption by the Council of Ministers in the presence of the Prime Minister. The Communication appoints the Minister for the Environment, Settlements and Urban Planning to coordinate its implementation and empowers the minister to transmit the NBSAP to ministers of other portfolios with a shared responsibility for implementation.

Revision

The NBSAP has not been revised.

National coordination structures for overseeing implementation

Other than the Communication instructing the Minister for the Environment, Settlements and Urban Planning to coordinate implementation, the NBSAP does not provide for any formal coordination structure.

Main features of NBSAP and possible other biodiversity plans and policies

The NBSAP is based on the following five strategic priorities:

1. Strengthening the institutional framework for the management of biological diversity
2. Promotion of research
3. Promotion of the values of relevant traditional knowledge
4. Valuation of genetic resources
5. Development of cooperation at national, regional, and international levels.

The strategic priorities are supported by the following specific objectives:

1. Restoration of natural biological resources to a level higher than the needs of the public and one that will allow for a significant contribution to economic development
2. Modernisation of agricultural practices in an ecologically acceptable way by 2015
3. Incorporation of the consideration of biological diversity into all actions aimed at social and economic development and in education
4. Increasing the value of biological diversity and genetic resources by means of the fair and equitable sharing of benefits arising from the utilisation of genetic resources
5. Creating a viable framework for cooperation, follow-up, coordination and orientation of all national activities dealing with the management of biological diversity.

Under these objectives, twenty-eight priority actions have been identified in the Action Plan. The actions are organised into a logical framework that includes indicators, means of verification, hypotheses and assumptions, agencies responsible for execution, other agencies involved, and estimated costs of execution.

Integration of NBSAP with higher and cross-sectoral plans and policies

The objectives and actions of the NBSAP are clearly cross-sectoral and development oriented. Since the adoption of the NBSAP, the profile of environment and biodiversity conservation issues has been elevated within government. The clearest manifestation of this was the establishment of the Ministry of

Environment and Nature Protection (MEN) in 2006, with the overall mandate to contribute to poverty reduction through the sound and sustainable management of environmental and natural resources, considered to be a source of wealth creation and of social well-being. This objective reveals a political will to integrate environment and development across sectors, and this has been followed up by several sectoral and cross-sectoral policy documents and initiatives with environmental and biodiversity characteristics.

The National Environmental Management Plan (2006-11) is intended to contribute to sustainable economic development by reducing losses resulting from environmental degradation and by promoting job creation through better management and production practices.

The objective of the National Program for Sustainable Management of Natural Resources (2008)[206] is to contribute to poverty reduction through integrated sustainable management of forests and other natural resources.

The 'greening' of the second Benin Poverty Reduction Strategy Paper (2007)[207] was the result of a widespread recognition that the first Benin PRSP did not take into account the linkages between environment and poverty and did not consider environmental sustainability as a cross-cutting issue. A joint decision of the Ministry of Development and Finance and the Benin Environment Agency was therefore adopted to promote concrete policy measures aimed at integrating environmental concerns into plans, programmes and projects related to the second PRSP with a view to ensuring their sustainability.

Strategic environmental assessment (SEA) was chosen as the main tool for achieving the 'greening' of the PRSP. The Benin Environment Agency has defined SEA as "a process that leads to a policy, plan or program that takes environmental issues adequately into account" and has developed a guide on SEA for practitioners.[208]

Among the main reasons advanced for conducting SEA are to increase the environmental credibility of decisions taken under the PRSP; to ensure consistency between the PRSP and existing environmental policy: to avoid mistakes when choosing strategic directions under the PRP; and to generate a better understanding of the connections between the environment, the economy and the social dimension, thereby facilitating the best solutions.

To further ensure sectoral and cross-sectoral integration, environmental units have been created in each ministry by presidential decree.[209] In addition, Benin has created the Benin Environment Agency to administer the *Framework Act on the Environment*, which, as one of its provisions, requires environmental impact assessments for all major projects.

Integration of NBSAP with implementation of the other biodiversity-related conventions

Benin has ratified all the global biodiversity-related conventions. The NBSAP does not address the question of integrated implementation.

206 www.schmidt-soltau.de/PDF/France/2008_PNGDRN%20Benin.pdf
207 planipolis.iiep.unesco.org/upload/Benin/PRSP/Benin_SCRP_eng_2007.pdf
208 Ministere de l'Environment et de la Protection de la Nature, Agence Benioise pour l'Environment 2006, Guide Methodologique pour une Evaluation Environnmental Strategique.
209 Décret N° 2001-095 du 20 février 2001 portant création, attributions, organisation et fonctionnement des cellules environnementales en République du Bénin.

Integration of NBSAP with climate change and desertification policies

The NBSAP does not include objectives and actions to integrate biodiversity and climate change policies. The Fourth National Report highlights the effects of climate change on biodiversity.

As a least developed country, in 2008 Benin published its National Adaptation Programme of Action (NAPA) under the UN Framework Convention on Climate Change.[210] The NAPA considers only broadly the question of synergies between measures to adapt to climate change and those to protect biodiversity and ecosystems. Of the five concrete projects outlined in the NAPA, only one (on protection of the coastal zone) refers to biodiversity.

Integration of NBSAPs with sectoral plans and policies

As previously mentioned, the government has adopted various measures to integrate environmental concerns (including biodiversity) into sectoral and cross-sectoral policies, including SEA and the requirement for each ministry to establish an environmental unit.

Interviews with representatives of various ministries revealed a high level of understanding of and interest in environmental integration, but also a concurrent concern about the lack of financial and human resources to put good intentions into effect on the ground.

According to the Fourth National Report, some key sectors for development, such as industry and transport, still give very little consideration to biodiversity in their plans and policies.

Forestry

Benin has no undisturbed primary forest and has lost 29 per cent of its forest cover since 1990, and has one of the highest annual deforestation rates in the world. Rapid population growth is putting pressure on forests through clearing for agriculture, pasture and human settlement and, not least, for fuel wood. This provides more than 75 per cent of energy needs, compared with 14 per cent for coal.

Deforestation has led to extensive siltation of Benin's water courses, affecting river transportation and further damaging the economy, of which the transport sector comprises over 30 per cent. Widespread poaching has depleted wildlife.

With the single exception of action to promote planting of trees, the NBSAP contains no specific objectives or actions related to forests and forestry.

The serious situation for forests in Benin has led to the raising of the profile of the Forest Administration and its transfer from the Ministry of Agriculture, Livestock and Fisheries to the Ministry of the Environment and Nature Protection. The government has initiated various measures for reforestation and for the promotion of community forests. The promotion of sustainable forestry and the conservation of forest biodiversity are important components of the National Programme for Sustainable Management of Natural Resources.

Agriculture

The NBSAP includes few activities specifically related to agriculture. However, in its strategic plan to revitalise the agricultural sector, the Ministry of Agriculture, Livestock and Fisheries identified actions that contribute to the conservation and sustainable use of biodiversity, including dissemination of good agricultural practices, promotion of practices that are environmentally-friendly and help maintain

210 unfccc.int/resource/docs/napa/ben01f.pdf

soil fertility, regeneration of pasture, and establishment of a mechanism for evaluating the impacts of agriculture on the environment.

Fisheries

No specific action on fisheries is included in the NBSAP. Inland fisheries are a much larger sector than marine fisheries and are seriously affected by the general degradation of the environment resulting from pollution, deforestation and soil erosion.

Tourism

Action to promote sustainable hunting tourism is included in the NBSAP, and the Ministry of Tourism and Handicrafts aims to promote ecotourism on the clear understanding that it should contribute to the conservation and sustainable use of biodiversity and to improving the livelihoods of local communities.

Public health and exploitation of medicinal plants

The Ministry of Health is actively promoting traditional medicines. It has established herbal gardens throughout the country, in cooperation with holders and traditional knowledge practitioners, to ensure availability of raw materials and traditional medicines of good quality at reduced cost.

Bioprospecting and access to and benefit sharing from using genetic resources

The promotion of bioprospecting and enacting legislation to regulate access to genetic resources and benefit sharing are included among the actions in the NBSAP. Such legislation is now under development.

Protected areas

Benin has designated protected areas under three categories: biosphere reserves, sacred forests and forest reserves. According to the Fourth National Report, protected area coverage represents 21 per cent of the total area of the country.

The Pendjari Biosphere Reserve (RBP), the most important and most visited of Benin's protected areas, is located in the extreme northwest of the country. It is part of the WAP complex (W-Arli-Pendjari ecosystem), which in addition to the RBP also includes the W transboundary Biosphere Reserve shared by Benin, Niger and Burkina Faso. The complex covers a total area of 50,000 square kilometres, of which 12,000 square kilometres are in Benin. It is the second-largest protected ecosystem in West Africa.

There is general agreement that the management of protected areas suffers from a serious lack of financial and human resources.

Integration of NBSAP with the sub-national level

Substantial decentralisation reform took place in Benin in 2003 with the establishment of municipalities (communes). Devolution of powers also occurred in the environmental field, meaning among other things that the management of natural resources became the shared responsibility of the state and the municipalities. As a result, nearly all municipalities have prepared development plans that include biodiversity planning. However, due to lack of capacity and resources, municipalities have so far given limited attention to implementation of such biodiversity-related policies.

To address this problem, the government aims to strengthen the institutional capacity of municipal administration through skills upgrades for personnel and elected officials. Provision of support to local civil society organisations, including women's and consumer organisations, is also envisaged.

Engagement with indigenous peoples

Greater involvement of local communities in the management of natural resources and the protection of community traditional knowledge and practices are included among the actions to be undertaken under the NBSAP. Local botanical gardens have been established to conserve medicinal plants and to enable traditional knowledge to be used to develop traditional medicine. Steps have also been taken to promote community forestry and to share hunting revenues and other revenues from protected areas with local communities.

Tools for implementation

Communication, education and public awareness

Communication, education and public awareness feature prominently in the NBSAP, and the Benin government has taken various initiatives to promote these.

At the level of higher education, efforts have been made to promote scientific research on biodiversity through the opening of graduate schools (masters and PhD levels) specialising in the management of natural resources. In addition, most departments, NGOs and other bodies involved in biodiversity in Benin have communication plans for generating public awareness of the need for better management of natural resources.

Regarding the CBD clearing-house mechanism, Benin has received support and training to improve its national clearing-house mechanism from the Belgian Directorate General for Development Cooperation (DGDC).

Legislation

Benin has adopted a number of regulations and provisions to protect nature, including on issues such as bush and plantation fires, coastal management, and hunting and wildlife management, both before and after the adoption of the NBSAP. The main legislative instrument is Law No. 98-030 of 12 February 1999 – the Framework Law on the Environment – which defines the basis for integrated environmental management policy. Eight implementing decrees were adopted in 2001.

EIA and SEA

In Benin, as stipulated by the Framework Law on the Environment, EIA is a well-established instrument for assessing environmental impacts, including biodiversity impacts, of major projects and building works. However, a lack of resources for inspection and enforcement is reported.

As previously mentioned, SEA is regarded as the main instrument for mainstreaming environmental concerns into sectoral and cross-sectoral plans, programmes and policies.

Spatial planning

Spatial planning comes under the authority of the municipalities, but due to their capacity constraints it is unlikely that they have been able to use this tool to any great extent to benefit biodiversity.

Application of the ecosystem approach

The NBSAP does not explicitly apply the ecosystem approach, but, with its holistic and cross-sectoral approach and its focus on the main ecosystems of Benin, it could be argued that the NBSAP implicitly uses this approach.

Understanding the goods and services provided by biodiversity

Reflecting its economic dependence on its natural resources, Benin has a clear sense of the goods and services provided by biodiversity and the value of these. Such a sense is also apparent in the NBSAP. However, like most other NBSAPs, Benin's does not include measures to internalise these values into the economy or to create incentives.

Financing

As is the case in most other countries, in Benin the lack of financial resources is a serious constraint on implementation of the NBSAP and the CBD as a whole, although the national budget allocation for biodiversity conservation seems to have increased.

Many projects related to the conservation and sustainable use of biodiversity have been funded by multilateral and bilateral donors such as the World Bank, the GEF, the Agence Française de Développement, German Technical Cooperation (GTZ) and the Danish International Development Agency (Danida). The government considers the results of external funding for specific projects to be mixed. In many cases the projects have not been rooted in national policies, and often the complementarities between projects and the cooperation between donors have been poor, leading to wasted opportunities and funds. The government believes that external assistance would be better spent on budgetary support for government-owned sustainable development than on individual projects.

National targets, monitoring and review

Quite unusually, the NBSAP action plan includes quantitative and time-bound targets for the different actions to monitor progress on implementation. While the Fourth National Report includes a thorough evaluation of the state of implementation of the NBSAP, it does not make use of the monitoring framework which the targets provide, suggesting that the targets have had little practical applicability.

Summary of implementation, obstacles encountered and lessons learned

In terms of integrating concerns for environment and biodiversity into mainstream government policies, Benin has been quite outstanding. In addition, Benin has adopted relevant legislation and developed a detailed diagnosis of the state of biodiversity in the country. This provides a good framework for combating loss of biodiversity. Now the time has come to use this framework to carry out effective action on the ground.

The fact that biodiversity continues to decline despite good intentions and policies illustrates how complex the issue of biodiversity loss is and the vicious circle that many poor countries find themselves in, where ecosystem degradation is a cause of poverty and poverty a driver of further degradation.

The main constraint to implementation is the pressure that a rapid population growth and urbanisation put on natural resources. Added to this is the insufficient level of resources available to implement policies and enforce laws and regulations. The powers that local authorities have gained with respect to environmental management have remained rather theoretical in the absence of capacity development or greater resource allocation.

Interviews with key stakeholders have revealed that, in spite of the well-developed cross-cutting plans and policies, interagency coordination and cooperation may not always occur in their day-to-day follow-up. The launch of a new policy is seen as an achievement in itself, and political interest may well then decline. The idea of a National Commission for Sustainable Development with a permanent secretariat clearly seems to have lost momentum. Furthermore, as previously mentioned, NGO stakeholders argue that they are not sufficiently involved in biodiversity policy-making.

However, this situation should not obscure the fact that some important measures for biodiversity have been taken, representing contributions to implementation of the NBSAP. These include the improvement of the knowledge base, expansion of protected areas, establishment of local botanical gardens, and promotion of traditional knowledge for conservation and sustainable use of biodiversity.

The Fourth National Report includes the following recommendations for further actions:

- Promotion of the conservation of existing biodiversity
- Reduction of the impact of agriculture on biodiversity
- Promotion of the mitigation of climate change and climate extremes for biodiversity and people
- Reduction of the impact of migration and natural increase of the population
- Promotion of collaboration between financial donors and with local communities
- Promotion of instruments to mitigate potential negative impacts of projects and programmes
- Economic diversification and valuation in relation to the management of biodiversity
- Capacity-building
- Harmonisation of policies and laws
- Reorganisation of the institutional management of international conventions ratified by Benin
- Involvement of the private sector, and creation of functional synergy between the private and public sectors, universities and development activities
- Development of a coherent strategy for creating and managing a reliable database on national biodiversity and for facilitating decisions taken on a scientific basis
- Creation of an institutional framework that includes research units and training structures for control of genetic resources, and in particular GMOs, in Benin
- Updating communal development plans to integrate biodiversity management.

4.4 Cameroon

Introduction[211]

Cameroon has a territory of 475,000 square kilometres and 15 million inhabitants. Its unique location between the equator and the Sahel provides Cameroon with very diverse ecosystems and landscapes. Nearly 90 per cent of all African ecosystems are represented in the country, including the Sahelian, Sudanian tropical rainforest, and Afromontane coastal and marine ecoregions. Cameroonian species biodiversity includes approximately 9,000 species of flora, 297 species of mammals, 849 bird species, 373 fish species, 3,723 reptile and amphibian species, and 39 butterfly species, ranking Cameroon fifth in Africa in diversity of plants and wildlife. Livestock and crop diversity are also very rich in Cameroon.

Cameroon's economy is based on biodiversity-related activities such as agriculture, forestry, fisheries, livestock and hunting. About 80 per cent of the rural population is engaged in these activities, and their livelihoods depend on the products of biodiversity. The contribution of biodiversity to GDP in 2007 was 40 per cent.[212]

At the same time, Cameroon has experienced dramatic population growth in recent decades. Between 1998 and 2010 the country's population almost doubled. This has been a driver of significant pressure on the country's biodiversity, mainly in the form of habitat loss, unsustainable exploitation and pollution. It is generally recognised that the rate of biodiversity loss appears to be greater than the rate of conservation and mitigation, and that the obstacles encountered include institutional weakness, inadequate funding, inadequate capacity and poor governance.[213]

NBSAP preparation process

Cameroon ratified the CBD in 1994. The NBSAP was prepared between 1997 and 1999 but was not finally approved until 2002. Among the reasons for this time lag were financial constraints and the retirement of the national coordinator of the NBSAP preparatory process, leading to a delay in administrative procedures.[214]

Engagement with stakeholders

The preparation of the NBSAP started with the creation of a Coordination Unit in the former Ministry of Environment and Forestry and of a taskforce mandated to undertake sectoral studies of various aspects of Cameroon's biodiversity. A National Expert Drafting Committee was also established and three workshops were held in 1997 with the participation of the taskforce, the drafting committee and various other stakeholders.

The NBSAP itself does not provide much information about the preparatory process, but, according to interviews with key players in the process, there was wide participation in the process both from various government sectors and civil society, and the process clearly raised awareness about the value of biodiversity.

Level of approval within government

The foreword to the NBSAP is written in the name of the then Minister of the Environment and Forestry, who states that the NBSAP is introduced jointly with the Ministries of Livestock, Fisheries and Animal

211 The main sources for this study are the Cameroon National Biodiversity Strategy (2002) and the Cameroon Fourth National to the CBD (2009), both available at the CBD website www.cbd.int/countries/?country=cm, and interviews with key stakeholders during the field visit in May 2010.

212 Cameroon's Fourth National Report to the CBD (2009).

213 GEF Country Portfolio Evaluation: Cameroon (1992–2007) (2009).

214 National Case Study of Cameroon on the Integration of Biodiversity into National Environmental Assessment Procedures produced for UNDP/UNEP/GEF Biodiversity Planning Support Programme, 2001.

Production, of Agriculture, and of Scientific and Technical Research. Other than this, neither the NBSAP itself nor Cameroon's Fourth National Report (2009) provide further information about the level of endorsement of the NBSAP.

According to interviewees, a stakeholder meeting was planned to take place to give final endorsement to the NBSAP and to agree on the shared responsibilities for implementation. However, this meeting never took place. It is generally perceived that the NBSAP has not been formally adopted, and interviewees found that the poor level of ownership and implementation of the NBSAP can be largely attributed to this lack of formal adoption and allocation of responsibilities by the government.

Revision

According to the NBSAP, annual reviews are to be conducted and periodic reviews are to be produced quarterly, half-yearly and annually. This has not happened.

A process for revision of the NBSAP was initiated in 2006 with the support of WWF and UNDP. A gap analysis was carried out, and a number of issues to be taken into account in the revised NBSAP were identified. These issues included fisheries and forestry policies, synergies between different conventions, environmental impact assessment, better integration of traditional knowledge, promotion of ecotourism, and institutional changes in responsibilities for biodiversity.[215] The former Ministry of the Environment and Forestry had been divided into the Ministry of Environment and Protection of Nature (MINEP), the focal point for the CBD, and the Ministry of Forestry and Wildlife (MINFOF).

Neither the process initiated in 2006 nor a later revision process in 2008 led to the adoption of a revised NBSAP. According to interviewees, the reason for this lay mainly in disagreements between MINEP and MINFOF.

The Fourth National Report does not report on these unfinished revision processes, but concludes that ten years after the NBSAP was issued there is now a need for revision.

National coordination structures for overseeing implementation

The foreword to the NBSAP mentions that an inter-ministerial committee was established "to ensure that biodiversity concerns, particularly those concerns now specified in NBSAP, are taken into account in all government's policies and actions". Apparently, this committee has never functioned.

Main features of the NBSAP

The NBSAP is divided into sections describing the background and rationale, current status of biodiversity, problem analysis, strategy, and action plan.

The overall goal is to implement the three objectives of the CBD and to fulfil the decisions of the COP. The NBSAP has the following five strategic goals:

- Reduce and/or stop biodiversity loss and ecosystem degradation in the short and medium term, and reverse the current trend of ecosystem degradation and biodiversity loss in the long-term, through environmentally appropriate, socially beneficial and economically viable biodiversity management systems

215 PowerPoint presentation by Dr Nouhou Ndam at the Central African Sub-Regional Capacity-Building Workshop on Implementing NBSAPs and Mainstreaming Biodiversity, Limbe, Cameroon, 22–25 September 2008.

- Promote known values of biodiversity and its components (short-term) and assess unknown values so as to raise awareness of the importance of biodiversity and to derive incentives such that all stakeholders will pledge greater commitment to conserve and sustainably use biodiversity and its components
- Develop and/or strengthen capacity for planning, implementation and monitoring of biodiversity programmes and projects at all levels of the society, and in particular at the local community level
- Adapt legislation to include CBD requirements
- Promote the development of project proposals and fundraising.

The NBSAP is based on the ecosystem approach, and the activities outlined are clustered around the six major ecosystems in Cameroon:

1. Marine and coastal
2. Tropical humid dense forest
3. Tropical woodland savannah
4. Semi-arid
5. Montane
6. Freshwater.

The NBSAP comprises twenty-eight priority objectives, and under these, 228 actions are identified. Of the twenty-eight objectives, thirteen are ranked 'very high priority' and the rest 'high priority'.

A comprehensive system involving 139 indicators and 131 means of verification was announced for monitoring the twenty-eight objectives. According to interviews with key stakeholders, and the Fourth National Report, this monitoring system has never been applied and therefore the degree to which the 228 actions have been effectively undertaken is not known.[216]

Integration of NBSAPs with sectoral plans and policies

On socioeconomic questions related to biodiversity, the NBSAP reports that population growth, economic recession and poverty have been major drivers of biodiversity, but offers little reflection on the values of biodiversity for development and poverty eradication. The Fourth National Report concludes that Cameroon's biodiversity has not been quantitatively and qualitatively evaluated, nor has its importance been clearly understood by the major stakeholders. Thus, it is important for the government to incorporate the importance of biodiversity in all sectoral policies.

While the Cameroonian Poverty Reduction Strategy Paper (2003) generally recognises the importance of sustainably managing the environment and national resources (especially forests), it pays very little attention to biodiversity and related issues and does not refer to the NBSAP.[217] The latest MDG progress report (2003) reflects the issue of biodiversity more prominently, making references to the NBSAP and mentioning "strengthening the coordination of institutional mechanisms for biodiversity management" and "protecting biodiversity by creating reserves of rare plants and endangered species" as some of the priority actions to be taken.[218]

216 Cameroon Fourth National Report (2009).
217 http://siteresources.worldbank.org/INTPRS1/Resources/Country-Papers-and-JSAs/Cameroon_-_PRSP1.pdf
218 www.undg.org/archive_docs/180-Cameroon_MDG_Report_-_3rd_Report.pdf

Forestry

The total forest cover in Cameroon is approximately 212,450 square kilometres, comprising 45.6 per cent of the total land area. It is estimated that the total forest loss since 1990 has been 13.4 per cent.[219] According to the NBSAP, the causes of forest biodiversity loss in the tropical humid dense forest ecosystem are many and complex. However, the main seem to be plantation agriculture, unsustainable marginal agriculture (including shifting cultivation), unsustainable logging, poaching/hunting for bushmeat, and to some extent clearing for urban and industrial development. As in other cases, these major causes are closely associated with policy, legal and socioeconomic failures.

In the late 1990s, the declining price of commodities hit the country very hard. The currency was devalued, pushing rural populations to clear additional forest for subsistence crop production, encouraging the government to grant more logging concessions.

The objectives for the tropical humid dense forest ecosystem are:

- To promote sustainable management and exploitation of tropical dense forest and resources
- To build, develop and strengthen capacity at all levels for the sustainable management and the protection of forest ecosystems
- To promote traditional knowledge of forest and biodiversity and its socioeconomic importance
- To promote biodiversity prospecting
- To ensure proper care of forests and to improve knowledge of the value of forests and their ecosystem dynamics
- To ensure the demarcation of forest reserves so as to limit the further utilisation of forest reserves by non-forest activities
- To institute measures against activities and practices likely to produce uncontrollable forest fires
- To ensure the adoption of better farming techniques by the population and to provide alternatives to forest resources such as fuel wood and building materials so as to reduce pressure on forests to meet daily subsistence needs
- To ensure the conservation of the representativity of the forest ecosystem.

Under the first four of the above objectives the NBSAP action plan includes thirty-seven actions, the majority of which are ranked as 'very high priority'.

The Fourth National Report gives little information on the extent to which these actions have been integrated into forest policies; nevertheless, integration appears to be limited.

The legal framework regulating forestry is the *Forestry, Wildlife and Fisheries Law* (No. 94, 20 January 1994) and the political framework is the National Forest Action Plan, finalised in 1995. These prescribe conservation and sustainable use as well as the active participation of the population in the conservation and management of forests, such as through community forestry. However, such participation appears to remain underdeveloped and it seems that community forestry has so far not been successful as an incentive for conservation, sustainable use and benefit sharing. Another obstacle reported is the lack of consistency between environmental law and land tenure laws and systems.[220]

219 http://rainforests.mongabay.com/20cameroon.htm
220 GEF Evaluation Office (2009).

The NBSAP reports that efforts are being made to encourage the planting of trees throughout the country and especially in provinces located in the semi-arid Sahelian zone.

The government has announced its intention to reform the existing forest policy.[221]

Agriculture

Agrobiodiversity is extremely important in Cameroon for food security, and the country possesses very rich crop and livestock genetic diversity.

There are no specific provisions related to agriculture in the NBSAP and there appear to be no sector policies for agrobiodiversity; for cultivated species, conservation is essentially *ex situ*. However, initiatives to conserve agrobiodiversity have been taken at the project level. The Fourth National Report describes the 'Heifer Project' (2003), whose slogan is 'Living Hope for a Hungry World' and which has provided a practical demonstration of appropriate conservation and management techniques to over 10,000 resource-poor families for a number of forms of animal biodiversity as a contribution to improving their livelihoods.

Domestication of wild plants and animals is a growing industry in Cameroon.

Fisheries

Cameroon has a heavily exploited 1,500 kilometre coastline where much biodiversity has been lost. Some of this depletion is due to overexploitation of fish resources, but according to the NBSAP there is no detailed information on major fish species under commercial exploitation.

Of the thirty-four actions proposed under the objectives for marine and coastal biodiversity in the NBSAP, none are directly related to fishery, although some are indirectly related, such as those to establish marine protected areas and to determine acceptable harvesting levels for each marine resource. The NBSAP reports, however, that measures have been taken to ensure that fishing zones are properly demarcated, that authorised and appropriate fishing methods are employed, that appropriate equipment is used during exploitation, and that there will be access controls on fishing grounds currently dominated by foreigners.

Tourism

The NBSAP does not address tourism. Ecotourism is practised in Cameroon but on a small scale and so far with limited potential to support local communities and biodiversity conservation. Considering the country's biodiversity wealth, there is clear untapped potential for ecotourism.

Hunting

Illegal hunting or poaching is a major cause of animal biodiversity loss, but the NBSAP does not address this issue in the form of any concrete measures.

Bioprospecting and access to and benefit sharing from using genetic resources

Objectives and actions to promote bioprospecting are included in the NBSAP under the consideration of the various ecosystems, but Cameroon has not enacted legislation to implement the CBD provisions on ABS.

221 cmsdata.iucn.org/downloads/opening_day_press_release.pdf

Protected areas

The establishment of protected areas is included in the NBSAP among the objectives and actions for the various ecosystems, and Cameroon has a long tradition of designation of protected areas. The Fourth National Report states that Cameroon has set a target to conserve 30 per cent of its national territory.

Cameroon has declared approximately 11 per cent of its territory as protected, in the form of national parks, forest reserves, wildlife sanctuaries, and botanical and zoological gardens. If the areas classified as safari or community management hunting zones are also considered as protected areas, the total extent of protected area coverage is estimated to be 135,000 square kilometres, or about 30 per cent of the national territory.

Integration of NBSAP with climate change policies

The NBSAP calls for actions to monitor the impact of climate change on the various ecosystems. Other than this the NBSAP contains no reference to integration with climate change policies.

The Fourth National Report notes that "Cameroon is very advanced in the building of capacities and synergies for the implementation of the three related conventions of the CBD, UNFCCC, UNCCD"; however, the report does not illustrate with any examples.

Integration of NBSAP with implementation of the other biodiversity-related conventions

Cameroon has ratified all the global biodiversity-related conventions. The NBSAP does not consider the integrated implementation of these.

Integration of NBSAP with the sub-national level

Cameroon is divided into ten regions under decentralised state authorities headed by a governor. The regions are divided into divisions, which are further divided into sub-divisions.

The need for integration of measures to conserve and sustainably use biodiversity is recognised in the NBSAP, but the consistent message from stakeholders interviewed was that the NBSAP has not been well communicated or integrated into the work of the regions and their sub-regional divisions. In addition to the problem of limited resources at the sub-national level, a further obstacle reported was that regional staff are often decentralised national government officials, simultaneously subject to the demands of their line ministries and the regional governor.

Engagement with local and indigenous peoples

Under a number of its objectives and actions, the NBSAP calls for the active involvement of local and indigenous groups in the management of biodiversity. However, it appears from the various reports and interviews with key stakeholders that efforts to engage local communities, in the creation of community forests for example, have had limited success and that, by and large, local communities do not regard the conservation and sustainable use of biodiversity as generating local benefits. Local community activities are often referred to as obstacles to conservation and sustainable use. The Fourth National Report notes that "in many rural areas old traditions and taboos in biodiversity-related activities have slowed down or even impeded CBD implementation".

Thus, untapped opportunities exist to create incentives and empower communities to effectively manage and benefit from biodiversity resources.

The lack of translation of government policies to sub-national authorities mentioned above is also a reason for the limited community engagement.

Regional cooperation

A large part of Cameroon is covered by its portion of one the three biggest forest ecosystems in the world, the Congo River Basin, an ecosystem shared with neighbouring countries. Thus, sustainable management of this biodiversity hotspot requires cooperation across borders.

While the NBSAP contains no specific provisions on regional cooperation, such cooperation does take place within the framework of the Central African Forest Commission (COMIFAC), established in 2005 (i.e. after the NBSAP), to act as a regional forum for the joint conservation and sustainable management of forest ecosystems in Central Africa. The participating countries are Cameroon, Central African Republic, Democratic Republic of Congo, Equatorial Guinea, Gabon, Chad, Burundi, Sao Tome and Principe, and Rwanda. COMIFAC is the primary authority for decision-making and coordination of sub-regional actions and initiatives on conservation and sustainable management of the Congo Basin forests, including biodiversity.

COMIFAC has facilitated establishment of national environmentally sustainable strategies and has trained key actors participating in policy formulation. Interviewees generally commented that Cameroon has benefited highly from COMIFAC.

Tools for implementation

Communication, education and public awareness

The NBSAP includes a thorough assessment of Cameroon's biodiversity and reveals a good knowledge base of the state of biodiversity, the threats to it, and the measures needed to reverse the negative trend. The NBSAP process itself may have had an impact in terms of improving and disseminating this knowledge base to a wider audience.

In terms of education, environmental education has been built into school curricula, and biodiversity-related issues have been incorporated into various university programmes.

The NBSAP does not consider how to communicate the NBSAP itself to a wider audience, and it is generally believed that the NBSAP remains largely unknown in Cameroon. During its country study visit to Cameroon, UNU-IAS found that hard copies of the NBSAP were not available.

Legislation

A National Environmental Management Plan (NEMP) was adopted around the time of the preparation of the NBSAP. Within the framework of the NEMP, a number of legislative measures have been taken, including the Framework Law on the Environment. This law outlines the manner and direction in which other laws on the environment will follow. Another important piece of legislation is the previously mentioned Forestry, Wildlife and Fisheries Law, which provides for the involvement of local communities, notably through ownership of community forests.

It is generally perceived that there is a serious lack of capacity to enforce compliance with the different laws and regulations in place, especially in the field of protected areas.

EIA and SEA

In accordance with the Framework Law on the Environment, EIA is required before any development project can be carried out. The assessment covers the expected impacts on biodiversity. According to a 2001 case study undertaken as part of the GEF Biodiversity Planning Support Programme,[222] EIA has contributed significantly to biodiversity protection in Cameroon.

SEA is not required and, as far as is known, is not applied.

Spatial planning

Promotion of spatial planning appears in the NBSAP only in the context of action to promote the sustainable exploitation of semi-arid resources.

Application of the ecosystem approach

The NBSAP is probably the first and one of the very few NBSAPs to explicitly apply the ecosystem approach. However, due to its early preparation, it does not address the guidance for the application of the ecosystem approach adopted by subsequent meetings of the COP.

Incentives and valuation measures

The NBSAP is based on and clearly reflects an understanding that biodiversity has a tremendous value in Cameroon, given that the national economy and the livelihoods of its people are based to a large extent on activities related to biodiversity. Nevertheless, like those of many other countries, the Cameroon NBSAP does not contain concrete measures to create economic incentives for conservation and sustainable use.

Taxes have been introduced on the exploitation of natural resources such as timber, fish and mineral resources.

Financing

Lack of financial resources is generally cited as the major obstacle to implementation of the NBSAP. A number of the stakeholders interviewed believed that it is not just a matter of getting more funds but also of making better use of the funds already available, through better mainstreaming of biodiversity concerns and coordination across sectors and at the sub-national level.

A number of conservation initiatives are being carried out with financial and technical support of external donors such as WWF and bilateral cooperation agencies such as GTZ, the UK Department for International Development (DFID) and USAID.

