

7.3 Improved legal protection of innovations associated with genetic resources, indigenous knowledge and skills

Justification

Indigenous knowledge is currently not properly covered by Intellectual Property Rights (IPR) legislation. There are some recent examples in the region of patenting based on Indigenous Knowledge made by companies and researchers. In order to ensure fair and equitable sharing of benefits resulting from the use of Indigenous Knowledge it is crucial that IPR legislation includes provisions for Indigenous Knowledge.

Also refer to 4.3, Legal Framework for biodiversity.

Actions to achieve targets

- 7.3.1 Develop a blueprint on protection of intellectual property rights including indigenous knowledge adopting OAU model law on IPR and Indigenous Knowledge (Ref 7.1.3 – Access legislation)
- 7.3.2 Develop a national policy framework on Indigenous Knowledge with special provision for traditional medicine research and use (Ref 10.5 – regional trade)
- 7.3.3 Make Access and Benefit Sharing Agreement guidelines and templates easily available and promote joint ventures which are beneficial to the country and individuals
- 7.3.4 Document trade data on biological resources and their products to establish trade flows
- 7.3.5 Adopt OAU model law on IPR and Indigenous knowledge

Outputs/Products

- 16 IPR legislation covering biodiversity and indigenous knowledge
- 17 Policy frame work on Indigenous knowledge and traditional medicine
- 18 ABS guidelines and agreement templates
- 19 Trade data on biological resources and related products
- 20 OAU model law adopted

OBJECTIVE 8

SAFE INDUSTRIAL AND TECHNOLOGICAL DEVELOPMENT BASED ON NATIONAL BIODIVERSITY RESOURCES FOR FUTURE PROSPERITY

WHY

Biotechnology and biosafety are relatively new concepts to Botswana and the world. Although many of the new technologies offer great potentials for humankind, there is still a lack of reliable scientific data on biotechnology issues such as the long-term effects, positive or negative, of introducing genetically modified organisms into natural systems. Botswana has so far applied the so called precautionary principle when dealing with biotechnology and biosafety. New technologies based on genetic resources however offer scope for economic diversification through research and development and participation in technical joint ventures.

The BSAP stock take report has identified a need for a structured approach to biotechnology and related biosafety issues, which takes into consideration the requirements of the CBD Cartagena protocol. Ministry of Agriculture is already in the process of developing a national biosafety framework and protocol, which links in with this strategy.

The BSAP stock take has also highlighted the need to raise public awareness about biotechnological opportunities and risks.

WHAT DOES NDP 9 SAY?

"The role of agricultural research is to develop appropriate technologies that reduce production constraints and increase productivity of crop and livestock enterprises while conserving the environment."

Paragraph 10.110 lists one of these strategies as "initiate biotechnology research that has potential for higher production and productivity and the safe use of biotechnology."

WHAT DOES NCS SAY

The NCS was published in 1990 and there has been a lot of progress and development in the field of biotechnology and biosafety since.

The NCS does not address biotechnology or biosafety issues, but talks about the need for economic diversification, including development of new markets for veldproducts.

Strategic targets overview

8.1	Increased capacity in dealing with biotechnology and biosafety
8.2	Safe use of biotechnologies ensured in Botswana
8.3	Raised biosafety and biotechnology awareness
8.4	Bio-prospecting and citizen-based innovation encouraged through creation of an enabling environment

Strategic targets details

8.1 Increased capacity in dealing with biotechnology and biosafety

Justification

Current biotechnology capacity is currently limited to a few individuals and institutions involved in plant and animal breeding, Artificial Insemination (AI), and vaccine production. It is very important to maintain high safety standards when dealing with biotechnology and genetically manipulated organisms. Biosafety issues are likely to increase as the new technologies develop, and national capacity to cope with future demands will be needed.

Actions to achieve targets

- 8.1.1 Develop institutional structures, ensuring regional harmonization, which will assure safe use of biotechnology in Botswana, including physical containment facilities, and institutionalising regulation approach, i.e. implementation of the Biosafety Framework
- 8.1.2 Assess government training needs for implementation of the National Biosafety Framework and develop strategy to address needs assessment results
- 8.1.3 Expand present information technology use in Government institutions to assure the regulatory personnel have access to the latest information on emerging biotechnology use and risks
- 8.1.4 Develop a biosafety clearing house with up to date biosafety information relevant to the Botswana situation and make it available on the World Wide Web
- 8.1.5 Estimate and develop capacity in biotechnology related fields, including legal issues, and implement training programme accordingly
- 8.1.6 Establish Biotechnology and Biosafety Expert Reference Group to provide technical backstopping for regulatory staff in Risk Analysis and Management activities, with membership reviewed biannually and adjusted as necessary
- 8.1.7 Carry out training programmes on biosafety for Customs officials, the police and other stakeholders

