



Convention on
Biological Diversity

Updating National Biodiversity Strategies and Action Plans
in line with the Strategic Plan for Biodiversity 2011-2020
and the Aichi Biodiversity Targets

Training Package (Version 2.1)

Module 8

Biodiversity Planning for States, Provinces, Cities and Other Local Authorities: How to Develop a Sub-National Biodiversity Strategy and Action Plan



United Nations Decade on Biodiversity

About this Series

This module forms part of a training package on the updating and revision of national biodiversity strategies and action plans (NBSAPs) in line with the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets. The package is intended for national focal points of the Convention on Biological Diversity, those responsible for updating and implementing NBSAPs and other biodiversity planners, including those responsible for other biodiversity-related conventions. They are being used in the ongoing second series of regional and sub-regional capacity building workshops on revising and updating NBSAPs. Each module is available on the CBD Secretariat's website (<http://www.cbd.int/nbsap/training/>). The module and its contents may be freely used for non-commercial purposes, provided the source is acknowledged. The secretariat would appreciate receiving a copy of material prepared using these modules.

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This module has been prepared by Camellia Ibrahim, with contributions by David Cooper, Nadine Saad, Chantal Robichaud, Oliver Hillel, Andre Mader, Lijie Cai, Sarat Babu Gidda, Noriko Moriwake, Joanne Keegan, and Andrea Cruz.

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Resources

About this Module

This Module discusses the role that states, provinces, cities and other local authorities and sub-national entities play in implementing the Convention on Biological Diversity (CBD) and the Strategic Plan for Biodiversity 2011-2020, and in achieving the Aichi Biodiversity Targets. It explains how sub-national biodiversity strategies and action plans (SBSAPs) can be developed as strategic instruments for these objectives. Through a number of case studies, the module illustrates a wide diversity of sub-national experiences and approaches at varying geographic and jurisdictional scales.

This module is designed as a resource tool for:

1. CBD national focal points working with planners at sub-national levels to integrate biodiversity considerations into planning and implement National Biodiversity Strategies and Action Plans (NBSAPs) at local levels; and
2. Local authorities and organizations that are working to integrate a greater focus on biodiversity into local planning processes and/or are considering developing a SBSAP.

Section I of this module provides some information relevant for sub-national governments, authorities, and participating stakeholders involved in biodiversity planning and interested in developing an SBSAP. The section provides some guiding principles for the development and review of SBSAPs, drawn from the guidance provided by the Conference of the Parties.

Section II focuses on biodiversity planning at the sub-national levels and how this should be envisioned as an adaptive and flexible process. The section outlines a cyclical and adaptive process for developing, implementing, and reviewing SBSAPs.

Section III provides some general conclusions and additional resources that would be useful to authorities and stakeholders developing SBSAPs.

Because of the close interlinkages between NBSAPs and SBSAPs, it is recommended that sub-national authorities and stakeholders preparing a SBSAP refer to the complete NBSAP training package designed by the Secretariat of the CBD and available at:

<http://www.cbd.int/nbsap/training/>.

1. Background

1.1. Why is Biodiversity Planning at the Sub-National Level Important?

The Conference of the Parties to the Convention has urged countries to “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, [through] the development of sub-national and local biodiversity strategies and/or action plans, consistent with national biodiversity strategies and action plans.”¹ Indeed, there is an increasing global trend in biodiversity planning at sub-national

¹ This is part of the consolidated guidance on NBSAPs adopted by the Conference of the Parties at its ninth meeting in decision IX/8, and available at: <http://www.cbd.int/decision/cop/?id=11651>.

levels. In their Fourth National Reports to the CBD, many Parties (61%)² report that sub-national policies are contributing to the conservation and/or sustainable use of biodiversity. Additionally, two global series of capacity-development workshops on NBSAPs organized by the SCBD in 2008 – 2009 and in 2011 – 2012 illustrate a diversity of sub-national action currently being implemented.³ Finally, in recent years, more and more cities are integrating biodiversity into their urban planning processes.⁴

A recent analysis conducted by the United Nations University Institute of Advanced Studies argues that NBSAPs will have limited impact on the ground if they are not translated into sub-national actions.⁵ One of the ways of achieving this is through the development of biodiversity strategies and action plans at Provincial, State, and/or local levels as distinct planning instruments. Another way is to examine existing sub-national plans and policies and to integrate biodiversity components into them.

The Convention, under Article 6 requires Parties to develop NBSAPs or equivalent instruments. NBSAPs should reflect the measures set out by the Convention and integrate, as far as possible, the conservation and sustainable use of biological diversity into relevant sectoral and cross-sectoral plans, programmes, and policies. Guidance on the development and revision of NBSAPs is provided in Modules 1 and 2 in this series, based on the guidance adopted by the Conference of the Parties at their ninth meeting in 2008 (available at: <http://www.cbd.int/nbsap/guidance.shtml>). There is no compulsory model for NBSAPs. Rather, individual nations choose the approach that best fits their national needs, challenges, and priorities.

Sub-national and local authorities are critical policy-makers, especially with regards to biodiversity conservation, restoration, and sustainable use. They play central roles in land-use and territorial planning. They develop regulations related to productive sectors, administer services such as water, waste management, housing, education, and health, and they make investments into these sectors. Additionally, they are responsible for creating and implementing sustainable development strategies and policies in their administrative areas. Finally, they have the responsibility of implementing national policy and legislation. All of these administrative and policy decisions have direct impacts on biodiversity both within and beyond territorial boundaries.

Sub-national Biodiversity Strategies and Action Plans are strategic planning instruments to implement the CBD and the NBSAP at the sub-national level in concrete and locally significant and prioritized ways. As with NBSAPs, there is no one “correct” template for an SBSAP. The formulation will depend on the local context and the area’s priorities. It is, however, useful to consider a combination of components such as:

- A **Biodiversity Strategy** with a vision, statement of principles, clearly identified priorities, defined short, medium, and long term goals, and a set of targets to help guide implementation;

2 This is based on a review of 126 Fourth National Reports. See document: UNEP/CBD/COP/10/INF/2 available at <http://www.cbd.int/doc/?meeting=cop-10>. [accessed 10 April 2010]

3 For documents and presentations related to these two series of workshops, see: <http://www.cbd.int/nbsap/>.

4 For information on the Global Partnership on Cities and Biodiversity see:

<http://www.cbd.int/authorities/Gettinginvolved/GlobalPartnership.shtml>. Additional resources are available through the Local Action for Biodiversity Programme, a partnership between ICLEI – Local Governments for Sustainability and the International Union for Conservation of Nature (IUCN): www.iclei.org/lab. [accessed 10 April 2010]

5 Prip, C., T. Gross, S. Johnston, and M. Vierros. 2010. Biodiversity Planning: An Assessment of National Biodiversity Strategies and Action Plans. Yokohama: United Nations Institute of Advanced Studies, p. 79.

- A **Biodiversity Action Plan** that identifies priority actions and clearly outlines how these will be implemented, including expected timelines, monitoring and reporting, and the roles and responsibilities of the institutions and stakeholders involved; The action plan should also include a **framework for mobilizing necessary funding** to support the implementation of the SBSAP; and a **communication strategy** for the SBSAP.

Sub-national Biodiversity Strategies and Action Plans provide a valuable planning tool for sub-national authorities managing their environments and territories, and building a healthy and sustainable future for their populations:

- SBSAPs can help translate international and national biodiversity policies and obligations into effective action at the sub-national level. In the effort to conserve biodiversity of national importance, BSAPs can help identify local actions.
- SBSAPs can identify and prioritize local concerns and priorities, adapting and targeting actions at the local level in ways that NBSAPs, or alternative national frameworks, cannot.
- Because they are locally adapted and specific, SBSAPs have the potential to galvanize greater involvement of local authorities and decision-makers, including local and indigenous communities. This applies both to localized conservation efforts as well as involvement in broader biodiversity planning.
- SBSAPs can serve as an important tool to increase public awareness of biodiversity conservation.
- Because they are reflective of local needs and realities, SBSAPs have the potential to be better internalized among sub-national governments. This helps build ownership and provide an avenue for better sectoral and cross-sectoral biodiversity mainstreaming.
- SBSAPs can also help integrate biodiversity concerns into spatial and territorial planning.
- Through the process of developing an SBSAP, information on biodiversity and ecosystems within the State, Province, District, or local area is collected. Additionally, information gaps are identified. This can help create locally specific baseline data for future biodiversity monitoring.

1.2. What Principles Should Guide the Development of Sub-National Biodiversity Strategies and Action Plans?

There are a number of key considerations that can guide and inform the development of SBSAPs. The following are based on the guidance for NBSAPs adopted by the Conference of the Parties to the Convention in decision IX/8. Additionally, these points reflect the revised Strategic Plan for Biodiversity 2011 – 2020, which was adopted in decision X/2:⁶

- SBSAPs should identify and prioritize up-to-date and effective action required in order to meet all three objectives of the CBD (conservation; sustainable use; and the fair and equitable sharing of the benefits deriving from the utilization of genetic resources). Furthermore, SBSAPs should take into account the 5 strategic goals of the Strategic Plan for Biodiversity 2011-2020.

⁶ Information on the Strategic Plan for Biodiversity 2011 – 2020 and Aichi Biodiversity Targets is available at: <http://www.cbd.int/sp/>.

- SBSAPs should clearly highlight the contribution of biodiversity and ecosystem services to human well-being, poverty eradication, and sustainable development, as well as the economic, social, and cultural values of biodiversity. Furthermore, SBSAPs should put forward specific recommendations and actions at both the policy level (through the Biodiversity Strategy) as well as the programming level (through the Action Plan) to conserve biodiversity and maintain ecosystem services as fundamental contributions to human well-being. Approaches, such as the Ecosystem Approach, are particularly relevant in helping to bridge these issues and programmatic elements.
- As a strategic instrument for achieving concrete outcomes, an SBSAP should not be a publication that sits on a shelf. Rather, an SBSAP is a guide for policy and decision-making. It should provide a practical and prioritized plan for implementing action on the ground.
- In order to be effective, it is important that the SBSAP be jointly developed, adopted, and owned by the full range of stakeholders and partners involved. The process should be open, participatory, and transparent.
- SBSAPs must include measures to mainstream biodiversity into sectoral and cross-sectoral policies and programs. This involves addressing the main drivers of biodiversity loss and actively engaging all sectors in conservation and sustainable use at both the policy and programming levels.
- Biodiversity planning is a long-term, cyclical and adaptive process. It involves continual monitoring, evaluation, and revision, as progress is made, conditions evolve, and lessons are learned.