The GEF has also provided support for many projects, especially those related to protected areas. In 2009 the GEF Evaluation Office issued a country portfolio evaluation of Cameroon which, among other things, concluded that GEF support has been instrumental in the planning, expansion and management of Cameroon's protected areas system, but that local benefits are still not visible enough to provide substantial incentives to support conservation activities. The evaluation also concluded that the results of the GEF support are at risk because of weak financial, institutional and socioeconomic sustainability in the country, and that project identification and preparation are externally rather than country driven.[223]

222 'Integration of Biodiversity into National Environmental Assessment Procedures: National Case Studies: Cameroon'
223 GEF Evaluation Office 2009, op cit, pp.3–6.

National targets

The NBSAP does not include quantitative and time-bound targets. As mentioned above, a target has been set to conserve 30 per cent of the national territory – a target that appears to have been met when all categories of protected areas are taken into account.

Monitoring and review

As mentioned above, a comprehensive monitoring system with 139 indicators and 131 means of verification was included in the NBSAP but never implemented, thus making the degree of achievement of the 228 actions unknown.

Summary of implementation, obstacles encountered and lessons learned

Cameroon is a country exceptionally rich in biodiversity and one where the value of biodiversity for human well-being is very clear, but also one that continues to be faced with serious loss of biodiversity. Government policies have so far been unable to seriously affect the root causes of biodiversity loss, which are associated with strong demographic forces. Most importantly, in a country with such a large rural population, there is a real lack of incentives for local communities to conserve and sustainably manage ecosystems and biodiversity.

The NBSAP, approved in 2002, is an example of a policy document that has not had any real impact on the ground and that probably has not had much influence on such positive developments for biodiversity as have occurred, such as the considerable expansion of protected area coverage.

This can be largely attributed to factors already present during the preparatory phase of the NBSAP. The preparatory process was positive in many aspects. Through the preparation of a thorough study of Cameroon's biodiversity it led to improvement of the knowledge base, and through a very participatory process it led to widespread involvement and awareness on the part of a wide range of stakeholders who took part. Not least, it led to a comprehensive NBSAP with relevant objectives and actions.

However, the delay in final approval of the NBSAP until several years after its finalisation seems to have caused a serious loss of momentum. Moreover, it appears that the NBSAP was never formally approved by the government and therefore does not enjoy the status of an official government strategy. Such at least is the perception of major sectors whose ownership of the NBSAP is crucial to its implementation. This missing sense of ownership is reinforced by the non-functioning of the inter-ministerial committee that was envisaged by the NBSAP as its implementation mechanism.

The system included in the NBSAP to monitor implementation has never been applied, leading the Fourth National Report to state that the degree of implementation of the priority actions is unknown. However, given the limited sense of ownership on the part of sectoral bodies mentioned above, it is probable that actions envisaged as being under their responsibility have only been partially implemented at best.

The newly installed institutional structure at the government level, with division of responsibility for biodiversity between two ministries, was believed by some interviewees to be an obstacle to implementation of the NBSAP and the CBD. The fact that MINEP is the CBD focal point but has limited executive powers, while MINFOF is responsible for the implementation of central parts of the CBD such as designation of protected areas and the conservation and sustainable use of forest biodiversity, is seen as neither logical nor practical. Observers attribute the interruption of the NBSAP revision process to disagreements between the two ministries.

Another factor believed to impede implementation is the failure to delegate implementation responsibilities to sub-national authorities, together with the limited capacity of those authorities.

In the Fourth National Report, the lack of financial and human resources is generally considered to be the overriding obstacle to implementation. Thus, its main recommendation for future action for biodiversity is the provision of more funds. While there is a clear lack of capacity to fully implement and enforce existing policies and legislation, a greater focus on mainstreaming and coordination across sectors and with sub-national authorities could lead to a more rational and efficient use of existing resources.

Activities for biodiversity in Cameroon have been heavily dependent on funding from external donors. As the GEF Country Portfolio Evaluation states, this may have been at the expense of country ownership, as the projects have often been externally rather than country driven. Conservation and sustainable use of biodiversity will only receive support and understanding from the population if it emerges as the result of a country-owned planning process with wide participation across the economic sector, civil society, academia, the scientific community and other stakeholders. The preparation of a new NBSAP could offer an opportunity for this necessary participatory planning process, given that the first NBSAP did not manage to sufficiently engage major stakeholders such that the NBSAP could have a real impact on the main drivers of biodiversity loss.

It will be important that a new NBSAP be adopted and owned at the highest political level and be based on greater self-reliance and a reduced dependency on external funding. The preparatory process should ensure that all those sectoral agencies responsible for the execution of the planned actions are allocated the necessary resources in the national budget to do so. In addition, the NBSAP should identify those actions which would require external funding, with the proviso that such funding should be provided in a form that enhances rather than hampers self-reliance and should be capable of being integrated into programmes already defined on the basis of existing budgets.

4.5 Canada

Introduction

Canada is one of the largest countries on the planet, covering an area of approximately 13 million square kilometres of land and water. This area includes considerable biodiversity resources and large wilderness areas. Almost 20 per cent of the planet's wilderness, 24 per cent of its wetlands, 20 per cent of its freshwater and 10 per cent of its forests are located in Canada. Canada also has an extensive coastline of 244,000 kilometres and a large arctic ecosystem that covers nearly one-quarter of the country's landmass.

The large size of the country presents a challenge for the management and coordination of biodiversity-related activities. Canada is divided into provinces and territories, and activities need to be coordinated between federal, provincial and territorial entities as well as local municipal governments. The population of Canada totals approximately 33 million and is growing at a rate of 1.238 per cent annually (a daily increase of 1,137 individuals). Most of the population is concentrated around large cities and population centres in the south of the country, while rural areas, particularly northern areas, are sparsely populated. Canada has a diverse aboriginal population (First Nations, Métis and Inuit) who play an important role in implementation of its NBSAP, the Canadian Biodiversity Strategy.

NBSAP preparation process

Engagement of stakeholders

Canada was one of the first countries to prepare an NBSAP to meet its obligations under the CBD. The Biodiversity Strategy was released in 1996 after a three-year process that was undertaken by a federal-provincial-territorial biodiversity working group. The working group received its mandate from a group of environmental ministers (parks, environment, wildlife and forestry ministers). The preparation of the Biodiversity Strategy was a bottom-up process, with the main responsibility for the preparation resting with the provinces.

During the preparation process, the working group was advised by an advisory group made up of representatives from industry, the scientific community, conservation groups, academia and indigenous organisations. Ten expert focus groups were convened to provide additional advice on specific CBD articles. While sectoral participation in the preparation of the Biodiversity Strategy was considered to have been good, it was noted that the tourism sector did not participate. This was later considered an omission, considering the importance of tourism (including ecotourism) for the Canadian economy.

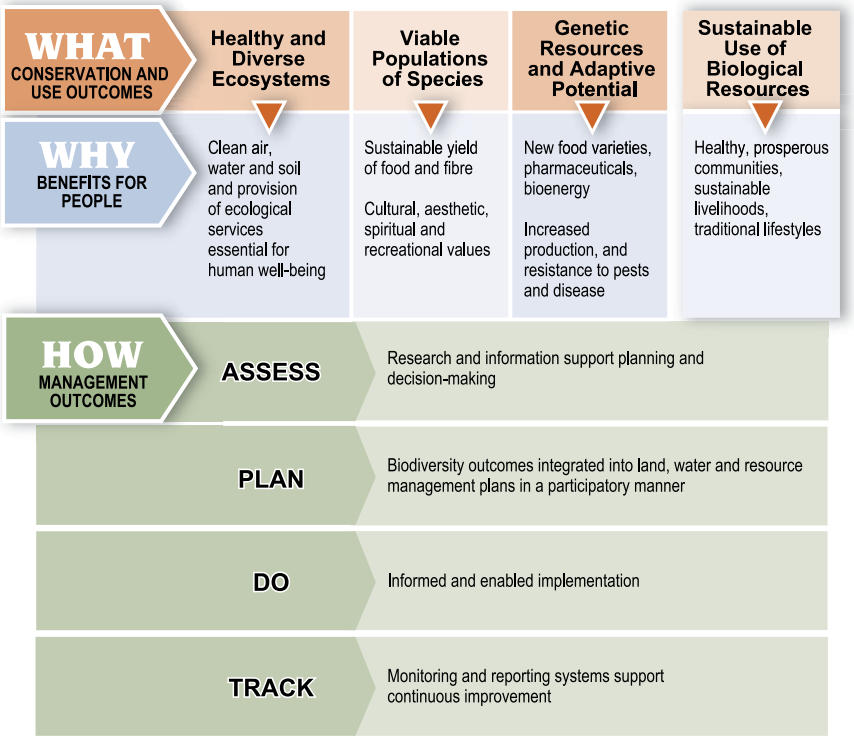
Level of approval within government

The Biodiversity Strategy was adopted at the ministerial level (environmental ministers). The subsequent enhancement to the strategy, the National Biodiversity Outcomes Framework (see below), was also adopted at the ministerial level.

Revision

Since 1996, Canada has moved forward with implementing the Biodiversity Strategy, but has not formally updated or revised it. The 'strategic directions' are seen to still be valid today, and thus continue to provide a foundation for the conservation and sustainable use of biodiversity in Canada. While a fundamental revision was not considered necessary, there was a recognition that the strategy should be complemented with more specific guidance to deal with new challenges and to reflect recent approaches for biodiversity management, such as the ecosystem approach. Importantly, there was a desire to identify measurable outcomes against which Canada can assess and report progress.

In 2005, federal, provincial and territorial ministers agreed on the need for an outcomes-based framework to provide a more systematic approach to identifying national biodiversity priorities. The National Biodiversity Outcomes Framework was developed in collaboration with federal, provincial and territorial governments with input from non-governmental interests. It builds on and complements the 1996 Biodiversity Strategy, and was adopted by the ministers in 2006. This framework is built around a suite of national outcomes: healthy and diverse ecosystems, viable populations of species, genetic resources and adaptive potential, and sustainable use of biological resources. The Outcomes Framework describes the societal benefits associated with these outcomes (such as clean air, water and soil, sustainable food supply, pharmaceuticals, protection from pests and diseases, healthy communities, sustainable livelihoods and traditional lifestyles). The 'what', 'why' and 'how' of the framework is shown below.



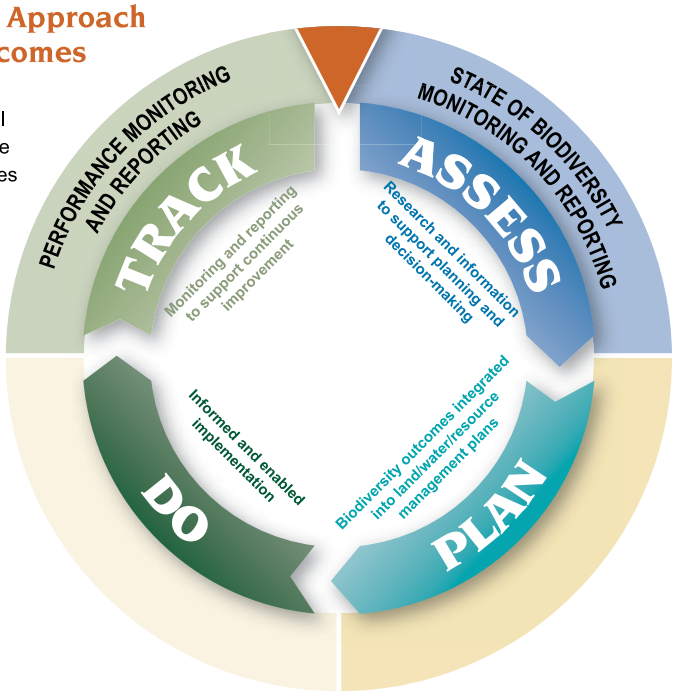
The Outcomes Framework uses an 'assess, plan, do, track' adaptive management approach that provides a basis for continuous learning and improvement. The framework takes into account the precautionary approach in recognising that, while decision-makers may lack some of the necessary information, action can still be taken based on best available knowledge. The adaptive management component (the 'how') is depicted below.

HOW We Will Get There: Using an Ecosystem and Adaptive Management Approach to Achieve Shared Outcomes

In an ecosystem approach, ecological goals are considered at the same time as economic and social goals. It places the trade-offs front and centre when decisions are being made.

Adaptive management is a cyclical process of taking stock, planning and decision-making, followed by implementation and tracking to see whether management responses to problems improve over time based on new knowledge and better information.

Management Outcomes: The "HOW"



The Outcomes Framework will be used to evaluate and report on progress, and was the basis for organisation of Canada's Fourth National Report. It will be used for communicating with both domestic and international audiences.

National coordination structures for overseeing implementation

The implementation of the Biodiversity Strategy and the subsequent Outcomes Framework requires collaboration at federal, provincial and territorial levels, as well as coordination among various governmental and non-governmental stakeholders. Considering the size of the country and its various levels of government, it could be reasonably expected that coordination would present additional challenges.

The challenges have perhaps been greatest at the highest (ministerial) level. The implementation of the Biodiversity Strategy was initially overseen by the Canadian Council of Ministers of the Environment, but was later left without a clear ministerial entity responsible. This lack of a clear lead for biodiversity governance made it challenging to gain political momentum at the highest level. This was rectified in 2000 when the Wildlife Ministers' Council mandated the development of a suite of biodiversity priorities for Canada (in a document called *Working Together*) that were presented to a joint meeting of wildlife, forestry, fisheries and aquaculture ministers in 2001. Joint meetings of these ministers, now called the Canadian Councils of Resource Ministers (CCRM), have taken place regularly since 2001, and presently provide for ministerial level governance (including federal-provincial-territorial coordination) of biodiversity work in Canada.

The CCRM mandated the development of an Ecosystem Status and Trends Report for Canada as a first deliverable following the adoption of the Outcomes Framework. It also called for a study of knowledge and information needs associated with biodiversity and adaptation to climate change. Additional collaborative work included the production of 'Canada's Stewardship Agenda' and the 'Invasive Alien Species Strategy for Canada'.

Canada relies to a great degree on bottom-up implementation of the Biodiversity Strategy, recognising the need to address provincial, territorial and local priorities. As a result, each of the provincial and territorial governments has developed its own arrangements for biodiversity planning and management. For example, the government of Ontario has created a multi- stakeholder Biodiversity Council to guide planning, implementation and reporting with respect to Ontario's biodiversity strategy. Alberta is developing its biodiversity strategy under the umbrella of a new land use framework, and Nova Scotia is creating a High Level Panel to oversee development of a provincial natural resource strategy that will include forestry, mining and protected areas. Each approach is unique, with some provinces/territories more advanced than others in implementing biodiversity-related activities.

Main features of the NBSAP and possible other biodiversity plans and policies

The NBSAP presents a vision for Canada of "a society that lives and develops as a part of nature, values the diversity of life, takes no more than can be replenished and leaves to future generations a nurturing and dynamic world, rich in its biodiversity".

The NBSAP provides 'strategic directions' and activities to be undertaken on the federal, provincial and territorial level for the following:

A. Wild flora and fauna and other organisms
B. Protected areas
C. Restoration and rehabilitation
D. Sustainable use of biological resources
E. Biosafety: Harmful alien organisms and living modified organisms
F. Atmosphere
G. Human population and settlement.

As described above, the Outcomes Framework enhances and builds upon the Biodiversity Strategy by identifying a set of national outcomes that can be achieved through implementation of the Biodiversity Strategy, as well as an 'assess, plan, do, track' adaptive management approach for implementation.

Integration of NBSAP with higher and cross-sectoral plans and policies

The Biodiversity Strategy sets the foundation for integrating biodiversity concerns into cross-sectoral plans and policies through its goal of "ensuring that economic, trade, conservation and sustainable resource-use laws and policies are mutually supportive". It also contains provisions relating to development aid, particularly through contributions to the GEF and to projects funded by the Canadian government and NGOs. This funding includes capacity-building and transfer of environmentally sound technologies.

Further integration of biodiversity concerns into development plans will be undertaken in the context of the Federal Sustainable Development Strategy, which will be drafted in 2010. This strategy will include legislated federal sustainable development goals and targets, as well as an implementation strategy for meeting each target. Departments' and agencies' sustainable development strategies will be required to have plans and objectives that comply with the new strategy. The development of this strategy is required by the *Federal Sustainable Development Act*, adopted in 2008.

Some municipal governments have already developed their own sustainability plans or 'green' plans which incorporate biodiversity concerns through, for example, consideration of natural areas and parks.

For example, in British Columbia, the sustainability plan of the municipality of Whistler (Whistler 2020) includes action plans and provision for community taskforces on priority topics such as natural areas and water (including wetland) resources.

Integration of NBSAP with implementation of the other biodiversity-related conventions

The Biodiversity Strategy promotes the consideration of the objectives of the CBD in the context of other international agreements, in particular the Ramsar Convention. The Fourth National Report to the CBD provides information about selected activities undertaken in fulfilment of Ramsar, CITES and the World Heritage Convention, indicating a degree of integration.

Integration of NBSAP with climate change and desertification policies

The Biodiversity Strategy was developed in 1996, before national climate change policies became commonplace. It does, however, mention a National Action Plan on Climate Change which was being prepared at that time. The strategy pays little attention to linkages between biodiversity and climate change, only considering climate change in relation to the atmosphere, along with atmospheric pollutants. The strategy highlights the need to develop linkages in the implementation processes of the CBD and the UNFCCC, as well as the need for coordination between national programs dealing with these issues. The strategy thus sets the stage for integration between biodiversity and national climate change policies.

This integration has not yet fully taken place, and Canadian climate change policy is not particularly biodiversity oriented. The greatest progress in linking the climate change and biodiversity agendas has been made through the recognition of the role of biodiversity in climate change adaptation, although this work has been done in the context of the environmental rather than the climate change agenda. Regardless, the need for mainstreaming was recognised in a 2007 federal report entitled *From Impacts to Adaptation*, which emphasises the importance of mainstreaming climate change within ongoing planning and policy decision-making. According to the Fourth National Report, programmes and policies dealing with natural resource management, land-use planning and other climate-sensitive issues provide ideal opportunities for using an ecosystem approach and mainstreaming biodiversity into climate change adaptation.

While the above deals with future policy-making, some climate change adaptation actions are already being implemented in Canada, including actions by provincial and municipal governments. According to the Fourth National Report, most of the adaptation actions were initiated in response to isolated events or circumstances, as the need became apparent and where the capacity existed. A more anticipatory and strategic approach to adaptation would be desirable in the future. Provinces and territories that are already experiencing impacts of climate change are paving the way to a strategic approach. For example, the Yukon Territory, which is experiencing extreme weather events, melting permafrost and changing species distribution, has developed a climate change strategy and an action plan which include activities relating to both adaptation and mitigation. Many municipal governments are also looking into developing (or in some cases have already developed) similar policies.

Desertification is not a priority issue in Canada, and thus there are no desertification policies, although Canada does have some polar desert in the high Arctic which is vulnerable to climate change.

Integration of NBSAPs with sectoral plans and policies

Sectoral integration was an important consideration in the development of the Biodiversity Strategy. Forestry, agriculture and fisheries agencies participated in the working group that developed the strategy, though representatives of the tourism sector did not participate.

The development and implementation of sector-specific policies, plans and programs is addressed in the fourth section of the Biodiversity Strategy, which contains specific strategic directions related to agricultural areas, aquatic areas (freshwater, wetland and marine ecosystems) and forested areas.

Forestry

The forestry sector seems to have achieved the greatest degree of integration. The Biodiversity Strategy specifically mentions Canada's 1992 National Forest Strategy and builds upon those elements of it that are most relevant to the objectives of the Convention. The National Forest Strategy was updated in 1998 and 2002.

Sustainable forest management has been another approach for integrating biodiversity concerns into the forestry sector, and a number of initiatives are underway to apply this approach. The Canadian Council of Forest Ministers (CCFM) provides a cooperative forum for federal, provincial and territorial governments responsible for forests, and biodiversity outcomes are integrated into forest sector action plans through the CCFM. The CCFM's vision identifies biodiversity as a fundamental value critical for the maintenance of goods and services provided by forest ecosystems. Biodiversity is one of the six criteria in the CCFM's Criteria and Indicators of Sustainable Forest Management framework, and this has provided a way for biodiversity goals and targets to become integrated into forest management. The CCFM framework is compatible with the 2010 targets developed by the CBD. Provincial, territorial and other policy-makers may develop appropriate legislation and management guidelines using guidance from this framework.

Agriculture

As the federal department responsible for agriculture, Agriculture and Agri-Food Canada (AAFC) participated in the development of the Biodiversity Strategy. Issues related to agricultural biodiversity are included in the strategy through a call for "the development and implementation of integrated resource use policies, plans, legislation and programs for agricultural, forested and aquatic areas that support the conservation of biodiversity and sustainable use of biological resources".

Implementation of sustainable agriculture initiatives has progressed through relevant governmental policies. The Agricultural Policy Framework (APF) (2003-2008) was a five-year federal-provincial-territorial agreement that contained environmental programs and policies designed to contribute to the sustainable use and conservation of biodiversity in agricultural areas. Building upon these initiatives, the Growing Forward Policy Framework (2008-2013) will also address sustainable agriculture. Other programs include Greencover Canada, which was a five-year initiative to help agricultural producers improve grassland management practices, protect water quality, reduce greenhouse-gas emissions and enhance the provision of wildlife habitat with increased biodiversity benefits, particularly for marginal land. The Community Pastures Program (CPP), an initiative spanning several decades, is a prairie agriculture biodiversity sustainability initiative encompassing some of the largest contiguous blocks of grasslands and functional prairie ecosystems in western Canada.

Increasing consumer demand for local organic produce, the 'slow food movement', farmers' markets, community gardens and other similar local initiatives have also contributed to the popularity of small-scale, environmentally responsible farming practices.

Fisheries

The Department of Fisheries and Oceans (DFO) has federal responsibility for developing and implementing policies and programs relating to oceans and fresh waters, and is thus the primary partner for mainstreaming biodiversity concerns into the fisheries sector. The DFO participated in the development of the Biodiversity Strategy and has collaborated actively in CBD-related initiatives. The DFO's guiding legislation includes the *Oceans Act* and the *Fisheries Act* (which covers the management

of fisheries, habitat and aquaculture). Canada's Oceans Strategy was released in 2002, and it outlines how the *Oceans Act* would be implemented for the environmental, social and economic development of Canada's ocean, offshore and coastal areas. The *Oceans Act* and the Oceans Strategy are the main instruments for mainstreaming biodiversity concerns within fisheries. They contain a goal to develop a system of nested integrated management plans for all marine waters, and to establish within these a national network of marine protected areas. Many coastal provinces already have in place provincial marine protected areas.

Due to declines in the stocks of many commercially important fisheries species, strategies for reducing fishing pressure and improving sustainability are becoming increasingly important. The application of an ecosystem approach to fisheries through area-based management and protection, and the adoption of a policy to manage the impact of fishing on sensitive benthic areas, are steps towards greater integration of biodiversity concerns into fisheries. Another strategy supporting mainstreaming is the promotion of certification programmes, such as that of the Marine Stewardship Council (MSC). The DFO has moved to increase certification of fisheries in Canada, following rising trends of forest certification in the country. Additionally, British Columbia has set a goal to have all its major commercial fisheries either certified sustainable or in the full assessment phase for certification in the next one or two years. The desire for certification is driven by the major retailers and seafood processors in the US, EU and Japan, who are increasingly demanding MSC certification from British Columbia suppliers.

Tourism

The tourism industry was not involved in the development of the Biodiversity Strategy, although tourism, and in particular ecotourism, constitutes a large part of Canada's economy. In practical terms, though, members of the tourism industry are involved in various sustainability programmes which reduce the impact of tourism on biodiversity.

Mining

The mining industry is developing environmental codes of conduct and launched its Towards Sustainable Mining initiative in 2004 to align industry actions with priorities and values of stakeholders and improve the industry's sustainable development performance.

Overall mainstreaming

While the activities described above represent impressive efforts towards incorporating biodiversity concerns into the work of sectors, mainstreaming still remains an uneven effort. While some sectors, such as forestry and fisheries, are making good progress, the impacts of previous unsustainable practices are still evident in the decline of fish stocks and the scars left by unsustainable logging. It will take concerted efforts to reverse declining trends in both forest and marine biodiversity. Extracting bitumen from the tar sands in Alberta has caused major biodiversity impacts and emissions of greenhouse gases, but due to the importance of petroleum to Alberta's economy it is unlikely that biodiversity conservation will become a real priority for the industry, even if extraction methods are slightly improved.

There is also still a certain amount of distrust between the production sectors and the CBD (including those implementing the CBD nationally), demonstrated for example by negative statements about CBD policies made by representatives of Canadian sectoral agencies at international meetings. Despite such statements, those same sectoral representatives are in fact undertaking a respectable number of activities to further the implementation of the CBD. In the words of one Canadian environmental official: "mainstreaming consists of one step forward and two steps back".

Integration of NBSAP with the sub-national level

The Biodiversity Strategy makes provisions for the preparation of sub-national biodiversity strategies. It states that "federal, provincial and territorial governments, in cooperation with members of the public and stakeholders, will pursue the strategic directions set out in the Strategy according to their policies, plans, priorities and fiscal capabilities. Implementation mechanisms will vary among jurisdictions".

Subsequently, sub-national biodiversity strategies have been prepared, or are under preparation, by most provinces and territories (Alberta, British Columbia, New Brunswick, Northwest Territories, Ontario, Quebec and Saskatchewan). These sub-national plans have often been more forward-thinking and concrete than the national Biodiversity Strategy. For example, the biodiversity strategy of Alberta includes binding targets.

The provincial and territorial biodiversity strategies have also provided for the development of new and important partnerships for the conservation and sustainable use of biodiversity. For example, the Northwest Territories has developed its biodiversity and protected areas strategy and action plan in partnership with aboriginal communities. There are also increasing numbers of private sector and NGO partnerships as more companies begin to develop strategies for reducing their ecological footprint or seek ways to offset potential impacts.

In addition, many cities have biodiversity plans or sustainability plans and are collaborating with each other. With over 80 per cent of Canadians now living in urban areas, the success of the Biodiversity Strategy hinges increasingly on municipal-level commitment and the targeting of urban areas at the provincial and federal level.

Engagement with indigenous peoples

The Biodiversity Strategy was developed with participation from indigenous peoples, and contains sections on traditional knowledge and implementation by indigenous communities. The strategy promotes community-based and community-paced implementation by indigenous peoples. This will require formulating local systems for preserving, using and regenerating traditional indigenous knowledge. The strategy also refers to the development of community-based regimes designed to preserve traditional indigenous knowledge, innovations and practices, and to recognise their potential economic, scientific, social and cultural values.

In practice, indigenous peoples have become some of the most important partners in implementing the Biodiversity Strategy. As land claims are settled, indigenous peoples are managing extensive tracts of land and resources in conjunction with other jurisdictions. Although not without controversy, the negotiation of land claims and finalisation of other agreements have helped develop partnerships that promote mutual respect and the protection of cultural and ecological values. One example of this is indigenous peoples' involvement in the creation and maintenance of protected areas, particularly in the northern territories. Many of the most significant protected area gains made in Canada in recent years stem from land use planning undertaken following claim negotiations.

As a result of their constitutionally protected rights related to wildlife, indigenous peoples participate in wildlife management through co-management boards in many northern areas. These boards also contain representation of federal, territorial or provincial governments. Co-management boards currently cover lands in the Northwest Territories, Northern Quebec and Labrador. They meet regularly to make decisions about wildlife, including species at risk, environmental management and other issues.

Sustainable forestry is facilitated through the First Nations Forestry Program, which supports capacity-building for First Nations to develop forest resources, implement sustainable management practices, and benefit from forest-based development opportunities. At sea, the Aboriginal Fisheries Strategy provides a regulatory framework for food, social and ceremonial fisheries, and employment opportunities related to fisheries management. Broader oceans management initiatives are undertaken through the Aboriginal Aquatic Resource and Oceans Management program, which provides funding to qualifying indigenous groups to establish aquatic resource and oceans management bodies. The Aboriginal Inland Habitat programs support the involvement of indigenous groups in integrated watershed or ecosystem planning and management.

In addition to these co-management efforts, indigenous peoples participate with stakeholders in other government-led programs and initiatives. Examples of this include the Federal Marine Protected Areas Strategy and the Canadian Boreal Initiative, which bring together a broad range of partners for cooperative management.

Indigenous-led initiatives include the Assembly of First Nations Environmental Stewardship Unit, which conducts research, develops policy, and advocates on behalf of First Nations on a broad range of environmental issues. The First Nations-led NGO, the Centre for Indigenous Environmental Resources, helps conserve biodiversity by working with First Nations through assessments of biodiversity status and implementation of strategies.

Traditional knowledge and indigenous views are incorporated into assessment and management through initiatives such as the National Aboriginal Council on Species at Risk (NACOSAR). NACOSAR advises the Minister of the Environment on the administration of the *Species at Risk Act* (SARA) and provides recommendations to the Canadian Endangered Species Conservation Council. The SARA also requires that an Aboriginal Traditional Knowledge Subcommittee be established on the Status of Endangered Wildlife in Canada (COSEWIC) to facilitate access to the best available traditional knowledge and integration of that knowledge into COSEWIC's status assessment process.

According to Canada's Fourth National Report, the incorporation of traditional knowledge has been a significant contributor to the effectiveness of Canada's various biodiversity initiatives, providing information regarding the sustainable use of plants and animals, and the relationships and current stresses in ecosystems.

Tools for implementation

Communication, education and public awareness

The Biodiversity Strategy contains a section on education and awareness which focuses on making individuals and communities aware of the need to conserve biodiversity and to use biological resources in a sustainable manner.

One of the main methods for the government to communicate with Canadians has been through biodiversity status and trends reporting, which was identified as a priority by the Canadian Council of Resources Ministers in 2001. In 2007, it mandated the development of an Ecosystem Status and Trends Report (ESTR). This report is the first deliverable under the Outcomes Framework. A federal/provincial/territorial steering committee has been established to produce the report, which will be released in 2010. In the meantime, national reports to the CBD provide information both to Canadians and an international audience.

Many provincial and territorial governments have already produced reports on topics of relevance to biodiversity. Examples of these include Saskatchewan's first State of the Watershed Report (2007) and

the Taking Nature's Pulse report (2008) produced by Biodiversity British Columbia. The British Columbia government concurrently launched its science-based conservation framework that is intended, in part, to address many of the report's findings. The Biodiversity Atlas of British Columbia, released in June 2009 as a companion document to Taking Nature's Pulse, provides a broad overview of the province's biodiversity and of human-induced threats affecting biodiversity.

While the initiatives described above are governmental, numerous NGOs, universities, cities and other entities have launched educational and awareness programs relevant to biodiversity.

Legislation

According to the Biodiversity Strategy, legislation is seen as most effective when it is developed and used as part of an overall strategy that includes planning systems, education and incentives. The strategy calls for jurisdictions to examine existing legislation and take steps towards creating an improved legislative framework where necessary.

Since the development of the Biodiversity Strategy, a great deal of effort has been invested in a national regime for the protection of species at risk, as well as other federal, provincial and territorial legislation. There is no single piece of legislation that relates only to biodiversity or to ecosystems as a whole.

One of the main pieces of biodiversity-relevant legislation is the SARA, which was passed in 2002 and is the federal component of the legislative commitment in the 1996 Accord for the Protection of Species at Risk. Provincial legislation is coming into force in each jurisdiction as parliamentary processes and political priorities dictate. A number of provinces also have species at risk legislation developed prior to or independent of the SARA. While this legislation represents substantial progress towards management of biodiversity, its predominance on the federal level may also give the impression that conservation and sustainable use of biodiversity is all about species protection.

Protected areas are governed by the *National Parks Act*, which also addresses the maintenance of ecological integrity.

The *Oceans Act* is an ecosystem-based piece of legislation that provides for a coordinated federal approach to ocean management. The core legislation guiding fisheries management at the federal level is the *Fisheries Act*.

The *First Nations Land Management Act*, established in 1999, is a sectoral self-government initiative that allows First Nations to resume control over the management of their lands and resources and to receive training and capacity development.

In addition to the federal-level legislation, provinces and territories have passed a large amount of species and ecosystem-related legislation. Many of these are based on the ecosystem approach, such as the *Water Protection Act* (2005) in Manitoba, which divides the province into conservation districts and mandates the development of watershed management plans by designated water planning authorities.

EIA and SEA

The Biodiversity Strategy has a section on environmental assessment and emergency response, which deals with EIA. It calls for the use of environmental assessments to determine potential biodiversity impacts of developments. The section also addresses cumulative environmental effects and early warning indicators.

The *Canadian Environmental Assessment Act* and its regulations provide the legislative basis for the federal practice of environmental assessment. The Act ensures that projects are carefully reviewed before federal authorities take action in connection with them, so that projects do not cause significant adverse environmental effects. Environmental assessment regulation is also in place on the provincial/territorial level.

Spatial planning

Spatial planning is not explicitly mentioned in the Biodiversity Strategy, likely because it is a new concept that was not yet developed when the strategy was adopted in 1996. The strategy does, however, contain text about integrated management and ecological planning and management.

In practice, spatial planning is undertaken in Canada through land use planning and, in the marine environment, through the implementation of Large Ocean Management Areas, which encompass the entire Exclusive Economic Zone of Canada. In all cases, the planning approach incorporates the participation of relevant stakeholders.

Application of the ecosystem approach

The Biodiversity Strategy is in many ways a reflection of the time at which it was developed (1996) in that it does not contain reference to newer concepts such as the ecosystem approach or spatial planning. Instead, it has a section providing strategic directions related to "ecological planning and management". This section seems to cover similar ground to the ecosystem approach in moving away from single species management to a management approach that takes into account ecological connections and societal needs. The ecosystem approach and adaptive management do have a central role in the Outcomes Framework (2006), which complements and builds on the Biodiversity Strategy.

It is evident from the Fourth National Report that, even though the Biodiversity Strategy does not explicitly include reference to the ecosystem approach, Canada has been implementing it for some time now. In fact, the earliest application of the term dates back to the 1978 Great Lakes Water Quality Agreement, and Canada considers itself a pioneer in the development and application of this management concept. While individual programs and projects related to applying the ecosystem approach in Canada are too numerous to present in detail here, the ecosystem approach is considered vital for achieving the conservation and sustainable use of biodiversity now and in the future. The report states that "in the face of increasing threats and the declining state of many of the country's ecosystems, further integrated action and use of the ecosystem approach is necessary".

The ecosystem approach is also implemented through sectoral approaches, including sustainable forest management and the ecosystem approach to fisheries. These sectoral approaches are generally complementary with the CBD ecosystem approach, and are reflective of the desire among many sectors to develop and implement their own solutions that are specific to sectoral issues while conforming to general principles of ecosystem-based management.

Incentive measures

Incentive measures are covered under a section on 'incentives and legislation' in the Biodiversity Strategy. In particular, the discussion on incentives focuses on economic and social incentives, and on assigning value to biodiversity.

The valuation of ecosystem goods and services is increasingly viewed as an important knowledge gap. Decision-makers in Canada are currently making land and resource use decisions in the absence of good data on ecological, social and economic values associated with biodiversity, or the true costs

of biodiversity loss in terms of human well-being. The need to fill this knowledge gap is urgent, given the likelihood that climate change will exacerbate ecosystem change and create stresses that diminish resilience and adaptive capacity.

A comprehensive study on the values of biodiversity for human well-being is being planned and will be undertaken in the next couple of years. In the meantime, two related studies address the values of specific biomes and areas. Counting Canada's Natural Capital, a study completed in 2006 and supported by the Canadian Boreal Initiative and the Pembina Institute, assesses the value of Canada's boreal ecosystems. The Value of Natural Capital in Settled Areas of Canada illustrates the economic values of natural capital from four geographically diverse locations in Canada. The study recommends the use of policies that integrate the true cost of environmental degradation with economic decision-making, thus leading to the most economically efficient management of natural capital resources.

Additionally, there are currently several initiatives in Canada that offer compensation to encourage the mainstreaming of biodiversity within the economy through the conservation of nature and ecosystem goods and services. These programs use measures such as conservation agreements, which limit development rights in exchange for compensation; tax credits, such as those offered through the federal Ecological Gifts Program and the Manitoba Riparian Tax Credit Program; and annual rental payments, such as those offered through the Rural Water Quality Program in regions of Ontario to pay for land set aside for stream buffer strips, cover crops, shelterbelts, environmentally-friendly cropping practices or retirement.

Financing

Details relating to financing are not mentioned in the NBSAP, which incorporates a qualifier that activities will be undertaken in accordance with "fiscal capabilities". In general, budget allocations for specific biodiversity-related activities are spread among various ministries on the federal and provincial/territorial levels, with the Environment Ministry's Biodiversity Office offering general guidance and policy direction. Local, municipal-level financing is also often allocated for biodiversity-relevant projects. In addition, NGOs and community organisations undertake many related activities. A total sum of money spent on activities related to the conservation and sustainable use of biodiversity in Canada is not available, and would likely be very difficult to calculate.

National targets

The Biodiversity Strategy does not contain targets, but the Outcomes Framework contains a suite of desired national outcomes: healthy and diverse ecosystems, viable populations of species, genetic resources, and adaptive potential and sustainable use of biological resources. While these are not numerical targets, they represent a move in an outcome-oriented direction against which progress can be measured.

Some of the provincial biodiversity strategies contain targets, such as the biodiversity strategies of New Brunswick and Alberta.

Monitoring and review

The Biodiversity Strategy has a section on environmental monitoring and indicators, and obligates reporting periodically to Canadians and the international community on the status of Canada's biodiversity.

At the present time, monitoring and review are carried out under the Outcomes Framework. The framework also provides for the use of monitoring outcomes for adaptive management. The Ecosystem Status and Trends Report prepared as part of the framework will include indicators, some of which are under development. Trends will be assessed over time using these indicators.

The national reporting framework is also used to report the outcomes of implementation. There is some debate on whether domestic or international priorities should dictate reporting. The Fourth National Report uses both the desired outcomes and the corresponding indicators to report on biodiversity status, trends and threats.

Other tools

The Biodiversity Strategy contains provisions for research and inventory of Canadian biodiversity, as well as data and information management. It also contains provisions for training and information programmes, specifically in regard to environmental research and management.

These activities are being implemented through a large investment in building biological databases, such as the National Land and Water Information System, the Canadian Healthy Oceans Network and the Canadian Biodiversity Information Facility. These efforts are part of a general trend towards enhancing the scientific basis for decision-making through improved assessment and monitoring in accordance with the Outcomes Framework. They will also address a current knowledge gap related to long-term biodiversity trend data, enabling a more accurate assessment of the rate of biodiversity change and the effects of conservation and sustainable use policies and practices.

Implementation and obstacles encountered

The government of Canada has achieved many accomplishments as a result of ten years of implementing the Biodiversity Strategy, including legislation to protect species at risk, new national parks, and the Oceans Strategy and Action Plan. What has been lacking, however, is a framework for measuring the impact of these policies and plans on the state of biodiversity in Canada. This is the reason cited for developing the Outcomes Framework, which aims to 'connect the dots' between actions and outcomes in the context of adaptive management.

The decision to produce the Outcomes Framework, instead of an update to the Biodiversity Strategy, represents a unique policy approach to biodiversity management. While a majority of countries with NBSAPs dating back to the same era as that of Canada's have produced second or even third revisions, Canada has chosen a different but arguably equally relevant path. The Outcomes Framework is a succinct way of relating assessment to planning, policy and outcomes, and in this process providing a way to learn by doing. While it is too early to tell how well the framework will work as a practical tool for biodiversity management, in theory it could provide an alternative model for countries struggling with measuring the impacts of their biodiversity policies.

Canada is faced by the challenge of the sheer size of its land and ocean areas, which necessitates biodiversity policies and management activities being undertaken at the federal, provincial, territorial and local (municipal) levels. Governments on all of these levels have developed and implemented a wide range of laws, policies and programs that deal either directly or indirectly with biodiversity. While harmonisation between these levels and policies has not always been smooth, vertical integration can be said to have worked relatively well considering the challenges. In particular, an emphasis on bottom-up approaches can be viewed as one of the biggest successes of biodiversity management in Canada. Activities designed and undertaken by cities and communities, indigenous groups, NGOs and provinces have likely produced some of the most positive biodiversity outcomes. The bottom-up approach is

actively supported by the federal government and its Biodiversity Office. In this regard, a great deal of effort has been placed on stakeholder involvement and the development of a joint vision of biodiversity outcomes.

Sectoral integration remains a challenge. While progress is being made in this regard, it has not always been as fast as would be desired. Canada has traditionally been a resource-based economy that has thrived on the proceeds of forestry, fisheries, mining, and oil and gas exploitation. Balancing the needs of these sectors for natural resources with conservation goals continues to be challenging. Some of the biggest environmental debates of the day in Canada involve salmon farming on the coast of British Columbia, the logging of old-growth or unique forests, and the exploitation of the tar sands in Alberta. At the same time, sectoral practices have become more conscious and inclusive of biodiversity concerns, and include the implementation of the ecosystem approach to fisheries and sustainable forest management, as well as certification programs.

A growing population and, in some cases, tourism have contributed to development-related pressures on biodiversity, as evidenced by historical and continued losses of wetlands and forests. At the same time, there is a growing movement towards sustainability on the municipal level, and many cities or municipalities have sustainability or green plans and thriving initiatives promoting 'green roofs', car-free commuting, recycling, locally sourced foods and community gardens. While this awareness is far from universal, it is clearly an increasing trend.

There is still a need for biodiversity awareness-raising among federal government officials, sectors and the general population. Biodiversity is often equated with species, or species at risk legislation, and is not viewed in its broader context of a producer of goods and services vital for human well-being. This narrow perspective is perhaps most glaring at the higher government levels, where the lack of a clear ministerial entity responsible for biodiversity governance in the past has made it challenging to gain political momentum for biodiversity-related activities. The poor integration between climate change and biodiversity policies may well be rooted in a limited understanding of the relationship between biodiversity and climate change at these higher levels, and may indicate a challenge that still needs to be overcome. It is likely that the planned work on biodiversity valuation could go a long way towards altering perceptions, provided that it receives appropriate attention.

4.6 Malaysia

Introduction

Malaysia is a federation comprised of thirteen states and three federal territories, with eleven states located in Peninsular Malaysia and Sabah and Sarawak on the island of Borneo. The system of administration of Malaysia is three-tiered, consisting of the federal government, the state governments and local authorities. The federal Constitution, which is the supreme law of the land, sets out the rights and responsibilities of the federal and state governments, among others.[224]

Malaysia is located in the Sundaland biogeographical region, one of the richest biodiversity hotspots in the world, and its forests constitute a part of the Indo-Malayan rainforest realm, which harbour some of the oldest tropical rainforests in the world. As such, Malaysia is recognised as one of the world's megadiverse countries and is ranked 12th in the world according to the National Biodiversity Index. As an illustration of this biological richness, there are about 15,000 species of flowering plants, 306 species of mammals, 742 species of birds, 567 species of reptiles, 242 species of amphibians and 150,000 species of invertebrates in Malaysia.

In the face of the rapid economic development the country has undergone since gaining independence in 1957, a significant portion of Malaysia's original forests and wetlands have been converted for plantations, agriculture and urban development. Nevertheless, considerable expanses of relatively pristine natural habitat remain throughout the country, especially within its permanent forest estate and network of terrestrial and marine protected areas. In spite of ongoing conservation efforts, habitat loss continues to be a major threat to the country's biodiversity. Other significant threats include habitat fragmentation, illegal poaching of wildlife, and degradation of freshwater and marine ecosystems due to pollution and climate change.

Malaysia signed the CBD in 1992 and ratified it two years later. As a signatory to the Convention, Malaysia is committed to the sustainable use, management and conservation of her natural resources. While biodiversity conservation initiatives were ongoing long before 1992, efforts were stepped up following the ratification. The major steps taken by the government of Malaysia to strengthen its capabilities for this purpose are:

- A holistic country study on biodiversity in 1996
- The launch of the National Policy on Biological Diversity (NPBD)[225] in 1998
- The establishment of the National Biodiversity-Biotechnology Council (MBBN), chaired by the Prime Minister, in 2001
- The creation of the Ministry of Natural Resources and Environment (NRE) in 2004 as a dedicated ministry to coordinate conservation efforts and serve as a focal point for the CBD
- The adoption of the Common Vision on Biodiversity in 2009 as a roadmap for driving biodiversity into the mainstream of the country's development.

224 The Constitution has three lists: the Federal List, which sets out matters that only the Federal Parliament can make laws on; the State List, which sets out matters that only State Legislative Assemblies can make laws on; and the Concurrent List, which sets out matters that Parliament and Legislative Assemblies can make laws on. Although 'biodiversity' is not mentioned explicitly in the Constitution, matters pertaining to biodiversity and natural resources are placed either on the State List (such as forestry, agriculture, rivers and water resources) or the Concurrent List (such as protection of wild animals and rehabilitation of eroded land). This suggests that national policies related to biodiversity have to be translated into action plans and adopted by the respective states for implementation.

225 Malaysia's National Biodiversity Strategies and Action Plans (NBSAP) are contained within the NPBD.

NBSAP preparation process

Engagement of stakeholders

The first National Steering Committee on Biodiversity (NSCB) was formed in 1993, one year after signing the CBD, in order to address policy matters relating to the Convention, in particular to arrive at a national position on biodiversity. Chaired by the Secretary-General of the then Ministry of Science, Technology and Environment (MOSTE), it comprised a wide range of ministries, agencies and NGOs. Representatives from the state governments were also invited to sit in as and when required.

In addition, the National Technical Committee on Biological Diversity (NTCBD) was formed to advise the NSCB on technical/scientific matters. The NTCBD was headed by the director-general of the Forest Research Institute Malaysia (FRIM) and covered all aspects of biological diversity – plants, animals and microorganisms. Taskforces were formed under the NTCBD to undertake specific assignments as and when required.

The main outputs of the NSCB were the Country Study on Biodiversity in 1996, followed by Malaysia's First National Report to the CBD in March 1998 and culminating in the National Policy on Biological Diversity (NPBD) in April 1998.

Level of approval within government

The Cabinet approved the NPBD in 1998.

Revision

The NPBD has not been revised in the twelve years since its inception. This is largely due to the fact that the policy fell under the responsibility of a number of different ministries over the period. Malaysia's Fourth National Report to the CBD (2009) suggested that a review be carried out. Following this, a rapid review of the NPBD was initiated by NRE.[226] The review, which is ongoing, will provide recommendations on the appropriate consultative process and studies required for the revision exercise, as well as the particular aspects of the NPBD that need to be improved or updated. It is anticipated that the review will focus on recommendations pertaining to operationalisation aspects, as the NPBD did not set targets and timeframes, or delegate duties of implementation to relevant agencies.

National coordination structures for overseeing implementation

Established in 2001, the National Biodiversity-Biotechnology Council (MBBN) is the nation's highest and most important decision-making body for implementation of the CBD and NPBD. The MBBN is chaired by the Prime Minister and is comprised of ministers of ten different ministries, chief ministers of all thirteen states, plus the Chief Secretary to the government, the Attorney General and the science advisor to the Prime Minister. The terms of reference of the MBBN are as follows:

- Determine and endorse the direction, policy and strategy for conservation of biodiversity and biotechnology
- Coordinate conservation of biodiversity and development of biotechnology
- Indentify and monitor the implementation of the relevant obligations of multilateral environmental agreements related to biodiversity and biotechnology that Malaysia has signed.

The MBBN is supported by the National Technical Committee on Biodiversity and Biotechnology, chaired by the secretary general of NRE. Two taskforces support this committee – the Biodiversity Task Force, chaired by the undersecretary of the Conservation and Environmental Management Division (CEMD) of

226 This review is still ongoing at the time of writing.

NRE, and the Biotechnology Task Force, chaired by the managing director of the National Directorate of Bio-technology. Within the former, five working groups have been formed to involve institutions of higher learning in areas of forest, marine, mountain, wetlands and agro/rural biodiversity.

The creation of NRE in 2004 represented a milestone in the strengthening of the institutional framework for implementation of the NPBD. Under the new set-up, all the biodiversity-related agencies and departments, such as the Department of Forestry, the Department of Wildlife and National Parks, the Department of Marine Parks, Drainage and Irrigation Department, and the Department of Environment were for the first time brought under one umbrella ministry. The Conservation and Environmental Management Division (CEMD) of NRE is the focal point for the implementation of the CBD and the NPBD, and plays an integral role as a coordinator, especially for the areas where there is no obvious implementing agency. In some areas, CEMD works closely with other institutions and individuals.

Main features of NBSAP and other biodiversity plans and policies

Malaysia's NBSAP is contained within the NPBD, published in 1998 by the Ministry of Science, Technology and Environment.[227] The NPBD sets the long-term direction and strategic framework for the implementation of the CBD and conservation of biodiversity in Malaysia. The NPBD contains a vision, policy statements and objectives, as well as fifteen strategies and eighty-seven action plans. The fifteen strategies (with associated action plans) are:

1. Improve the scientific knowledge base (eleven action plans)
2. Enhance sustainable utilisation of the components of biological diversity (nine action plans)
3. Develop a centre of excellence in industrial research in tropical biological diversity (three action plans)
4. Strengthen the institutional framework for biological diversity management (five action plans)
5. Strengthen and integrate conservation programmes (seven action plans)
6. Integrate biological diversity considerations into sectoral planning strategies (seven action plans)
7. Enhance skill, capabilities and competence (six action plans)
8. Encourage private sector participation (four action plans)
9. Review legislation to reflect biological diversity needs (five action plans)
10. Minimise impacts of human activities on biological diversity (seven action plans)
11. Develop policies, regulations, laws and capacity-building on biosafety (six action plans)
12. Enhance institutional and public awareness (six action plans)
13. Promote international cooperation and collaboration (five action plans)
14. Exchange of information (three action plans)
15. Establish funding mechanisms (three action plans).

227 Responsibility for the NPBD was assumed by the Ministry of Natural Resources and Environment (NRE) following a cabinet reshuffle in March 2004.

Other key policies and plans concerning biodiversity are:[228]

- *Common Vision on Biodiversity (2008)* – The Common Vision, adopted by the MBBN in 2009, focuses on the operationalisation of the NPBD in the nation's planning and development process. Developed by NRE under the biodiversity component of the Malaysia-Denmark cooperation programme, the Common Vision contains three main elements: strengthening the protected areas system, application of the ecosystem/landscape approach, and mainstreaming biodiversity within national policies, plans and programmes.
- *National Tiger Conservation Action Plan 2008-2020* – This plan was formulated by the Department of Wildlife and National Parks Peninsular Malaysia (DWNP) in a participatory manner with NGOs and other government agencies using a collaborative platform called the Malaysian Conservation Alliance for Tigers (MYCAT). The aim of the plan is to establish a holistic but focused and achievable conservation strategy that lays out specific actions to be taken towards securing viable tiger populations in Malaysia for the next century and beyond. Specific actions outlined in the plan cover protected areas and wildlife corridor development and ecologically sound land use planning, as well as monitoring, enforcement and research.
- *National Plan of Action for Conservation and Management of Sea Turtles in Malaysia (2008)* – Formulated by the Department of Fisheries, Ministry of Agriculture and Agro-based Industry, this plan contains six primary objectives, including reducing direct and indirect causes of sea turtle mortality and protecting, conserving and rehabilitating sea turtle habits. The plan lists eighty-five specific activities organised into twenty-one programmes of work, with lead agencies and timelines for implementation. A particular strength of the plan is its concise and frank assessment of the factors that have contributed to the decline in Malaysia's turtle populations, such as inadequate regulation and management.
- *National Wetlands Policy (2004)* – The aim of the policy, which was passed by cabinet in 2004, is to ensure conservation and wise use of the wetlands and to fulfil Malaysia's obligation under the Ramsar Convention. The policy's objectives include to "Protect and conserve each type of wetlands" and "Integrate wetlands conservation interest into overall natural resource planning, management and decisions".
- *National Biotechnology Policy (2006)* – This policy provides a framework for the government, in partnership with key stakeholders, to harness the benefits of biotechnology development in accordance with established social and ethical norms. One of the objectives of this policy is to create greater values from agriculture and natural resources utilising the unique biodiversity and natural environment.
- *Heart of Borneo Strategic Action Plan (2009)* – Brunei Darussalam, Indonesia and Malaysia signed a historic declaration in 2007 to establish the Heart of Borneo (HoB) initiative, which aims to foster trans-boundary cooperation to conserve and sustainably manage this region, which contains the largest contiguous forest area remaining in Southeast Asia and is one of the most biologically diverse habitats on Earth. The HoB Strategic Action Plan was launched by three countries at COP-9 in Bonn, Germany. The plan contains five main programs i.e. transboundary management, protected areas management, sustainable natural resources management, ecotourism development and capacity-building.
- *Action Plan for the Conservation and Sustainable Use of Fishery Resource Biological Diversity of Malaysia (2006)* – This document, prepared by the Department of Fisheries Technical Committee on Biodiversity, contains sixty-two actions within nine strategies. The strategies touch on areas such as effective fishery resource conservation and management, reduction of biodiversity

228 The National Tiger Action Plan, CFS Masterplan and RFZPPN are only applicable to Peninsular Malaysia, while the Heart of Borneo Strategic Action Plan is only applicable to Sabah and Sarawak.

loss, strengthening of research, capacity-building, enhancing information dissemination and networking, and control and management of invasive species.

In addition, the National Action Plan for Peatlands, Central Forest Spine (CFS): Masterplan for Ecological Linkages and National Coastal Zone Physical Plan (RFZPPN) are currently being finalised. The CFS Masterplan, initiated by the Town and Country Planning Department of Peninsular Malaysia (DTCP), aims to re-establish contiguity between the most important forest complexes in Peninsular Malaysia through the establishment of over thirty 'ecological linkages' (wildlife corridors).

Integration of NBSAP with higher and cross-sectoral plans and policies

The NBSAPs have been integrated with a number of higher and cross-sectoral policies and plans which either refer directly to the NPBD or include provisions for natural resource and biodiversity management and conservation that are in line with the NBSAPs. The most pertinent of these are the Outline Perspective Plan 3 2001-2010 (OPP3); the 10th Malaysia Plan[229] 2011-2015 (10MP), which was recently launched to propel the country towards becoming a high-income and high-productivity economy; the National Physical Plan, which translates these economic plans into spatial form and sets the framework for regional and local spatial planning; and the National Policy on the Environment (2002) (NPE). The common aspects of the three documents pertaining to biodiversity conservation are that:

- Development should be environmentally sustainable
- The well-being of the population is dependent on biodiversity and the environment
- Planning and management should be integrated and holistic (as opposed to sector-based).

In particular, the OPP3 affirms that "the National Policy on Biological Diversity will form the basis for integrating and consolidating biodiversity programmes and projects in the country". While the 10MP does not refer to the NPBD specifically, it does state that the Common Vision on Biodiversity, CFS Masterplan, HoB Strategic Action Plan and National Tiger Conservation Action Plan shall be implemented/ operationalised within the plan period.

One of the three objectives of the NPE is to "conserve Malaysia's unique and diverse cultural and natural heritage with effective participation by all sectors of society". Of the seven strategies provisioned under this policy, one is of direct relevance to the NPBD (Strategy 2: effective management of natural resources and the environment). This strategy includes measures for a national inventory and audit of natural resources, protection of important habitats for the conservation of flora and fauna, and the ecologically sustainable management of forest, freshwater and marine ecosystems.

The National Physical Plan (NPP)[230] contains a number of provisions that set the framework for integrating biodiversity considerations into spatial planning. The most important of these is the Environmentally Sensitive Area (ESA) system, whereby areas important for biodiversity and life support, as well as where potential hazards are present, are designated as ESA 1, 2 or 3, with corresponding levels of treatment based on the importance/sensitivity of the particular site. The NPP also contains land use policies for the sustainable management and conservation of the highlands and coastal zone, and provides recommendations for new protected areas and wildlife corridors.

In addition, the 8th strategic reform initiative of the New Economic Model developed by the current Prime Minister is to "ensure sustainability of growth" by placing strong emphasis on "preserving our natural

229 Since the third Malaysia Plan (1976-1980), which proposed fifteen new protected areas totalling 5,663 square kilometres, biodiversity considerations have consistently been integrated into the five-year national economic plans.

230 The National Physical Plan is only applicable in Peninsular Malaysia.

resources by applying appropriate pricing, regulatory and strategic policies to manage non-renewable resources sustainably".

Integration of NBSAP with implementation of the other biodiversity-related conventions

RAMSAR Convention

Six wetlands in Malaysia have been designated as Ramsar sites: Tasik Bera, Tanjung Piai, Pulau Kukup, Sungai Pulai, Kuching Wetlands and the Lower Kinabatangan-Segama Wetlands. Tanjung Piai and Pulau Kukup have also been gazetted as state parks. Numerous plans, programmes and projects have been initiated by government agencies and NGOs, with funding from both the government and international donors towards the conservation and wise use of these wetland sites.

Convention on International Trade in Endangered Species (CITES)

The CITES Act 2008 was passed to address the import, export and re-export of CITES-listed species throughout Malaysia. The government has been working with Traffic Southeast Asia to develop protocols and enhance the capacity of relevant agencies to ensure effective enforcement of the Act. In addition, Malaysia is a member of ASEAN-WEN, an intergovernmental initiative between ten Southeast Asian governments to combat wildlife crime.

World Heritage Convention (WHC)

Two national parks, Kinabalu Park and Mulu National Park, were listed as UNESCO World Heritage sites in 2000, and are managed to meet the high standards set by the World Heritage Committee. Three other parks, Taman Negara, Batang Ai National Park and Lanjak Entimau Wildlife Sanctuary, have been nominated and are currently on the tentative list.

FAO International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

The Malaysian Agricultural Research and Development Institute (MARDI), as well as other agencies, especially the Department of Agriculture in Sabah and Sarawak, have been actively engaged in the exploration, collection, conservation (both in situ and on farm) and utilisation of crop genetic resources, thus contributing to the activities of the ITPGRFA as well as the NPBD.

Convention on Migratory Species (CMS)

Malaysia is not a signatory to the CMS.

Integration of NBSAP with climate change and desertification policies

Climate change

Malaysia is a Non-Annex 1 Party to the UNFCCC. Of relevance to the CBD, its obligations to the UNFCCC are to formulate programmes to promote sustainable management, conservation and enhancement of carbon sinks, and to prepare and develop plans for adaptation to impacts of climate change on biodiversity.

The potential for integration between the NBSAP and climate-change-related actions is high, as the Prime Minister, who chairs the MBBN, also chairs the Cabinet Committee on Climate Change. In addition, the secretary general of NRE chairs both the National Technical Committee on Biodiversity and Biotechnology as well as the National Committee of Climate Change, and the two committees have many members in common. At the operational level, the CEMD of NRE is the focal point for both the CBD and UNFCCC.

The National Policy on Climate Change (NPCC) will be launched this year. The draft policy, prepared by NRE in collaboration with the Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia, contains a number of strategic thrusts and key actions relating to biodiversity and the NPBD. The most pertinent actions are to "Conserve and enrich carbon pools in natural ecosystems including plantations and promote rehabilitation of sensitive and degraded ecosystems" and to "Integrate climate change considerations at the planning level by applying tools that [include] economic evaluation of ecological services".

Desertification

Malaysia signed the UNCCD in 1995 and ratified it in 1997. As Malaysia is not vulnerable to desertification due to its wet tropical climate, in the Malaysian context the implementation of this convention covers the prevention/mitigation of land degradation.

While there is no high-level committee or council dedicated to the UNCCD, the MBBN and the National Technical Committee on Biodiversity and Biotechnology may from time to time deliberate on land degradation issues relating to habitat loss and ecosystem degradation. In addition, NRE line agencies such as the Forestry Department of Peninsular Malaysia, the Department of Environment and Minerals and the Geoscience Department play important functions in addressing land degradation issues.

The National Capacity Needs Self Assessment (2008) recommended that the implementation of the CCD in Malaysia be reviewed to propose the next step forward. In addition, it identified the following strategies to consolidate cross-cutting issues between the biodiversity conservation, climate change and land degradation:

- Review and identify synergies in terms of implementation of the National Policy on Environment, National Policy on Biological Diversity, the forthcoming Strategy and Action Plans on Climate Change, and the relevant action plan on land degradation
- Rationalise and consolidate environmental laws and regulations to address the cross-cutting issues and reduce conflicting concerns
- Utilise and consolidate inter-ministerial councils and committees to address cross-cutting issues.

Integration of NBSAP with sectoral plans and policies

Forestry

The National Forestry Policy (NFP) was adopted in 1978 and revised in 1992, before the creation of the NPBD. However, the NFP is in line with the NPBD and provides for "the conservation of biological diversity and areas with unique species of flora and fauna, including specific areas for the purpose of forestry education and other scientific studies". Under the NFP, such areas may be designated as protection forests, amenity forests, or research and education forests.

Malaysia is committed to the pledge made by the Prime Minister at the 1992 Rio Earth Summit that the government of Malaysia will ensure that at least 50 per cent of its land area will remain permanently under forest cover. In relation to the need to preserve montane biodiversity and catchment forests, the National Forestry Council has ruled that logging will not be permitted in areas higher than 1,000 metres above sea level.

A comprehensive forest management system is in place in Malaysia. In addition, forest management units (FMUs) in Malaysia are subject to the Malaysian Timber Certification Scheme (MTCS), in accordance with the 2002 Malaysian Criteria and Indicators for Forest Management Certification (MC&I), which is based on

the 1998 ITTO Criteria and Indicators for Sustainable Management of Natural Tropical Forests. The MTCS has been endorsed by the Programme for the Endorsement of Forest Certification schemes (PEFC), the largest forest certification programme in the world. High conservation value forest (HCVF) assessments are a requirement under the MC&I. A HCVF Toolkit for Malaysia was published by WWF-Malaysia in 2009.

Agriculture

The Third National Agricultural Policy (1998-2010) (NAP3) sets the current strategic directions for agricultural development. One of the four objectives of the NAP3 is to "conserve and utilise natural resources on a sustainable basis". Correspondingly, one of the thrusts of the NAP3 states that "Sustainable management and utilisation of resources will be the guiding principle in pursuing agricultural and forestry development. Rules, regulations and incentives will be strengthened to encourage environment-friendly agricultural and forestry practices and to minimise the negative impact of these activities on the environment".

While agriculture expansion has been a major cause of habitat loss in the past, the NAP3 (and the NPP) place greater emphasis on increasing productivity through the modernisation of agriculture practices, rather than land expansion.

The Farm Animal Genetic Resources Management Plan (FAnGR) for Malaysia was developed in 1998. The objective of the FAnGR is to conserve and utilise these resources in a sustainable manner for food security and nutritional well-being of the nation. A national technical committee on agricultural biodiversity has also been formed. This committee is in the process of preparing national strategies and action plans for the conservation and sustainable utilisation of agricultural biodiversity.

Fisheries

The NAP3 invokes the sustainable development of fisheries in Malaysia: "The fisheries industry, particularly deep-sea fishing and aquaculture, will be further developed on a commercial and integrated basis. The development will focus on conservation and utilisation of fisheries resources on a sustainable basis". The Department of Fisheries, the Department of Marine Parks and other relevant national and state agencies have sought to realise this policy through the gazetting of marine protected areas, including marine parks, fisheries prohibited areas and turtle sanctuaries. A pilot community-driven ecosystem based fisheries management (EBFM) project is being tested at a site in Kedah in Peninsular Malaysia.

Tourism

While promoting the natural attractions of the country to tourists, the Malaysian government also realises the importance of sustainable tourism and of balancing conservation and development. As such, the Ministry of Tourism has adopted the National Ecotourism Plan (NEP) to provide policies and guidelines for the conscientious development of ecotourism. The NEP includes twenty-one action plans, which address a host of issues ranging from legal changes to monitoring and finance; identifies existing and potential ecotourism sites; and provides a comprehensive set of guidelines, including guidelines for tourism development in various ecosystems, interpretation, accreditation, architecture, etc.

Integration of NBSAP at the sub-national level

The integration of the NPBD at the state level can be further improved, and this is an extremely important area where implementation is concerned. 'Biodiversity' is not mentioned explicitly in the federal Constitution, and matters pertaining to biodiversity and natural resources are placed either on the State List (such as land, forestry, agriculture, rivers and water resources) or the Concurrent List (such as protection of wild animals and rehabilitation of eroded land). Aside from formulating national policies

and legislation (which are to be adopted and used by the states) the federal government can only advise and provide technical assistance; implementation is largely dependent on state governments.

However, BSAPs have not been formulated at the state level, with the exception of Sabah. The Sabah Conservation Strategy (1992), commissioned by the state Ministry of Culture, Environment and Tourism (MOCET) and produced by WWF-Malaysia, has been endorsed and adopted by the state government. The document provides a range of recommendations and guidelines for the sustainable management of biodiversity and natural resources of Sabah, based on a comprehensive natural resource accounting exercise. It should be noted that the National Conservation Strategy, which included strategies for biodiversity conservation for all the states in the same vein as the Sabah Conservation Strategy, was commissioned by the Economic Planning Unit (EPU) and produced by WWF-Malaysia in the sixth Malaysia Plan period. Unfortunately, this document has not been endorsed or adopted.

At the local level, many site-specific plans have been formulated for the conservation and sustainable management of biodiversity. These include management plans for various terrestrial and marine protected areas and forest reserves, and integrated management plans for peat swamp forest complexes. These plans make reference to, or are in line with, the NPBD.

In terms of decision-making platforms at the state level, only two states, Sabah and Sarawak, have established state biodiversity councils (and related legislation and committees). In other states, biodiversity issues may be addressed indirectly through forums such as the Majlis Tindakan Negeri (State Action Councils), where the main focus is on economic development, not biodiversity.

Engagement with indigenous peoples

Indigenous and local communities are normally involved in the development and implementation of biodiversity-related policies, programmes and projects. The Malaysian Environmental NGO (MENGO), which has an ongoing programme on community-based natural resource management facility in Malaysia, published a compilation of best practices entitled *Journeys Taken – Lessons Learnt: Empowering Malaysian Communities for Conservation and Sustainable Resource Use* in 2009.

The GEF Small Grants Programme for Malaysia is an example of a programme oriented towards supporting the interventions by NGOs, community-based organisations and local communities throughout Peninsular Malaysia, Sabah and Sarawak. Among others things, it is designed to build the capacity and capability of civil society to initiate and implement sustainable development and sustainable livelihood and environmental imperatives. Among the areas covered are traditional knowledge and equitable access and proper benefit sharing of anything valuable emerging from traditional knowledge of its holders, especially indigenous people throughout Malaysia.

Finally, there are a growing number of indigenous people's organisations that are involved in efforts to empower indigenous communities on resource management. These include the Network of Indigenous Peoples and Non-Governmental Organisations on Forest Issues (JOANGOHutan), Partners of Community Organisations (PACOS), Friends of Ecotourism and Environmental Conservation (SEMAI) and Semelai Association for Boating and Tourism (SABOT).

Tools for implementation

Communication, education and public awareness

Communication, education and public awareness (CEPA) activities are undertaken by NRE, its line agencies and various NGOs. A national CEPA plan of action was drafted in 2007 to promote a collaborative approach to CEPA throughout the country. This plan aims to create a framework to enhance success,

encourage synergies, strengthen links and build on current activities and developments. Of note, a course on biodiversity developed by NRE in 2009 has now been incorporated into the curriculum of the National Institute of Public Administration (INTAN).

NRE, as well as other ministries, institutions of higher learning and NGOs that aim to promote and exchange knowledge and expertise on biodiversity research and management, conducts numerous seminars and conferences each year. Media coverage on biological diversity issues is also increasing.