In addition, the following considerations are particularly important at the sub-national level:

- As SBSAPs are developed and/or revised, it is recommended that they take into account the Strategic Plan for Biodiversity 2011 – 2020 and develop sub-national targets that correspond to the 20 global Aichi Biodiversity Targets and similar targets being developed at the national level.
- SBSAPs should also take into account the Plan of Action on Sub-national Governments, Cities, and Other Local Authorities for Biodiversity 2011-2020.⁷ The Plan of Action highlights the importance of developing and implementing sub-national and local BSAPs and increasing the engagement of sub-national governments and local authorities in the implementation of the CBD and its Strategic Plan for Biodiversity.

Box 1: Plan of Action on Sub-National Governments, Cities, and Other Local Authorities for Biodiversity 2011-2020

Parties to the CBD adopted the Plan of Action in decision X/22 during the tenth meeting of the Conference of the Parties, which took place in October 2010. Through this decision, the Conference of the Parties invited Parties to involve sub-national governments, cities, and other local authorities in the implementation of NBSAPs, in future revisions of NBSAPs, and in the implementation of the Convention's programs of work and its Strategic Plan for Biodiversity 2011-2020. The Plan of Action provides guidelines to Parties on how to support local actions on biodiversity and to bring national strategies and plans into the urban context. The Plan of Action presents a set of objectives, monitoring and reporting guidelines, suggested activities for implementation, and an appropriate institutional framework for optimizing synergies between Parties, UN and development agencies, NGOs and networks of cities. Information on the Plan of Action is available at the CBD website: <http://www.cbd.int/strategicplan.shtml>. [Accessed 20 April, 2011]

⁷ The Plan of Action was adopted by the Conference of the Parties to the Convention in decision X/22. For more information see: <http://www.cbd.int/strategicplan.shtml>.

1.3. A Diversity of Approaches and Scales for Sub-National Biodiversity Strategies and Action Plans

This module provides a range of examples in order to illustrate the diversity in the types of, and approaches towards SBSAPs. In some instances, NBSAPs are developed first and then sub-national jurisdictions have been encouraged to prepare SBSAPs as a way to implement the NBSAP locally. In other cases, SBSAPs were developed first as an integral part of the NBSAP preparation process. Both India and Chile decided to take this route. However often, NBSAPs and SBSAPs have been developed independently. It is therefore important to build strategic links between these biodiversity strategies and action plans developed at different levels so that they do not exist in isolation from each other.

SBSAPs are developed in a wide range of geographic and jurisdictional scales, and in a variety of contexts, including at State or Provincial levels in federated or quasi-federated states and at local or municipal levels, including cities. SBSAPs may also be developed for regions defined on ecological criteria.

State and Provincial levels

State, provincial or regional biodiversity strategies and action plans are commonly developed by Federated States (e.g. Australia, Canada, Mexico and India), in countries with strong decentralization policies (i.e. China at the level of Provinces, Peru at the level of its Regions and the United Kingdom at the level of its component countries) and countries with geographically disperse national territories (i.e. The Federated States of Micronesia). Boxes 2 and 3 provide examples from Australia and Mexico.

Box 2: Victoria State Biodiversity Strategy 2010 – 2015

Like a number of other States in Australia, Victoria is completing a revision of its Biodiversity Strategy⁸. This was guided by an evaluation of the first Strategy, which outlined a number of concrete ways that implementation could be improved. It incorporates new thinking related to ecosystem functions and addresses emerging issues of climate change, marine biodiversity, fire management, and indigenous values and capacity. The title *Biodiversity is Everyone's Business* reflects the strong linkages between biodiversity, human well-being, and the necessity of public participation.

The strategy has been developed within the context of Victoria's Land and Biodiversity White Paper "*Securing our Natural Future*," which sets the vision and policy agenda for the next 20 to 50 years to safeguard Victoria's environment.

The Strategy itself provides the strategic direction through a framework of action composed of seven critical elements for biodiversity management:

- Leadership (including advocacy and improved coordination);
- Mainstreaming public awareness, understanding, and action;
- Working together to achieve biodiversity outcomes through coordinated action, innovation, and capacity-building;
- Standards to retain, enhance, and restore biodiversity and ecosystem function;
- Modernizing legislation related to government as well as the business sector;
- Knowledge management to build and share the knowledge base that underpins biodiversity conservation; and
- "Nature print" serving as a blueprint for strategic planning and implementation.

⁸ Department of Sustainability and Environment. 2010. *Biodiversity is Everybody's Business: Victoria's Biodiversity Strategy 2010 – 2015*. Melbourne: Victorian Government Department of Sustainability and Environment. (consultation draft) Available online at: <http://www.dse.vic.gov.au/conservation-and-environment/biodiversity/victorias-biodiversity-strategy>. [Accessed 27 June 2011]

For each of the seven elements, the Strategy outlines the current situation and priority issues, provides a set of goals, indicates the different ways the government will respond, and puts forward several key expected outcomes. Through this, the Strategy provides a mechanism for delivering on the Government's commitments over the next five years through programs, standards, and targets for government and the environment sector. To achieve this, there is a strong focus on influencing and changing behaviours. The strategy puts forward the notion of a 'biodiversity sector,' with public, private, and community groups working in partnership to deliver biodiversity outcomes.

Box 3: State Biodiversity Strategies in Mexico

Michoacán was one of the first Mexican States to develop both a biodiversity study (2005)⁹ and a strategy (2007)¹⁰, and succeed in having the strategy formally adopted by the State Congress. The strategy was developed in three stages, starting with a series of multi-sectoral dialogues. These were highly participatory and provided opportunities to i) share the results of the biodiversity study, (ii) identify priority conservation and social issues, and (iii) and develop proposals for actions to be included in the strategy. The second stage focused on the development of strategic areas, objectives, and priority actions for the Strategy. The final stage consolidated these strategic areas and actions, validating the decisions through additional workshops and consultations, including internet-based public consultations. A description of the process is included in the final Strategy as an Annex.

The strategy's six strategic areas address the main challenges of biodiversity conservation and sustainable use while offering solutions and responses in the form of priority actions. The strategic areas are:

- Territorial planning and social participatory planning;
- Information and knowledge management;
- Biodiversity conservation and the reversal of environmental degradation;
- Local development and quality of life;
- Capacity development and strengthening; and
- Environmental governance.

Aguascalientes has also finalized a State Biodiversity Strategy (2010)¹¹. The strategy has a 2030 Vision and 4 strategic objectives, each with a set of corresponding goals and actions:

- Biodiversity conservation and protection, with actions related to territorial zoning, protected areas, legal frameworks, and climate change, to name a few;
- Information and knowledge management, including support for research;
- Biodiversity valuation, focusing on strategic communication and promoting an "environmental culture;" and
- Diversification of sustainable use, including the development of alternative technologies and the promotion of traditional knowledge.

Each action, in turn, is given a proposed timeline, and the institution responsible for the activity is identified. Institutions and partners that can provide additional support also are listed. The Strategy includes a proposed implementation framework with specific proposals for a multi-stakeholder committee to monitor implementation. Federal, State, and municipal governments, sectors, civil society, and universities will be represented. Additional sub-committees are proposed to monitor progress in each of the 4 strategic objectives. In 2009, a proposal was sent to the State Congress to reform the Aguascalientes Environmental Protection Law and have the Biodiversity Strategy formally recognized as the guiding framework for all conservation and sustainable use activities in the State. The Congress has since formally adopted the

9 Villaseñor G., L.E. (ed). 2005. *La Biodiversidad en Michoacán: Estudio de Estado*. México D.F. y Morelia: CONABIO, Secretaría de Urbanismo y Medio Ambiente, Universidad Michoacana de San Nicolás de Hidalgo. Available online at: http://www.biodiversidad.gob.mx/region/EEB/pdf/EE_MICHOACAN_2005.pdf

10 CONABIO, SUMA, y SEDAGRO. 2007. *Estrategia para la Conservación y Uso Sustentable de la Diversidad Biológica de Michoacán*. México D.F. y Morelia: CONABIO, SUMA, y SEDAGRO. Available online at: http://www.biodiversidad.gob.mx/region/EEB/Estudios_Estrategias.html

11 CONABIO, IMAE, UAA. 2010. *Estrategia para la Conservación y Uso Sustentable de la Biodiversidad del Estado de Aguascalientes*. México D.F. y Aguascalientes: CONABIO, IMAE, UAA. Available online at: http://www.biodiversidad.gob.mx/region/EEB/Estudios_Estrategias.html

Strategy.

Local and Municipal Levels

Local Biodiversity Action Plans in the United Kingdom (see Box 4) and Ireland illustrate the role these action plans can play in implementing national biodiversity policy and integrating biodiversity considerations into local-level planning, as well as the types of partners that are often involved. These issues will be elaborated in further sections of this module.

Box 4: Local Biodiversity Action Plans in the United Kingdom

Implementation of the UK Biodiversity Action Plan¹² is supported predominately through biodiversity strategies developed by each of the UK's four countries. Within each country, Local Biodiversity Action Plans (LBAPs) have been developed at different geographic scales, including for parishes, counties, and national parks. LBAPs have been encouraged since 1995 when, in consultation with the Local Authority Association and Local Government Board, the UK Biodiversity Steering Group developed a set of guidelines for LBAPs. While the UK Biodiversity Action Plan structure has since changed at the national and country levels, LBAPs remain crucial implementation mechanisms. Their functions are:

- To translate national targets for species and habitats into effective action at the local level;
- To identify targets for species and habitats important to the local area and reflecting the values of local people;
- To stimulate effective local partnerships to ensure programmes for biodiversity conservation are developed and maintained in the long term; and
- To raise awareness of the need for biodiversity conservation and enhancement in the local context.¹³

Local Authorities are required to develop Community Strategies for economic, social, and environmental well-being. LBAPs are identified as one of the elements to be used when preparing these Community Strategies.

Throughout the UK, LBAP implementation is first and foremost based on a Partnership Approach¹⁴ that connects Local Authorities and a wide range of government, private sector, and civil society stakeholders in order to identify and deliver local action for biodiversity. For instance, in Wales, implementation of the LBAP actively involves farmers, landowners, foresters, game managers, fishery managers, managers or graziers of common land, environmentalists, government departments, conservation charities, industrial/ commercial enterprises, and local authorities. Implementation of LBAPs involves working together with local community groups, schools, colleges, and people of all ages.

As of 2009, 190 LBAPs have been prepared in the UK.