Of particular interest, WWF-Malaysia's TX2 campaign in 2010, designed to galvanise public support for tiger conservation, successfully incorporated the use of new media to reach out to Malaysian youth. Facebook, Twitter, YouTube, websites and blogs were used to organise a 'flashmob', a 'blogfest' and a 'TX2 Ambassador Search' contest.[231]

Legislation

Although there is no federal or state biodiversity legislation per se, with the exception of Sabah and Sarawak,[232] various pieces of federal and state legislation relating to species and habitat protection are relied on. Federal legislation includes the *National Land Code 1965*, the *National Forestry Act 1984*, the *Wildlife Conservation Act 2010*, the *Fisheries Act 1985*, the *Town and Country Planning Act 1976* and the *National Parks Act 1980*. State legislation includes the *Johor National Park Enactment 1989*, the *Sarawak Wildlife Protection Ordinance 1998*, the *Sabah Wildlife Conservation Enactment 1997* and the *River Terrapin Enactment (Kedah) 1972*.

The passing of the *Wildlife Conservation Act* by parliament in July 2010 to replace the thirty-eight-year-old *Protection of Wildlife Act 1976* was an important step for strengthening enforcement against wildlife crimes. The new law, which is expected to come into force by the end of 2010, protects more species of wildlife, provides mandatory jail sentences for setting snares, closes loopholes by providing penalties for products claiming to contain parts of protected species or their derivatives, prevents zoos from operating without a permit, and widens the list of agencies empowered to enforce wildlife laws by including police and customs officers.

EIA and SEA

The quality of EIA reports, and assessments of these reports, which fall under the purview of the Department of Environment (DOE) of the NRE,[233] have improved in recent years, largely due to tighter regulatory, qualification and training requirements imposed on EIA consultants. This includes a requirement for ecologists to be certified by DOE in order carry out ecological assessments for EIAs. EIA review panels may call upon a pool of biodiversity experts from the government, private sector and universities, as and where required. In addition, guidelines for biodiversity assessments in EIAs are currently being formulated.

Although SEAs have not yet been adopted, pilot SEAs have been conducted on state structure plans as well as on the National Water Resources Strategy.

Spatial planning

The Department of Town and Country Planning (DTCP), Ministry of Housing and Local Government, which is tasked with developing spatial plans at the national, state and local levels, places high priority on biodiversity conservation. The Environmental Sensitive Area (ESA) framework set out in the National

231 See www.tx2.my
232 Sabah Biodiversity Enactment 2001 and the Sarawak Biodiversity Ordinance 1998.
233 Except for certain types of projects in Sabah and Sarawak, which come under purview of respective state environmental agencies.

Physical Plan (2005), and in greater detail in state structure plans and district local plans, is the most important platform for incorporating biodiversity conservation into spatial planning.[234] Landscape ecology concepts are now being introduced into spatial planning, following the CFS Masterplan study on ecological linkages.

Application of the ecosystem approach

The ecosystem approach is still not widely known or understood. However, this approach has been highlighted in the Common Vision on Biodiversity and is being promoted by WWF-Malaysia and other NGOs.

Incentive measures

Incentive measures are yet to be fully developed. Although financial incentives have previously been offered in the form of development budgets for the establishment of national parks and Ramsar sites, these incentives are generally deemed not politically expedient or economically worthwhile to the states. Although it has been explored in a number of studies, and some state governments have voiced interest, the payment for ecosystem services (PES) concept has yet to be implemented. At the ground level, however, monetary rewards are available to members of the public who provide accurate tip-offs of wildlife crimes and illegal logging.

Understanding the goods and services provided by biodiversity

While the major goods and services provided by nature, such as freshwater, timber and non-timber forest products, is widely understood and noted in various policies and plans, particularly the NPBD, the first comprehensive description of ecosystem services was provided by the Common Vision on Biodiversity (2008). Since then, this concept has been mainstreamed into a number of other national level documents, such as the Draft National Physical Plan 2, which is currently being finalised. However, there is still a long way to go before the concept of ecosystem services, in particular the relationship between ecosystem services and ecosystem functioning, is fully understood by all stakeholders.

Financing

In previous decades, many major conservation initiatives were either fully or partially financed by international agencies such as UNDP and the International Tropical Timber Organisation (ITTO), or bilateral aid agencies such as the Danish International Development Agency (Danida) and Japan International Cooperation Agency (JICA). However, as Malaysia is no longer considered a developing country, these sources of funds are becoming increasingly limited.

Apart from federal budget allocation, new sources of money are required to fund conservation initiatives. The REDD scheme is seen as a potentially important source of funds. A noteworthy recent initiative is the creation of the Malua BioBank, which seeks to rehabilitate and preserve 34,000 hectares of rainforest in Sabah. Launched in 2008, this innovative public/private partnership seeks to demonstrate that "conservation of biodiversity and ecosystem services has value that can compete with other commercial land uses".[235] The Malua BioBank sells biodiversity conservation certificates, with each certificate representing 100 square metres of restoration and protection of the Malua Forest. In order to ensure reliable, long-term forest stewardship, the Sabah government has committed to halt logging in the Malua Forest for at least fifty years.

Another source of funds, particularly where NGOs are concerned, has been from the private sector and industry, including both multinationals and local entities such as HSBC, Honda, Digi, Maybank and

234 Refer to page 155 for an introduction to the NPP.
235 www.maluabank.com

CIMB Bank. Of note, the Malaysian Palm Oil Council, in collaboration with Bursa Malaysia (representing the country's financial market), recently launched the Palm Oil Wildlife Conservation Fund with seed money of US$6.2 million. The private sector is envisaged to continue to be a significant source of funds, especially with the growing public consciousness and the increasing emphasis placed on corporate social responsibility.

The potential of ecotourism as a significant source of funds for conservation is yet to be realised. Although a number of trust funds, such as the Marine Parks Trust Fund and the Taman Negara Trust Fund, are in place to tap revenue from park entrance fees, the development of this source of funds is hampered by a common perception that additional charges on top of entrance fees, hotel room rates, etc will affect visitor numbers.[236]

National targets

The NPBD did not set any time-linked targets, save for its 'vision' – "To transform Malaysia into a world centre of excellence in conservation, research and utilisation of tropical biological diversity by the year 2020". Other than that, the Prime Minister's pledge made at the 1992 Rio Earth Summit to maintain 50 per cent forest cover is widely accepted to be a general target for forest biodiversity.

In addition, Malaysia is committed to achieving a provisional framework of goals, targets and indicators to assess progress towards the 2010 Biodiversity Target. A review of Malaysia's progress towards meeting the 2010 target is provided in the Fourth National Report (2009).

Monitoring and review

The NPBD has not been actively monitored in the twelve years since its inception. However, it is noted that national stocktaking exercises, such as the one carried out in the preparation of the Fourth National Report, are extremely useful as they provide a platform for a thorough review of the progress made in various sectors towards the implementation of the NPBD.

Summary of implementation, obstacles encountered and lessons learned

Significant steps have been taken towards the implementation of the fifteen strategies (and associated action plans) in the NPBD. Notable achievements include the establishment of new terrestrial and marine protected areas, strengthening of the legislative framework, stepping up of biodiversity survey and research efforts, and the integration of the NPBD into sectoral policies and plans. At the national level, the creation of NRE to oversee all agencies responsible for managing natural resources and the environment was a crucial step towards streamlining and strengthening implementation of the NPBD.

However, as the NPBD did not delegate duties of implementation to relevant agencies, much of the implementation has been carried out on a sectoral and ad hoc basis, with poor coordination between implementing agencies. This has at times resulted in overlaps and duplication of programmes, plans, projects, research and databases.

In addition, the NPBD did not set targets or timeframes, so it has not been possible to measure the effectiveness of its implementation objectively. A weak natural resource accounting system has hampered the ability to monitor habitat loss, especially in terms of marine habitats such as seagrass and mudflats.

236 A conservation financing study carried out by the EPU-Danida Environmental Planning and Strategy (EPS) component in 2006 found that, in general, parks in Malaysia have the lowest fee structure in the region, even compared to less developed countries. In this respect, there is a lot of room for proposing higher fees and charges in order to reduce the shortfall in financing conservation activities.

Finally, poor understanding of what biodiversity is, why it is important and how we should manage it, at all levels – from the general public to government agencies and politicians – has been a general obstacle to effective implementation of the NPBD. A lack of technical skills has affected the ability to implement plans at all levels, especially within the context of adaptive management. It is hoped that the new course on biodiversity at INTAN will help solve this problem.

On the ground, increased resource allocation is very much needed to strengthen the ability of enforcement agencies to effectively reduce illegal poaching and resource extraction, and to ensure that spatial plans and mitigation measures specified in EIAs are adhered to.

The lack of incorporation and poor implementation of the NPBD at the state level is a fundamental weakness that must be addressed. While terrestrial, aquatic and marine[237] habitats are under state government jurisdiction, many states rely heavily on revenue from land and associated resources (e.g. natural resource levies, land rent) to maintain state coffers and fuel socioeconomic development. In relation to this, states do not have any significant economic incentives for conservation. Of late, a number of state chief ministers have been calling on the federal government to compensate the states for the loss of revenue incurred from conserving forests.

237 Within three nautical miles of the Mean Low Tide Level.

4.7 Mexico

Introduction

Mexico is a large country with a wide range of ecosystems and many endemic species. The country is made up of thirty-one sovereign states and a Federal Capital District, and contains ecosystems ranging from high and lowland desert to rainforest, cloud forest and tropical savannah. It is one of the world's seventeen megadiverse countries, and houses approximately 12 per cent of Earth's biological diversity. It is generally considered to be a priority region for global conservation; it is ranked second worldwide in diversity of ecosystems, fourth in overall number of species, of which it houses nearly a quarter of a million, and is among the top five countries for endemism. According to scientific data, approximately 31-33 per cent of mammals, 60-62 per cent of amphibians, 49 per cent of freshwater fish, and 40-50 per cent of species of flowering plants in Mexico are endemic. Mexico ranks first in biodiversity in reptiles with 707 known species, second in mammals with 438 species, fourth in amphibians with 290 species, and fourth in flora with 26,000 different species.

Around 2,500 species are protected by Mexican legislation, and over 25 million hectares are contained within the Natural Protected Areas National System. These include fourty-one reserves, sixty-seven national parks, five natural monuments (protected in perpetuity for their aesthetic, scientific or historical value), thirty-five areas of protected flora and fauna, eight areas for natural resource protection (conservation of soil, hydrological basins and forests) and eighteen sanctuaries (zones rich in diverse species). In spite of this, Mexico's biodiversity is continuously threatened by forest fragmentation, deforestation, natural habitat degradation, pollution, unsustainable and illegal land and resource use, climate change, and the global economic crisis.

NBSAP preparation process

Engagement of stakeholders

The National Commission for the Knowledge and Use of Biodiversity (CONABIO) was established in 1992 as a permanent inter-ministerial commission of the federal government, and is charged with coordinating, supporting and executing activities and projects designed to foster understanding of biodiversity within Mexico. CONABIO coordinated and developed the NBSAP. This process began in 1997 and the final NBSAP was submitted in 2000.

The NBSAP was developed through consultation processes and workshops involving a broad base of scientists and academics from leading Mexican institutions, relevant stakeholders and members of civil society. Participation in this process was voluntary and there were only limited mechanisms to ensure inclusion of indigenous groups or local communities (namely, one workshop in Chiapas). Workshops were conducted in collaboration with the Monterrey Institute of Technology using the Support System for Collective Decision-Making (SATD-Ventana).

A total of 161 people from 125 organisations (35 from civil society, 33 academic institutions, 19 NGOs, 18 private sector, 20 government agencies) participated in the development of the NBSAP. A remarkable feature of this process was the inclusion of the scientific community in what was the largest study of Mexican biodiversity to date: the five-volume *Capital Natural de Mexico (CNM)* recently published by CONABIO.[238] The CNM was the outcome of an impressive participatory process involving more than 700 experts from 350 institutions and included information from the National Information System on Mexican Biodiversity (SNIB).

238 www.biodiversidad.gob.mx/pais/capitalNatMex.html

Level of approval within government

The NBSAP bears the official seal of the office of the President of the Republic and is endorsed by the Ministry of Environment and Natural Resources (SEMARNAT). However, to date, the NBSAP has not been harmonised with federal and state legal frameworks although, according to interviewees, attempts will be made to bridge this gap during the upcoming revision of the NBSAP.

Revision

To date, Mexico's NBSAP has not undergone revision, although one of the conclusions of the Fourth National Report is that there is a compelling need to carry out an evaluation of Mexico's NBSAP and update it accordingly. This revision will take place in the coming years and one of the major objectives of the revision will be to include clear evaluation and policy guidelines in the NBSAP so as to make implementation easier at both the national and regional levels.

National coordination structures for overseeing implementation

CONABIO is the inter-ministerial body responsible for overseeing NBSAP implementation; however, it lacks the necessary staff and resources to do this effectively. One of CONABIO's current priorities is facilitating the development of sub-national biodiversity strategies and action plans (BSAPs). These state-level BSAPs are meant to identify local challenges and opportunities and aim to develop clear evaluation mechanisms. As of January 2010, two states had completed their BSAPs and fifteen others had begun the preparation process, which includes the development of a study as a state-based biodiversity assessment.

Main features of NBSAP and other biodiversity plans and policies

Mexico's NBSAP presents a strategic vision for biodiversity in Mexico and is organised around four strategic lines:

1. Protection and conservation
2. Valuing biodiversity
3. Knowledge and information management
4. Diversification of use.

Under these headings, prioritised actions are identified for the following areas:

- In-situ conservation
- Rescue of 'biodiversity elements'
- Biosafety
- Exotic species
- Prevention and control of illegal acts
- Emergency responses
- Importance of national culture
- Benefits from biodiversity
- Institutional updating
- Research
- Inventory and collections

- Knowledge rescue
- Information exchange
- Dissemination
- Environmental education
- Academic development
- Biodiversity information management
- Current use
- Productive diversification
- Indicators and criteria
- Markets and commercialisation.

A major challenge for implementation of the NBSAP in Mexico is the absence of practical objectives, strategies and indicators in the original document, giving it little relevance or applicability for policy-makers or programme administrators.

Another major issue relates to governance. The current legal framework does not facilitate the effective implementation of the NBSAP. For instance, local land use is subject to competing interpretation of the law (i.e. whether it is the federal or the municipal governments which have the right to determine land use) and to local regulations and political pressures. As a result, changes of land use are often not in conformity with the provisions of the environmental legislation or the NBSAP.

Integration of NBSAP with higher and cross-sectoral plans and policies

Analysis of international support mechanisms, such as UNEP and The Nature Conservancy, is included as a priority action. However, the NBSAP contains no specific mention of multilateral environmental agreements (e.g. CITES or Ramsar) other than the CBD itself.

Integration of NBSAP with climate change and desertification policies

Although global climate change and desertification are mentioned, there are no provisions or references to international treaties, plans or policies.

Integration of NBSAP with sectoral plans and policies

Forestry, agriculture, fisheries and tourism are all mentioned briefly in the NBSAP and identified as priority areas in relation to biodiversity conservation and many interviewees cited the importance of integrating biodiversity concerns into the planning, execution and evaluation of public policies in these sectors in line with the NBSAP. There are, however, no specific goals, indicators or plans with regard to how conservation can be achieved. This is an area of interest for the upcoming revision of the NBSAP.

Integration of NBSAP with the sub-national level

The integration of the NBSAP at all levels of government, including state and municipal, has been identified as a priority. CONABIO has been working with state governments to develop state-level BSAPs. To date, 17 of Mexico's 31 states have voluntarily engaged in this process, and two (Michoacán and Morelos) have published their completed BSAPs. CONABIO maintains that these state-level strategies will be the principal mechanism for specific application of the NBSAP guidelines.

Engagement with indigenous peoples

In spite of Mexico's large indigenous population, and the purportedly inclusive process for the development of the NBSAP, few specific provisions were made either nationally or regionally to guarantee the inclusion of indigenous perspectives in the development of the strategy. This shortcoming is in part due to the barriers between academic disciplines and institutional barriers encountered by natural scientists when trying to engage with human communities.

Tools for implementation

Communication, education and public awareness

Development of communication and educational materials is one of the priority actions defined in the NBSAP. To this end, the most noteworthy resources are the websites developed by CONABIO.[239] These are aimed at informing the public sector on the activities of the inter-ministerial agency, as well as fostering awareness and general knowledge regarding Mexico's biodiversity and the various mechanisms, institutions and initiatives working on conservation. A series of interactive maps has been developed, and partnerships with corporations, state governments and institutions have been used to highlight biodiversity conservation in several different media and forums. CONABIO has also published three activity reports, covering the periods 1992-2004, 2005-2006 and 2007-2009. It has also published almost 100 newsletters ('Biodiversitas') with 200 articles written by more than 300 authors on topics related to Biodiversity.

Environmental education is increasingly emphasised in school curricula and several university programmes throughout the country offer post-graduate degrees in Biodiversity, Conservation, and Ecosystem management. CONABIO also offers a series of scholarships for young researchers and support for academics working on issues of biodiversity and conservation.

Legislation

The NBSAP states that its provisions should be enshrined at the highest levels of government and integrated into all regional scales. In spite of this, aside from the 1992 presidential decree establishing CONABIO, no legislation specifically relevant to the NBSAP has been passed in federal or state legislatures. Nevertheless, the Mexican environmental legal framework has several applicable provisions related to the implementation of the NBSAP, although it is generally acknowledged that there is a serious lack of capacity to enforce compliance with the laws and regulations that have been put in place for the benefit of protected areas.

EIA and SEA

Although not specifically mentioning EIA or SEA, the NBSAP outlines the need to develop capacities for the prevention, control and mitigation of emergencies. In general, however, there are few provisions in Mexico for strategic environmental assessments, and no specific mechanisms have been put in place as a result of the NBSAP process.

Spatial planning

Mexico has several provisions regarding spatial planning such as those provided by the 1988 federal General Law of Ecological Balance and Environmental Protection[240] (GLEBEP) in respect of air, sea and fresh water quality, hazardous waste, soil, protected areas, environmental impact assessment and noise. The GLEBEP was updated in 2001 to establish the right of public access to environmental information and to greater public participation. In addition, all states have created and adopted their own environmental

239 www.conabio.gob.mx and www.biodiversidad.gob.mx
240 Ley General del Equilibrio Ecológico y la Protección al Ambiente-LGEEPA.

legal regimes. Although these provisions are not directly linked to the NBSAP, the current NBSAP considers spatial planning as a priority theme.

Application of the ecosystem approach

There is no mention of an ecosystem approach in Mexico's NBSAP. However, this is expected to be introduced in the upcoming revision as well as in the development of the regional BSAPs.

Incentive measures

There are no incentive measures mentioned or incorporated into the NBSAPs. However, the CNM considers incentives and the recent creation of mechanisms such as REDD or carbon trading markets makes it likely that more attention will be paid to incentives in the upcoming NBSAP revision.

Financing

There are no specific provisions or financial mechanisms described in the NBSAP. There is mention of "strengthening management of economic funds for developing projects focused on biodiversity conservation" as a priority action, but this has not been further elaborated.

The lack of financial resources is generally cited as one of the major obstacles to the implementation of the NBSAP. Interviewees mentioned that financial constraints make it difficult to carry out the necessary coordination with stakeholders or to conduct educational activities to promote the implementation of the NBSAP.

National targets

The NBSAP reiterates the three main objectives of the CBD (conservation, sustainable use, and benefit sharing) but goes no further in identifying measurable targets. There are numerous outcomes identified as desirable, although no indicators for measuring success are offered.

Monitoring and review

The need for periodic monitoring and review is mentioned throughout the NBSAP, with consideration for ecosystems, regions, species and genes. There is also mention of ongoing support for research into biosafety and biotechnology. However, no specific or binding commitments are included. Identification and monitoring of indicator species, as well as exotic or invasive ones, are mentioned as priority actions, and a general commitment is made to foster efforts aimed at monitoring all aspects of Mexican biodiversity.

Other tools

Major outcomes of Mexico's NBSAP are extensive inventories and catalogues of Mexican biodiversity, as well as new understanding of species distribution. The NBSAP process has led to the development of new approaches to analysis and collection of biodiversity data and to major growth in scientific knowledge as a result of the inputs made by a wide range of scholars working in Mexico. The compilation of large databases and maps under CONABIO's stewardship has helped to establish a baseline for Mexican biodiversity, and in particular has highlighted the importance of understanding and incorporating scales in biodiversity planning.

Mexico is a leader in developing bioinformatics as an important tool for helping decision-makers. It has recently developed specific strategies for alien species (2010) and for plant conservation as its response to the Global Strategy for Plant Conservation. These advances are informing the ongoing process of creating state-level BSAPs.

Implementation and obstacles encountered

Although Mexico is a priority region for global conservation and ranks high in biodiversity, the country's biodiversity strategies have been unable to halt the loss of biodiversity. The main drivers are external and internal pressures including poverty, changes in land use to agriculture and urban settlements, corruption, illegal trafficking, resource extraction and global environmental change. A growing population and rapid rural development have contributed to development-related pressures on biodiversity.

In this regard, Mexico's NBSAP represented a positive step forward in developing appropriate biodiversity strategies. The very process of developing the NBSAP led to several important improvements including the widespread involvement of stakeholders and academics working on issues related to biodiversity and the strengthening of the biodiversity knowledge base. However, several obstacles have impeded the successful implementation of the NBSAP and have limited the potential impact it could have on the ground. For instance, its general and overreaching nature, combined with its lack of specific goals, targets, strategies, mechanisms or indicators have made it especially difficult for local and national planners and decision-makers to act upon it in concrete terms.

Another factor believed to impede the implementation of the NBSAP is the lack of incentive measures. This has exacerbated the general lack of political will and advocacy within the Mexican government to implement the NBSAP and perhaps also explains why there is a dearth of legislative measures within the legal framework to support NBSAP implementation in Mexico.

The grey areas in current Mexican legal frameworks – namely, unclear property rights regimes and land use rights – have also complicated the implementation of the NBSAP. Various interviewees cited the need for new legal amendments and provisions if NBSAP implementation is to be successful, specifically, more clarity on provisions related to property and land use rights.

Lack of financial support is reported as another obstacle to implementation of the NBSAP. Interviewees mentioned that, given the NBSAP's objectives, there is insufficient federal spending on its implementation. Together with the limited revenue-raising capacity of states and municipalities and the low reliance on external financing, this has made it difficult to implement the NBSAP at the local and regional levels. Interviewees also mentioned that such resources as are available tend to be 'project specific' and cannot easily be used for NBSAP implementation. Thus, the provision of more 'open' funds (i.e. that can be used according to needs) is one of the main recommendations for facilitating NBSAP implementation in Mexico.

Insufficient human resources are also cited as an obstacle to NBSAP implementation. Efforts to disseminate the NBSAP are unlikely to be effective without parallel investments in human resources.

It is important to stress, however, that despite these significant challenges, CONABIO has managed to successfully recruit the voluntary participation of 17 states in efforts toward the implementation of the NBSAP at the local and state levels as complementary actions and public policies to support CBD implementation. This has resulted in increased awareness and capacity-building at state and municipal levels on issues related to biodiversity. However, until there is a revision and update of the NBSAP that includes concrete objectives and measurable outcomes, and a new scope in line with the new Strategic Plan to be adopted by the CBD for the 2011-2020 period, implementation of the NBSAP will continue to face challenges.

4.8 Nepal

Introduction[241]

Nepal is situated in the central Himalaya and covers an area of 167.181 square kilometres. The population in 2007 was estimated at 26 million people, with an annual population growth rate of 2.25 per cent. Around 86 per cent of the area consists of hills and high mountains in the north, with 14 per cent of its flat land in the south. Altitudes vary from 67 metres to the world's highest mountain, Mount Everest, at 8,848 metres. Twenty-nine percent of the country is covered by forests, 10.6 per cent by shrub land and degraded forests, 12 per cent by grassland, 21 per cent by farmland, 2.6 per cent by bodies of water, and 24.8 per cent by other vegetation types.

Nepal's biodiversity reflects the country's diverse and unique geographical and climatic conditions, and is quite disproportionate to its size. Nepal covers only 0.1 per cent of the Earth's land area but has over 2 per cent of all flowering plants, 8 per cent of all birds and 4 per cent of all mammals. The country is comprised of six floristic regions and is one of four hotspots in the Himalayan region; 35 forests types and 118 ecosystems have been classified.

Agriculture is the most important industry in the country, followed by tourism. It is estimated that 342 plant and 160 animal species are endemic, concentrated mainly in the alpine and subalpine regions. Although they are under pressure, there are a large number of local landraces of crop and livestock species in Nepal.

Nepal is defined as a least developed country, with a GDP per capita of approximately US$460. The root causes of biodiversity loss can be attributed to a very large degree to socioeconomic causes, such as poverty and population growth. Lately, climate change and the political conflicts that have been ongoing for over a decade have also significantly contributed to biodiversity loss.

Preparation process for the Nepal Biodiversity Strategy and its Implementation Plan

Nepal ratified the CBD in 1993 and in 2002 issued a Nepal Biodiversity Strategy (NBS)[242] to serve as an overall framework for conservation and sustainable use of biodiversity. Preparation of the NBS started in the late 1990s, and disagreement with representatives of local forest communities is stated to be the main reason why the strategy was not approved until 2002. The NBS includes a very comprehensive description of Nepal's biodiversity and its significance, as well as considerations of the main threats to biodiversity conservation and a strategy section.

An action plan was not included in the NBS. According to interviews with key resource persons, this was seriously considered and a large number of the actions which were included in the subsequent Nepal Biodiversity Strategy Implementation Plan 2006-2010 (NBSIP) had already been identified during the NBS preparatory process. However, in light of the discussions during the process, it was considered that time was not yet politically ripe for the adoption of both a strategy and an action plan, and a stepwise approach was applied.

The second step was the adoption of the NBSIP in 2006.[243] The NBSIP identified thirteen concept projects to be implemented by relevant executing agencies.

241 Nepal Fourth National Report to the CBD (www.cbd.int/doc/world/np/np-nr-04-en.pdf) and Carew-Reid 2002, op cit (country review of Nepal, www.icem.com.au/02_contents/06_materials/06-reports.htm#item02)
242 Government of Nepal/MFSC 2002, Nepal Biodiversity Strategy, www.cbd.int/countries/profile.shtml?country=np#nbsap
243 GoN/MFSC 2006, Nepal Biodiversity Strategy Implementation Plan.

Involvement of stakeholders

The NBS was developed through the participatory process involving a broad cross-section of Nepali society, including over 120 NGOs, all 75 district development committees and over 350 government officials, plus national and international experts. Following three field surveys, forty-three technical papers were prepared and consultation meetings were held in thirty-six sites around the country. There were 1,254 respondents at the meeting and generally a high level of participation of local and indigenous communities.

Preparation of the NBSIP also involved a broad range of stakeholders. Two national level workshops and several cross-sectoral meetings were held.

The preparatory processes are generally viewed as a success in raising awareness about biodiversity in Nepal and establishing the NBS and the NBSIP as forming the key framework for biodiversity policy in Nepal. However, interviewees indicated that this has been more effective at the national and less at the local level.

Level of approval and national coordination structures for overseeing implementation

The NBS and NBSIP were approved by the Minister for Forests and Soil Conservation, whose ministry has overall responsibility for biodiversity in Nepal, on behalf of the government.

As an implementation structure, the NBS established and the NBSIP further spelled out the modalities of a National Biodiversity Co-ordination Committee (NBCC) with thirteen members comprising senior level representatives of relevant ministries, the private sector, NGOs and major donors. The Committee is chaired by the Minister for Forests and Soil Conservation and is supposed to meet every six months. The Biodiversity Unit under the Ministry of Forests and Soil Conservation (MFSC) serves as Secretariat.

The primary task of the NBCC is to develop policies for consideration by the government and to further provide institutional, political and operational guidance and direction for the implementation of the NBSIP. It is supposed to adopt an annual report to be submitted to parliament.

Under the NBCC, five thematic sub-committees were established covering the following themes: forest biodiversity, agricultural biodiversity, sustainable use, genetic resources and biosecurity. The coordinators of the committees are members of the NBCC.

The implementation structure also includes the sub-national level. Recognising that the efforts of central government will have only limited impacts if co-responsibility for biodiversity is not devolved to local governments, the NBS calls for the establishment of a district biodiversity committee in each of Nepal's seventy-five districts.

According to both Nepal's Fourth National Report and interviews with stakeholders, the coordination and implementation structure described above has so far not functioned properly. The NBCC has only met twice, and the report identifies poor inter- and intra-ministerial coordination and the lack of coordination with other stakeholders as major constraints to the implementation of individual projects and the NBSIP as a whole. The report also states that "serious attempts need to be undertaken to actively involve NBCC and the thematic sub-committees".

A number of interviewees mentioned the frequent replacement of high-ranking officials dealing with biodiversity issues, and thereby the loss of institutional memory in the Ministry of Forests and Soil Conservation, as an important reason for the poor performance of the NBCC. In fact, this was the subject

of an article in the Nepalese English-language newspaper the *Himalayan Times* ('Country a biodiversity hotspot; conservation zilch!') during the project team's visit to Nepal.[244] The newspaper reported that frequent replacements and unfilled posts in the ministry have seriously hampered implementation of biodiversity policies.

On the five thematic sub-committees, the national report states that "achievements made by the sub-committees have been unsatisfactory". Interviews with the focal points of the sub-committees on genetic resources, sustainable use and agriculture revealed rather uneven performances by each.

The sub-committee on genetic resources, whose focal point is the National Parks and Wildlife Department and whose mandate includes protection of species and wildlife management, was reported to function well and is meeting regularly.

The sub-committee on sustainable use, whose focal point is the Department of Botany, Tribhuvan University, has seen limited activity due to lack of funding and human resources as well as to the weak functioning of the NBCC and consequent lack of guidance.

The Committee on Agrobiodiversity, whose focal point is the Ministry of Agriculture, seems to have been subsumed into a National Agrobiodiversity Conservation Committee, mandated to carry out implementation and monitoring of the government's Agrobiodiversity Policy, adopted in 2007.

At the district level, district biodiversity coordination committees have been established in only ten out of seventy-five districts. No committees have been established since the release of the NBSIP in 2006.

Revision

According to the Fourth National Report, [245] the implementation of the NBSIP for 2011-2015 will be reviewed and updated and the committees will be reorganised. The updates will take into account the need to synergise biodiversity concerns with other conventions and to integrate more issues related to climate change, livelihoods and poverty reduction.

The Fourth National Report is also an important element in the Nepal biodiversity planning process. The report includes a very systematic and frank review of progress in the implementation of the NBS and NBSIP, including identification of gaps and constraints.

The report includes a table reporting on both the likelihood of implementation of each of the thirteen priority projects outlined in the NBSIP and the status of a supportive environment for implementation. The report also assesses progress in implementation against the CBD framework of goals, targets and indicators for the overall 2010 biodiversity target. The report could thus serve as an essential tool for setting new biodiversity goals and policies post-2010.

Main features of the Nepal Biodiversity Strategy and its Implementation Plan

Nepal Biodiversity Strategy

Besides the very thorough descriptions of Nepal's biodiversity and the threats to it, the document includes relatively short and broad outlines of strategies to conserve biodiversity and of mechanisms for action.

244 Bhushal, R.P. 2010, 'Country a biodiversity hotspot; conservation zilch', *Himalayan Times*, 8 March.
245 www.cbd.int/countries/profile.shtml?country=np#nbsap

The strategies are divided into four sections:

1. *Cross-sectoral strategies*, including landscape planning, local participation and indigenous knowledge, institutional strengthening, strengthened research, bioprospecting, gender issues, impact assessment and awareness raising
2. *Sectoral strategies*, including protected areas, forests, rangelands, agrobiodiversity, wetlands, and mountain biodiversity
3. *Commitments to address the most serious threats to biodiversity*, including commitments to develop the NBSIP through a broad participatory process and to address the root causes of biodiversity loss, and also calling for the establishment of the district biodiversity committees
4. *Criteria for ranking existing threats and prioritising action*, including a list of nine scientific and ecological and four socioeconomic criteria that may be used or built upon for setting priorities in the NBSIP.

The final chapter considers implementation mechanisms, including the role of government, the establishment of the NBCC and the thematic sub-committees, the role of the public, NGOs and academic institutions, and financial resources.

Implementation Plan

The NBSIP sets up a detailed framework for implementation that includes general objectives, criteria for prioritisation, priority projects, objectives under the projects, and cost estimates. As mentioned above, this framework has allowed for a comprehensive review of progress in implementation in the Fourth National Report.

The objectives of the plan are to:

- Conserve the biodiversity of the country within and outside protected areas and at the landscape level through public participation and institutional strengthening, and by ensuring sustainable funding mechanisms, consolidating inventory and database systems, and establishing transboundary cooperation
- Identify, develop and establish legislative, policy and strategic measures necessary to conserve, sustainably utilise and provide access to and share the benefits of the country's biological resources
- Conserve endangered species of wildlife through management of their habitats within and outside protected areas
- Develop legislation (*sui generis* legislation, access to genetic resources and benefit sharing) and sub-sectoral policies and strategic measures for the conservation of agriculture, rangelands (including pastoral), wetlands and mountain diversity through community participation
- Develop sustainable eco-friendly rural tourism, and
- Domesticate non-timber forest products and explore marketing opportunities for poverty reduction by promoting biodiversity conservation within and outside the protected areas through community participation.

On the basis of these objectives and twenty-four criteria for ranking threats and prioritising action, the following thirteen priority actions were identified (ranked in priority order):

1. Forest biodiversity conservation through community participation (outside protected areas)
2. National mountain policy and research network
3. Integrated wetland management
4. Phulchoki-Chandragiri biodiversity conservation programme[246]
5. Poverty reduction through biodiversity conservation
6. Rhododendron conservation programme in Tinjure-Milke-Jaljale, Eastern Nepal
7. Species conservation and habitat management (in protected areas)
8. Landscape level biodiversity conservation
9. Agrobiodiversity conservation through community participation
10. Integrated rangeland management
11. Establishment of the Kangchenjunga tri-national peace park[247]
12. Institutionalisation of biodiversity conservation in Nepal
13. Conservation and management of pollinators for sustainable agriculture through an ecosystem approach.[248]

Seven projects are new and six are continuations of existing projects. Each project concept is thoroughly described and includes objectives, cost estimates and potential funding agencies.