Cities

The world's population is rapidly urbanizing, making cities, their governments, and their inhabitants fundamental actors in achieving the 3 objectives of the CBD. In 2010, UN-HABITAT estimated that 50.6% of the world's population lived in urban areas, and that this would reach 70% by 2050. Biodiversity provides essential goods and environmental services to urban areas, such as food, water, fuel, building supplies, micro-climate regulation, air pollution regulation, protection from natural hazards, and recreation. UN-HABITAT estimates that while

¹² Information on the UK Biodiversity Action Plan, including on the ways it is implemented at local levels, is available at: <http://www.ukbap.org.uk/>

¹³ England Biodiversity Group. 2003. *Natural Partners: The Achievements of Local Biodiversity Partnerships in England*. Newark: The Wildlife Trusts on behalf of England Biodiversity Group. Available online at: http://www.ukbap.org.uk/Library/Natural_partners.pdf

¹⁴ The United Kingdom. 2009. *Fourth National Report to the CBD: United Kingdom*. Available online at: <http://www.cbd.int/doc/world/gb/gb-nr-04-en.pdf>

cities only occupy under 3% of the planet's surface, their inhabitants use 75% of the world's natural resources.¹⁵ Urban areas often drive biodiversity loss beyond their borders through habitat destruction and conversion, extraction of natural resources, pollution, and introduction of invasive alien species, to name a few examples.

When it comes to biodiversity conservation, the initial focus tends to be on parks and green spaces. While green spaces do help protect local biodiversity, the city-biodiversity relationship is much broader and layered. Therefore, city-level SBSAPs will benefit from addressing the influence of cities beyond their boundaries as well as the cross-sectoral nature of biodiversity policy and how it is directly linked to numerous sectors administered by municipal governments such as land-use, water, solid waste management, transportation, housing, and health. Since many city-level SBSAPs include education and outreach components, they provide a crucial opportunity to increase public awareness of biodiversity within large and often diverse populations.

Box 5: Integrating Biodiversity into Urban Planning: Innovations and Successes in South Africa and Brazil

Cape Town has taken a number of measures to integrate biodiversity concerns into urban planning. The city lies within the Cape Floral Kingdom biodiversity hotspot, with approximately one third of the floral kingdom's plants found within the city's boundaries. Additionally, the Table Mountain National Park lies within the municipal jurisdiction. However, urban development and sprawl are major drivers for habitat loss. In response, Cape Town adopted an Integrated Management Environmental Policy in 2001. The city then published a Biodiversity Strategy in 2003,¹⁶ with links to the Integrated Development Plan. A revised Local Biodiversity Strategy and Action Plan 2009 – 2019¹⁷ was subsequently published and contains a strategic planning framework with performance indicators. The BSAP will be evaluated annually and will be revised again by 2014.

In their conception, the Biodiversity Strategy, and subsequent Biodiversity Strategy and Action Plan, were viewed as an opportunity to introduce a paradigm shift in urban planning. This involved:

- A coordinated and integrated approach to conservation and biodiversity from a citywide perspective with citywide biodiversity targets;
- A focus on ensuring equitable distribution of, and access to, biological wealth among disadvantaged communities with improved and redistributed benefits arising directly from the conservation of the area's unique biodiversity;
- Creative, participative, open, and transparent approaches to the conservation of biodiversity rather than restrictive approaches; and
- Partnerships with external organizations and donor organizations.

Administrative issues related to conservation planning have been consolidated under a Biodiversity Management Branch within the municipal government, a move aimed at mainstreaming biodiversity into city governance. The Branch reviews any potential development with a high biodiversity impact. A conservation plan called the Biodiversity Network (BioNet)¹⁸ has been produced. Among numerous activities, BioNet

15 Puppim de Oliveira et. al. 2010. *Cities, Biodiversity and Governance: Perspectives and Challenges of the Implementation of the Convention on Biological Diversity at the City Level*. Yokohama: United Nations University Institute of Advanced Studies. The policy report is available at:

http://www.ias.unu.edu/sub_page.aspx?catID=111&ddlID=1392. [accessed 20 April 2010]

16 City of Cape Town. 2003. *Biodiversity Strategy*. Available online at:

http://www.capetown.gov.za/en/EnvironmentalResourceManagement/projects/Documents/Environmental/Biodiversity_Strategy.pdf [Accessed 28 April 2011]

17 City of Cape Town. 2009. *Local Biodiversity Strategy and Action Plan 2009 – 2019*. Available online

at: <http://www.capetown.gov.za/en/EnvironmentalResourceManagement/publications/Pages/PoliciesandStrategies.aspx>

18 Cape Town Biodiversity Network. Reports available at:

http://www.capetown.gov.za/en/EnvironmentalResourceManagement/functions/BiodivManagement/Pages/Biodiversity_Network.aspx [Accessed 28 April 2011]

maps and analyzes vegetation types, conservation areas, wetlands, and urban areas. This is to assess and monitor the city's 500 representative sites that have been identified for conservation and to align the City's conservation targets with national targets. Cape Town has also developed a strategic framework for combating invasive alien species (IAS) within its jurisdiction¹⁹.

Curitiba's BioCity Programme²⁰ is a groundbreaking US\$ 175 million program launched in 2007 that integrates biodiversity into urban planning and links different areas of the municipal administration to combat biodiversity loss. BioCity is composed of five main projects related to: (1) reintroduction of indigenous plant species within the city; (2) establishment of conservation units, encouraging active participation of civil society; (3) preservation of water resources through the Strategic Plan for Revitalizing the Barigui River Basin; and (4) air quality/mobility and transportation, through the Green Line Project which aims to revitalize an important federal highway, establish a park, and create a major transportation corridor with special lanes for bicycles and pedestrians.

Sao Paulo has a population of 18 million and is surrounded by a green belt biosphere reserve protecting the Atlantic Forest biome with its high levels of endemism. Increasing threats to biodiversity include population growth, urban sprawl, deforestation, habitat fragmentation, pollution and urban waste, illegal trafficking of wildlife, and introduction of invasive alien species. In response, the city has taken a multi-faceted approach to implementing the CBD within city boundaries. This has included²¹:

- Zoning of environmental protection areas as part of the Urban Master Plan;
- The creation of urban, nature parks, and riparian parks;
- Environmental restoration of waterways and watersheds as urban ecological corridors that protect water resources and mitigate flooding;
- Payments to private landowners to conserve forest-cover adjacent to water sources;
- Tree planting in urban areas and within green corridors;
- Wildlife conservation and reintroduction into protected areas;
- Environmental education centres;
- Flora and fauna inventories;
- Establishment of a Municipal Environmental Police unit comprising 300 personnel to protect forest and watershed areas;
- Legislation to combat the sale of illegal timber and a procurement policy requiring official documentation of the origin and supplier for any timber used in public works;
- The mobilization and training of community health agents to work on initiatives linking biodiversity, environment, and health;
- Sustainable urban agriculture; and
- Publication of an environmental atlas, a local Agenda 21, and a Sao Paulo Global Environment Outlook that includes 83 urban-environmental indicators.

Ecologically Defined Regions

Strategies and/or Action Plans can also take a landscape-level approach to conservation planning, for instance covering a contiguous geographical area such as watersheds and mountain ranges, or focusing on distinctive biodiversity features and habitats. These types of SBSAPs can help different jurisdictions better coordinate conservation efforts.

For instance, 10 eco-regional biodiversity strategies and action plans were developed in India as part of the bottom-up approach taken in developing the country's NBSAP. The eco-regions were

¹⁹ City of Cape Town. 2008. Framework for a Strategy and action Plan for the Management of Invasive Alien Species in the City of Cape Town. Cape Town: Biodiversity Management Branch, Environmental Resource Management Department. Available at:

<http://www.capetown.gov.za/en/EnvironmentalResourceManagement/InvasiveSpecies/Pages/default.aspx> [accessed 28 April 2011]

²⁰ Curitiba BioCity Programme, and for contacts, see: <http://www.iclei.org/index.php?id=7910> [Accessed 28 April 2011]

²¹ For more detail on these activities undertaken by Sao Paulo see: <http://www.cbd.int/authorities/casestudy/saopaulo.shtml> [Accessed 28 April 2011]

selected on the basis of their biodiversity significance and ecological contiguity. In Colombia, six SBSAPs have been developed. Of these, 2 take an eco-regional approach. The Orinoco watershed Biodiversity Action Plan covers parts of 9 sub-national jurisdictions (or Departments). Another Biodiversity Action Plan covers 3 Departments in the Amazonian part of the country. Japan's Biodiversity Act encourages the development of Biodiversity Strategies that take into account ecosystems, even if this means crossing Prefecture political boundaries.

1.4. How can national governments support biodiversity planning at the sub-national levels?

In many countries, a rise in decentralization policies have given State, Provincial, and local authorities greater control over policy, planning, and regulation related to the environment, including statutory responsibility for protecting biodiversity. In other countries, national legislation provides a legal framework for the creation of SBSAPs. Encouragement may also come from the NBSAP itself in cases where there has been a call for sub-national authorities to better integrate biodiversity considerations into State, Provincial, local, and/or city planning.

Box 6: Examples of National Governments Providing an Enabling Environment for SBSAPS

The **Mexican** government has been providing support to States in developing State Biodiversity Studies as well as State Biodiversity Strategies. The National Commission for the Knowledge and Use of Biodiversity (CONABIO) has developed guidelines for both, and has designated staff members to provide technical assistance and coordinate capacity-building and knowledge exchange. CONABIO also provides the States with assistance in developing state biodiversity information systems as part of the national Clearing House Mechanism

China's NBSAP includes a commitment to work with authorities at the provincial, municipal, and county levels in developing SBSAPs²²

In **Peru**, both the National Biodiversity Strategy, as well as the Decentralization Law (Law 27783), required regional governments to develop biodiversity strategies.²³

In 2008 **Japan** passed the Basic Act on Biodiversity, which highlights the importance of biodiversity to human wellbeing, sets forth a series of fundamental principles for the conservation and sustainable use of biodiversity in Japan, and articulates the responsibilities of government, civil society, and private sector. Article 13 of that Act obliges prefectural and municipal governments to prepare local BSAPs. The Ministry of Environment has also developed a Guide²⁴ for the development of sub-national BSAPs, including guidance on a planning framework, project management, and building public awareness of SBSAPs.

France adopted legislation in 2009²⁵ that encouraged the development of regional and local biodiversity strategies with the participation of a wide range of stakeholders. Additionally, France's National Biodiversity Strategy (2004) encouraged the development of both sectoral and local biodiversity action plans.