The NBSIP does not include time-bound and measurable targets or indicators.

Nepal's Fourth National Report includes a table indicating whether the objectives under the projects are likely to be met, and the status of the supportive environment. Out of forty-nine objectives, twenty-five are considered likely and fourteen not likely to be implemented; for the remaining ten objectives there is insufficient data. For three objectives, the supportive environment is strong, for sixteen it is fair, for five it is weak but improving, and for twenty-four it is weak. The cross-sectoral project 'Institutionalisation of Biodiversity Conservation in Nepal' has the lowest score.

The limited degree of implementation is attributed in the report to "a lack of systematic approach in determining the country's capacity and developing implementation modalities. This has negatively impacted prioritisation, operationalisation, implementation and ability to monitor performance at the programme/project level." This lack of a systematic approach has been evidenced in many ways, but perhaps most notably through a mismatch between priorities for action and budget allocation and poor inter- and intra-ministerial coordination.

Integration of NBSAP with higher and cross-sectoral plans and policies

More than 70 per cent of Nepal's people depend on agriculture and forestry for their livelihoods, and the links between biodiversity, livelihood and social well-being are very obvious in Nepal. This relationship thus features prominently in the NBS and NBSIP, which are clearly aiming to integrate biodiversity concerns into cross-sectoral plans and policies. As described below, this has to a certain extent occurred.

The National Planning Commission is responsible for the formulation of cross-sectoral national development policies such as poverty reduction strategy papers (PRSPs) and MDG progress reports.

246 Locations in the midhills above the Kathmandu valley.
247 With China and India.
248 Not ranked with others, but considered a priority project by the Ministry of Agriculture.

A promising factor in getting biodiversity reflected at the higher policy level is the current process of preparing a new constitution for Nepal. The 2007 interim constitution stipulates that all citizens shall have the right to live in a healthy environment. It further stipulates that the state should give priority to the interests of local people when managing the country's national resources and that the state should make provisions for the equitable distribution of benefits from the conservation and sustainable use of forests, plants and biodiversity. Moreover, the interim constitution includes provisions for identifying and preserving traditional knowledge, and a target to conserve at least 40 per cent of the natural forest area.[249] According to interviews with key stakeholders, this high level recognition of environmental concerns is likely to be maintained in the final constitution, expected to be adopted in 2010.

In the Nepalese PRSP entitled the Tenth Plan (2002-2007), environmental and biodiversity concerns are rather weakly reflected, while the MDG-based Three Year Interim Plan (2007/08-2009/10) gives clearer recognition to the value of biodiversity, traditional knowledge and community based management of natural resources.

The global target to significantly reduce the current rate of biodiversity loss by 2010 was adopted in 2007 by the UN as a target under Goal 7 (environmental sustainability). While biodiversity is quite extensively covered in the Nepalese 2005 MDG report on progress in achieving Goal 7, Nepal has not integrated the 2010 target into its MDG policies and biodiversity is not reflected in the reports of the other MDGs. A new MDG report is currently under preparation, and it is likely that biodiversity will feature more prominently in this.

A Poverty Alleviation Fund was established in 2004 to assist marginalised communities. It has helped to implement 6,000 community projects, including projects related to biodiversity through natural resources management, afforestation and raising awareness about the environment. However, according to the Fourth National Report, there is scope for a more systematic implementation of the NBS and NBSIP through the fund.

In spite of the fact that connections have been established between national biodiversity and development policies, according to both the Fourth National Report and interviews with key stakeholders there is a lack of coordination and thus of implementation of cross-sectoral activities. As mentioned above, the institutional framework in the form of the National Biodiversity Co-ordination Committee and the five thematic sub-committees has yet to function as envisaged.

Integration with implementation of the other biodiversity-related conventions

Nepal is a party to the Ramsar Convention, the World Heritage Convention, CITES and the ITPGRFA.

The Ramsar Convention obligations are reflected in the NBSIP by the priority project to promote integrated wetlands management with a general objective of developing integrated watershed plans and a more specific objective of conserving a number of internationally significant wetlands. According to the Fourth National Report, the latter objective is likely to be met but the former objective is less likely to be met.

CITES is reflected under the priority project 'Species Conservation and Habitat Management' through the objective 'Control poaching activities and effectively implement CITES legislation'. The objective is likely to be met according to the Fourth National Report, although the supportive environment is assessed as weak.

249 Nepal Fourth National Report to the CBD, 2009.

Nepal only ratified the ITPGRFA in 2010, but the treaty is implicitly reflected in policies to conserve agrobiodiversity.

The Fourth National Report states that implementation of the biodiversity-related treaties is generally weak and that a strong national commitment and complementary legislation are needed to make them truly effective.

Integration with climate change policies

Nepal is among those countries most vulnerable to climate change. High mountain areas are warming faster than lowlands, implying severe impacts on local natural resources and environment through, for example, the melting of Himalayan glaciers and undesirable changes in forest and vegetation composition, which could directly affect not only the environment of Nepal but also the lives of the majority of people.

Nepal's biodiversity policies have so far not been integrated into its climate change policies, although steps have now been taken in that direction. Nepal is in the process of preparing a National Adaptation Programme of Action (NAPA), which all least developed countries are supposed to do under the UNFCCC and which most have already done. The work is led by the Ministry of Environment, Science and Technology, and six thematic groups have been established to provide input, including a group on forests and biodiversity steered by the Ministry of Forests and Soil Conservation (MOFSC). It is likely that biodiversity and sustainable management of forests will be well reflected in the NAPA.

Given its extensive forest cover and the importance of forestry, Nepal is well suited for being involved in REDD activities. A REDD Forestry and Climate Change Cell has been established under the MOFSC and is currently preparing a REDD Readiness Preparation Proposal as a pre-condition for receiving support for REDD projects from the World Bank Forest Carbon Partnership Facility.

It is expected that REDD projects in Nepal will build largely on existing forestry policies, including community forestry, and will include biodiversity as a strong component.

Integration with sectoral plans and policies

Forestry

Forest covers nearly one-third of Nepal's geographic area (5.8 million hectares, and when shrub lands are included this figure rises to nearly 40 per cent), and thirty-five forests have been classified. The forest cover has declined over a long period and, according to the FAO,[250] the deforestation rate increased in Nepal at an annual rate of 1.4 per cent between 2000 and 2005. However, according to the Fourth National Report, information on change of forest cover is conflicting and confusing.

The government has formulated a Master Plan for the Forestry Sector, which was revised in 2000 (Revised Forestry Sector Policy), and which gives high priority to biodiversity conservation.

'Forest biodiversity conservation through community participation' is ranked the first priority project of the NBSIP, and Nepal is already a pioneer in community forestry. The government's policy is to hand over management of a large part of the country's forests to local forest user groups for the benefit of the communities. Around 21 per cent of forests are now under the management of 14,431 forest user groups, benefiting 1.66 million households (about 40 per cent of total households of Nepal).[251] The area represents approximately one-third of the forest area with community forest potential, and this transfer is

250 FAO *Global Forest Resources Assessment 2005*, Rome 2005, www.fao.org/docrep/008/a0400e/a0400e00.htm
251 Fourth National Report of Nepal to the CBD, 2009.

expected to continue. The work slowed down in the last decade, however, due to the political conflicts in Nepal.

As far as is known, no survey of the impact of community forestry on biodiversity has been made, but the prevailing view is that community forestry has led to more sustainable management, including with regard to biodiversity conservation.

Agriculture

Despite the fact that only 21 per cent of the total land area is used for agricultural purposes, agriculture is Nepal's biggest industry. The country has a wide diversity of indigenous livestock and crops, although agrobiodiversity has been seriously depleted as a result of more intensive agricultural practices, including the increasing use of modern high-yielding varieties.

There is a growing awareness of the importance of agrobiodiversity conservation, and this is included as one of the thirteen priority projects in the NBSIP (ranked number 9). According to the Fourth National Report, of the six objectives of the project, four are likely to be met and many concrete activities are reported.

The NBSIP also includes a project on the conservation and management of pollinators. Here also most objectives are likely to be met, according to the report.

In 2007 the government adopted an Agrobiodiversity Policy addressing the conservation, promotion and utilisation of genetic resources in agriculture, as well as community and state rights over these.

Measures to combat unsustainable agriculture practices, such as the use of pesticides which are harmful to biodiversity, do not appear in the NBSIP. At an interview, representatives from the Ministry of Agriculture stated that sustainable agriculture was only the third policy priority for the ministry after food security and promotion of trade.

Tourism

As mentioned above, tourism is the second biggest industry in Nepal, and a major income source for both the government and local communities. Half a million tourists visit Nepal each year, of which more than 40 per cent visit national parks. In spite of this clear link between tourism and biodiversity conservation, tourism policies are little reflected in the NBS and the NBSIP as compared to other economic sectors.

In practice, however, there seems to be a general appreciation of this interdependency, and mechanisms have been set in place to return revenues from tourism to community-based nature conservation (at least indirectly) through returning shares of fees for entry to protected areas to local communities (see below).

Tourism is concentrated in a small number of protected areas, and interviews showed divergent views on the environmental impact of tourism on these areas. The biodiversity sector believes that the pressure from tourism in some areas has exceeded the carrying capacity, whereas the tourist sector states that there is no need for restrictions.

The considerations of tourism in the NBS concern the development of ecotourism outside protected areas and in less visited protected areas in order to benefit local livelihoods. Promoting sustainable tourism in protected areas to benefit local communities is an objective under the NBSIP priority project 'Poverty reduction through biodiversity conservation' (ranked 5). The Fourth National Report considers the objective less likely to be met and the supportive environment as weak.

Bioprospecting and ABS

Bioprospecting has great unfulfilled potential in Nepal. According to the Fourth National Report, estimates for the number of medicinal plant species in Nepal range from 593 to 1,700. However, the harvesting of medicinal plants is nowadays generally unsustainable.

Bioprospecting is broadly reflected in NBS. The NBSIP does not directly address the issue but includes an objective to develop *sui generis* intellectual property legislation to meet benefit sharing requirements of the CBD. The Fourth National Report assesses this as less likely to be met.

Outside the context of the NBS and NBSIP, a bill to implement the CBD provisions on ABS is in the final stages of preparation. Preparation of the bill has been underway since 2002 and has been subject to controversy between the government and indigenous groups on determining the latter's rights to genetic resources, including questions of interpretation of the Convention concerning Indigenous and Tribal Peoples in Independent Countries (ILO 69).

Protected areas

Protected areas are the cornerstones of biodiversity conservation in Nepal, and a success story. The country's sixteen protected areas cover nearly 20 per cent of the total area of the country and are established in lowland, midhills and the high mountains, although protected areas in the midhills are underrepresented. The sixteen areas are made up of nine national parks, three wildlife reserves, three conservation areas and one hunting reserve – as well as eleven buffer zones around protected areas.

There is a general recognition that protected areas management cannot take place without the involvement of and the sharing of benefits with local communities. Incentives have been created through returning 30-50 per cent of revenues from national park entrance fees to those local communities living in the buffer zones surrounding the parks. The arrangement is enshrined in law and involves 700,000 people. It is administered by the National Parks and Wildlife Department. The total amount being returned is approximately US$3 million a year. The arrangement covers, for example, compensation to farmers when their livestock is killed by wild animals and this has led to less conflict between local communities and the authorities.

Similar arrangements exist for other categories of protected area through the Natural Trust for Nature Conservation. This was established in 1982 as an autonomous non-profit organisation mandated to implement official conservation policies. The fund administers revenues from conservation area entry fees and distributes these to local communities living in and around the areas as a way to promote forests and wildlife, alternative energy production, conservation awareness and production, gender-equitable development, agrobiodiversity, heritage conservation, community development, tourism development and community health. The Annapurna Conservation Area, visited by 78,000 tourists a year, is one of the areas that benefits in this way.

While no assessment has been made of the extent to which these incentive measures have benefited biodiversity in the protected areas involved, they are generally believed to have had positive impacts both for biodiversity and the communities involved.

Integration of biodiversity planning with the sub-national level

The NBS states: "It is recognised that local authorities can be very effective in biodiversity conservation and sustainable use. If biodiversity considerations are not devolved to local government decision-makers, central government efforts are likely to remain ineffective. It is not possible for central government

ministries to ensure the sustainable use and conservation of the biological diversity of Nepal's seventy-five districts without the active involvement of local government bodies".

These districts are responsible for biodiversity management at the local level. As mentioned above, the establishment of district biodiversity committees called for under the NBS and NBSIP has only taken place in ten out of the seventy-five districts. Many of the stakeholders interviewed for this case study identified this as one of the major constraints on implementation.

The current process of preparing a new constitution includes the proposal to change the country from a unitary to a federal state. The modalities of the new federal state, including the division of powers between the federal, regional and local levels, are still to be developed, and many of those interviewed feared that this process will further hamper and delay the devolution to the sub-national level of responsibility for biodiversity management.

Engagement with local and indigenous communities

The importance, roles and responsibilities of community-based groups and organisations with regard to natural resources are well recognised, and are legally defined by various laws and regulations. The NBS and the NBSIP also embody a strong commitment to promoting enhanced local participation, including that of women, in natural resources management.

The handing over of management of large parts of Nepal's forests to local forest user groups and the programmes for returning revenues from protected areas to local communities in and around the areas are strong expressions of government policy. However, the delay in devolving powers from national to local authorities reported above could well be an obstacle and an indication that there is still a large unfulfilled potential for community management of natural resources and biodiversity.

Tools for implementation

Communication, education and public awareness

The MOFSC gave high priority to organising a broad participatory process in Nepal for the preparations of the NBS and NBSIP, and thereby to raising public awareness about biodiversity. Nevertheless a lack of public awareness is reported to be an obstacle to implementation. Other than this, the issue of communication, education and raising public awareness does not appear strongly in the NBS or NBSIP.

Legislation

The NBSIP identifies a large number of acts and regulations relevant to implementation of the NBS; these include the *National Parks and Wildlife Act*, the *Plant Protection Act*, the *Soil and Water Conservation Act*, the *King Mahendra Trust Fund for Nature Conservation Act*, the *Seed Act*, the *Forest Act* and the *Environment Protection Act*. The NBSIP does not call for additional legislation, except for legislation on *sui generis* IPR legislation.

Impact assessment

The *Environmental Act* provides mandatory provisions for environmental impact assessments of proposed projects that are likely to have significant impacts on the environment. A review carried out in 2001 concluded that the level of implementation and enforcement of EIA assessment was generally weak and that biodiversity receives limited attention in the EIA schemes.[252] This present case study did not assess the extent to which this is still the case.

252 Anneveldt, E. & Pasman, M. 2001, 'A National Case Study on the Integration of Biodiversity into EIA', as part of the UNEP-BPSP Thematic Studies on Integration of Biodiversity into National Environmental Assessment Procedures, www.unep.org/bpsp/HTML%20files/TS-EIA.html

Nepal has not applied procedures for SEA (assessment of plans, programmes and policies), and nor do the NBS or NBSIP call for such procedures.

Application of the ecosystem approach

The ecosystem approach is not explicitly applied as a general approach to biodiversity management in the NBS and NBSIP, but it is implicitly applied through projects to promote integrated management of different ecosystems. The concept is also the basis of the project to conserve and sustainably manage pollinators.

Incentive measures

Incentive measures have mainly been applied in Nepal through the measures, previously referred to, for community forestry and for returning revenues from protected area fees to local communities living in and around the areas.

Financing

The NBSIP includes a detailed estimation of costs for implementing the various priority projects. The total cost is estimated to be US$86 million, but the NBSIP states that biodiversity conservation should be considered an investment with direct and indirect economic returns.

The NBSIP outlines a number of potential sources of finance, including a new Nepal Trust Fund for Biodiversity, recycling of government revenues collected from products and services provided by biodiversity, donations and investments by the private sector, and grants and loans from bilateral and multilateral donor agencies. Each project description includes a list of potential external funding agencies.

The estimated financial resources needed for implementing the NBSIP are far greater than those made available, and to a large degree the limited progress in implementation is attributed to the inadequacy of resources. The envisaged Trust Fund for Biodiversity has never functioned and, according to the Fourth National Report, many activities related to the implementation of the NBSIP have been carried out with funding from the government, the GEF or NGOs.

The government cooperates with many bilateral donor agencies, including those from Australia, Denmark, Switzerland, Finland, the UK and the US. Although listed in the NBSIP as potential donors, these agencies are apparently not involved in financing NBSIP projects. One reason for this could be that the government focal point for funding agencies is the Ministry of Finance and this ministry may not see biodiversity as a bilateral funding priority.[253]

National targets

The NBP and the NBSIP do not include time-bound and measurable targets. According to the Fourth National Report, such targets will be included in the post-2010 NBP and NBSIP follow-ups.

Monitoring and review

The NBSIP does not include indicators or other tools for monitoring, but indicates that such tools are to be developed.

In the absence of targets and a monitoring mechanism, the Fourth National Report contains a thorough and illustrative measurement of progress in implementation against the detailed system of goals, targets

253 The Danish donor agency Danida is mentioned often in the NBSIP as a potential funder, but an interview with a Danida representative in Nepal revealed that biodiversity and natural resources management is not a priority for Danida funding.

and indicators for the 2010 biodiversity target adopted by COP-7 in 2004. This gives a very useful picture of the level of implementation.

Summary of implementation, obstacles encountered and lessons learned

"There is world class paperwork, but the actual work in the field is negligible in the country". This quote is from the *Himalayan Times* article on biodiversity governance in Nepal, mentioned above. While this may not be completely fair in light of the impressive work done in Nepal for conservation and sustainable use of biodiversity, it points to the gap between policy and implementation which exists in Nepal, as in many other countries, as a consequence of the tremendous complexities involved in addressing biodiversity loss.

The 'paperwork' in the form of the policy planning process in Nepal has indeed been of high quality. Earlier reviews of other countries' NBSAPs have often concluded that these documents have mostly 'remained on the shelf'. This is not the case with Nepal's NBS and the NBSIP. The preparatory processes for the two documents were truly participatory, and interviews with national stakeholders across sectors reveal that the NBS and NBSIP have raised awareness about biodiversity, are well known and are considered policy documents not simply for the MOFSC (although this is less the case at the sub-national level). Nepal is one of the few countries that has clearly identified the stakeholders responsible for implementation and estimated the financial costs.

Also, the evaluation of progress in implementation and the gap analysis presented in the Fourth National Report is very elaborate and useful, not only for Nepal in preparing the next steps in its national biodiversity planning process, but also for a wider audience as a model for illustrating successes and challenges. However, as the evaluation reveals, the implementation plan was too ambitious and important elements have not been implemented.

Progress has been made in the fields of promoting sustainable forest management and of designation and management of protected areas through involving and sharing the benefits with local communities. It is clearly recognised that conservation and sustainable use of biodiversity is most effective when it is community based. Progress has also been made on improving the status of some endangered species, and within the agricultural sector there has been progress in conserving crops and livestock genetic diversity.

Like in many other countries, progress has been limited in fields which require more complex and integrated measures, such as the conservation of areas important to biodiversity outside protected areas, sustainable use of the components of biodiversity, pollution control and management of invasive alien species. In addition, Nepal has yet to take measures to mitigate and adapt to climate change – measures that could well go hand in hand with conserving biodiversity through maintaining forests and other robust ecosystems.

Lack of financial resources is cited as the main obstacle to implementation of the NBSIP, and it is a fact that the Nepal Trust Fund for Biodiversity exists only on paper and that the contributions from external sources estimated in the NBSIP to be needed to finance the priority projects have not been received. Other major obstacles are the lack of coordination and integration with economic sectors and the limited number of biodiversity committees constituted at the district level to execute biodiversity policies locally.

The above obstacles are interconnected in the sense that mainstreaming of biodiversity concerns within sector policies and at the local level, and recognition across sectors of the value of biodiversity for human well-being, will lead to more cost-effective implementation measures.

The Fourth National Report offers a number of suggestions for future policy and actions to address the gaps, including:

- Revitalising and restructuring the National Biodiversity Coordination Committee and its thematic sub-committees
- Speeding up the establishment of all the District Biodiversity Coordination Committees
- Promoting landscape-level planning and monitoring and thereby harmonising action at the national, sub-national and local levels
- Internalising biodiversity outreach action as a regular government programme to increase public awareness
- Integrating measures to combat climate change and to conserve and sustainably use biodiversity
- Adopting quantitative and measurable national goals, targets, objectives and indicators for beyond 2010
- Reviewing the existing NBP and NBISP and preparing a new national biodiversity strategy and action plan, including the above elements, and building capacity at all levels but especially at the local level.

Further recommendations

Given the important contribution of tourism to Nepal's economy and the fact that nature is the main tourist attraction, the closer integration of biodiversity and tourism policies than is the case today as part of a new NBSAP for the post-2010 period is recommended.

It is generally recognised that a lack of inter-ministerial coordination has been a major obstacle to implementation. One way of improving coordination, integration and ownership could be through adoption of the future strategy and action plan at the level of the Prime Minister and/or parliament and the establishment of a new coordination and implementation mechanism under the responsibility of the Prime Minister.

Nepal's present action plan for biodiversity, in the form of the NBSIP, consists of a number of priority projects. These projects have not been integrated into the national budget and their execution has been highly dependent on external funding. One reason for the lack of success in getting support for the projects could be that funding from bilateral donor agencies earmarked for biodiversity is generally decreasing. Official development assistance is now increasingly given in the form of budget support rather than support for specific projects.

Thus it is recommended that in the future biodiversity planning take a programmatic approach, building more on self-reliance and less on dependence on external funding. It will create a greater sense of ownership within the government if the bulk of a new NBSAP were built on what could be achieved independently of external funding. The NBSAP preparatory process should ensure that those sector departments responsible for the execution of the planned actions are allocated the necessary resources in the national budget to do so.

In addition, the NBSAP could also identify actions that are desirable but which would require external funding. Such funding should be sought in a form that enhances rather than hampers self-reliance and can be integrated into programmes already defined on the basis of existing budgets.

4.9 St Kitts and Nevis

Introduction[254]

St Kitts and Nevis (also known as St Christopher and Nevis) is a two-island federation in the Eastern Caribbean. Nevis is located just 3 kilometres southeast of St Kitts, and the combined land area of both is 269 square kilometres. The volcanic islands have a tropical maritime climate with an average temperature of 27 degrees Celsius and a rainy season from May to November. The country gained full independence in 1983 from the UK and has maintained a stable Westminster democracy. There is a federal government based in St Kitts and also a Nevis Island Assembly and a semi-autonomous Nevis Island Administration.

St Kitts and Nevis has a population of 40,131 (July 2009 est) with 32 per cent based in urban areas – the capital Basseterre and smaller towns of Sandy Point and Cayon in St Kitts and the Nevisian capital, Charlestown. Carib Indians occupied the islands for hundreds of years, yet the population is now mainly of African descent, with some Portuguese and Lebanese. Within the last ten years there has been a growing immigrant population from Guyana. The population has a life expectancy of 73.2 years and a literacy rate of 97.8 per cent. The economy is increasingly dependent on tourism revenues, which have replaced the sugar industry, which closed in 2005. In 2009 visitor arrivals were 200,000; however, the islands' economies are vulnerable to damage from natural disasters such as hurricanes and to external factors such as changes in the global economy. With a GDP per capita of US$9,900 in 2006[255] and US$15,200 in 2009 (est), the country faces a high public debt burden, estimated at US$314 million in 2004 and 185 per cent of GDP in 2009.

NBSAP preparation process

St Kitts and Nevis ratified the CBD on 7 January 1993. The NBSAP preparation process began around 2000 with the commissioning of country studies to establish baseline information on and the status of biodiversity in the country. A national project desk was established within the Department of Environment (St Kitts), staffed with a national project coordinator and an administrative assistant. In addition to management of the NBSAP development, this office undertook the preparation of reports to the UNFCCC and the UNCCD.

A 25-member national steering committee was appointed comprising technicians from both islands and various government departments, NGOs from both islands and other organisations with biodiversity relevant mandates. The committee reviewed the country study reports and supported the work of national consultants who drafted the NBSAP. The document National Biodiversity Planning Guidelines based on Early Experiences around the World (WRI/UNEP/IUCN1995) was used as a key tool for guiding the NBSAP development process.

The development process included a biodiversity and NBSAP publicity and awareness campaign using brochures, news spots, radio announcements, poster boards and displays, mailed notices, and essay competitions. The national consultants undertook individual consultations with various stakeholders, community leaders and traditional resource users by participating in community events, biodiversity and traditional use tours, interviews, social club meetings and discussions. Formal consultations were carried out at a national consultation which was attended mainly by government agencies and users, such as tour guides and fisheries associations.

254 Most information and statistics for this section taken from: a) CIA World Factbook, https://www.cia.gov/library/publications/the-world-factbook/geos/sc.html:, accessed 18 May 2010; b) US Department of State, www.state.gov/r/pa/ei/bgn/2341.htm, accessed 18 May 2010; and c) Government of St Kitts and Nevis, Ministry of Sustainable Development (April 2006) Adaptation Strategy in Response to the New EU Sugar Regions 2006-2013.

255 CARICOM Secretariat Statistical Databases 2005-2006.

The NBSAP was drafted and then reviewed at a national review workshop. The reviewed draft was then submitted to the national project coordinator, who in turn submitted it to the Ministry of Health and Environment through the Planning Unit, which undertook various supporting changes before final submission for cabinet approval. The 2004 NBSAP for St Kitts and Nevis was then submitted to the Secretariat of the CBD at the end of 2008.

St Kitts and Nevis has recently (December 2009) completed its Second National Report to the CBD; however, this has yet to be submitted. This report is mainly a question and answer checklist of whether work has been done in the country in response to various articles of the CBD (Articles 5 to 26) and COP decisions.

The biodiversity project office was dissolved after submission of the draft NBSAP to the Planning Unit. The previously separate Department of Physical Planning and Department of Environment were merged and the director of the new Department of Physical Planning and Environment became the CBD biodiversity focal point. As discussed further below, in addition to being the manager of a fairly large department and focal point for biosafety, the appointment as biodiversity focal point presents an extra burden for one officer with competing priorities. Overseeing the implementation of the NBSAP has therefore been hampered by not having a dedicated officer for biodiversity management.

In Chapter 7, the NBSAP outlines 'key elements for implementation', which include a structure for its implementation. At the top level, the NBSAP proposes the separation of the management and implementation of the NBSAP projects. The Ministry of Finance, Planning and Development would coordinate the NBSAP, whereas the Ministry of Environment would be the lead agency. This division of responsibility has proven to be unclear both in the process for developing the NBSAP and also in its implementation. The rationale for this has been explained as being one of personalities on one hand and of pragmatism on the other hand, since the GEF focal point is based in the Ministry of Finance, Planning and Development and should have oversight responsibility for all GEF-funded projects. Whatever the rationale, the changing of departmental alignments within and between ministries seems not to have resolved the issue arising from the division of responsibilities and the still unclear role. There is now a Ministry of Finance, Sustainable Development and Human Resource Development under the Prime Minister which brings the Department of Physical Planning and Environment (and hence the biodiversity focal point) into direct reporting to the GEF focal point at the same ministry.

The NBSAP further proposes:

- A Steering Committee – to provide advice, expertise and guidance, and for NBSAP promotion
- An NBSAP Coordinating Unit – as the focal point for NBSAP implementation but not involved in the NBSAP activities (specific projects)
- A Technical Advisory Committee – to collaborate with the Coordinating Unit and to assess implementation
- Technical specialists – expert consultants to work on specific short-term contracts providing expertise and advice, especially on fundraising and technical aspects of implementation to support the skills of the various implementation groups.

None of these structures have been formally instituted and therefore there has been limited implementation of the NBSAP. As described further below, elements of NBSAP projects are being implemented through various projects driven by other processes. Though these are not driven by the NBSAP, it is fair to say that the same technicians who developed the NBSAP support these projects and the NBSAP is referred to by several later projects and documents on environmental management.

Main features of the NBSAP and other plans and policies

The major part of the NBSAP, up to Chapter 6, provides a description of St Kitts and Nevis, a review of its biota and relevant legislation, and identification of information, actions, policy, legislation and institutional gaps. The final chapter, Chapter 7, identifies the 'key elements for implementation' and presents a structure for the implementation of the NBSAP – the roles of various agencies and the responsibilities of the proposed Steering Committee, Technical Advisory Committee, technical specialists and Coordinating Unit. Various implementation issues are briefly discussed, including:

- Legal instruments
- Financing
- Regional and international cooperation
- Organisational development and capacity-building
- Public awareness
- Indicators.

The appendices include:

- A description of the methodology used in preparation of the NBSAP and examples of agenda used for NBSAP consultation
- A listing of the plants of St Kitts and Nevis
- Invasive pests, diseases and organisms of importance to animals in St Kitts and biological control agents introduced into St Kitts and Nevis for crop protection measures
- St Kitts and Nevis bird species of special conservation concern
- Invertebrates: global and country estimates
- Proposed protected areas for selected natural resources: a table of fifteen protected areas in both islands ranging from terrestrial, marine and historic, and a brief reason for protection
- Projects: twenty-one projects are listed under five broad areas of (i) strengthening national capacity; (ii) terrestrial conservation measures and practices; (iii) a coastal environment management programme; (iv) hazard vulnerability analysis of critical ecosystems; and (v) development of monitoring and evaluation methodologies.

NBSAP implementation and relevant projects

Several projects whose early roots lie in the NBSAP development process are now (in 2010) being implemented in the country.

Small to medium scale projects being undertaken by various government departments and NGOs include:

a) *The Nevis Biodiversity Project*:[256] This is a project of the Nevis Historical and Conservation Society (NHCS) which undertakes several environmental, historical and biodiversity assessment, conservation, training and awareness projects. Ongoing projects include the Reef Check Project, a GIS mapping and surveying project of various ecosystems and key habitats; a Wetland Rehabilitation Project for the replanting of the red mangrove (most

256 www.bio-diversity-nevis.org

of the remaining mangroves have rapidly deteriorated since the NBSAP country studies assessments and only one remaining red mangrove can now be found on the island); and the Mapping of Nevis Seabed Project for biodiversity habitat and archaeological heritage, which has recently resulted in locating a historic shipwreck of a British frigate lost during the French invasion of 1782 (leading to NHCS plans to request from the government designation and protection of the relevant area under the recently ratified UNESCO Convention on the Protection of the Underwater Cultural Heritage).

b) The Department of Fisheries and the Sea Turtle Group Monitoring Programme[257] and Mapping of the Migration Route of the Hawksbill Sea Turtle.

c) *The Sandwatch Project*: Sandwatch is a volunteer network of schools, youth groups, NGOs and community-based organisations working together to monitor their beach environments. It started in the Caribbean in 1999 and has extended to various regions and is mainly funded by UNESCO.[258] The director of the Sandwatch Foundation is based in Nevis at NHCS and serves on several environmental project committees and also leads the Nevis Biodiversity Project. One school on Nevis is involved in beach monitoring.

Major projects include:

a) *Rehabilitation and Management of the Basseterre Valley as a Protection Measure for the underlying Aquifer*: This project proposes to demonstrate the proper management and protection of a critical aquifer and well-field through mitigation of threats from contaminants, on-the-ground protection and improved user resource management.[259] The project has been facilitated under the GEF Integrated Watershed and Coastal Area Management Project (GEF-IWCAM), which is a regional project designed to protect watersheds and coastal areas.[260] Also referred to as the Basseterre Valley National Park Project, it is expected to be completed in 2010. The designation within the Basseterre Valley of an area as a national park – the Liamuiga National Park with a management plan and management authority – is one major output. The park's conceptual model includes a botanical gardens, butterfly and insect aviary, and herb garden. The proposal is also compatible with the following international and regional multilateral agreements to which St Kitts and Nevis is a signatory: the CBD, the Ramsar Convention, the Cartagena Convention[261] and Protocols, the UNCCD and the St George's Declaration of Principles for Environmental Sustainability in the Organisation of Eastern Caribbean States (OECS).[262] The goal of the project is expressed as follows: "Basseterre Valley transformed from a threatened and heavily exploited aquifer and well-field into a water resource management area where water

257 More information on the Sea Turtle Group is available at www.cccturtle.org
258 www.sandwatch.ca
259 Project document – Demonstration Project Paper, St Kitts and Nevis.
260 The project Integrating Watershed and Coastal Area Management (IWCAM) in the Small Island Development States (SIDS) of the Caribbean, with a value of US$22 million, was approved by the GEF in May 2004. Implementing agencies are UNEP and UNDP. Executing agencies are the Secretariat of the Cartagena Convention (UNEP-CAR/RCU) and the Caribbean Environmental Health Institute (CEHI). There are thirteen countries, including St Kitts and Nevis and St Lucia. The overall objective of this project is to strengthen the commitment and capacity of the participating countries to implement an integrated approach to the management of watersheds and coastal areas. The long-term goal is to enhance the capacity of the countries to plan and manage their aquatic resources and ecosystems on a sustainable basis (www.iwcam.org).
261 Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region.
262 The St George's Declaration (SGD) of Principles for Environmental Sustainability in the Organization of Eastern Caribbean States was published in 2001. In 2004, the Government of St Kitts and Nevis (GOSKN) prepared a National Environmental Management Strategy and Action Plan, 2005-2009, in fulfilling obligations under the SGD. The NEMS spans a five-year period, including a two-year implementation plan. There are forty-eight strategies listed under seventeen principles from the SDG. The principles range from the use of economic instruments for sustainable environmental management to managing and conserving energy.

abstraction is carefully controlled and where the groundwater and well-fields are actively protected against contamination and harmful usage. Control and management of the water resource in the valley linked and integrated into improved control and management of demand and more efficient supply and distribution. Domination of the landscape by monoculture will have disappeared, and the ecosystem functions of the valley will have been enhanced through sustainable development of appropriate land usage".

b) *Nevis Peak National Park and Camps River Watershed*: This project is part of the Protecting the Eastern Caribbean Region's Biodiversity (PERB) project, funded by USAID and executed by OECS. It proposes a 2,330 hectare protected area in accordance with the Nevis Physical Development Plan, consisting of volcanic formations and encompassing rainforest and the island's major watersheds, springs and freshwater lagoon, which feed into the largest living reef system around Nevis. The protected area management plan is with the Nevis Island Administration Cabinet for approval.[263] This project is especially significant as it covers one of 14 protected areas proposed by the NBSAP.

c) *St Kitts and Nevis Marine Zoning Project*: USAID Barbados/Eastern Caribbean provided funds to The Nature Conservancy (TNC) to develop a multiple-use marine zoning plan for St Kitts and Nevis as a pilot project for the wider OECS region. The key outputs include a zoning design and a decision support framework for the implementation of a country-wide marine zoning plan which will facilitate sustainable development and use for all activities occurring in the defined marine and coastal areas (260 square kilometres of marine habitat off St Kitts and Nevis). The project also includes review and recommendations for strengthening marine policy, legislation and regulations, and a marine biodiversity education and outreach component that will support the zoning effort. This project was scheduled for completion by June 2010.

d) *OECS Protected Areas and Associated Livelihoods (OPAAL) Project*: This project is the first phase of a fifteen-year programme which seeks to create an integrated system of protected areas among the OECS member states. The OPAAL project is a developmental plan component seeking to conserve globally important biodiversity by removing barriers to effective management of protected areas. There are six demonstration sites in the OECS, including Point Sable Environmental Protection Area, St Lucia and the Central Forest Reserve, St Kitts and Nevis. The OECS Secretariat, through its Environment and Sustainable Development Unit (ESDU), is responsible for the implementation of the OPAAL project. This initiative is being executed in partnership with the World Bank acting as an implementing agency of the GEF, the Fonds Français pour l'Environnement Mondial (FFEM) and the Organisation of American States (OAS).