22 Ministry of Environment. 2010. Fourth National Report to the CBD. Available at : <https://www.cbd.int/doc/world/cn/cn-nr-04-en.pdf>

23 Ministry of Environment. 2010. Fourth National Report to the CBD. Available at: <http://www.cbd.int/doc/world/pe/pe-nr-04-es.pdf>

24 Japan: Japan Ministry of Environment. 2010. *Guide to the Local Biodiversity Strategy*.

25 See Article 23 of the Loi Grenelle 1. Information on Regional Biodiversity Strategies in France can be found in the following report: IUCN Comité Français. 2011. *Quelles Stratégies Régionales Pour la Biodiversité en France Métropolitaine*. Paris: IUCN. The report is available at: http://www.uicn.fr/IMG/pdf/Etude_SRB_UICN_France.pdf [accessed 28 April 2011]

There are numerous ways in which national governments can support biodiversity planning at the sub-national level. Some examples²⁶ include:

- Send the message to all levels of government, and to the public, of the critical role biodiversity plays in sustaining human well-being and productive economies.
- Create strong regulatory and institutional frameworks in order to encourage biodiversity to be considered and given high priority in government operations at all levels.
- Collaborate and coordinate with local authorities to effectively integrate biodiversity into local decision-making, planning, and regulations. Such collaboration helps implement national policies in practical and locally specific ways, and recognizes the reality that species and ecosystems are not confined to jurisdictional boundaries.
- Provide training and capacity-building at local levels in order to maximize human and technical resources.
- Ensure local authorities have access to up-to-date information from the NBSAP, national biodiversity assessments, and reporting to the CBD. Similarly, encourage two-way communication between national and local governments on biodiversity-related information and technology as well as reporting and monitoring on relevant policies, programmes, and projects that are being implemented at different levels. Facilitate the exchange of data and research through knowledge sharing platforms such as Clearing House Mechanisms that can link data sets collected at both local and national scales.
- Encourage partnerships with civil society and create opportunities for greater participation in biodiversity conservation.
- Recognize leadership, proactive engagement of local authorities, and success stories. This can be, for example, through awards, labels, and other incentives.
- Provide resources so that local authorities can assist in the implementation of the CBD, national biodiversity-related legislation, the NBSAP or equivalent, etc.

2. Developing and Implementing Sub-National Biodiversity Strategies and Action Plans

New data, technology, biodiversity management approaches, input from stakeholders and key actors, changing national and local priorities, and emerging conservation issues all provide critical feedback into biodiversity planning. Many countries that have developed NBSAPs have followed a cyclical and adaptive planning process. This process is also quite relevant to the development and any subsequent updating of SBSAPs. Those involved in the development, implementation, and updating of SBSAPs can adapt this planning process to their specific context, for instance regarding issues relating to administrative and territorial governance, civil society groups, local livelihoods, the status of biodiversity, conservation priorities, and threats and drivers of biodiversity loss.

²⁶ Adapted from: United Nations Human Settlements Programme. 2010. Supporting Local Action for Biodiversity: The Role of National Governments. Nairobi: UN HABITAT (Draft)

2.1. Getting Started and Engaging Stakeholders and Key Actors

When initiating an SBSAP, there are a few considerations that can help establish a streamlined and organized process. The following are some general considerations that SBSAP planners may choose and adapt according to their specific contexts and needs:

- Identifying the geographical area that the SBSAP will cover;
- Defining an appropriate timeframe for the Strategy and Action Plan and a schedule for the SBSAP preparation;
- Securing funding and other necessary resources (staffing, institutional, office space, in-kind contributions, etc.) to support the SBSAP preparation;
- Establishing criteria and modalities for gathering of information (e.g. a master database) and streamlining communication between participants;
- Designing guidelines for the biodiversity assessment/diagnostic phase
- Developing a public awareness and communications package to inform the media and civil society that the SBSAP is being developed and how the public can participate.
- Identifying a lead organization, Committee, or Working Group to coordinate the preparation of the SBSAP;
- Establishing a clear coordination structure, lines of communication, and institutional responsibilities;

Engaging stakeholders and key actors from the very beginning of the biodiversity planning process is critical. No single organization or agency will have enough information and technical experience to develop an SBSAP on its own. The active participation and buy-in of all relevant stakeholders and partners will be essential for effective implementation of the SBSAP once it is developed and approved. Moreover, a diversity of backgrounds and expertise will foster innovative ideas and add richness to the process. This is an opportunity to ask:

- Who are the main actors? (Who is affecting biodiversity in the area? Who is being affected by biodiversity loss?)
- Which actors should be included into the planning process? Whose input and participation could help develop a strong and effective SBSAP?

Actors will differ from region to region and depending on political contexts and geographical scales. However some indicative examples from a selection of SBSAP cases across the world include:

- Local government agencies
- Representatives from sectoral departments
- Government and municipal planners
- Local communities and municipal organizations
- Indigenous peoples organizations
- Regional development bodies (such as regional economic boards)
- Landowners
- Agricultural producers and fishers
- Conservation and environment NGOs
- Protected areas
- Community groups and associations of concerned citizens
- Academic and scientific institutions
- Youth groups

- Women groups
- Local businesses and the private sector
- Volunteers

It is important to have a clear understanding of the different actors, their priorities, area of expertise, relationships with each other, where they are most active, etc. This will help facilitate participation and dialogue and serve to manage any potential conflicts. Some ideas for channelling inputs from a range of actors include:

- Holding public consultations to gather input during the development phases for biodiversity assessments and SBSAPs, or to collect feedback on drafts;
- Organizing sectoral workshops followed by one or more inter-sectoral meetings;
- Forming one or more inter-sectoral and/or multi-stakeholder advisory committee(s) that can, for instance, focus on a particular theme; and
- Designating technical and policy groups to work on certain aspects of the SBSAP.

Module 5 of the NBSAP training package focuses exclusively on societal engagement and establishing a participatory planning process. This module is a useful resource for those preparing, implementing, and revising sub-national BSAPs.

Box 7: Engaging Women in State-level Biodiversity Action Plans in India

While sub-national and thematic BSAPs were being developed as part of the overall India NBSAP process, coordinators realized that there needed to be an additional effort to engage women's groups and seek gender-specific inputs. Some examples include:

- Five meetings were held with women's groups as part of the Kachchh BSAP process. These meetings were organized with the help of *Kachchh Mahila Vikas Sangathan*, a NGO working on women's issues in the region. Women representatives from about 100 villages participated.
- Several meetings with fisherwomen were conducted as part of the West Coast Ecoregion BSAP process. More than 100 women from the Malpe Fisherwomen's Co-operative Society participated. Discussions focused on the interlinkages between biodiversity, livelihoods and the traditional knowledge of women.
- Two documentary films²⁷ were made on women, livelihoods, and biodiversity, an output of the BSAP process in Arunachal Pradesh

Additionally, in 2001 and 2002, there were a series of regional workshops to bring together partners and coordinators working on different state, ecoregional, and thematic BSAPs. One of the issues discussed was whether the BSAPs sufficiently addressed gender equity and how gender could be better incorporated into planning processes.

Indigenous and Local Communities

Indigenous and local communities are key partners, and their active participation as equal partners is critical for the success of SBSAP design, preparation, implementation, and monitoring²⁸. Throughout the world, indigenous and local communities are stewards of the environment and biodiversity, who directly benefit from the ecosystem services provided, and who are fundamentally impacted by biodiversity loss. Their traditional knowledge, including in-depth knowledge of local biodiversity, and biodiversity management practices, innovations, and technologies, are extremely relevant to the design of effective SBSAPs. Additionally, local and

²⁷ These films can be viewed on the Earthcare films website at: <http://www.earthcarefilms.com/docu/ls-gend.htm> [Accessed 5 May 2011]

²⁸ Indeed the UN Declaration on the Rights of Indigenous Peoples, adopted in Resolution 61/295 in 2007, recognizes that respect for indigenous knowledge, cultures, and traditional practices contributes to sustainable and equitable development and proper management of the environment. See: <http://www.un.org/esa/socdev/unpfii/en/drip.html>

traditional customary governance structures, indigenous decision-making processes and the associated “customary laws,” and indigenous institutions should be considered during SBSAP preparation. Indigenous law often has territorial components, which govern lands, natural resources, subsurface resources, and social dimensions.²⁹ Therefore taking these existing governance, legal, and institutional structures into account in the design of SBSAPs will help ensure the strategies and plans are inclusive and relevant.

Box 8: Engaging Indigenous and Local Communities in SBSAPs

India

As part of the preparation of the NBSAP, 74 State, sub-State, thematic, and ecoregional BSAPs were developed. This process involved tens of thousands of participants, many of which came from indigenous and local communities. A few examples³⁰ include:

- Questionnaires to document indigenous knowledge on biodiversity were used during the development of the Maharashtra State plan. The Punjab State also circulated questionnaires through NGOs and schools in order to gather information on traditional farming and conservation systems as well as related religious, ethical, cultural and social aspects.
- The nodal agency coordinating the development of the Deccan Area sub-state BSAP (Andhra Pradesh) organized a mobile biodiversity festival in 62 villages in the Zaheerabad region. Ten decorated bullock carts displaying the region’s agricultural biodiversity, including traditional foods that are reappearing in local diets, visited these villages. Discussions were held in each village about their agro-biodiversity and associated farming practices. A draft strategy and action plan for agricultural biodiversity in 70 villages of the area was released at a ceremony in February 2001. This plan was based on the information gathered during the festival and the associated series of stakeholder consultations in which farmers, officials, NGOs, and academics participated. As a result of the Mobile Biodiversity Festivals and other BSAP related processes, more farmers are incorporating biodiversity considerations into their farming practices. The festivals have become an annual event.
- In Jammu and Kashmir State, a special meeting was held with Buddhist monks to get their input on the traditional use and conservation of medicinal plants. And in Pondicherry State the nodal agency coordinating the development of the State BSAP organized special meetings with farmers and fisher folk to collect inputs on local biodiversity and linkages to livelihoods.

New Zealand

Improving coordination between groups, agencies, and individuals currently involved in biodiversity conservation and management is a priority under the Taranaki Regional Council Biodiversity Strategy.³¹ The Strategy recognizes the traditional notion of *Kaitiakitanga* (the process and practices of environmental guardianship) and stresses that both Maori groups as well as the Taranaki Council have *Kaitiakitanga* responsibilities. The Strategy’s Action Plan outlines a number of ways in which the Council and Maori groups should partner on biodiversity issues. For instance, the Council must collaborate with and provide support to biodiversity projects managed by Maori groups, and Maori groups are to be included in monitoring activities. Additionally, biodiversity is to be incorporated into Memorandums of Understanding associated to Waitangi Treaty³² settlements. Finally, case studies illustrating *Kaitiakitanga* in action are to be used in State of the Environment reporting.

29 United Nations General Assembly. 2010. *Progress Report on the Study on Indigenous Peoples and the Right to Participate in Decision-Making: Report of the Expert Mechanism on the Rights of Indigenous Peoples*. (Report No. A/HRC/EMRIP/2010/2).

30 Bhatt, S., K. Kohli, and A. Kothari. 2005. *Process Documentation of the National Biodiversity Strategy and Action Plan, India*. Pune / New Delhi: Kalpavriksh Environmental Action Group.

31 Taranaki Regional Council. 2008. *Biodiversity Strategy: An Operational Strategy to Guide Biodiversity Actions of the Taranaki Regional Council*. Stratford. Available at: <http://www.trc.govt.nz/Biodiversity/#strategy> [Accessed 11 May 2011]

32 The Waitangi Treaty was signed in 1840 and is considered a founding document of New Zealand.

By the end of this step, SBSAP planners should aim to have:

- A small representative group of actors willing to form part of a SBSAP Committee / Working Group with a clear coordination structure;
- A broad range of participants willing to be engaged in the larger consultation process;
- A clear schedule for completing the SBSAP; and
- Financial, human and other resources for developing the SBSAP in place.