Integration of the NBSAP with higher and cross-sectoral plans and policies

Most recent policies make reference to the NBSAP. For example, under its detailed strategies and priority actions, the Government's Adaptation Strategy in Response to the New EU Sugar Regions 2006-2013[264] calls for the implementation of the measures contained in the NBSAP.

The National Environmental Management Strategy (NEMS) was completed soon after the NBSAP and was a requirement under the 2001 OECS St George's Declaration (SGD) of Principles of Environmental

263 Status as at 1 May 2010.
264 Government of St Kitts and Nevis, Ministry of Sustainable Development (April 2006).

Sustainability.[265] Principle 13 of the NEMS is 'Protect and conserve biological diversity' and the NBSAP is referenced under its activities:

i. Implement the measures contained in the National Biodiversity Strategy and Action Plan (NBSAP) for St Kitts and Nevis [Dept of Environment/ PPNRE/ All Ministries/NGOs].

ii. Ensure that the work plans of all relevant Ministries contain elements of the NBSAP appropriate to their jurisdiction [Cabinet of Ministers].

In late 2009, the NEMS was reviewed at the end of its five-year cycle and two-year implementation planning process. Country reporting to the OECS-ESDU on implementation of the NEMS and the SGD is required every two years. The National Environmental Management Strategy and Action Plan appears to be the most authoritative strategy for environmental management in St Kitts and Nevis, perhaps as a consequence of the proximity, reporting and cooperative relationship with (and within) the OECS.

Integration of the NBSAP with implementation of the other biodiversity-related conventions, and with climate change and desertification policies

St Kitts and Nevis has ratified several major international and regional conventions, and by extension participates in the meetings and national implementation.[266] These include:

1. Cartagena Protocol on Biosafety: accession 11 September 2003. Draft biosafety legislation developed in 2006 and still under review. An Interim National Report was submitted in 2008.
2. UNCCD: accession 30 June 1997. First and Third National Reports were prepared and submitted. National Action Plan adopted on 12 March 2007.
3. CITES: accession 14 February 1994. Annual reports have been submitted by the Department of Agriculture. An International Trade in Endangered Species Act is being drafted.
4. UNFCCC and its Kyoto Protocol: ratification 7 January 1993 and 8 April 2008 respectively. First national communication submitted in 2001. Second national communication now under review.
5. Convention Concerning the Protection of the World Cultural and Natural Heritage: accession 10 July 1986. Brimstone Hill Fortress inscribed on World Heritage List in 1999 and Bath Hotel Historic Site has heritage protection.
6. UN Convention on the Law of the Sea (UNCLOS): ratified 7 January 1993. No specific legislation.
7. Protocol of 1978 relating to the International Convention for the Prevention of Marine Pollution from Ships, 1973 (MARPOL PROT 1978) and its Protocol of 1997 (MARPOL PROT 1997), accession 24 December 1997 and 2 March 2005 respectively, and the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (LC PROT 1996), accession 7 October 2004. Some elements for the prevention of pollution by oil included in various acts and with regulations being developed.
8. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal: accession 7 September 1994. Comprehensive regulations being developed.
9. Stockholm Convention on Persistent Organic Pollutants: accession 21 May 2004. National Conservation Protection Act No. 6 of 2004 deals with legislation of substances that deletes the ozone layer.

265 See footnote 262 above.

266 The status of national implementation of these agreements taken from Draft OECS NEMS Review Document (review of St Kitts and Nevis NEMS implementation), prepared by Helen Douglas, 30 June 2009 version.

10. Vienna Convention for the Protection of the Ozone Layer and Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol) and subsequent Amendments up to Beijing Amendment. Accession to both the Vienna Convention and the Montreal Protocol 10 August 1992 and ratification of all four amendments, most recently the ratification of the Beijing Amendment, 8 January 2009. Management of importation of ozone-depleting substances is ongoing with the development and implementation of a licensing process of ozone-friendly substances.
11. Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (Cartagena Convention): ratification 15 June 1999.
12. Oil Spills Protocol (Cartagena): ratification 15 June 1999. St Kitts and Nevis Oil Spill Contingency Plan is part of the SKN National Disaster Plan.
13. United Nations Programme of Action for the Sustainable Development of Small Island Developing States (Barbados Programme of Action 1994) and the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (2005).
14. Millennium Declaration and Millennium Development Goals. "... the Government also acknowledges that it has to set its own specific targets in relation to the MDGs and in context of its own economic, social and political circumstances".[267]
15. 2001 OECS St George's Declaration (SGD) of Principles of Environmental Sustainability. Development of the NEMS in 2004 and subsequent reporting as recently as 2008 and a review of implementation in 2009.

This extensive listing of agreements is indicative of the number of implementation and reporting demands which face the few officers in addition to their other management responsibilities. NBSAP implementation is the responsibility of the Department of Physical Planning and Environment, which has two graduate technical officers with responsibilities for about six regional and international environmental agreements, including NBSAP implementation. The NBSAP is mentioned in the reporting on implementation of these agreements; however, a more systematic integration of strategies and programme/project implementation seems to be largely absent, with the exception of the NEMS.

Integration of the NBSAP with sectoral plans and policies

Most policies in other sectors make reference to environmental sustainability and also to the existence of an NBSAP. To take the most relevant and current example, the Adaptation Strategy in Response to the New EU Sugar Regions contains an action plan listing action in the areas of environmental protection (land management and disaster mitigation), land use planning and management, coastal area management, watershed management, and protected areas management. Several proposed actions in the strategy reiterate elements of the proposed projects in the NBSAP. However, full mainstreaming or even a discussion of mainstreaming of biodiversity is elusive.

Integration of the NBSAP at the sub-national level

St Kitts and Nevis is a federation of two islands, with the smaller island, Nevis, having a degree of autonomy over natural resource management. A sub-national or Nevis BSAP might have been useful in assisting implementation. The NBSAP does not clearly indicate roles and responsibilities for implementation for the Nevis resource ministries vis-à-vis the federal ministries. Some projects indicate a lead agency; however, there is no consistent definition of responsibility or clarity in the challenges of local biodiversity management.

267 Government of St Kitts and Nevis (2006) *Adaptation Strategy in Response to the New EU Sugar Regime 2006-2013*, p.74.

Engagement with indigenous peoples

The population of St Kitts and Nevis has been comprised mainly of African descendants since the colonisation by Europeans in 1624 and the displacement and genocide of the Kalingo/Carib people in 1626, who previously inhabited the islands for several hundred years. As there are no remaining Caribs, engagement with indigenous peoples is thus not a major consideration. There are infrequent cultural projects which involve inviting the indigenous peoples of Dominica to share and demonstrate their cultural and traditional practices in various cultural shows, exhibitions and demonstration activities.

Tools for implementation

Monitoring and identification

There is no systematic programme of monitoring and species identification for biodiversity conservation. There are activities involving rapid assessments and remote sensing at the project level for specific ecosystems, such as through the Marine Zoning Plan Project and the activities of the Nevis Historical and Conservation Society in cooperation with visiting researchers. Fisheries catch data is collected but there are no further studies of impacts at the ecosystem level.

There is no comprehensive national environmental data management system, and information is kept by the agency which collects the data, with sharing of information on request. The Nevis Biodiversity Project is utilising the project website to disseminate the findings of the visiting research teams. The Geographical Information System at the Department of Physical Planning and Environment (St Kitts) is one tool for managing and utilising the data collected; however, it lacks the necessary strong coordinating role. There is the Inter-American Biodiversity Information Network (IABIN), which has assisted various departments in developing guidelines and with training. Multilateral environmental agreements such as the Biosafety Protocol have computer-based clearing-house mechanisms; however, they are yet to become operational in St Kitts and Nevis.

Research and training

There is some research undertaken in the agriculture sector, yet its focus is on plant propagation. Regional training initiatives are often attended by the same officers; however, little is translated into local action given the limited human resources and facilities.

Communication, education and awareness

An 'Education, Public Awareness and Participation' project is listed in the NBSAP; however, no structured biodiversity awareness activities as envisaged in the NBSAP have been implemented. Environmental education is carried out in schools by NGOs and volunteers, but the NBSAP is not used, in part due to the lack of awareness of its existence or content. Biodiversity education and awareness activities are perhaps most extensively carried out by the Nevis Historical and Conservation Society and the St Christopher Heritage Society. Various government departments celebrate international days, such as World Environment Day and Earth Day. These celebrations involve school talks, exhibitions, and radio and television programmes.

Legislation

Since the drafting of the NBSAP, a number of legislative and key policy developments have occurred. These include: a National Physical Development Plan in 2006; the Medium Term Economic Strategy 2005-2007, which identifies biodiversity relevant priorities (as also identified in the NBSAP) such as watershed/forestry management, coastal zone management and land degradation; and the Nevis Physical Planning and Development Control Ordinance 2005.

Impact assessment

Since 2007, EIAs have been increasingly requested from developers in both islands under the *Development Control and Planning Act* and the *Physical Planning and Control Act*. There is still room for improvement of the EIA process, including the review process and the monitoring of development and compliance with EIA review recommendations.

Monitoring and review

The NBSAP outlines some elements of a monitoring and evaluation plan, including a listing of indicators. The proposed Technical Advisory Group and Steering Committee would provide independent monitoring and evaluation, and the Coordinating Unit would gather information on implementation of the various projects. However, none of these structures are in place. An interesting aspect of this plan is the proposed component of accountability where periodic implementation reports and an annual public report would be available to stakeholders.

Incentives

There is no concerted effort to focus on incentive mechanisms for implementation of the NBSAP. In the agricultural sector there are awards for soil and water conservation and also some incentives for fishermen; the focus is arguably less on conservation than on sustainable use.

Cooperation

The country is involved in a few cooperation activities with CARICOM and the OECS. However, there seems to be room for the country to seek more active cooperation both regionally and internationally with respect to biodiversity management. Even regional opportunities could be further explored, and for those regional projects for which St Kitts and Nevis is a partner, more dynamic representation and reporting is needed. The OECS-ESDU is perhaps its strongest cooperating partner given the mandate of the Unit. It was with the support of the OECS-ESDU that St Kitts and Nevis prepared the NEMS at the end of 2004.

Other cooperation projects focusing on coastal and marine management include the UNDP and UNESCO Intergovernmental Oceanographic Commission project Sustainable Management of the Shared Living Marine Resources of the Caribbean Large Marine Ecosystem and Adjacent Regions (CLME project). This GEF-supported project will look at both exploited and non-extractable transboundary large marine resource integrated management.[268]

There is also cooperation between the Caribbean and Japan through CARICOM and JICA. The Caribbean Regional Fisheries Mechanism (CRFM) Secretariat is implementing a project which looks at options for a comprehensive resource management approach in the Caribbean in accordance with the scope of work signed by the CRFM and CARICOM secretariats and JICA on 15 December 2008. This project is called Formulation of a Master Plan on Sustainable Use of Fisheries Resources for Coastal Community Development in the Caribbean.[269]

As the country is a federation of two islands, cooperation is essential for effective implementation of the NBSAP. Yet there appears to be a systemic failing in cooperation between the two islands in environmental management. There is a lack of ownership of the NBSAP at the local level, despite the Development Steering Committee comprising stakeholders from both islands. NBSAP approval was delayed at the federal level for four years, and at the local level there is little or no awareness that the NBSAP was finally approved and submitted to the CBD Secretariat. The NBSAP is regarded as another 'document' which has

268 Both St Lucia and St Kitts and Nevis are part of this project.

269 CARICOM projects website, www.caricom-fisheries.com/Default.aspx, accessed 18 May 2010. Both St Lucia and St Kitts and Nevis are part of this project.

fallen through a federal 'black hole' as little or no notification of status of implementation is given at the local level. Resource constraints and staff changes at both local and federal ministries might account for the lack of continuity in internal reporting and updating between and within the two islands.

Summary of implementation, obstacles encountered and lessons learned

Limited capacity

The biodiversity focal point is responsible for various environmental conventions and is involved in UNEP activities, ministerial meetings, and Latin American regional and sub-regional issues. The focal point is also director of the merged Department of Physical Planning and Environment, which has responsibilities for development control and environmental management. There is no supporting technical officer specifically for biodiversity management.

Capacity development seems to be a challenge across sectors due to limited financial resources and a shortage of trained graduates. Even where training is available at the regional or international level, it is difficult for the same or relevant officers to attend many workshops and receive medium to long-term training.

The National Capacity Self-Assessment project involved a multi-sectoral review and assessment to assist the country in identifying its environmental priorities and capacity needs, and a capacity action plan was prepared. Through this action plan, along with the Institutional Strengthening project and Constitutional Reform project, it is expected that institutional leadership for environmental management will be strengthened.[270]

The OPALL project included a training needs assessment looking at the training needs in protected area planning and management to increase proficiency in administration, to empower local communities to effectively participate in local management decisions, to identify entrepreneurship opportunities, and to increase professionalism among staff.

Limited project funding and lack of full and appropriate use of resources

The NBSAP notes that mobilisation of finances is necessary for its successful implementation, and references are made to a fundraising specialist who would facilitate access to funding, to the creation of a biodiversity fund and to the financial assistance of the international community. Furthermore, the NBSAP posits that, as a small island developing state, the country cannot bear sole responsibility for financing NBSAP implementation.

The twenty-one projects of the NBSAP are described in terms of their rationale, activities, lead agency, other agencies, timeframe and budget. However, potential sources of funding have not been identified since approval of the NBSAP. Where funding is available through external funders, funds often remain untapped and are poorly accounted for, with limited oversight and poor technical understanding in contracting consultants. Little or no funding is allocated for environmental research or establishing environmental baselines.

Weak administrative and institutional structure

More trained technicians are needed across resource ministries (specifically, biodiversity and/or environmental technicians are needed). The administrative structure of the Department has provision for only three graduates, although the Department has responsibility for six environmental agreements.

270 Draft OECS NEMS Review Document (review of St Kitts and Nevis NEMS implementation), prepared by Helen Douglas, 30 June 2009 version.

The existing conservation officers lack training and are demotivated. Within the ministry, the institutional structure appears unclear (even to the staff) and senior management seems inaccessible.

Unclear roles at the departmental and ministerial level

The merging of the departments of physical planning and environment in St Kitts and the management of various MEA-related projects such as the NBSAP development has led at the ministerial level to an unclear sense of responsibilities and roles in NBSAP implementation, and has undermined a sense of ownership across the organisations of the Steering Committee members and stakeholders.

Limited mainstreaming and cross-departmental integration

Despite the involvement of all resource ministries in the NBSAP's development, there are no joint implementation activities or projects. The NBSAP and its development have not served as a tool for biodiversity management mainstreaming, and the links between various ministries remain weak. This might partially be as a result of no promotion of the NBSAP and an unclear structure for the NBSAP implementation and host agency.

Lack of political will and interest

The value and importance of environmental management and biodiversity receives little political attention, except when marine conservation issues impact on tourism and this become a political issue. Policies and projects therefore receive little support and limited approval at the top administrative and ministerial levels. Most policies have a long lag time in gaining cabinet approval, including the NBSAP and present draft *National Conservation and Environmental Management Act* (NCEMA).

The focus at the political level is on creation of employment, investments, crime and housing, with short-term priorities tied to the five-year political election cycle. With a small, highly-indebted economy, biodiversity conservation is perceived as a luxury goal, and the link with other sectors of the economy is not seen or understood.

Poor enforcement and monitoring for environmental compliance

There is limited and sporadic community environmental education, and therefore informal sectors and developers utilising natural resources (such as sand mining and charcoal burning, or mountain and watershed development) are unaware of the full impact of their activities on biodiversity and ecosystems, as departmental efforts and enforcement rarely occur. Such decisions on enforcement as do occur are frequently circumvented by appealing to political representatives.

A general lack of understanding of ecological principles and awareness of the NBSAP

The NBSAP development process involved a relatively broad spectrum of stakeholders. However, the extensive delay between submission of the NBSAP by the Steering Committee (2003) and approval of the NBSAP (2008/2009) led to lost interest and vague recall of the contents of the NBSAP. The NBSAP as a tool for raising awareness has failed, and most ministries (even key resource ministries) and stakeholders are unaware of its existence or of the status of biodiversity in the country. With the exception of a few species studies undertaken by NHCS, biodiversity information and ecosystem status appears to have reverted to an anecdotal state.

Conclusion

The implementation of the St Kitts and Nevis NBSAP has proven to be quite challenging for the country, with its limited capacity base. Overall, biodiversity management and external reporting is weak, yet the country has been able to begin implementing various components of the projects listed in the NBSAP through regional projects and the work of local NGOs. The implementation of the NBSAP appears to have been constrained by lack of buy-in by stakeholders. The approval of the NBSAP came long after consultations and the preparation of a draft and its submission to the ministerial level for cabinet endorsement. In its approved form, the NBSAP bears limited resemblance to the stakeholder draft. Perhaps the only aspect of the NBSAP which bears resemblance to the stakeholder draft is the section on project implementation. Notably there is an absence of the country's vision for biodiversity management, clear objectives, strategies and options for biodiversity use, conservation and benefit sharing, as discussed in the stakeholder consultations. Biodiversity managers lack confidence in articulating conservation views in most forums, including those taking development decisions. Consequently the NBSAP is relegated to being a reference document in sectoral strategies and planning.

Given that the NBSAP was first drafted in 2003, and that there is a lack of awareness of its existence, a lack of proposed management structures for its implementation, and a lack of buy-in by stakeholders (including other government departments), it is essential that a second NBSAP be developed for St Kitts and Nevis. The development and approval process, including the roles of various stakeholders and especially those within the lead agency and between the islands, must be clear and must receive cabinet approval. A clear, strong and informed vision for biodiversity management should be articulated at the highest level of government. Having this clear vision of how to manage its biodiversity is the key to enabling the country to develop and effectively implement appropriate environmental and biodiversity management policies.

Faced with a high national debt and a strong economic development imperative, it is important for St Kitts and Nevis to sustainably utilise all of its resources for the benefit of its people. Forward planning is necessary; however, policy responses, structures and tools must be agile, as the rapid changes and multiple shocks to the economy by climatic and international events render most strategies obsolete even before implementation. A full and clear assessment of reporting requirements and outstanding obligations under all the multilateral agreements is necessary, especially for the Department of Physical Planning and Environment. A medium-term strategy and prioritisation for the achievement of implementation objectives should be presented to cabinet, international and regional partners, and key agencies. The country is too far behind, too constrained and under too much pressure to effectively implement the CBD under present conditions. A participative and open national dialogue is therefore necessary to allow the country to identify how it can somehow 'leap-frog' the current impasse and make its biodiversity and environmental management arrangements more effective.

Recommendations

Specific recommendations that could be considered by government and stakeholders include the following:

1. Establish a project office to implement MEA-related projects with a dedicated project coordinator having the necessary technical capabilities, given that neither the permanent secretary within the ministry or the departmental director are able to follow through on project implementation as a result of their demanding and wide-ranging management responsibilities. The project coordinator will be needed on a medium to long-term basis to ensure continuity in reporting, implementation and documentation.
2. Environmental and, specifically, biodiversity champions are needed at both technical and cabinet levels. At the Department of Planning and Environment level, identify and empower a passionate and energetic technician charged with biodiversity management.
3. Increase the technical capacity for biodiversity management by increasing the number of civil service positions within the Department, training existing personnel or using local consultants. If expansion of the civil service is not possible, appeals should be made to regional groups such as the OECS and larger islands in the Caribbean to provide technical secondments to the Department.
4. Clarify the roles of the various committees recommended in the NBSAP and eliminate overlaps in membership and responsibility. The management structure for NBSAP implementation should be practical and less bureaucratic. The Steering Committee in particular must have a clear sense of responsibility, objectives and successes, and should have participation and buy-in from both islands (local and federal governments and stakeholders).
5. Make regular presentations and submissions early in policy development and throughout project implementation to cabinet and also to individual ministers to secure political buy-in for biodiversity projects and NBSAP implementation.
6. Strategically look at financing for biodiversity management. This could involve:
    a. Submitting biodiversity (NBSAP) projects during departmental budget submissions with proposed cost sharing and implementation with other ministries
    b. Conducting environmental financing meetings with the ministries of finance and other natural resource-based ministries, explaining various streams of biodiversity management funding and general fund management and reporting requirements of various funders; funding agencies or other countries in the region that have been successful in securing grants from key agencies may be invited as key resource people
    c. Developing local project writers at the departmental level who can seek funding for biodiversity projects
    d. Undertaking a review and developing a 'biodiversity project proposals database' with a review of international and regional funding streams and their requirements for biodiversity projects, including training opportunities.
7. Work more closely with regional organisations and UN offices such as OECS-ESDU, UNEP, UN-ECLAC and IICA[271] and seek to participate in relevant regional projects to build partnerships with other country departments and share knowledge and implementation skills.
8. Cultivate and maintain strong interagency collaboration for project development and implementation, especially with natural resource-based departments such as fisheries and

271 Inter-American Institute for Cooperation on Agriculture.

agriculture. Explore mechanisms for interagency collaboration such as project committees and co-writing of presentations and reports to international and regional meetings, participation and contribution to various departmental awareness activities.

9. Make presentations, including field-based illustrations, to the various development advisory committees, building boards, environmental review committees and small subdivision developers to large-scale developers on the country's vision for biodiversity management, and ecological concepts, including ecosystem services.
10. Work closely with local organisations, especially NGOs and local ministries, to leverage their resources and capacities for biodiversity management, education and awareness.
11. Identify a flagship species or an annual day where biodiversity conservation can be promoted through partnership with the media.[272]

272 Sources of information: Government of St Kitts and Nevis, 2004 National Biodiversity Strategy and Action Plan for St Kitts and Nevis 2004; Government of St Kitts and Nevis, Ministry of Sustainable Development (April 2006), Adaptation Strategy in Response to the New EU Sugar Regions 2006-2013; Government of St Kitts and Nevis Second National Report to the Convention on Biodiversity (as of April 2010, to be submitted), Department of Physical Planning and the Environment, Ministry of Sustainable Development, 2 December 2009; St Kitts and Nevis, National Environmental Management Strategy and Action Plan 2005-2009, 30 September 2004; Draft St Kitts and Nevis Report on Status of National Implementation of the St Georges Declaration of Principles for Environmental Sustainability in the OECS.

4.10 St Lucia

Introduction

St Lucia is a mountainous island in the Eastern Caribbean with a total land area of only 616 square kilometres.[273] The island gained full independence from the UK in 1979 and maintains a Westminster-style parliamentary democracy as a Commonwealth realm. The official language is English, though a French-based patois or Antillean Creole is spoken by most of its population and many programmes are presented in both languages. St Lucia has an estimated population of 166,838,[274] with most St Lucians being of African descent (82.5-90 per cent)[275] and the remainder a mixture of Europeans and East Indians. About one-third of the population lives in the capital city, Castries.

The economy of St Lucia has been agriculturally based, mainly on the banana trade, with Europe having had a large participation in the economy since the mid-twentieth century. However, with a contracting agricultural sector (a 60 per cent contraction from the 1990s to 2005),[276] the government is increasingly turning towards tourism, information and communication technologies, and international financial services. The GDP per capita in 2008 was US$5,484[277] and the unemployment rate in 2007 was 15 per cent. As with other Caribbean islands, St Lucia's economy is susceptible to frequent hurricanes, droughts, and external economic shocks such as declining export demands and the global economic downturn.

St Lucia is a member of several regional organisations. Most significant in promoting cooperation, especially on environmental and economic issues, are CARICOM and the OECS. The CARICOM[278] is a regional organisation of fifteen nations promoting economic integration, including the free movement of labour and capital and coordination of foreign policies. The OECS is a smaller nine-member grouping which promotes cooperation among the member states and at the regional and international level. There are four strategic divisions with the OECS-ESDU[279] providing natural resource and environmental management services to member states. The ESDU oversees the implementation of the SGD through the National Environmental Management Strategies (NEMS) of member states and currently implements the major sub-regional biodiversity projects – the PERB project and the OPAAL project.

NBSAP preparation process

Engagement of stakeholders

The NBSAP describes in some detail the consultative process and the stakeholders engaged in the NBSAP development. The top management included a National Steering Committee with representatives from various sectors, a coordinator who then contracted six national experts to undertake sectoral country study assessments, and one international consultant. There were four public consultations involving various stakeholder groups followed by two national consultations in 1999. The stakeholder groups included government ministries, statutory boards and corporations, town and village councils, community and non-governmental organisations, private sector, and regional and international organisations.

273 Government of St Lucia Ministry of Physical Development, Environment and Housing, National Land Policy, May 2007.
274 Estimated Mid-year Population 2005, St Lucia Government Statistics Department, www.stats.gov.lc.
275 2001 Census, CIA – The World Factbook.
276 Trends in the Labour Market of St Lucia 2004-2006, Edwin St Catherine, Director of Statistics; the Labour Market Conditions, St Lucia Statistical Department.
277 World Bank World Development Indicators.
278 See www.caricom.org
279 See www.oecs.org/esdu

Level of approval within government

In 1997 the government of St Lucia established the Steering Committee, led by the coordinator. In 2000 the NBSAP was endorsed by the Minister of Agriculture, Forestry and Fisheries and on 14 September 2000 the completed NBSAP was approved by cabinet.

Revision

St Lucia has completed several reporting obligations under the CBD. These include a Biodiversity Awareness Survey Report; a Country Report on Intellectual Property and Traditional Knowledge Related to Genetic Resources (2000); first (2000), second (2001) and third (2006) national reports; the first NBSAP (2000); and the first Regular National Report on Biosafety.[280] The country is now in the revision stage of its draft second NBSAP (see Box 51 below for further information). Its Fourth National Report to the CBD was endorsed by cabinet on 13 May 2010 and has been preliminarily submitted to the SCBD. Full publication is planned for a later date.

National coordination structures for overseeing implementation

The Biodiversity Coordinating Unit based at the Ministry of Agriculture, Forestry and Fisheries monitored the implementation of the first NBSAP. With a staff of two, the unit began as a project office early in the process, under the second Enabling Activity grant. The unit monitors project implementation by other agencies that have mainstreamed the NBSAP activities into their work plans. Various ad hoc issue-based committees,[281] comprised of various original members of the 1997 Steering Committee or their replacements, can be quickly convened to monitor and review specific projects. For example, there is an OPAAL project committee that includes the biodiversity coordinator, ensuring constant sharing of information and strategies.

Members of the various biodiversity-related committees make presentations, by rotation, at committee meetings or after participation in workshops, thus disseminating information and garnering support and assistance for follow-up actions. Scientific meetings were once held regularly at which technicians would present and consult on their focus issues and implementation projects. Management meetings are held every two months in the Ministry of Agriculture and involve heads of department, accountants and the permanent secretary. As NBSAP implementation has been widely mainstreamed, this management meeting allows all departments and senior management to be kept up-to-date on implementation. The biodiversity coordinator has access to higher management within the ministry and can gain support for implementation activities. It is the coordinator's responsibility to bring together information and reporting on implementation, to identify implementation gaps, and to provide updates on regional and international obligations and opportunities.

Main features of NBSAP and other biodiversity plans and policies

With the establishment of the Steering Committee in 1997, St Lucia began developing its first NBSAP. Extensive consultations over three years, underpinned by the Country Study Report, produced the NBSAP, which was approved by cabinet in 2000 and which has guided biodiversity management in St Lucia for the last ten years. The succinct 68-page NBSAP expressed the vision of St Lucia for biodiversity, the aims and objectives of the NBSAP and, interestingly, the approach, conditions and requirements, a programme of implementation, as well as twenty-two projects.

280 These reports can be accessed from the CBD website or St Lucia's national biodiversity clearing-house mechanism: www.slubiodiv.org

281 These committees are ad hoc and comprised of the same group of technicians as other MEA committees. The Climate Change Committee is the only Cabinet-appointed committee.

St Lucia's NBSAP was developed to guide the sustainable use and conservation of its biological wealth. Specifically the NBSAP provides a mandate and policy directive for developers, management authorities and policy-makers; a reference point to assist in the design and implementation of biodiversity-related programmes and actions; and a document to garner support for implementation of biodiversity projects. A five-point vision is expressed as follows: (i) the status of biological resources is known; (ii) government agencies, NGOs, the private sector and communities are participants in biodiversity management; (iii) the integrity of the country's biodiversity is maintained; (iv) biodiversity contributes optimally, through sustainable uses […] to the well-being of all its people; and (v) national, regional and international efforts aimed at conserving biodiversity are consistent, mutually supportive and effective.

Box 49
Biodiversity mainstreaming in St Lucia

NBSAP as a policy development template for other sectors: Biodiversity mainstreaming is a large factor in St Lucia's NBSAP implementation. The process of developing the first NBSAP provided a policy development 'template' for many other sectors and brought a biodiversity management agenda to most sectoral programmes. Building on the strength and profile of the first NBSAP, the development of the second NBSAP (see Box 51 below), with its extensive consultative process, has led to further and wider inclusion of biodiversity issues in the development of legislation and other sectoral policies. As a contracting party to fourteen regional and international MEAs relating to biological resources, St Lucia has recognised their implementation as an opportunity to mainstream biodiversity planning into the agendas of the various agencies that lead on these different MEAs, and these efforts have been supported and reinforced by the national capacity self assessment (NCSA).

A national vision/sustainable development plan: As St Lucia tackles its economic development challenges, further mainstreaming of biodiversity is needed in trade, tourism and spatial planning. Mainstreaming biodiversity in an overall sustainable development plan for St Lucia through identifying the clear links between and the contribution of biodiversity to poverty eradication and growth is perhaps the additional step which biodiversity management in St Lucia needs to accomplish, preferably through full implementation of the second NBSAP. The existing national vision plan is mainly a tourism plan and would require concerted effort to integrate biodiversity conservation and sustainable use into its implementation activities and possible future revision.

Information management: Essential to recognition by the entire country and government of the value and dependency of St Lucia's society on its natural wealth is the generation and accessibility of good biodiversity information. Research, monitoring, evaluation, communication and information management are therefore crucial areas to be strengthened through the implementation of the second NBSAP. Attempts have been made to improve biodiversity information management in St Lucia. Under the EU SFA 2003 Project, a national biodiversity information management system was designed and tested, and biological resource users were trained in inputting data on use of the resources into the database. Further training of resource users also occurred under the fourth national report process. The PERB project has also developed a database for protected areas in the OECS region, and St Lucia was used as the pilot country for data input. It is important to improve and build on these efforts.

Local action: Not only is political recognition of the value of St Lucia's biological wealth required for effective mainstreaming, but also needed is an acceptance by all that trade-offs between biodiversity conservation and development are unavoidable. Not only do large-scale development activities require support at various levels, but local and small-scale actions and initiatives looking at sustainable use of biological resources also require support from resource and other sectors. Opportunities and methodologies to scale up and promote such activities are needed. Many existing activities – such as heritage tourism activities like the Des Barras Sea Turtle Tour-guiding Group and Gros Piton Trail Guides, seamoss farmers, Latanye broom producers, Mauby producers, liane and lencens harvesters, medicinal herb processors, bamboo scaffold users, almond and cassava harvesters – all use biological resources as a basis for local livelihoods and these efforts should be further supported with appropriate incentives.

St Lucia's Fourth National Report presents a detailed portrait of biodiversity mainstreaming in St Lucia, with various examples and success stories and a listing of the various sectoral policies with strong mainstreaming components. The report also refers to 'incidental mainstreaming', where biodiversity and conservation targets/activities are incorporated into various policies and projects based on a longstanding conservation ethos in St Lucia.

The aims and objectives include conservation, sustainable use, equitable distribution of benefits, and participation of people and institutions. These are followed by a principles-based approach which is described as a new approach to development revolving around equity, sustainability and social justice. The approach includes 'institutional collaboration', 'building resilience', 'acceptance of change' and 'precaution'. To achieve the objectives, five broad programme areas with activities are defined: (i) planning and policy formulation; (ii) research and monitoring; (iii) conservation; (iv) sustainable use; and (v) education and awareness.

Implementation is addressed under the sub-headings of institutional arrangements, legal instruments, organisational development and capacity-building, financing, monitoring and evaluation, and regional and international cooperation. Lastly, there are twenty-two projects each having a project rationale, objectives, activities, estimated cost, and institutional arrangements for implementation. Projects include an inventory of marine and coastal biodiversity (project 4), training (project 13), and increasing and managing plant diversity for sustainable rural livelihoods (project 22).

Integration with higher and cross-sectoral plans and policies

National Environmental Strategy

In line with the other OECS member states, in 2004 St Lucia developed its NEMS and a National Environment Policy consistent with the terms of the SGD.[282] The biodiversity coordinator was a member of the team that developed the NEP and the NEMS. The NEP is the broad framework for environmental management in the island, linking various sectoral and environmental policies, whereas the NEMS provides specific expected outputs and actions in support of the policy objectives. Key biodiversity policy interventions proposed by the NEMS are "maintenance of diversity of ecosystems, species and genes" and "maintenance and enhancement of the natural productivity of ecosystems and ecological processes". Five of the seven objectives of the NEMS relate to biodiversity. The NBSAP is the main policy instrument, along with a revised system of protected areas, for fulfilling these interventions. The NEMS also calls for the "full implementation of the NBSAP". The NEMS implementation and reporting to the ESDU and the NBSAP implementation ran almost concurrently, and this factor has perhaps been one of the greatest influences on NBSAP implementation.

Integration of NBSAP with sectoral plans and policies

To a varying extent, biodiversity conservation priorities and activities are incorporated into the Forest Management Plan (1992-2002), the new Forest Sector and Wildlife Policy, the Agriculture Policy, the Fisheries Policy/Fisheries Management Plan, the Physical Development Plans and the Tourism Policy. The draft second NBSAP and the Fourth National Report provide an extensive review of biodiversity mainstreaming within existing policies and further plans for mainstreaming. Two examples of how relevant policies are linked to biodiversity are:

- Coastal Zone Management policy: St Lucia developed its Coastal Zone Management (CZM) policy with funding by the EU through the Stabilization of Exports Project (STABEX). In 2004, the CMZ policy was adopted with the following objectives: to maintain the integrity and productivity of the coastal zone and resources; to optimise the coastal zone contribution to social and economic development through the sustainable use of resources and equitable sharing of benefits; and to provide a management framework.
- National Land Policy: A National Land Policy was developed in 2007 to guide the use, management, development and administration of land resources in St Lucia in order to optimise the contribution of land to sustainable development. Environment and natural resource

282 Government of St Lucia, Ministry of Physical Development, Environment and Housing 2004, *National Environment Policy (NEP)* and *National Environment Strategy (NEMS)*, Final Draft.

management, including hazard mitigation and disaster management, is cited as a priority action area that would require full implementation of various policies, including the NBSAP.

Integration of NBSAP with implementation of the other biodiversity-related conventions

St Lucia is party to fourteen MEAs and cooperates with several countries, especially regionally, on issues of biodiversity conservation and sustainable use beyond its national jurisdiction. Relevant agreements on which collaboration takes place include:

- Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention)
- Cartagena Protocol on Biosafety
- International Convention for the Prevention of Pollution from Ships 1973/1978 (MARPOL)
- International Convention for the Regulation of Whaling
- UNFCCC
- SGD
- United Nations Millennium Declaration
- CITES – St Lucia has two scientific committees in the departments of Forestry and Fisheries for CITES management; the CITES law has been drafted and was done through eleven iterations over four years of extensive consultations[283]
- Ramsar Convention – the national focal point lies with the Forestry Department; two RAMSAR sites have been declared for the country, which are two mangrove areas representative of SIDS in the form of the Mankote and Savannes Bay Mangroves; in the first NBSAP, wetland management and study was one of the projects identified
- Convention to Combat Desertification – a national capacity self-assessment document has been prepared and this contains proposals on how to improve collaboration and synergies for implementation of the three Rio conventions and for environmental conservation in the country.

Box 50
The Draft Second NBSAP (2008-2018)

"Biodiversity management is an integral part of the overall framework of environmental management, for ensuring sustainable social, cultural and economic development in St Lucia; and that there is collective responsibility for, and sharing in the benefits derived from the conservation and sustainable use of biological resources" (Vision of the draft second NBSAP).

"Conservation and sustainable practices for use of biological diversity in St Lucia are effectively integrated into national development at all levels" (Goal 2008-2018).

During the second NBSAP development process, critical issues relating to the national obligations under the CBD were identified, and related conditions and priority actions were proposed. These conditions and proposed actions are summarised in the following recommendations:

- Preparation of a ten-year action plan with targets and activities to be achieved within set timeframes
- Promotion of an integrated planning approach to include mainstreaming of biodiversity management into national sustainable development strategies and (sector) plans

283 The EU SFA 2003 Natural Resources Management Project provided funds for a CITES public awareness and education programme and materials in 2008.

- Development of an appropriate framework to implement the second NBSAP, and other related policies such as the NEP, NEMS and Biosafety Strategy
- Enhancement of private sector and community awareness and participation in conservation and sustainable use of biodiversity.

Issues and challenges: The main issues and challenges the second NBSAP seeks to address relate to development planning, socioeconomics, institutional and technical capacity, knowledge and information, environmental issues, regulatory (legal) policy, cooperation and collaboration, and political support.

The Action Plan: This component of the second NBSAP provides a framework for achieving the goal for 2008-2018. Targets for the second NBSAP are consistent with the goals, objectives and targets of the CBD Strategic Plan and the revised SGD.

Expected outcomes: Expectations are that biodiversity objectives are mainstreamed into national development planning at all levels, community participation and involvement in biodiversity management are maximised, improved institutional framework and coordinating mechanisms for biodiversity management are supported by appropriate legislative and regulatory systems, and effective monitoring and evaluation mechanisms are developed and implemented.

Coordination: The second NBSAP implementation design is built upon a biodiversity coordinating mechanism that includes a national Biodiversity Management Authority (BMA) within the Ministry for Agriculture, Fisheries and Forestry. The authority will also serve as the national biodiversity focal point. A Biodiversity Scientific Committee will give technical guidance to the BMA.

Main difference between the first and draft second NBSAPs: The major difference is that the second NBSAP has targets, goals and timelines which were absent from the first. The second NBSAP covers emerging issues like climate change, biosafety and invasive species, and includes more consideration of traditional knowledge than was the case with the first. It also looks at the ecosystem approach, and one of its main goals is the mainstreaming of biodiversity within all sectors of society. The final draft will also consider SEA. To quote from the executive summary of the draft second NBSAP: "While the first National Biodiversity Strategy and Action Plan (First NBSAP) for St Lucia focused on five programme areas with objectives aimed at fulfilling many of the obligations under the Convention on Biological Diversity (CBD), the second National Biodiversity Strategy and Action Plan (Second NBSAP) encompasses a more holistic vision and integrated action plan for biodiversity management in St Lucia and includes goals and outcomes defined by targets to be achieved within specific time frames".

Source: Information provided by the Biodiversity Coordinator, and the unpublished Draft Second Biodiversity Strategy and Action Plan for St Lucia, prepared by Joan John-Norville, 7 September 2008 revision.

Major regional projects

As with St Kitts and Nevis,[284] St Lucia is involved in several sub-regional projects, including Integrating Watershed and Coastal Area Management (IWCAM), OECS Protected Areas and Associated Livelihoods (OPAAL) and Protecting the Eastern Caribbean Region's Biodiversity (PERB).

IWCAM

St Lucia is one of thirteen Caribbean islands participating in the five-year IWCAM project.[285] This is a GEF 2004 funded project implemented by UNEP and UNDP. The United Nations Environment Programme Caribbean Regional Coordinating Unit (UNEP-CAR/RCU) and the Caribbean Environmental Health Institute (CEHI) are the executing agencies; the unit was established in 2006 at CEHI. The overall project seeks to assist Caribbean SIDS to adopt an integrated approach to watershed and coastal management. There are five project components and demonstration projects in the participating countries. In St Lucia, and St Kitts and Nevis, the projects focus on water resource conservation and management.

284 See St Kitts and Nevis country study.
285 IWCAM project website, www.iwcam.org, accessed 4 July 2010.

St Lucia's IWCAM project is 'Protecting and Valuing Watershed Services and Developing Management Incentives in the Fond D'or Watershed Area of St Lucia'. The project is based in the second-largest watershed in St Lucia, which faces threats related to water quality and to reliable access to and production of freshwater as a resource for both the human population and the biodiversity of the watershed/coastal ecosystem. The watershed contains the Fond D'or Natural Reserve and Historic Park, established in 2001. Project implementation began in mid-2007 and lasted for three years through a participatory approach. It successfully developed an Integrated Watershed Management Strategy and Spatial Plan and a compensation for environmental services scheme in addition to other achievements.[286] The project successfully used native plants to help clean up sewage water in the constructed wetland. The project also supports the implementation of the CBD, the Ramsar Convention, the Cartagena Convention and Protocols, the UNCCD, MARPOL, the UNFCC and the SGD.

OPAAL

The OPAAL project is the first five-year phase of a fifteen-year programme which seeks to create an integrated system of protected areas in OECS member states, strengthen existing protected areas and create new protected areas while providing environmentally sustainable economic opportunities for communities associated with the surrounding protected areas.[287] The OPAAL project is a developmental plan to conserve globally important biodiversity by removing barriers to effective management of protected areas. The sub-regional project is being executed by the OECS with funding by the GEF through the World Bank, Fonds Français pour l'Environnement Mondial (FFEM), the governments of the OECS states and, for the St Lucia project, the OAS.

St Lucia's Pointe Sable Environmental Protection Area is one of six demonstration sites in the OECS region. The area covers five coastal ecosystem types – coral reefs, mangroves, seagrass beds, offshore islands, and beaches – and a sandbank. Included are five marine reserves, nature reserves, two RAMSAR sites and a national landmark. The project as implemented by the St Lucia National Trust has produced several outputs complementary to the sub-regional outputs. These include the Pointe Sable Environmental Protection Area Management Plan (2009-2014),[288] an Interpretation and Education Plan for the Pointe Sable Environmental Protection Area, and a Social Assessment.[289] Other outputs at the sub-regional level include the report of a KAP (Knowledge, Attitude and Practice) Survey conducted in six OECS member states, a Regional Awareness Strategy on Protected Areas, and a policy, legal and institutional review.

In late 2009, as part of the OPAAL project, St Lucia drafted a Systems Plan for Protected Areas in St Lucia. This plan builds on the earlier 1992 system of protected areas proposal for the establishment of twenty-seven management areas in St Lucia. However, this first plan, although highly regarded and used as a baseline document for various biodiversity activities, was not adopted. Currently, there are four major protected areas: the Forest Reserve and Protected Forests, the Pitons Management Area (World Heritage site), the Soufriere Local Fisheries Management Area, the Pointe Sable Environmental Protection Area and a network of twenty-four Marine Reserves. The new 2009 plan aims to "create the framework for the designation, protection and effective management of a comprehensive network of protected areas across St Lucia".[290] As of June 2010 the plan had yet to be adopted by the government of St Lucia.

286 'The GEF-IWCAM Demonstration Projects – Highlights', presentation at the Fifth Caribbean Environmental Forum and Exhibition, Montego Bay, Jamaica, 24 June 2010.
287 Information on the sub-regional OPAAL project, including various project documents and sub-regional outputs, can be found at the OECS website: www.oecs.org/esdu
288 Gardner, L. 2009, Management Plan for the Pointe Sable Environmental Protection Area, 2009-2014, Government of St Lucia.
289 Relevant project documents can be downloaded from the St Lucia National Trust webpage: www.slunatrust.org/programmes.php
290 Haffer, D. 2009, A Systems Plan for Protected Areas in St Lucia, OECS.

PERB

The PERB project is funded by USAID and executed by the OECS Secretariat through the ESDU. It seeks to improve biodiversity protection, management and conservation through interventions in selected sites. Under the project, countries have looked at the legal framework for biodiversity management and consistency with MEAs and other OECS member states, biodiversity awareness and education,[291] biodiversity areas management and training, biodiversity and tourism, and information management systems for protected areas.

St Lucia developed a Millet Nature Trail Management Plan and Interpretive Centre under the PERB project. The interpretive centre was officially opened on 28 July 2010 by the permanent secretary of the Ministry of Agriculture. St Lucia has developed regulations to accompany the draft *Biodiversity Conservation and Sustainable Use Bill* produced under the EU Special Framework of Assistance (SFA) 2003/Integrated Natural Resource Management Project.[292] Finally, a database for protected areas was developed under PERB, and St Lucia was used as the pilot country to test the database, housed at the OECS headquarters.

Integration of NBSAP with climate change and desertification policies

Desertification

St Lucia has developed a National Action Programme and Strategic Action Plan to Combat Desertification and Drought (NAPSAP) through the Department of Forestry acting as the national focal point for the Convention. The NAPSAP and the country study report indicate the status of future endeavours to address land degradation and drought, and the implementation of the UNCCD for a ten-year period from 2008 to 2018. The goal of the NAPSAP is "the creation of a holistic and cohesive framework for integrating the sustainable use and management of the country's land resources into national development, ensuring that both the intrinsic/natural and man-made factors (root causes) contributing to land degradation and drought are effectively addressed, through a fully participatory approach".[293]

The NAPSAP outlines four programme areas for focus – behavioural change, capacity development and institutional/organisational strengthening, sustainable land management (SLM), and disaster risk reduction and early warning systems. In seeking to integrate various environmental and sectoral policies, the NAPSAP proposes various measures and identifies the policy instruments through which actions and various measures can be taken. For example, the NBSAP is identified as a key policy instrument through which "measures to arrest land degradation and mitigate drought within a sustainable land management approach" can be achieved. The NAPSAP proposes that poverty be addressed as an underlying cause of land degradation through the NBSAP sustainable livelihoods and poverty reduction initiatives using agroforestry and bio-resources-based small initiatives (such as the Latanye broom industry).

Climate change

St Lucia prepared its National Climate Change Policy and Adaptation Plan in 2003. This provides policy directives for various areas, including coastal and marine resources, and highlights various areas of policy concern – terrestrial resources, terrestrial biodiversity and agriculture, human settlements, water resources, tourism, the financial sector, and human health. Under the directives for terrestrial biodiversity and agriculture, the plan acknowledges that St Lucia's soils, forest and biodiversity are key resources and, as a consequence, actions to address climatic impacts include:

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291 A key output promoting biodiversity education is a learning resource developed for teachers and students to support biodiversity teaching and learning for secondary or high-school students; OECS 2009, Biodiversity of the Caribbean A Learning Resource Prepared for the Organisation of Eastern Caribbean States (OECS) (Protecting the Eastern Caribbean Region's Biodiversity Project).

292 The draft bill and the regulations are currently (August 2010) with the Attorney-General's office.

293 *UNCCD National Action Programme and Strategic Action Plan (NAPSAP) for St Lucia*, Draft Final Document 2008. Publication reference: SFA2003/SLU/BIT-1/0710/EMF/LC.

- Undertaking measures in the short, medium and long-term to increase the resilience of terrestrial resources, including soil conservation, agro-forestry and the establishment of special conservation/management areas
- Developing a comprehensive national land use and management plan, which, inter alia, incorporates climate change concerns and which is based upon such concerns and which makes prescriptions regarding the location of future settlements and urban development without compromising water supply and other such requisites for the sustainability of settlements
- Ensuring the inclusion of climate change considerations during the implementation of other strategies and plans, including the NBSAP, the National Action Plan for the Desertification Convention, the National Land Policy and the National Forest Action Plan.[294]

Engagement with indigenous peoples

Engagement of indigenous peoples has not been a strong focus for St Lucia. During the last national census in 2001, approximately 750 St Lucians identified themselves as indigenous. Without any clear national organisation, those who are known to be active on social issues are invited to national consultations on various biodiversity activities. Local community representatives are targeted through the Folk Research Centre.

Tools for implementation

Communication, education and public awareness

Interviewees felt that, generally, communities in St Lucia have a relatively high awareness of biodiversity and conservation. This is largely due to a programme of conservation awareness which gained momentum from the 1970s.

In 2008, the European Commission financed the development of a National Environmental Education Strategy and a National Environmental Education Policy for St Lucia. A preceding situational analysis found that environmental education and awareness activities in St Lucia face the challenges of lack of funding, lack of trained environmental educators in various agencies, inadequate links between environmental initiatives and the formal education system, and poor evaluation of various initiatives. This has led to the characterisation of environmental education and awareness in St Lucia as "inadequate, unsustained and uncoordinated",[295] even though public awareness surveys conducted in 2003 and 2010 show that public knowledge of biodiversity is improving.[296]

The vision expressed by the National Policy is that: "Every man, woman and child will consider the environment essential to his or her very existence. Every person will understand the linkages between the environment, health and all that is personally valued." The vision outlines twenty-one principles, including community spirit, inclusivity, access to information, and research and knowledge. The National Environmental Education Strategy proposes the establishment of an Environmental Education Unit and an Environmental Education subcommittee of the National Environment Commission (which came into effect in 2009) with representation from key environmental agencies, the private sector, media and civil society. Other recommendations, perhaps easily implemented, include the compilation of an annual calendar of activities to be developed around existing and proposed annual celebrations, and the promotion of a core set of environmental principles. The strategy also outlines specific actions to be taken by several actors, including key environmental and other public sector agencies, policy-makers, the

294 St Lucia National Climate Change Policy and Adaptation Plan, 2003.
295 Taken from the 2008 *National Environmental Education Strategy for St Lucia* and the *National Environmental Education Policy for St Lucia*, Ministry of Economic Affairs, Economic Planning, Investment & National Development. Office of the National Authorising Officer.
296 Indicated by the Biodiversity Coordinator.

private sector, regional agencies, law enforcement and the judiciary, media, communities, and the formal education system.

Judging by the interviews conducted, there is progress on consolidating and coordinating environmental awareness and education, inclusive of biodiversity education in St Lucia; however, at present, though diverse, most of the education and awareness activities remain project driven. Within government agencies such as the Ministry of Agriculture, the technicians of the ministries have been committed to information-sharing utilising various methods. These include:

- Public call-in programmes and talk-shows – technicians provide information on a particular issue and are asked open questions
- Use of the St Lucian parrot and other endangered species such as the St Lucia whiptail and the iguana as flagship species for conservation
- School partnerships and integration of conservation awareness in school debates, sports, morning assembly presentations, summer camps, and *Bushtalk* magazine on biodiversity
- Public service announcements and biodiversity jingles through the Government Information Service channels
- Continued community consultations as the second NBSAP and the Fourth National Report were prepared
- Teaching by extension officers of sustainable use methods such as community harvesting of fifa grass and seamoss
- Traditional methods such as town hall meetings and, in rural villages, using the 'town crier' – someone in the village who uses a bullhorn or a bell to invite villagers to assemble
- A biodiversity award ceremony in 2005 as the final activity of a biodiversity public awareness campaign – awards were granted to media, schools and the private sector for their support for biodiversity conservation activities
- Awareness activities in both English and Creole
- Issuing of biodiversity postage stamps, especially for International Year of Biodiversity
- Popular theatre activities in communities led by community-based organisations
- Mobile education exhibits such as the Jacquot Bus.

Other recent programmes include 'My Island – My Community', launched in January 2010 as a partnership programme to build public awareness across the Eastern Caribbean with respect to community-based adaptation to biodiversity and climate change using various communication approaches to motivate social change.[297] National partners will form coalitions in each OECS country to support activities such as radio dramas with call-in programmes and community campaigns. In St Lucia, this national coalition has been formed. Presently, key partners for the regional programme include the St Lucia Folk Research Centre, the Secretariat of the OECS, Media Impact, TNC, the GEF Small Grants Programme, the Global Island Partnership (GLISPA), the CBD Secretariat, BirdLife International, Durrell, and SeaWeb. At a recent launch in St Lucia, key biodiversity stakeholders participated in training and awareness activities.

A draft biodiversity education and awareness strategy was outlined under the Second Enabling Activity project. The Sustainable Development and Environment Unit of the Ministry of Physical Development and the Environment has recently obtained funding from the OAS to help develop an integrated approach

297 See mediaimpact.org/programs_caribbean_my_island.shtml

to environmental education on a national scale and to train stakeholders in that regard. The project's duration is for one year from August 2010.

Legislation

Most countries of the OECS have commonalities in their approach to environmental management and legislation as expressed by the full adoption of the SGD. The SGD has become increasingly action-oriented as countries develop their NEMS, reporting on implementation progress every two years. This sub-regional framework supports and drives implementation of the NBSAP by stimulating will at the political level.

Countries of the OECS have taken a harmonised approach to environmental legislation using model legislation developed by the ESDU. Model legislation was used to develop St Lucia's draft legislation and it is now being used in St Vincent. One issue which arose in development was whether there should be a combined or separate environment and biodiversity legislation. Each country of the OECS will perhaps determine this, as it has been largely recognised that legislation is indeed a national issue affected by how ministries and sectors are grouped, as well as national priorities and consultative processes. In St Lucia, for example, the first draft of the biodiversity legislation focused on ABS, but progressive consultations led to a wider biodiversity draft with ABS as a component. The draft biodiversity legislation is now called the *Biodiversity Conservation and Sustainable Use Bill*, which contains provisions for protected areas. Regulations have been developed under the PERB project in 2009. However, its passing is expected this financial year (2010-2011). This bill is an implementation achievement of the NBSAP in which the first project is 'Project 1: Policy, institutional and legislative review', including the "development of new laws and regulations when needed".

The Sustainable Development and Environment Section of the Ministry of Physical Development and the Environment coordinates all other MEAs except the CBD, which is coordinated by the Biodiversity Unit of the Ministry of Agriculture. Presently this unit is identifying the gaps in the *Environmental Management Act* and is coordinating the development of a draft bill. The unit has also developed a Draft Environmental Research Policy that includes ABS. It has been noted that the NBSAP process and its format is seen as the forerunner for other environmental policy and legislation development in St Lucia.

EIA and SEA

There is EIA legislation under the *Physical Development Act 2001*. There is also an EIA procedure, but concerns have been raised whether this procedure works to the extent that it supports biodiversity conservation. Enforcement is lacking, and little or no remedial action is taken when 'red flags' are raised by technicians. Strategic environmental assessment is still not developed in the country. The NBSAP outlines a mechanism, but the process is still weak.

A coordinating mechanism in the NBSAP would have assisted in this regard and it is hoped that the newly-created National Environment Commission can now play this role. Monitoring and enforcement are noted as responsibilities of referral resource agencies, but referral agencies are unclear of their roles and approaches to adopt. On the other hand, from the developer's side, 'approval in principle' appears to be misunderstood and is instead viewed as clear-cut development approval without a need to submit to further steps such as an EIA process.

Spatial planning

There is a *Physical Planning and Development Act 2001* and a Quadrant Plan, now called the National Vision Plan (which was developed in 2009 and which focuses on tourism development). It is being used to develop the island's tourism industry.

Application of the ecosystem approach

The ecosystem approach has been applied in the Soufriere Management Area and is generally seen as successful. There was some criticism of the ecosystem approach for its weakness in addressing upstream effects and the level of its relevance for small islands. It was suggested that the IWCAM approach is more appropriate for small islands such as St Lucia as it emphasises island system management where a national versus ecosystem approach is taken. This approach is suggested for the next generation of NBSAPs in small island countries.

Incentive measures

There is no large-scale incentive plan for biodiversity conservation in St Lucia; however, a few incentives exist for renewable energy technology and sustainable fishing.

Planting of trees has usually been offered as an incentive package to farmers where they are given a subsidised fee for purchase of trees to use for soil and water conservation. The National Fair Trade Organisation (NAFTO) now offers banana farmers special benefits when they sustainably manage their banana holdings. The LEAF standard which is currently being implemented between WINFRESH farmers and a supermarket chain in England also encourages farmers to practice biodiversity conservation on their farms. WINFRESH is collaborating with the Forestry Department and the Biodiversity Unit in training farmers in correct practices of biodiversity conservation.[298] The country is also promoting good agricultural practices with farmers with the EURepGAP program.[299]

There is a young fishers' programme in which school leavers are encouraged and trained to practise good fishing techniques in an effort to improve sustainable fishing practices and attract younger people to the fishing industry. There have been four or five such training programs over the years with about 30 trainees in each two-week session.

National targets and indicators

Indicators were not developed from the first NBSAP, but these have been developed for the second NBSAP as performance indicators. Under the IWCAM project, indicators were developed for St Lucia. Under IWCAM there has also been an assessment of indicators mechanisms and related capacity in the participating countries and the development of an IWCAM indicators template.

Monitoring and review

The NBSAP refers to monitoring and evaluation yet it appears that the process for monitoring of the NBSAP implementation, though arguably effective, is informal. The biodiversity coordinator convenes various committees and conducts one-on-one interviews with various agencies to monitor the progress of implementation of the projects listed in the NBSAP. Interviewees who have participated in the ad hoc committees for NBSAP implementation have indicated that the consensus is that the NBSAP has been well implemented, as most parts of nineteen out of twenty-two projects in the NBSAP have been completed. St Lucia has also been consistent in its reporting requirements to the CBD Secretariat and has now completed its Fourth National Report and second NBSAP. The process of completing these and other reports involved wide consultation with stakeholders (including communities) and guidance from the Secretariat.

Financing

Even though there was no clear funding mechanisms for implementation under the first NBSAP, St Lucia has been relatively effective in raising funds and implementing its projects using domestic and

298 Incentives listed as provided by the Biodiversity Coordinator.
299 Read more on the EURepGAP programme at www.eurepgap.org

international funding, including the EU SFA 2003, GEF, OAS, OECS and FFEM, and by early 'piggybacking' on various sub-regional initiatives. Local initiatives also received funding from the OECS Secretariat, the Inter-American Institute for Cooperation on Agriculture (IICA), the FAO, the Canadian International Development Agency (CIDA), USAID, and EU and other governments.[300]

Box 51
Financing NBSAP implementation and biodiversity management in St Lucia

St Lucia indicates almost full implementation of its first NBSAP (19/22 projects). It has successful raised funding both internally, through bilateral relationships, and through sub-regional and regional collaborative projects to implement the NBSAP projects.

Estimated funding of key biodiversity projects include:

- EU Biodiversity Improvement Project: EC$254,000
- GEF Biosafety Development Project: US$126,740
- GEF Second Enabling Activity Project: US$280,400
- GEF First Enabling Activity Project: US$169,000
- GEF Regional Invasive Species Project: US$600,000 (ongoing)
- GEF Biosafety Implementation Project: US$500,000 (to come onstream)
- GEF Biosafety Clearing-House Project: US $48,200
- Assessment of Biological Resources: EC$400,000 (local funds)
- PERB Project (St Lucia Component): EC$628,052[301]
- OPAAL Project (St Lucia Component): EC$204,000 from the FFEM, US$62,000 from OAS, in addition to funds from the World Bank.

GEF funding and GEF RAF: As of July 2010 St Lucia has utilised $522,500 of its US$3,300,000 allocation for biodiversity and climate projects (GEF website).

The NEMS presents an interesting financing mix for environmental management in St Lucia. It proposes the following instruments: public investments; establishment of a national social investment fund; user fees and payment for environmental services; environmental tariffs and levies; and contributions of the international community.

The draft second NBSAP also proposes the feasibility of establishing a Biodiversity Trust Fund or utilising the resources from an Environment Fund to fund implementation.

Summary of implementation, obstacles encountered and lessons learned[302]

St Lucia's implementation of its first NBSAP presented several lessons which enabled the country to develop its second NBSAP and which will perhaps guide its successful implementation. From the interviews, in addition to the list below, key factors contributing to the successful implementation of the first NBSAP include a project office early in implementation which serves as the coordinating unit for biodiversity management, scientific and technical peer-to-peer meetings, timing of the implementation of the SGD, and development and implementation of the NEMS.

300 From the draft second NBSAP.
301 Note that all funds to here represent monies spent on the national components, but the regional components benefit all six participating states and thus St Lucia benefited an additional US$101,602 from implementation of aspects of the project at the regional. level Thus benefits to St Lucia amount to approximately 17 per cent of the overall PERB project budget.
302 These lessons were identified by Peter Murray, Anita James and Rufus Leandre.

An internal country conservation ethos

St Lucia has long had a conservation ethos. From the 1970s there were biodiversity 'champions' from the forestry and fisheries sectors, leading to the identification of the St Lucian parrot *Amazona versicolor* as a flagship species for conservation and awareness of marine and terrestrial species. Since that time, the Ministry of Agriculture and Fisheries has been recognised as the key authority in biodiversity and conservation issues. Through the work of the Forestry Department, St Lucia's endemic parrot was brought back from the brink of extinction – from fewer than a hundred birds in the wild in 1977 to over 1,500 existing freely today. Models of St Lucia's conservation education campaign were taken to over forty countries all over the world by Paul Butler of the RARE Centre for Tropical Conservation, who had worked with the Forestry Department, and from his experience there developed a template to be disseminated. The biodiversity awareness survey carried out in 2003 under the second enabling activity project to determine knowledge of St Lucians on biodiversity revealed that the majority were aware of the importance and value of forests to conservation.

Biodiversity focal point based in the main natural resource ministry

The Ministry of Agriculture, Lands, Forestry and Fisheries has been recognised as the national agency with the greatest technical expertise in natural resource management and an early authority on conservation and awareness. Locating the biodiversity focal point (the Biodiversity Unit) in this ministry thus gave biodiversity and the NBSAP immediate buy-in, recognition and support from other agencies and stakeholders. The NBSAP reflected the work on the ground of the agencies and the real needs of conservation on the island. The NBSAP is used by some officers to give guidance for project development and for development of work programmes.

Drive, passion and persistence

A biodiversity coordinator must have drive, passion and persistence, and not be restrained by the political process. Characteristics possessed by St Lucia's coordinator which have helped implementation include good rapport with existing natural resource agencies and major stakeholders, the determination to consistently communicate relevant information to all stakeholders, the skill to mobilise stakeholders to participate in activities, the ability to recognise funding opportunities and take advantage of them, the ability to use the media strategically, and the ability to respond promptly to correspondence.

A willingness to be participatory

In the development of the NBSAP there was willingness at all levels for the process to be participatory and to involve most sectors and communities. St Lucia had previous successful experience in mobilising participation, especially through the development of the first Systems Plan of Protected Areas prepared in 1992 and led by the Saint Lucia National Trust (SLNT) through consultations involving local communities, public sector agencies and members of the Trust. This was an example of a good learning tool from which other agencies benefited.

A team approach to implementation

For NBSAP implementation, ad hoc teams are brought together as there are various issues, including reporting, to address. The Biodiversity Office is staffed by only two officers so the biodiversity coordinator calls together various technicians and stakeholders to form various committees as needed. Leads on various projects are determined based on the technical strength of the team member; for example, the sustainable use leader is based in the Department of Agriculture. This teamwork and technical peer-to-peer approach has been successful in St Lucia, as most of the officers working on NBSAP implementation and conservation began in the civil service together and therefore have a good rapport and understanding of each other's strengths. On the other hand, most (90 per cent) of these technicians will retire within the next three to five years. Currently under consideration is the impact of their

retirement on various teams and therefore a need to identify and monitor successors or use of a short-term consultant hiring strategy.

Good technical and management mentorship

A good technical core of people is needed in the development and implementation of an NBSAP. In the 1970s and 1980s higher education was a key development focus for St Lucia, and the government therefore sought and allocated funding for training, resulting in a civil service (and regional organisations) of capable university-educated St Lucian technicians. The Ministry of Agriculture, Forestry and Fisheries has therefore been staffed at all levels with trained technicians. As a lead conservation department, the Department of Agriculture, along with Fisheries and Forestry, has done well at mentoring new officers such as the biodiversity coordinator. The coordinator comes from a science/environmental education and forestry background and, in participating in the NBSAP development and then its implementation, he was mentored by an agriculturalist with forestry and project management training. This mentorship included mentoring in team-building and departmental policies.

National funding for bio-resources management

The government of St Lucia invested funds in biodiversity projects (not just external funding) included in the NBSAP. The NBSAP became part of the ministry's programming, and thus funding is allocated at times from the ministry's annual budget. The Biodiversity Unit is not formally established in the ministry structure, though it is recognised widely as a coordinating unit. A case may be made that financing for biodiversity conservation planning is still insufficient – hence the existence of only a two-member team at the unit – and therefore that resources and technicians from other units/departments must be accessed.

Good access to regional international funding

St Lucia has been successful at accessing funding from various donors. For example, the EU has funded projects on biodiversity management and establishment of a biodiversity network through the Special Framework of Assistance (SFA) 2003. The OAS and USAID have also funded projects. The OECS-ESDU is located in St Lucia and staffed with several ex-ministry officers. St Lucia has thus been well positioned to join several sub-regional projects of the ESDU. Though the GEF RAF is viewed as too bureaucratic and non-facilitative for SIDS, St Lucia has been successful in securing GEF funds through regional projects such as the Mitigating Invasive Species Project and the Regional Project on Sustainable Financing for Protected Areas (see Box 52 above).

Recommendations and conclusion

St Lucia has performed well on its MEA reporting. For the NBSAP the implementation rate is considered high, as most elements of the twenty-two projects in the NBSAP have been or are being implemented. The technical strength of St Lucia's biodiversity managers is commendable and St Lucia in all likelihood would rank as a leader in biodiversity management, and specifically NBSAP implementation, in the Caribbean.

However, there is a need to translate or exercise this strength in the face of increasingly strong economic (mainly tourism-driven) development. Despite strong collaboration among the resource-based ministries at the technical level, there are conflicts between environment and development and poor trade-offs between both. The EIA process must be strengthened in terms of clarifying the roles of various agencies, increasing respect for the process and understanding the role of the EIA in the development planning process. Resources are also needed for monitoring the implementation of EIA review recommendations. The development process, development control and enforcement should also be strengthened, and one clear process should be shared and adopted by technicians, developers and policy-makers.