2.2. Assessing Biodiversity and its Links to Human Wellbeing

The assessment stage is designed to ‘take stock’ of biodiversity knowledge and relevant policy, social and economic considerations. In assessing biodiversity and its links to human wellbeing, it is critical to consider ecosystem services – the benefits such as food, fuel, medicines, pollination, regulation of climate, floods, and disease, water purification, cultural services, soil formation and nutrient cycling, etc.). Broadly, the term human well-being encompasses health, security, income, material needs, and good social relations. In making the case for biodiversity conservation, sustainable use, and equitable sharing, it is important to highlight the different ways biodiversity can enhance human well-being.

The impact of ecosystem change on human wellbeing was the subject of the Millennium Ecosystem Assessment (MA) and 33 sub-global assessments³³. These assessments, and their findings, provide valuable resources for those preparing SBSAPs. Another useful resource is the TEEB study, which draws attention to the global economic benefits and value of the goods and services provided by biodiversity and ecosystem services. Through a series of reports, the study focuses on the growing costs to society of biodiversity loss and ecosystem degradation, as well as the savings of averted loss. TEEB approaches the issue from the perspective of policy-makers and business, seeking to highlight win-win solutions for ecological security, development, and human well-being. It puts forward a range of tools and practical policy mechanisms as well as market-based instruments. TEEB has developed a report specifically for local and regional policy makers. The report and supporting case studies are of particular relevance for planners involved in SBSAPs.³⁴

The knowledge and information consolidated in the biodiversity assessment stage will form a baseline for future monitoring and will assist in the development of goals and objectives for the SBSAP. It will also help to determine what actions are necessary in order to implement the Convention at the sub-national level. Finally, this baseline information will be crucial in developing a communication strategy for the SBSAP and making the case for conservation, sustainable use and equitable benefit sharing. Those preparing biodiversity assessments may wish to consult Modules 1 and 3 for further information on biodiversity assessments and the type of information that is typically used and evaluated.

The scope of the biodiversity assessment will depend on the particular local context. However some suggestions based on SBSAP cases around the world include:

³³ The MA and sub-global assessments can be found at: <http://www.maweb.org/en/index.aspx> [Accessed 3 May 2011]

³⁴ The report is available at: <http://www.teebweb.org/ForLocalandRegionalPolicy/tabid/1020/Default.aspx> [Accessed 3 May 2011]

- The status of and trends of the area's biodiversity, and the identification of specific ecosystems, habitats, species, and conservation challenges that are seen as priorities and require critical intervention;
- The drivers of biodiversity loss, including (i) the direct drivers (such as land-use change, climate change, invasive species, over-exploitation, pollution) and (ii) the indirect drivers (such as changes in human population, incomes and/or lifestyle, and influences from economic, socio-political, cultural, religious, and technological factors);
- The relationship and interlinkages between biodiversity and human well-being;
- An analysis of the present framework of biodiversity legislation, policies, programmes, expenditures, the ways in which different policy instruments might affect biodiversity (in both positive and negative terms), and any policy gaps;
- An estimate of current expenditures on biodiversity conservation;
- An analysis of how all the areas of work of the local authority / government impact or potentially impact upon biodiversity – whether positively or negatively;
- An evaluation of efforts to reduce biodiversity loss, including, for example, a review of recent and on-going biodiversity initiatives that are being conducted locally, what local organizations are involved in biodiversity conservation, an assessment of technical capacity, etc.;
- Traditional knowledge of indigenous and local communities, including cultural and spiritual concerns as well as oral histories that can provide insight into changes in biodiversity;
- An assessment of public awareness of biodiversity conservation and value;
- An analysis of socio-economic data that can, for instance, provide information on productive sectors, land-use systems, poverty, rural-urban migrations, etc., all of which impact biodiversity conservation and planning; and
- An assessment of data and information gaps.

Examples of some sub-national biodiversity assessments are provided in Boxes 9 to 11.

Box 9: Assessing the State of Biodiversity in British Columbia, Canada

British Columbia's biodiversity assessment is a suite of reports.³⁵ The province wanted to base planning decisions on a strong scientific analysis of the current status of biodiversity. A report on ecological concepts and principles provided information on valuing biodiversity, ecosystem management concepts, ecological principles, and how these can be applied in conservation activities. Additionally, a status report "*Taking Nature's Pulse: the Status of Biodiversity in British Columbia*" included sections on the current status of species and ecosystems, their functions, areas in British Columbia of global biodiversity significance, gaps in current knowledge, threats and pressures on biodiversity, and the gaps in what the report terms the "safety net" to protect biodiversity. The report concluded with 23 major findings.

A technical expert advisory group was created to provide guidance on the development of the status report and review the 13 component reports which provided the main input to the status report. These 13 component reports covered a diversity of issues, ranging from assessments of threats, climate change, climate trends, and genetic diversity, to gap analysis. Additionally, a biodiversity atlas comprised of over 60

³⁵ The Biodiversity BC website provides information on the approach taken to develop its biodiversity assessment, summary of the major findings, and BC's biodiversity vision for 2100. It is available at <http://www.biodiversitybc.org/EN/main/24.html> [Accessed 18 May 2011]

maps was published in 2009, and a report on traditional knowledge, stewardship, and sustainability of coastal First Nations was published in 2010. Links to all the component reports are publicly available at: <http://www.biodiversitybc.org/EN/main/26.html#component>.

Box 10: Mexican State Biodiversity Studies as an Entry Point to a Broader Biodiversity Policy

The preparation of State Biodiversity Studies, and subsequent development and adoption of Biodiversity Strategies, represents part of a long-term public policy to promote the conservation and sustainable use of biodiversity as a fundamental part of the economic and social development of Mexico's states. By 2011, there were 16 States developing Biodiversity Studies. Three States have completed both their Studies and Biodiversity Strategies. The resulting Strategies are seen to be an important instrument for implementing the National Biodiversity Strategy. Furthermore, the process provides opportunities to (i) build capacity; (ii) establish biodiversity information systems; (iii) consolidate protected area systems; (iv) harmonize conservation initiatives; (v) develop environmental education programmes; (vi) and bolster implementation of biodiversity-related laws – all at the State level.³⁶

States receive considerable guidance and support from the national level through the National Commission for the Knowledge and Use of Biodiversity (CONABIO). This centralized support system facilitates the transfer of scientific, technical, and policy information generated at the national level to planners in the States. CONABIO has led numerous workshops and training events that have brought these planners and other actors together from different States in order to exchange information and experiences. It has also developed a guide³⁷ for developing State Studies, indicating the type of information that should be analyzed (including ecological, socio-economic, fiscal, policy, and spatial information) and providing suggestions for where relevant data can be found. The guide also offers suggestions for content and format, examples of maps and graphs that can be used, and definitions of ecological and management terminology.

Spatial Analysis

It is helpful to include a spatial analysis component which can identify biodiversity resources, threatened habitats, and priority conservation areas, and that can help with future land-use and conservation planning as well as zoning. In Japan, the Shiga Prefecture mapped ecologically important areas and networks as part of its 2009 BSAP. The maps analyze the status of conservation activities as well as current challenges. Increasingly, biodiversity atlases are published as part of a BSAP process, as was done in Sao Paulo and several Canadian Provinces³⁸, to name a few examples.

In the case of British Columbia (Box 9), the atlas was developed as a companion to the scientific biodiversity assessment and as a valuable management tool. This kind of valuable output underscores the importance of building partnerships and synergies with groups and institutions that have technical capacities, who may already be involved with biodiversity assessments and mapping, and who can bring this value-added component to the SBSAP process.

Box 11: Walvis Bay City Biodiversity Report, Namibia

³⁶ Information on the development of State Biodiversity Studies and Strategies, including the status of initiatives in each of the States, is available at the CONABIO website through its Biodiversity Portal: <http://www.biodiversidad.gob.mx/region/EEB/ENBM.html>.

³⁷ CONABIO. 2011. *Estudio sobre Biodiversidad de los Estados: Términos de Referencia*. Mexico City: CONABIO. [Accessed 18 May 2011]

³⁸ For instance, see British Columbia's Biodiversity Atlas at: <http://www.biodiversitybc.org/EN/main/where/133.html> and Quebec's Biodiversity Atlas at: <http://www.mddep.gouv.qc.ca/biodiversite/atlas-en.htm> [Accessed 3 May 2011]

Walvis Bay, Namibia, as one of the cities participating in the Local Action for Biodiversity (LAB) initiative under ICLEI, produced a biodiversity report in 2008³⁹. The city plans to use the report to further develop a local BSAP. They view both the report and the subsequent BSAP as providing a contribution Namibia's sustainable development Vision for 2030 as well as its Millennium Development goals.

The report provides information on the area's ecology, highlighting significant areas such as the Walvis Bay Ramsar site, the Kuiseb Delta, the Dune Belt Area, and the Walvis Bay coastline. Each area is divided into a number of zones, and for each the report outlines the status of biodiversity, endangered and endemic species, threats to biodiversity, and links to human well-being and socio-economic activities. Additionally, information is provided on the status of current conservation and/or land management policies, programmes, and plans. This includes action plans for certain areas, by-laws, land-use regulations, guidelines related to impact assessment and habitat restoration, policies related to environmental data sharing, and strategic environmental assessment for coastlines, among others.

In Namibia, the Local Authorities Act delegates the management of natural resources to municipal authorities. The report outlines relevant national policies and legislation, as well as international conventions to which Namibia is a signatory, and illustrates the roles and responsibilities of the local authority towards this policy framework. The report also discusses environmental governance issues, providing information on local administration, key stakeholders that are involved in environmental management, which areas are under municipal control, and which are administered by the national Ministry of Environment and Tourism.

As a step towards the development of a BSAP, the Walvis Bay Biodiversity Report offers a Vision, Mission, and list of objectives for a biodiversity management programme.

Information Sources

It is common to view the lack of locally specific biodiversity information as a major obstacle in biodiversity planning. Therefore, during the assessment stage it is important to identify any knowledge and information gaps. Filling these gaps can be prescribed as a priority action or target in the finalized SBSAP. However, it is equally important to realize that there are many sources of available information that could be very useful, such as:

- Government departments (including those dealing with sectors other than the environment);
- Non-governmental organizations (both environmental NGOs and others working on development issues more broadly);
- Local and indigenous communities with their extensive traditional ecological knowledge;
- Universities and international research institutions working in the country (such as CGIAR Centres);
- UN agencies working in the country;
- Regional organizations and their Secretariats; and
- International Environmental NGOs' working locally.