The structure for implementation has worked, yet there is a need to strengthen and formalise these structures. The Biodiversity Coordination Unit should be fully incorporated into the permanent structure of the ministry and supported with additional staff. The ad hoc committees should formalise their composition (based on offices) as the present system of committees, though effective, is based on technical peers who have collaborated over a long period and several will be retiring within three to five years. Younger technicians and newly-recruited staff require mentoring to ensure continuity.

St Lucia lacks an overall strategic plan for its sustainable development, and this has affected the dialogue between resource conservation/environmental protection and economic planning. There appears to be limited will to produce or endorse such a guiding plan outside of the Tourism Policy. As political terms are short to medium in length, it is important for St Lucia to develop a holistic strategic vision for the sustainable development of the country, incorporating the needs of communities and civil society. This top tier and, to some extent, the bottom tier of community empowerment are perhaps what would fuel even greater success of the conservation and sustainable use of St Lucia's biodiversity. The unit should also consider the use of strategic environmental assessment(s) to strengthen the varied environmental programmes in St Lucia. The recently-constituted National Environment Commission can perhaps play a role in such efforts.

St Lucia is facing the same development dilemmas as other OECS and Caribbean countries, even more so since the global economic downturn. As in St Kitts, where agriculture and specifically sugar has lost its economic significance, so in St Lucia agriculture, and particularly the banana industry, is losing its importance, although efforts are being made by the Ministry of Agriculture to revitalise agriculture. St Lucia, like most of the sub-region, is therefore looking at the service sectors and particularly tourism. St Lucia must be careful to avoid the usual lopsided conflict faced by other islands with older tourism-based sectors – between tourism development and environmental protection.

Protected areas, both terrestrial and marine, and forested lands, even though receiving increasing 'protected status' recognition, are also facing development pressure. There are various demands on the same ecosystem services, land and biodiversity, as recently there was an especially severe water shortage facing the entire island and affecting all sectors. A clear sustainable development vision will perhaps clearly articulate a balance of the trade-offs between tourism development and biodiversity management. A strengthened EIA process will also address some implementation challenges of these development projects in addition to further mainstreaming biodiversity conservation within tourism planning and all other sectors. Strengthening the Biodiversity Unit to implement the second NBSAP and building the institutional capacity to implement the *Biodiversity Conservation and Sustainable Use Bill* are also necessary actions.

In addition to the challenge of developing the island in balance with environmental and social considerations, St Lucia must also respond to the various trade and partnership regimes and bilateral and regional assistance programmes to which it is a party. These, and especially bilateral aid relationships, are changing in nature and philosophy, so St Lucia, like all Caribbean islands, must consider both regionally and nationally the nature of these changes and their impact on national strategies and ambitions. Some of these range from the recent signing of a Revised Treaty of Basseterre establishing the OECS Economic Union,[303] the Caribbean Single Market and Economy (CSME),[304] and the WTO.

303 See www.oecs.org for further information on the Treaty. Areas for joint policies and actions include international trade agreements; external financial and technical assistance; public administration and management; scientific, technical and cultural co-operation; intellectual property rights; matters relating to the sea and its resources, etc.

304 "The CARICOM Single Market and Economy … will create one large market among the participating member states. The main objectives of the CSME are: full use of labour (full employment) and full exploitation of the other factors of production (natural resources and capital); competitive production leading to greater variety and quantity of products and services to trade with other countries. It is expected that these objectives will in turn provide improved standards of living and work and sustained economic development." See www.caricom.org (accessed 12 July 2010).

Knowledge management, including the dissemination of biodiversity-related information at various scales (local, regional and international), appears to require some strengthening. There appears to be a wealth of biodiversity information, both at ecosystem and species levels, and also various policy and projects outputs, yet the means for collating, evaluating and disseminating this information and even integrating it into regional channels is somewhat weak. Information-sharing both within and outside of St Lucia seems to be done mainly through presentations at meetings, but this is draining on local capacities. The assessments of environmental education have indicated that meetings, workshops, radio and television have been the most effective at communicating environmental messages. However, especially for external communication, stronger electronic platforms, including social media, should be supported and developed to collate and disseminate St Lucia's biodiversity information to a wider audience. The Biodiversity Information Network, developed under the EU SFA, and the national biodiversity clearing- house[305] can be strengthened by training officers and resource users on information-sharing and by appointing a webmaster.

Finally, while capacity (financial and number of officers) of national institutions responsible for resource management in St Lucia may be taxed by heavy implementation and management demands, St Lucia remains comparatively strong in its technical ability in natural resource management. St Lucia should continue and perhaps increase its technical contribution to the region through sharing of lessons learnt, secondments between islands, technical peer-to-peer training, and collaborative development of funding proposals. The SGD provides a framework and forum for continued lesson-sharing among Member Countries, and many of these lessons, as well as the structure of SGD implementation, can be adopted in other regions that have existing institutions for regional integration and development. The CBD Multi-Year Plan of Action (MYPA) for South-South Cooperation on Biodiversity for Development might also offer guidance and resources for lesson-sharing between countries.

305 St Lucia's National Biodiversity Clearing-House Mechanism, www.slubiodiv.org. There is also a Facebook page, 'Biodiversity Matters'.

Glossary

10MP	10th Malaysia Plan
AAFC	Agriculture and Agri-Food Canada
ABS	Access to Genetic Resources and Benefit Sharing
ACB	ASEAN Centre for Biodiversity
ANZECC	Australian and New Zealand Environment and Conservation Council
ASEAN	Association of Southeast Asian Nations
ASEAN-WEN	ASEAN Wildlife Enforcement Network
AusAID	Australian Government Overseas Aid Program
BBOP	Business and Biodiversity Offsets Programme
BPSP	Biodiversity Planning Support Programme (UNDP/UNEP/GEF)
CAMRE	Council of Arab Ministers Responsible for the Environment
CARICOM	Caribbean Community
CBD	Convention on Biological Diversity
CCAD	Central American Commission for Environment and Development
CCRM	Canadian Councils of Resource Ministers
CEE	Central and Eastern Europe
CEHI	Caribbean Environmental Health Institute
CEMD	Conservation and Environmental Management Division of the NRE (Malaysia)
CEPA	Communication, education and public awareness
CERF	Commonwealth Environment Research Facilities (Australia)
CFS	Central Forest Spine (Malaysia)
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CLME	Caribbean Large Marine Ecosystem
CMS	Convention on Migratory Species
COMIFAC	Central African Forests Commission
COP	Conference of Parties
CRFM	Caribbean Regional Fisheries Mechanism
CSME	Caribbean Single Market and Economy
DAC	Development Assistance Committee (OECD)
DANIDA	Danish International Development Assistance
DFID	Department for International Development (UK)

DTCP	Town and Country Planning Department of Peninsular Malaysia
DWNP	Department of Wildlife and National Parks Peninsular Malaysia
EAF	Ecosystem Approach to Fisheries
EBFM	Ecosystem Based Fisheries Management
ECNC	European Centre for Nature Conservation
ECOWAS	Economic Community of West African States
EEA	European Environment Agency
EIA	Environmental Impact Assessment
EPA	Environment Protection Authority (Victoria, Australia)
EPBC	Environment Protection and Biodiversity Conservation Act 1999 (Australia)
EPU	Economic Planning Unit
ESA	Environmentally Sensitive Area
EU	European Union
FAnGR	Farm Animal Genetic Resources Management Plan (Malaysia)
FAO	Food and Agriculture Organisation of the United Nations
FFEM	Fonds Francais pour l'Environment Mondial
FFI	Fauna & Flora International
FRIM	Forest Research Institute Malaysia
FSM	Federated States of Micronesia
GBIF	Global Biodiversity Information Facility
GBO	Global Biodiversity Outlook
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEF SGP	Global Environment Facility Small Grants Programme
GLISPA	Global Island Partnership
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HCVF	High Conservation Value Forest
HoB	Heart of Borneo Initiative
IEPF	Institut de l'Énergie et de l'Environnement de la Francophonie
IIED	International Institute for Environment and Development
ILO	International Labour Organisation
INTAN	National Institute of Public Administration (Malaysia)
IPBES	Inter-governmental Platform on Biodiversity and Ecosystem Services

IPCC	Intergovernmental Panel on Climate Change
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
ITTO	International Tropical Timber Organisation
IUCN	International Union for the Conservation of Nature
IWCAM	Integrating Watershed and Coastal Area Management
JICA	Japan International Cooperation Agency
LDC	Least Developed Country
LME	Large Marine Ecosystem
MA	Millennium Ecosystem Assessment
MAEP	Ministry of Agriculture, Livestock and Fisheries (Benin)
MARDI	Malaysian Agricultural Research and Development Institute
MBBN	National Biodiversity-Biotechnology Council (Malaysia)
MC&I	Malaysian Criteria and Indicators for Forest Management Certification
MDG	Millennium Development Goal
MDGR	Millennium Development Goals Report
MEA	Multilateral Environmental Agreement
MEN	Ministry of Environment and Nature Protection (Benin)
MER	Marine Extractive Reserve (Brazil)
MERCOSUR	Southern Common Market
MFSC	Ministry of Forests and Soil Conservation (Nepal)
MINEP	Ministry of Environment and Protection of Nature (Cameroon)
MINFOF	Ministry of Forestry and Wildlife (Cameroon)
MOCET	Sabah Ministry of Culture, Environment and Tourism (Malaysia)
MOEF	Ministry of Environment and Forests (India)
MOSTE	Ministry of Science Technology and Environment (Malaysia)
MPA	Marine Protected Area
MYCAT	Malaysian Conservation Alliance for Tigers
NAP3	Third National Agricultural Policy (Malaysia)
NAPA	National Adaptation Programmes of Action (UNFCCC)
NBAP	National Biodiversity Action Plan (Guyana)
NBCC	National Biodiversity Co-ordination Committee (Nepal)
NBS	Nepal Biodiversity Strategy
NBSAP	National Biodiversity Strategy and Action Plan

NBSIP	Nepal Biodiversity Strategy Implementation Plan 2006-2010
NCEMA	National Conservation and Environmental Management Act
NEMP	National Environmental Management Plan (Cameroon)
NEMS	National Environmental Management Strategy (St. Kitts and Nevis)
NERP	National Environmental Research Program (Australia)
NFP	National Focal Point
NFP	National Forestry Policy (Malaysia)
NGO	Non-Governmental Organisation
NHCS	Nevis Historical and Conservation Society
NPBD	National Policy on Biological Diversity (Malaysia)
NPE	National Policy on the Environment (Malaysia)
NPP	National Physical Plan (Malaysia)
NRE	Ministry of Natural Resources and Environment (Malaysia)
NRMMC	Natural Resource Management Ministerial Council (Australia)
NSCABD	National Strategy for the Conservation of Australia's Biological Diversity (1996)
NSCB	National Steering Committee on Biodiversity (Malaysia)
NSW	New South Wales
OAS	Organisation of American States
OECD	Organisation for Economic Cooperation and Development
OECS	Organisation of Eastern Caribbean States
OECS –ESDU	OECS Environment and Sustainable Development Unit
OPAAL	OECS Protected Areas and Associated Livelihoods
OPP3	Outline Perspective Plan 3 2001-2010 (Malaysia)
OTCA	Amazon Cooperation Treaty Organisation
PA	Protected Area
PAGEV	Projet de Amelioration de la Gouvernance de l'Eau dans le Bassin de Volta
PERB	Protecting the Eastern Caribbean Region's Biodiversity
PES	Payment for Ecosystem Services
PRSP	Poverty Reduction Strategy Paper
Ramsar	Convention on Wetlands of International Importance, especially as Waterfowl Habitat
REDD/REDD+	Reduced Emissions from Deforestation and Degradation *(see below)
RFA	Regional Forest Agreement
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice (CBD)
SCRP	Stratégie de Croissance pour la Réduction de la Pauvreté (Benin)

SEA	Strategic Environmental Assessment
SFM	Sustainable Forest Management
SGD	St George's Declaration of Principles of Environmental Sustainability in the OECS
SIDS	Small Island Development States
SMMA	Soufriere Marine Management Area (St Lucia)
SPREP	South Pacific Regional Environment Programme
TEEB	The Economics of Ecosystems and Biodiversity
TNC	The Nature Conservancy
TRAFFIC	WWF/IUCN Wildlife Trade Monitoring Network
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UN-ECLAC	United Nations Economic Commission for Latin America and the Caribbean
UNEP	United Nations Environment Programme
UNEP-CAR/RCU	United Nations Environment Programme Caribbean Regional Coordinating Unit
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
UNU-IAS	United Nations University Institute of Advanced Studies
WHC	World Heritage Convention
WRI	World Resources Institute
WSSD	World Summit on Sustainable Development (Johannesburg 2002)
WTO	World Trade Organisation
WWF	World Wide Fund For Nature

* REDD "is an effort to create a financial value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development. 'REDD+' goes beyond deforestation and forest degradation, and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks" (UN-REDD Programme 'About REDD' at www.un-redd.org).

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The initial research proposal was drawn up by Marjo Vierros and discussed with potential funders by Christian Prip. In response to funders' comments and suggestions, a revised proposal was prepared by Tony Gross. During COP-9 (Bonn, Germany, May 2008), UNU-IAS received confirmation of financial support to the project from the Norwegian Ministry of Foreign Affairs and the Swedish International Biodiversity Programme.

Implementation of the project had in fact begun in early 2008 with UNU-IAS participation in the first set of regional capacity-building workshops on NBSAPs and the mainstreaming of biodiversity organised by the Secretariat prior to COP-9. With the confirmation of external support, the authors were able to participate in the majority of relevant regional and global meetings held in the period January 2008 to June 2010. These included:

- South, Southeast and East Asia Regional Capacity-building Workshop on NBSAPs and the Mainstreaming of Biodiversity, Singapore City, Singapore, 14 to 18 January 2008[306]
- South America Regional Capacity-building Workshop on NBSAPs and the Mainstreaming of Biodiversity, Rio Branco, Brazil, 31 March to 4 April 2008
- West Africa Regional Capacity-building Workshop on NBSAPs and the Mainstreaming of Biodiversity, Ouagadougou, Burkina Faso, 29 September to 3 October 2008
- Caribbean Regional Capacity-building Workshop on NBSAPs and the Mainstreaming of Biodiversity, Port of Spain, Trinidad and Tobago, 3 to 7 November 2008
- Workshop for Asia (South, Southeast and East Asia) on the Fourth national Report, Tsukuba, Japan, 2 to 4 December 2008[307]
- North Africa and the Middle East Regional Capacity-building Workshop on NBSAPs and the Mainstreaming of Biodiversity, Cairo, Egypt, 14 to 18 December 2008
- Central Asia Regional Capacity-building Workshop on NBSAPs and the Mainstreaming of Biodiversity, Ramsar, Iran, 9 to 13 March 2009
- European Union Conference, 'Biodiversity Protection – Beyond 2010', Athens, Greece, 27 to 29 April 2009
- Workshop for Least Developed Countries on the Preparation of the Fourth National Report, Addis Ababa, Ethiopia, 4 to 8 May 2009
- Expert Consultation on the Revision and Updating of the Strategic Plan of the Convention, London, United Kingdom, 18 to 20 January 2010[308]

306 Further details of the regional NBSAP capacity development workshops are available at www.cbd.int/nbsap/workshops
307 Further details of Fourth National Report capacity development workshops are available at www.cbd.int/nr4/support/capacity-development.shtml
308 Further details of this workshop are available at www.cbd.int/doc/?meeting=EM-StratPlan-01

- Sixth Trondheim Conference on Biodiversity, Trondheim, Norway, 1 to 5 February 2010
- Nordic Symposium "Synergies in the biodiversity cluster", Helsinki, Finland, 8 to 9 April 2010
- Third Meeting of the Working Group on Review of Implementation of the Convention, Nairobi, Kenya, 24 to 28 May 2010[309]
- Workshop for Latin American and Caribbean Countries on the Preparation of the Fourth National Report, Panama City, Panama, 15 to 17 June 2010.

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- Ms Tone Solhaug, Senior Adviser, Ministry of Environment, Norway
- Dr Spencer Linus Thomas, Ambassador and Special Envoy for Multilateral Environmental Agreements, Grenada
- Ms Somaly Chan, Director, Department of International Convention and Biodiversity, Ministry of Environment, Cambodia
- Dr Shirin Karryeva, Biodiversity Expert, Ministry of Nature Protection, Turkmenistan
- Mr Rodrigo Fuentes, Executive Director, ASEAN Centre for Biodiversity
- Professor Philippe Le Prestre, Directeur, Institut EDS, Université Laval, Québec, Canada
- Ms Maria Schultz, Programme Director, Swedish International Biodiversity Programme
- Ms Kate Brown, Coordinator, Global Island Partnership (GLISPA), IUCN
- Dr David Duthie, Regional Coordinator for Central and Eastern Europe, UNEP-GEF Biosafety Unit, Division of the Global Environment Facility, United Nations Environment Programme.
- Dr David Cooper, Senior Programme Officer, Division of Implementation and Technical Support, Secretariat of the Convention on Biological Diversity
- Dr Balakrishna Pisupati, Chief, Biodiversity, Land Law and Governance Unit, Division for Environmental Law and Conventions, United Nations Environment Programme.

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309 Further details of the WGRI-3 meeting are available at www.cbd.int/wgri3

310 All members of the advisory group served in their individual capacities and institutional affiliations are shown solely for the purposes of identification.

place informally on the margins of other meetings and electronically. A full final draft was circulated to the advisory group in August 2010 for comment. UNU-IAS is extremely grateful to the chair and members of the advisory group for their encouragement, advice and helpful comments.

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311 University of Melbourne.
312 ERE Consulting Group.

Annex 1

COP guidance to Parties on NBSAPs

COP 2 encouraged Parties "in preparing and implementing their national strategies and action plans, to collaborate with relevant organisations and, if so desired, to take into consideration existing guidelines such as 'National Biodiversity Planning' published by the United Nations Environment Programme, the World Resources Institute and the World Conservation Union (IUCN)"314 (see Box 3).

At **COP 3** in 1996, Parties were urged to include in their NBSAPs *in-situ* as well as *ex-situ* conservation, integration of biodiversity objectives in relevant sector policies and benefit sharing arising out of the use of genetic resources. COP 3 further encourages Parties to set measurable targets in order to achieve biodiversity conservation and sustainable use objectives. [313]

COP 6 in 2002 urged Parties:

(a) *To develop and adopt national biodiversity strategies and action plans, where they have not yet done so;*

(b) *To give priority to the integration of the conservation and sustainable use of biological diversity, as well as benefit-sharing, into relevant sectoral or cross-sectoral plans, programmes and policies, in accordance with Article 6 of the Convention;*

(c) *To identify priority actions in national biodiversity strategies and action plans and other relevant national strategies;*

(d) *To implement national biodiversity strategies and action plans; and to periodically revise them in the light of the experience of implementation;*

(e) *To establish national mechanisms or consultative processes, with particular regard, where appropriate, to the special needs of indigenous and local communities, for coordinating, implementing, monitoring, evaluating and periodically revising national biodiversity strategies and action plans;*

(f) *To identify constraints and impediments to implementation of national biodiversity strategies and action plans, and to reflect them in the national reports;*

(g) *To make their national biodiversity strategies and action plans, including periodic revisions, available through their national clearing-house mechanism and the Convention website.* [314]

At COP 6, Parties also adopted a Strategic Plan to guide implementation of the Convention at national, regional and global levels and which included the overall target "to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth".[315] The target was endorsed later the same year by Heads of States at the World Summit for Sustainable Development in Johannesburg.

Goal 3 of the Strategic Plan is that national biodiversity strategies and action plans, and the integration of biodiversity concerns into relevant sectors, serve as an effective framework for the implementation of the objectives of the Convention. In particular, the Strategic Plan aims to ensure that:

- All Parties have effective national strategies, plans and programmes in place to provide a national framework for implementing the three objectives of the Convention and to set clear national priorities (objective 3.1);
- Biodiversity concerns are being integrated into relevant national sectoral and cross-sectoral plans, programmes and policies (objective 3.3);

313 Decision III/9.
314 Decision VI/27.
315 Decision VI/26.

- The priorities in national biodiversity strategies and action plans are being actively implemented, as a means to achieve national implementation of the Convention, and as a significant contribution towards the global biodiversity agenda (objective 3.4).

The Strategic Plan annexes a list of twenty-nine obstacles to implementation of the CBD.

At **COP 7** in 2004, a set of goals and targets was adopted to clarify and help assess the overall 2010 target. COP emphasised that the goals and targets should be viewed as a flexible framework within which national and/or regional targets may be developed, and invited Parties and Governments to develop national and/or regional goals and targets, and, as appropriate, to incorporate them into relevant plans, programmes and initiatives, including NBSAPs.[316]

COP 8 decided that COP 9 should consider consolidated guidance for the development, implementation and evaluation of NBSAPs and the effective integration of biodiversity concerns into relevant sectors.[317] The decision was taken in light of the fact that guidance related to NBSAPs was scattered among a large number of individual COP decisions and in some areas also incomplete.

In preparing for **COP 9's** decision, the Working Group of Review of Implementation at its second meeting in 2007 identified the following points not fully reflected in the existing guidance:

a) The need for a communication plan for promoting NBSAPs (in addition, for NBSAPs to include strategies for communication, education and public awareness);

b) The need to make the case for biodiversity by linking biodiversity, ecosystem services and human well-being;

c) The need for funding plans for priority activities;

d) The need to engage all stakeholders in the development, updating and implementation of NBSAPs; and

e) The need for local-level action on biodiversity, including by linking NBSAPs with local planning processes, and or developing local biodiversity strategies or action plans.

These points have been included in the consolidated and updated guidance adopted by **COP 9** in 2008 and contained in decision IX//8, "Review of Implementation of Goals 2 and 3 of the Strategic Plan".

Below is the part of decision IX/8 containing the guidance on NBSAPs:

"National biodiversity strategies and action plans

6. *Urges* Parties that have not yet done so to develop a national biodiversity strategy and action plan or adapt existing strategies, plans or programmes, as required by Article 6 of the Convention, as soon as possible and preferably no later than the tenth meeting of the Conference of the Parties;

7. *Further emphasises* the importance of securing high-level government support in the process of developing, updating and implementing national biodiversity strategies and action plans, and the need to engage all relevant sectors and stakeholders;

8. *Recalling* the guidance provided by the Conference of the Parties concerning national biodiversity strategies and action plans, appended to the annex to recommendation 2/1 of the Working Group on Review of Implementation of the Convention, and *taking note* of the lessons learned from the in-depth review, *urges* Parties in developing, implementing and revising their national and, where appropriate, regional, biodiversity strategies and action plans, and equivalent instruments, in implementing the three objectives of the Convention, to:

316 Decision VII/30.
317 Decision VIII/8.

Meeting the three objectives of the Convention:

a Ensure that national biodiversity strategies and action plans are action-driven, practical and prioritised, and provide an effective and up-to-date national framework for the implementation of the three objectives of the Convention, its relevant provisions and relevant guidance developed under the Convention;

b Ensure that national biodiversity strategies and action plans take into account the principles in the Rio Declaration on Environment and Development adopted at the United Nations Conference on Environment and Development;

c Emphasise the integration of the three objectives of the Convention into relevant sectoral or cross-sectoral plans, programmes and policies;

d Promote the mainstreaming of gender considerations;

e Promote synergies between activities to implement the Convention and poverty eradication;

f Identify priority actions at national or regional level, including strategic actions to achieve the three objectives of the Convention;

g Develop a plan to mobilise national, regional and international financial resources in support of priority activities, considering existing and new funding sources;

Components of biodiversity strategies and action plans:

h Take into account the ecosystem approach;

i Highlight the contribution of biodiversity, including, as appropriate, ecosystem services, to poverty eradication, national development and human well-being, as well as the economic, social, cultural, and other values of biodiversity as emphasised in the Convention on Biological Diversity, making use, as appropriate, of the methodologies and conceptual framework of the Millennium Ecosystem Assessment;

j Identify the main threats to biodiversity, including direct and indirect drivers of biodiversity change, and include actions for addressing the identified threats;

k As appropriate, establish national, or where applicable, sub-national, targets, to support the implementation of national biodiversity strategies and action plans, consistent with the flexible framework established in decisions VII/30 and VIII/15, taking into account, as appropriate, other relevant strategies and programmes, such as the Global Strategy for Plant Conservation and focusing on national priorities;

Support processes:

l Include and implement national capacity-development plans for the implementation of national biodiversity strategies and action plans, making use of the outcomes of national capacity self-assessments in this process, as appropriate;

m Engage indigenous and local communities, and all relevant sectors and stakeholders including representatives of society and the economy that have a significant impact on, benefit from or use biodiversity and its related ecosystem services. Activities might include:

(i) Preparing, updating and implementing national biodiversity strategies and action plans with the participation of a broad set of representatives from all major groups to build ownership and commitment;

(ii) Identifying relevant stakeholders from all major groups for each of the actions of the national biodiversity strategies and action plans;

(iii) Consulting those responsible for policies in other areas so as to promote policy integration and multidisciplinary, cross-sectoral and horizontal cooperation to ensure coherence;

(iv) Establishing appropriate mechanisms to improve the participation and involvement of indigenous and local communities and civil society representatives;

(v) Striving for improved action and cooperation to encourage the involvement of the private sector, namely through the development of partnerships at the national level;

(vi) Strengthening the contribution of the scientific community in order to improve the science/policy interface to support research-based advice on biodiversity;

n Respect, preserve and maintain the traditional knowledge, innovations and practices of indigenous and local communities consistent with Article 8(j);

o Establish or strengthen national institutional arrangements for the promotion, coordination and monitoring of the implementation of the national biodiversity strategy and action plans;

p Develop and implement a communication strategy for the national biodiversity strategy and action plan;

q Address existing planning processes in order to mainstream biodiversity concerns in other national strategies, including, in particular, poverty eradication strategies, national strategies for the Millennium Development Goals, sustainable development strategies, and strategies to adapt to climate change and combat desertification, as well as sectoral strategies, and ensure that national biodiversity strategies and action plans are implemented in coordination with these other strategies;

r Make use of or develop, as appropriate, regional, sub-regional or sub-national networks to support implementation of the Convention;

s Promote and support local action for the implementation of national biodiversity strategies and action plans, by integrating biodiversity considerations into sub-national and local-level assessments and planning processes, and, as and where appropriate, the development of sub-national and local biodiversity strategies and/or action plans, consistent with national biodiversity strategies and action plans;

Monitoring and review:

t Establish national mechanisms including indicators, as appropriate, and promote regional cooperation to monitor implementation of national biodiversity strategies and action plans and progress towards national targets, to allow for adaptive management, and provide regular reports on progress, including outcome-oriented information, to the Secretariat of the Convention on Biological Diversity;

u Review national biodiversity strategies and action plans to identify successes, constraints and impediments to implementation, and identify ways and means of addressing such constraints and impediments, including revision of the strategies where necessary;

v Make available through the Convention's clearing-house mechanism national biodiversity strategies and action plans, including periodic revisions, and where applicable, reports on implementation, case studies of good practice, and lessons learned; [….]"

Annex 2

Status of national biodiversity strategies and action plans or equivalent instruments (NBSAPs) at 31 July 2010 [318]

A. Parties that have revised their NBSAPs
(year of completion indicated where year of adoption is unknown)

1. Australia (1996, 2009)
2. Austria (1998, 2005)
3. Bhutan (1997, 2002, 2009)
4. Botswana (2005, 2007)
5. Brazil (2002, 2006)
6. China (1993, 2010)†
7. Croatia (1999, 2008)
8. Cuba (1997, 2006)
9. Democratic Republic of Congo (2000, 2002)
10. European Community (1998, 2006)
11. Finland (1997, 2006)
12. France (2004, 2009)††
13. Guyana (1999, 2007) *Action Plan only
14. India (1999, 2008)
15. Indonesia (1993, 2003)
16. Japan (1995, 2002, 2008, 2010)
17. Kyrgyzstan (1998, 2002)
18. Latvia (2000, 2003) *Action Plan revised
19. Lebanon (1998, 2005)
20. Madagascar (2000, 2007)
21. Morocco (2002, 2004)
22. Mozambique (2001, 2003)
23. Netherlands (1995, 2001, 2008)
24. Norway (2001, 2004, 2006)
25. Philippines (1997, 2002)
26. Poland (2003, 2007)
27. Romania (1996, 2001)
28. Singapore (1992, 2002)
29. Slovakia (1998, 2002) *Action Plan updated only
30. Spain (1999, 2005) *Strategy only
31. Sweden (1995, 2006)
32. Thailand (1997, 2002)
33. Turkey (2001, 2007)
34. United Kingdom (1994, 2006)
35. Vietnam (1994, 2007)

† China announced the adoption of its second revised NBSAP in September 2010.
†† Strategy adopted in 2004 and sectoral Action Plans adopted between 2006 and 2008; sectoral Action Plans revised in 2009.

318 CBD Secretariat, www.cbd.int/doc/nbsap/nbsap-status.doc and www.cbd.int/doc/press/2010/pr-2010-08-26-china-nbsap-en.pdf

B. Parties with NBSAPs under revision
(Year of completion indicated where year of adoption is unknown)

1. Bahamas (1999)
2. Cameroon (1999)
3. Egypt (1998)
4. Estonia (1999)
5. Guinea (2001)
6. Ireland (2002)
7. New Zealand (2000)
8. Niger (2000)
9. Niue (2001)*
10. Qatar (2004)
11. Saint Lucia (2000)
12. TFYR Macedonia (2004)
13. Tunisia (1998)
14. Turkmenistan (2002)

*Strategy being updated, Action Plan still in development.

C. Other Parties with completed NBSAPs
(Year of completion indicated where year of adoption is unknown)

1. Albania (1999)
2. Algeria (2005)
3. Angola (2006)
4. Argentina (2003)
5. Armenia (1999)
6. Azerbaijan (2004)
7. Bahrain (2007)
8. Bangladesh (2006)
9. Barbados (2002)
10. Belarus (1997)
11. Belgium (2007)
12. Belize (1998)
13. Benin (2002)
14. Bolivia (2001)
15. Bosnia and Herzegovina (2008)
16. Bulgaria (2000)
17. Burkina Faso (1998)
18. Burundi (2000)
19. Cambodia (2002)
20. Canada (1996)
21. Cape Verde (1999)
22. Central African Republic (2003)
23. Chad (1999)
24. Chile (2003)
25. Colombia (2005)
26. Comoros (2000)
27. Congo (2001)
28. Cook Islands (2001)
29. Costa Rica (1999)
30. Côte d'Ivoire (2002) *Strategy only
31. Czech Republic (2005)
32. Denmark (1996)
33. Djibouti (2001)
34. Dominica (2002)
35. DPR Korea (1998)
36. Ecuador (2001)
37. El Salvador (1999)
38. Equatorial Guinea
39. Eritrea (2000)
40. Ethiopia (2006)
41. Fiji (1997)
42. Gabon (1999)
43. Gambia (1999)
44. Georgia (2005)
45. Germany (2007)
46. Ghana (2002) *Strategy only
47. Grenada (2000)
48. Guatemala (1999)
49. Guinea-Bissau (2006)
50. Honduras (2001)
51. Hungary (2004)
52. Iran (2006)
53. Israel (2009)
54. Jamaica (2003)
55. Jordan (2001)
56. Kazakhstan (1999)
57. Kenya (1999)
58. Kiribati (2006)
59. Kuwait (completed 1997, not adopted)
60. Lao PDR (2004)
61. Lesotho (2000)
62. Liberia (2003)
63. Lithuania (1996)
64. Luxembourg (2007)
65. Malawi (2006)
66. Malaysia (1998)
67. Maldives (2002)
68. Mali (2001)
69. Marshall Islands (2000)
70. Mauritania (1999)

71. Mauritius (2006)
72. Mexico (2000)
73. Micronesia, Federated States of (2002)
74. Mongolia (1996)
75. Montenegro (2010)
76. Namibia (2002)
77. Nepal (2002)
78. Nicaragua (2001)
79. Nigeria (2006)
80. Oman (2001)
81. Pakistan (1999)
82. Palau (2005)
83. Panama (2000)
84. Papua New Guinea (2007)
85. Paraguay (2003)
86. Peru (2001)
87. Portugal (2001)
88. Republic of Korea (1997)
89. Republic of Moldova (2000)
90. Russian Federation (2001)
91. Rwanda (2003)
92. Saint Kitts and Nevis (2004)
93. Saint Vincent and the Grenadines (2004)
94. Samoa (2001)
95. Sao Tome and Principe (2005)
96. Saudi Arabia (2005)
97. Senegal (1998)
98. Seychelles (1997)
99. Sierra Leone (2003)
100. Slovenia (2001) * Strategy only
101. Solomon Islands (2009)
102. South Africa (2005)
103. Sri Lanka (1998)
104. Sudan (2000)
105. Suriname (2006) *Strategy only
106. Swaziland (2001)
107. Switzerland (2006)
108. Syrian Arab Republic (2002)
109. Tajikistan (2003)
110. Togo (2003)
111. Tonga (2006)
112. Trinidad and Tobago (2001)
113. Uganda (2002)
114. Ukraine (1998) *Strategy only
115. United Republic of Tanzania (2004)
116. Uruguay (1999)
117. Uzbekistan (1998)
118. Vanuatu (1999)
119. Venezuela (2001)
120. Yemen (2005)
121. Zambia (2003)
122. Zimbabwe (2000)

D. Parties with first NBSAP under development

1. Dominican Republic
2. Haiti
3. Italy
4. Libyan Arab Jamahiriya
5. Liechtenstein
6. Malta
7. Monaco
8. Myanmar
9. Nauru
10. Serbia
11. Tuvalu
12. Timor-Leste (Party as of 1 August, 2007)
13. Brunei Darussalam (Party as of 27 July 2008)

E. Parties for which there is no recent information about the status of its NBSAP

1. Afghanistan
2. Antigua and Barbuda
3. Cyprus
4. Greece
5. Iceland
6. Iraq
7. San Marino
8. Somalia
9. United Arab Emirates

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