By the end of this step, SBSAP planners should aim to have:

- A reliable and up-to-date understanding of the status and trends of biodiversity, spatial components, threats to biodiversity, and the origin of these threats;
- A clear understanding of the importance of biodiversity in the area;
- A firm understanding of the existing national and sub-national, legal, and administrative

³⁹ Currently, approximately 20 cities participating in the LAB initiative have produced Biodiversity Reports. These are available at: <http://www.iclei.org/index.php?id=10471> Walvis Bay Council and ICLEI Africa Secretariat. 2008. *Walvis Bay Biodiversity Report*. Edited by. D. Uushona and O. Makuti. Walvis Bay. [Accessed 28 April 2011]

frameworks as well as existing institutional and human capacities;

- A good understanding of the Strategic Plan for Biodiversity and of the Aichi Targets adopted at COP 10 in Nagoya, Japan in 2010; and
- A list of gaps, opportunities, and needs to be addressed in the up-coming SBSAP.

2.3. Developing a Biodiversity Strategy

Emerging out of the biodiversity assessment, the biodiversity strategy addresses where the State, Province, local area, or city wants to go and which route it will take to get there.

The Strategy can be comprised of a number of elements, such as a vision, statement of principles, clearly identified priorities, goals and/or objectives, and a set of targets to help guide implementation. It is important to ensure that elements included in a strategy are aligned with each other and developed iteratively. There is no one “correct” template for a Biodiversity Strategy. The following section elaborates some elements that are commonly included, using examples from a number of sub-national biodiversity strategies.

Vision

The vision is the foundation for long-term planning and action. It serves to inspire collaboration and action in an ambitious way, offering a statement conveying the desired state that we would like future generations to inherit. It is helpful to communicate the links between biodiversity and human well-being within this vision. Box 12 provides examples of vision statements from various SBSAPS.

Box 12: Examples of Vision Statements in SBSAPs

The vision for Cajamarca Regional Biodiversity Strategy in Peru⁴⁰ is: *In 2021, the population of the Cajamarca region has improved its quality of life through the sustainable management of biodiversity.* As a way to implement this vision, Cajamarca has set out 4 strategic objectives and 16 corresponding anticipated results.

The Scotland Biodiversity Strategy⁴¹ has an overall 25-year vision: *Its 2030: Scotland is recognized as a world leader in biodiversity conservation. Everyone is involved; everyone benefits. The nation is enriched.* Subsequently in the strategy’s Agenda for Action, 5 “strategic objectives” are elaborated along the same 25-year outlook.

In Japan, the Nagoya City BSAP also has a 100-year long-term vision as well as a 2050 vision linked to 4 strategies. These 2 visions were developed through a participatory process involving the citizens of Nagoya.

Statement of Principles

The principles are the values and beliefs underlying the SBSAP. Often principles include the importance of biodiversity, its benefits to the human well-being, the role it plays in the economy and the development of the area, the importance of education and outreach, and the importance of social inclusion and community participation.

40 Gobierno Regional de Cajamarca. 2009. *Estrategia Regional de Biodiversidad de Cajamarca al 2021*. Cajamarca.

41 Scottish Executive. 2004. *Scotland’s Biodiversity: it is in Your Hands*. Edinburgh. Available at: <http://www.scotland.gov.uk/Resource/Doc/25954/0014583.pdf>.

Box 13: Principles of the Canadian Northwest Territories Biodiversity Strategy

5 principles guided the Northwest Territories (NWT) Biodiversity Team during the analysis and development of the Biodiversity Action Plan⁴². These were based on the Canadian Biodiversity Strategy, but revised and adapted to the NWT context:

- *ecosystem-based approach* to resource management recognizing the interconnectedness between humans and healthy ecosystems;
- *social involvement and cultural best practices*, encouraging all NWT residents to participate in decisions biodiversity and recognizing the social and cultural intrinsic values of biodiversity;
- *cooperation and collaborative approach*;
- *best information approach*, where the best knowledge available is used in conservation and sustainable use and where the innovations and practices of traditional and local communities are respected with the support of these communities; and
- *fair legislation and economic incentives approach*, recognizing that these are effective conservation and sustainable-use tools.

Priorities

The priorities are the most pressing issues to be addressed in the SBSAP. It is important to keep these focused and realistic in order to concentrate efforts and resources and ensure successes during implementation.

Box 14: Priorities in Brittany's Schéma Régional

The biodiversity assessment undertaken by the Bretagne region of France identified a number of weaknesses related to the state of biodiversity and its conservation. Based on this analysis, Bretagne developed a framework⁴³ oriented around 4 priority issues:

- Increasing knowledge of natural heritage and ecosystems
- Conservation
- Involvement of public policy, social and economic actors, and the public, and
- Networking and interlinkages of stakeholders and of data.

Each priority issue is deconstructed and analyzed in order to identify a number of specific needs that should be addressed.

Building on its analysis of priorities and needs in Bretagne, the Schéma Régional outlines 15 operational objectives. Each operational objective is further deconstructed in order to identify selected priorities, specific weaknesses, and relevant resources (i.e. data sources, studies, initiatives, organizations, policies, etc.). In addition, a number of actions are proposed under each operational objective

Goals, Objectives, and Targets

The goals and/or objectives provide strategic direction. It is useful to look at goal congruency, and how the goals are compatible with each other and combine to form a unified strategy. Sometimes, one or more overarching goal(s) are identified and followed by a number of specific goals. This can provide a framework for an Action Plan or equivalent. It can also be helpful to divide goals and/or objectives into the short, medium, and long-term. This can help guide the

42 NWT Biodiversity Team. 2006. *Northwest Territories Biodiversity Action Plan – Report Two: Gap and Overlap Analysis and Recommendations for Future Actions*. Yellowknife: Department of Environment and Natural Resources, Government of the Northwest Territories.

43 Conseil Régional de Bretagne. 2006. *Schéma Régional du Patrimoine Naturel et de la Biodiversité en Bretagne*. Rennes: Conseil Régional de Bretagne. Available at: <http://www.bretagne-environnement.org/Patrimoine-naturel> [Accessed 14 May 2011]

sequencing of activities, with those responsible for the implementation of the SBSAP starting with the short-term goals and advancing through the medium and long-term goals respectively.

For example, in Peru, the Regional Biodiversity Strategy for Cajamarca has 4 overarching goals, each divided into sub-categories focusing on specific issues. These sub-categories, in turn, are linked to 16 expected results for the year 2021 with corresponding targets. In this way, the Cajamarca Regional Strategy integrates the notion of time-bound targets directly to each objective.

The SBSAP's targets play an essential role in both the Strategy and Action Plan. Targets must be aligned with the Strategy's goals and/or objectives. Additionally, targets should be developed iteratively with corresponding indicators (see section 5 of this Module). Strategic planning is concerned primarily with **“what, where, when, who, why, and how.”** For example: (i) *what* needs to be accomplished, (ii) *where* will it be done, (iii) *when* should it be done, (iv) *who* will be responsible (i.e. taking a leading role) and who will be involved in the process, (v) *why* is this initiative being undertaken, and (vi) *how* will it be successfully achieved? The first three can be combined to develop a target for the strategy.

Targets should be SMART. In other words, they should be:

- Strategic and specific;
- Measurable and preferably quantifiable so that progress can be assessed;
- Ambitious, going beyond “business as usual;”
- Realistic; and
- Time bound.

Parties to the Convention on Biological Diversity have been urged to develop national and regional targets, using the Strategic Plan for Biodiversity 2011 – 2020, its 5 Strategic Goals, and its Aichi Biodiversity Targets as a flexible framework, and to report on progress at the eleventh meeting of the Conference of the Parties⁴⁴. Parties also have been urged to establish sub-national targets, as appropriate, to support the implementation of NBSAPs⁴⁵. Module 4 in the NBSAP training package deals exclusively with setting national biodiversity targets within the framework of the Aichi Biodiversity Targets, and is therefore helpful for those preparing SBSAPs.

Box 15: Targets of the Chongqing City Biodiversity Strategy and Action Plan

This Municipal BSAP⁴⁶ includes 9 Biodiversity targets. Some are time bound for 2015, and others for 2020. Specific activities and institutional responsibilities related to these targets will be assigned to relevant sectors, districts and counties within this City-Prefecture. As part of the BSAP evaluation, performance reviews for heads of governments of these districts, counties and sectors will be conducted and will specifically evaluate how targets and associated activities have been implemented.

- By 2015, surveys of the status of biodiversity within the city will be completed and a system of biodiversity monitoring and evaluation will be established.
- By 2020, the management of protected areas will be standardized, with capacities of management bodies and personnel to be improved and a network of well-coordinated management bodies with separate responsibilities to be established.
- By 2020, endangered animal and plant species, particularly endemic species, will be effectively protected and restored, and various threats to three key ecological zones in the city will be reduced.

⁴⁴ See decision X/2 of the tenth meeting of the Conference of the Parties at:

<http://www.cbd.int/decision/cop/?id=12268>

⁴⁵ See decision IX/8 of the ninth meeting of the Conference of the Parties at:

<http://www.cbd.int/decision/cop/?id=11651>

⁴⁶ Chongqing City. 2010. *Chongqing City Biodiversity Strategy and Action Plan*.

- By 2015, a policy and legal system for biodiversity conservation and sustainable use will be established and implemented, with a mechanism to be established for payments for ecosystem services. Additionally, a policy and legal system will be established to regulate the development and commercialization of biological resources, provided that biodiversity conservation is ensured.
- By 2020, a system of biodiversity management will be established, with biodiversity to be mainstreamed into relevant government sector planning and government performance review.
- By 2020, a biosafety legal and policy system will be established and improved, and a system of monitoring and warning of invasive alien species (IAS) will be established for effective control of IAS.
- By 2015, genetic resources and associated traditional knowledge will be effectively protected and a system of benefit-sharing from their use will be established.
- By 2020, sustainable use of biodiversity will be ensured and relevant technologies will be promoted.
- By 2015, a system of communication and education for biodiversity will be established, with mechanisms for training and human resources development to be further improved and more platforms and mechanisms to be established for public participation.

Box 16: Time-bound targets of the New South Wales Biodiversity Strategy (2010 – 2015)

The Draft Strategy⁴⁷ has 5 targets that are linked to the major themes/priorities of the Strategy, its 11 objectives, and the associated proposed actions. The Targets also will be used for reporting purposes, with a number of success measures assigned to each target. The targets are:

- By 2015, state-scale priorities are incorporated into biodiversity and related planning processes including Catchment Action Plan updates and plans of management for reserves and other public lands;
- By 2015, standard site-assessment tools have been taken up by public and private conservation organizations in NSW;
- By 2015, recover and threat abatement efforts will reflect the priorities set out in the Priorities Action Statements under the Threatened Species Conservation Act and Fisheries Management Act;
- By 2015, regional land-use planning processes are informed by landscape-scale biodiversity assessment and contain provisions that contribute to the protection of biodiversity; and
- By 2015, there is a 25% increase in employment and participation of Aboriginal people in natural resource management, including biodiversity conservation.

By the end of this step, SBSAP planners should aim to have:

- A consensus among actors and partners on a clear and focused strategy, including agreement on the main priority issues and/or areas and species that the SBSAP will address;
- Focused goals and/or objectives; and
- A clear list of SMART targets (preferably working towards the 5 strategic objectives of the Strategic Plan for Biodiversity and towards national biodiversity targets) that provide a strategic framework for action.

2.4 Developing a Biodiversity Action Plan

The action plan guides the institutions and partnerships involved on *how* they are going to

⁴⁷ Draft New South Wales Biodiversity Strategy 2010-2015 available at: <http://www.environment.nsw.gov.au/biodiversity/nswbiostrategy.htm> [Accessed 10 April 2011]

achieve the strategy. Different elements of the strategy (such as the vision, principles, and priorities) need to be translated into specific sets of activities to be carried out within the implementation period of the SBSAP in order to meet its goals, objectives, and targets. Who is responsible for implementing the activities, the timelines, and earmarked funds should also be identified. The action plan is thus the vehicle for implementation. During its development, the following are important to consider:

- Identifying required actions to meet the goals, objectives, and targets established in the Strategy;
- Developing programming for the SBSAP implementation, including specifying coordination structures, the roles and responsibilities of different actors, and expected timelines;
- Identifying and securing the human, technical, and financial resources necessary to implement these actions. It is also helpful to estimate how much funding will be required for the different proposed activities under the Action Plan;
- Establishing indicators by which progress towards targets will be measured; and
- Developing monitoring and evaluation mechanisms.

Reflecting Mainstreaming in Biodiversity Action Plans

In the action plan, it is important to ensure mutual support between the SBSAP, and related sub-national and national policies and planning processes. This includes meaningful and operational linkages with, for example:

- Sub-national planning related to environmental management, land-use planning, rural development planning and programming, urban planning, departmental work plans, inter-departmental agreements, etc., and
- National planning processes such as the NBSAP or equivalent, biodiversity-related legislation, cross-sectoral strategies and plans (for instance related to sustainable development, Millennium Development Goals, poverty eradication, climate change, and health), State of Environment reporting, etc.

“Mainstreaming” refers to the integration of the conservation and sustainable use of biodiversity into existing and/or new sectoral and cross-sectoral structures, processes, plans, and systems. Article 6b of the Convention on Biological Diversity, numerous decisions of the Conference of the Parties, and most recently the Strategic Plan for Biodiversity (2011-2020) all provide strong mandates and guidance for mainstreaming biodiversity, including into sub-national planning processes. Mainstreaming is thus critical to the effective implementation of sub-national BSAPs, and should be reflected accordingly in their action plans. Ensuring that SBSAPs address mainstreaming at sub-national levels also supports associated national priorities and objectives articulated in a country’s NBSAP. Module 3 in the NBSAP training package focuses entirely on this issue, discussing tools and approaches to facilitate mainstreaming biodiversity concerns at sub-national, national, and regional levels and across sectors. Planners involved in developing SBSAPs will find Module 3 particularly useful.

Local Authorities have a range of instruments and tools that can be used to help integrate biodiversity concerns into planning. Some include:⁴⁸

- Legal, planning, and regulatory instruments
 - Zoning and land-use laws;

⁴⁸ This indicative list is adapted from ICLEI – Local Governments for Sustainability. 2010. Local Action for Biodiversity Guidebook: Biodiversity Management for Local Governments. Laros M.T. and F.E. Jones (Eds.). Cape Town: ICLEI.

- Municipal bylaws;
- Conservation easements and management agreements with local organizations or private landowners;
- Urban planning and urban design;
- Economic and financial incentives
 - Financial incentive measures including tax incentives, subsidies, and grants;
 - Market-based incentives, such as procurement policies, payments for ecosystem services;
 - Removal of perverse incentives;
 - Measures to discourage activities harmful to biodiversity, such as fines and penalties;
 - Environmental taxes or levies to raise funds for conservation activities;
 - Certification schemes
- Standards, codes of conduct, guidelines, and information on good practices; and
- Indicators

The relevance of these instruments, and how they can be used, will depend on local needs, challenges, and priorities, as well as specific political and administrative context and/or scale (i.e. State/Provincial, local, or municipal).

More broadly, there are a number of approaches that can be used to mainstream biodiversity considerations into sectoral and cross-sectoral planning and processes. These are discussed in detail in Module 3, and the following are particularly relevant for mainstreaming at the sub-national level:

- Ecosystem Services Approach;
- Ecosystem Approach;
- Environmental Impact Assessment and Strategic Environmental Assessment; and
- Integrated Coastal Zone Management

Programming, Actions, and Indicators

There is often a tendency to insert a long list of proposed projects into action plans. However, it is more strategic and effective to focus on a core group of actions that will be implemented and for which human, technical, and financial resources have already been identified/earmarked, or for which there is a clear plan for obtaining the necessary resources. Planners developing SBSAPs may find Module 6 useful. It explains how to develop a resource mobilization strategy for financing NBSAP implementation.

Box 17: Presenting Clear and Concise Actions in the *Schéma Régional for Bretagne, France*

The Schéma Régional presents a set of 24 actions in a clearly structured and concise format. For each action, there is a short list that recalls the associated priority issues and operational objectives that had been detailed in a previous section. Some key background information and a short description of the proposed action are provided. Additionally, a proposal for implementation is presented, including (i) any activities that have already taken place, (ii) proposed future activities, (iii) which actors are/will be involved, and (iv) the roles and responsibilities of different actors. The Regional Council’s position on the issue is outlined, and one or more indicators to monitor and evaluate implementation are listed. In most cases, this description of the action is limited to 1 page.

For example, Bretagne has more than 3,000 km of coastline, with 95% of the population living within 60 km of the ocean. The economy and development of the region is tied to marine resources. Therefore, under the Schéma Régional, Action 21 calls for the identification and establishment of new marine protected areas (MPAs) in order to protect particularly sensitive sites and threatened species, and to complete the existing network of MPAs. This action is also linked to a second proposed action focusing on integrated coastal zone management (Action 22), stressing that it was necessary to change current marine resource harvesting practices that are having a negative impact on marine biodiversity. This requires engaging the

fishing industry, local operators, and public authorities. Different types of MPAs are briefly described. In terms of establishing new MPAs, a regulatory framework is in place. Additionally, the Minister and the President of the Regional Council are jointly responsible for initiating the process. For this Action, the Regional Council commits to a policy of marine conservation as a component of a larger integrated coastal zone management Charter. Two indicators will be used to monitor progress: (i) the extent of area protected under MPAs, and (ii) the development of operating conditions and regulations.

It is helpful to have monitoring and evaluation measures and mechanisms built into the plan of action from the beginning so that these can be in place at the start of the implementation phase. Short and long-term actions should include information specifying how progress will be assessed. Indicators can be particularly useful in this regard. An indicator is a measure based on verifiable data and critical success factors that provides information about current conditions and any changes since the last measurement. Biodiversity indicators refer to measures of biodiversity (for example species populations and extent of ecosystems) as well as measures of actions for biodiversity conservation and sustainable use (such as the creation of protected areas, regulations for species harvesting, threats such as habitat loss, etc.).⁴⁹ These indicators are a central part of adaptive management. They can help track progress towards achieving targets, and measure the successes of implementing an SBSAP's policies and activities. Indicators also are tools for highlighting the relationship between biodiversity and human-wellbeing, and as such can be used to evaluate the effectiveness of mainstreaming efforts. Additionally, indicators are important communication tools and can be used to raise awareness, both within governments and the public.

Thus, a successful indicator is:⁵⁰

- Scientifically valid;
- Based on available data;
- Responsive to change;
- Easily understood by decision-makers and the public;
- Relevant to the user's needs; and
- Used.

It is recommended that indicators be developed in consultation with partners. These can be, for example, representatives of government departments, statistics, universities and research institutes, user groups, indigenous and local communities, and NGOs. Working in partnership brings together vital capacity, data, and technical expertise.

By the end of this step, SBSAP planners should aim to have:

- A Plan of Action that is strategic and provides a results-based framework;
- A list of concrete and achievable actions to meet the goals, objectives, and targets established in the Strategy;
- Secured human, technical, and financial resources necessary to implement these actions

⁴⁹ An excellent resource on biodiversity indicators is a report published by the Biodiversity Indicators Partnership in 2011. It provides information on types of indicators, guidance for developing, using, and communicating indicators, and developing monitoring and reporting systems. The report is: Biodiversity Indicators Partnership. 2011. *Guidance for National Biodiversity Indicator Development and Use*. Cambridge: BIP and UNEP World Conservation Monitoring Centre. It is available at: <http://www.bipnational.net/indicatorguidance> [Accessed 20 May 2011]

⁵⁰ Ibid.

and/or a strategy to obtain them;

- A strategy for communicating the content and key messages of the SBSAP; and
- Indicators to be used in monitoring and evaluation.

Peer Review and Adoption

Prior to finalizing the SBSAP, it is important to allow a period for peer review and public consultation. During the public consultation period, both printed copies and electronic copies should be made available, with an address provided where comments can be sent. SBSAP planners also may wish to hold public consultation workshops. This is especially helpful in remote areas with limited Internet access.

Since SBSAPs are often developed by a consortium of partners, it is important to have the finalized SBSAP officially endorsed by the sub-national government. This helps cement the SBSAP as instrument to guide planning and investment in biodiversity conservation and sustainable use, for both the public and private sectors. For instance, in Mexico, State Biodiversity Strategies will be submitted to State Congresses for formal adoption. This has already taken place in 3 States. In Peru, the Cajamarca regional government approved the Regional Biodiversity Strategy through an executive resolution.

2.5. Implementation

The implementation of biodiversity strategies and/or action plans is often most effective when delivered through a partnership approach. Partnerships take advantage of the wide-ranging expertise of stakeholders and partners, making the most of existing initiatives and resources. The establishment of an SBSAP “management team” (or equivalent) to coordinate implementation activities is also advantageous. This can help provide a comprehensive overview of how implementation is proceeding, identify any issues or challenges that arise, and coordinate targeted responses. The team can also harmonize a coordinated communication strategy for the SBSAP.

While communication, education, and public awareness are critical in implementing an SBSAP, it is important to stress that strategic communication is essential throughout all stages of the SBSAP process. For example, strategic communication is essential in engaging stakeholders, in consultation processes, and in ensuring transparency and equity in developing the Strategy and Action Plan. With regards to how communication can support implementation, there are 2 components to consider.

- The first is to develop and communicate key messages from the SBSAP to the public, other government departments, and sectors. This helps build awareness of the SBSAP and clarifies the roles and responsibilities of government, partners, and stakeholders. More broadly, the public is made aware of the important role it can play in implementing the SBSAP.
- The second is incorporate education and public awareness elements into the different activities outlined in the Action Plan. This can serve to increase public participation in biodiversity conservation, restoration, and monitoring. It can also provide information on priority species and habitats as well as linkages to national biodiversity conservation efforts and policy.

It is important to find ways to make the SBSAP accessible and easy for the public to understand. Some examples are provided in Box 18. Those developing SBSAPs may wish to consult Training Module 7 on developing a communication strategy for NBSAPs.

Box 18: Raising Awareness to Promote SBSAP Implementation

Joondalup, Western Australia

The city of Joondalup developed an Adopt a Coastline programme⁵¹ to raise biodiversity awareness and increase the participation of youth in conservation activities. Specifically, the programme teaches school children about coastal biodiversity and involves them in protecting and restoring endangered vegetation along dunes. The programme is funded by the city.

Cape Town, South Africa

The Environmental Resource Management Department published playing cards that feature 52 invasive species that threaten local biodiversity. The packs of cards are distributed by partner organizations and through the City's nature reserves. These cards are used as an environmental education tool to raise awareness locally and regionally.⁵²

South East England

The region has posted highlights of their regional Biodiversity Strategy on a website in order to communicate key messages to the public.⁵³ A "Who are You" section provides guidance and information to key stakeholder groups, such as businesses, local authorities, charcoal and wood fuel producers, mineral extractors, landowners, etc. For each stakeholder group, the website outlines why biodiversity matters, what benefits are derived from biodiversity, what the stakeholder group can do for biodiversity, and any relevant regulations. The website also provides easy access to information on the Strategy's main elements, including targets, maps, lists of organizations and their responsibilities, state of biodiversity and species management reports, relevant legislation, and links to the region's Local Biodiversity Action Plans.

Cities and Prefectures in Japan

Nagoya City BSAP uses illustrations to communicate the 2050 and 100-year Visions. Illustrations and graphics are also used to demonstrate the need to change lifestyles in order to conserve biodiversity and use it more sustainably.

Nagareyama City BSAP includes maps of ecological networks. Not only are target areas identified on the maps, but also planned activities are illustrated. Photographs of target species and habitats, as well as related graphs, are included and linked to the ecological network maps. This approach helps the public visualize the implementation of the BSAP in spatial terms. Additionally, people can connect personally to the BSAP by seeing where they live and work in relation to areas and biodiversity of special concern.

Saitama Prefecture BSAP showcases good practices and technologies for biodiversity conservation that can be implemented by households and by businesses. The BSAP uses a series of drawings in order to communicate these examples and recommendations in easy to understand ways.

2.6. Monitoring and Evaluation

Monitoring is necessary to evaluate the implementation of a SBSAP and determine the effectiveness of management actions. It is through monitoring that those in charge of implementing the SBSAP can determine if the vision, priorities, goals/objectives, and targets are being achieved, and whether the planned actions and policies have been successful. Additionally, monitoring and evaluation can assess whether resources (human, time, financial) are being effectively used to achieve the desired results. Put simply, monitoring can help planners,

⁵¹ Information on the programme is available through the city's website at:

<http://www.joondalup.wa.gov.au/Explore/SchoolConnections/EducationalPrograms.aspx>. [Accessed 22 May 2011]

⁵² City of Cape Town and ICLEI Africa Secretariat. 2008. *City of Cape Town Biodiversity Report*. Cape Town: ICLEI. Available at: <http://www.iclei.org/index.php?id=10471>. [Accessed 22 May 2011]

⁵³ The website is available at: <http://strategy.sebiodiversity.org.uk/index.php> [Accessed 22 May 2011]

managers, and partners answer the questions “**Did we do what we said we would do, and was it effective?**” Finally, the results can contribute valuable local-level input into monitoring and assessment activities being conducted under the country’s NBSAP. It is important to keep in mind that monitoring and evaluation is preferably done by a range of stakeholders and partners or by independent bodies. This is to help assure accuracy, transparency, and balance of information.

Box 19: Ontario’s State of Biodiversity Reports

Monitoring also helps planners keep track of the status of biodiversity. One of the actions outlined in Ontario’s Biodiversity Strategy (Canada) is to evaluate and report on the state of province’s biodiversity every 5 years. The first report, published in 2010, is an assessment of 29 indicators and their current trends.⁵⁴ The purpose is to improve understanding of ecosystems and their function as well as the impacts of human activities on these systems. It was published as a companion to a progress report that assessed the implementation of the Ontario Biodiversity Strategy from 2005- 2010. Additionally, the reports were submitted to the Canadian government to be considered in national reporting to the CBD.

With regards to indicators that have been developed as part of the Action Plan, monitoring focuses on the state and trend of the indicator. The condition is based on an assessment of where the indicator is in relation to established thresholds. The trend indicates the change that has occurred since the last assessment.

Box 20: The Singapore Index on Cities’ Biodiversity

The Global Partnership on Cities and Biodiversity has developed a self-assessment tool known as the Singapore Index on Cities’ Biodiversity under the leadership of Singapore and the CBD Secretariat. The index comprises 23 indicators covering a range of physical, biological, and policy-related information used to calculate a score. This includes indicators on numbers of native species, changes in native species, natural connected areas, green areas, number of alien species in the city, ecosystem services (such as water climate regulation, and recreational), and an assessment of governance structure and activity (budget, alignment of local to national policies; existence of a local BSAP, number of projects, civil society participation, and outreach programs, institutional capacity).

The purpose is to help cities (i) monitor their level of biodiversity, (ii) understand the provision of ecosystem services within the city, and (iii) develop their capacity to manage these resources within the city. The resulting score can be used as a reference for future updates.

More details on the Index, including the users’ manual on how to conduct the assessment, can be found at: <http://www.cbd.int/authorities/gettinginvolved/cbi.shtml> [Accessed 20 April 2011]

Monitoring and evaluation can help provide valuable feedback into future revisions and amendments to SBSAPs. Since biodiversity planning is an adaptive and cyclical process, SBSAPs should be flexible and able to adjust to changing circumstances including, but not limited to:

- New legislation or major policy changes at the national as well as sub-national levels;
- Changes in land-use zoning;
- Newly identified conservation priorities that require management intervention;
- New threats, challenges, and/or deteriorating conditions that are not adequately addressed in the SBSAP; and
- Consultations with key stakeholders and partners such as indigenous and local communities.

⁵⁴ Ontario Biodiversity Council. 2010. *State of Ontario’s Biodiversity 2010: A Report of the Ontario Biodiversity Council*. Peterborough. This report, and the draft of the revised Ontario Biodiversity Strategy (2011) are available at: <http://www.ontariobiodiversitycouncil.ca/> [Accessed 20 May 2011]

2.7. Reporting

Parties to the CBD are required to present to the Conference of the Parties periodic reports on measures they have taken to implement the Convention and the effectiveness of these measures. Similar reporting from the sub-national level can greatly benefit national reporting, for instance by providing information on progress in delivering targets, on the success of partnerships, innovative conservation approaches and solutions that have been designed, etc. An important goal of reporting is to increase knowledge sharing and capacity both at sub-national and national levels.

Box 21: the UK Biodiversity Action Reporting System

Since 2005, the 4 component country Biodiversity Strategies and Action Plans, as well as Local Biodiversity Action Plans, report through the Biodiversity Action Reporting System (BARS)⁵⁵. The system allows those involved in action plan implementation and LBAP partnerships to enter information in a standardized structure. In this way, it can link data sets collected at both local and national scales. BARS is used to provide information on biodiversity status and trends, threats and recorded losses, national and local targets, and implementation of Action Plans. Planners as well as members of the public can search the databases for information on the status of activities, progress towards targets, and local organizations involved. Additionally, practitioners can find training and resource information. A new feature includes interactive biodiversity action mapping.

3. Conclusions and Additional Resources

This module has discussed how the development and implementation of an SBSAP is a cyclical and adaptive process. SBSAPs should be flexible in their response, both to their own internal dynamics and to the external context. Therefore in order to remain effective and strategic instruments for achieving concrete outcomes, SBSAPs will benefit from being periodically reviewed and updated.

The module also has highlighted different approaches and experiences from a range of geographical and jurisdictional scales. A common thread through the examples illustrated is how stakeholder engagement and a partnership approach can bring valuable input to the planning and implementation processes.

Finally, this module has shown various ways in which SBSAPs offer important input to national biodiversity planning. They are strategic planning instruments that can help implement a country's NBSAP at the sub-national level in concrete and locally prioritized ways. Readers are encouraged to visit the full set of CBD training modules at <http://www.cbd.int/nbsap/training/>.

Resources

Partners and Networks

Global Partnership on Cities and Biodiversity

Launched in 2008, the Global Partnership brings together UN agencies (Secretariat of the CBD, UNEP, UN-HABITAT, and UNESCO), international organizations (such as IUCN and ICLEI-

⁵⁵ The Biodiversity Action Reporting System is available at: <http://ukbars.defra.gov.uk/default.asp>.

Local Governments for Sustainability), academic networks, and local governments for the purpose of (i) meeting the 3 objectives of the CBD and (ii) improving the conservation and management of biodiversity through technical cooperation, capacity-building projects, and communication campaigns. The partnership conducts regular teleconferences and publishes a newsletter biannually. It is supported by two advisory bodies: one on cities and one on sub-national governments.

Local Action for Biodiversity (LAB)

A key component of the Global Partnership is Local Action for Biodiversity (LAB), a programme coordinated by the Cities Biodiversity Centre of ICLEI – Local Governments for Sustainability in partnership with IUCN. Starting in 2006 with 21 pioneer cities and local governments, LAB is an action-oriented programme providing technical assistance as well as networking, profiling, and advocacy opportunities to local and regional authorities. Through the network, local and municipal governments share experiences, challenges, and successes related to urban biodiversity management. LAB works to highlight the need for increased political support for biodiversity at local levels as well as the effective integration (mainstreaming) of biodiversity considerations into all aspects of local governance.

Participating cities sign the Durban Commitment and agree, among other activities, to regularly publish Biodiversity Reports and develop a long-term Local Biodiversity Strategies and Action Plan for their administrative area. Information on the Durban Commitment, as well as links to city case studies, fact sheets, and biodiversity reports can be found on the LAB website at: <http://www.iclei.org/index.php?id=6237> [accessed 20 April 2011]. Cities participating in the programme receive the comprehensive Local Action for Biodiversity Guidebook. LAB also runs two other projects that focus on strengthening capacities at local levels:

- The LAB Biodiversity and Climate Change Project
- The LAB Biodiversity and Communication, Education, and Public Awareness Project.

Bibliographical Resources

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Country Guidelines for Developing Sub-National BSAPs

Austria: Guidelines for Local Biodiversity Activities see www.vielfaltleben.at

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City Resources

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