Outputs/Products

- Appropriate biosafety infrastructure
- Biosafety and biotechnology training programme
- Improved access to internet facilities regarding biosafety and biotechnology
- Biosafety Clearing House Mechanism
- Biotechnology related expertise available in country
- Biotechnology and biosafety expert reference group
- Biosafety awareness among law enforcement staff

8.2 Safe use of biotechnologies ensured in Botswana

Justification

Botswana has ratified and is committed to the *Cartagena Protocol on Biosafety to the CBD*. The levels of awareness of modern biotechnology and the safety of the use and handling of products of modern biotechnology are generally quite low. Ensuring safety while dealing with biotechnology, both established

technologies and modern biotechnology, is essential as accidents involving biotechnology could have serious consequences.

Biotechnology is a reality of the future and it is important to have procedures, regulations and suitable expertise in place for existing biotechnologies such as vaccine production and breeding, and for when requests to use modern biotechnological processes and products start appearing. Comprehensive legislation and guidelines are currently missing, but Government has already initiated the process of regulating the use of biotechnology through the development of a National Biosafety Framework, coordinated by the Ministry of Agriculture. Regional harmonization of legislation and standards, especially concerning import/export and movement are essential.

Actions to achieve targets

- 8.2.1 Finalise and implement biosafety framework
- 8.2.2 Develop and adopt the policy and legal instruments to support the biosafety framework
- 8.2.3 Develop and implement technical guidelines and procedures to control handling and the transboundary movement of genetically modified organisms (GMOs) and their products

Outputs/Products

- Biosafety Framework
- GMO guidelines and procedures for handling, use and movement
- Legal policy and framework covering biotechnology and biosafety

8.3 Raised biosafety and biotechnology awareness

Justification

The limited public awareness of biotechnology and related safety issues is currently not a major problem as exposure to biotechnology activities and products is currently fairly limited. With an expected increase in the use of biotechnologies in the future it is important that the awareness level is raised to prevent misuse and to encourage development of the opportunities provided by the new technologies.

Actions to achieve targets

- 8.3.1 Develop public and political awareness programmes on biosafety and biotechnology for various sectors
- 8.3.2 Integrate biosafety and biotechnology studies into curricula both at secondary and tertiary centres of learning
- 8.3.3 Assess national training needs in the field of biotechnology and biosafety and establish specialist capacity

Outputs/Products

- Biosafety information campaign
- Revised curricula at secondary and tertiary levels
- Biosafety and biotechnology training needs assessed

8.4 Bio prospecting and citizen based innovation encouraged through the creation of an enabling environment

Justification

Biotechnology, biosafety and bio-prospecting are closely related. Biotechnology based innovations based on new technologies are a potential source of income and livelihoods, which should be encouraged. While it is important to protect biodiversity, it is important not to limit *bona fide* research and development activities. Biotechnology and access and benefit sharing partnerships can provide opportunities, which will contribute to the future prosperity of the nation.

In addition to the technologies and inventions themselves, sound marketing skills and an enabling business environment are required for successful implementation (Ref Objective 4).

Actions to achieve aim

- 8.4.1 Improve and encourage national and local capacity to participate and benefit from bio trade by encouraging the formation of user groups and by providing communities with appropriate training
- 8.4.2 Ensure that new legal framework addressing genetic resources, while providing the necessary safety regulatory framework does not stifle *bona fide* research and bio prospecting enterprises unnecessarily. This can be achieved through extensive consultation with all concerned groups in connection with updating of the legal framework
- 8.4.3 Carry out feasibility studies and market surveys for biodiversity and biotechnology based products and production and link with investment opportunities
- 8.4.4 Promote value added research and sustainable trade in genetic resources through education campaigns and financial incentives
- 8.4.5 Ensure that the standards, regulatory processes and legal framework are compatible with regional and international biosafety regulations

Outputs/Products

- Biotrade user groups
- Biodiversity legislation consultation process
- Regionally and internationally compatible standards, policies and laws
- Bio-prospecting feasibility studies and market data
- Research reports addressing value added research and new products
- New Bio-prospecting companies and partnerships

OBJECTIVE 9

IMPROVED AVAILABILITY AND ACCESS TO BIODIVERSITY DATA AND INFORMATION, AND PROMOTION OF EXCHANGE OF INFORMATION

WHY

Information and data are essential components of responsible and informed decision making. The BSAP Stocktake has identified a gap in the availability of certain biodiversity data, the need to facilitate the access and use of existing biodiversity data and to generate new data (See Objective 2).

The proposed model for streamlining the access to national biodiversity data include a computerised biodiversity Clearing House Mechanism (CHM) and the appointment of national focal-point institutions responsible for the recording, safe-keeping and maintaining records and data related to specific groups of organisms. The information of key national biodiversity data should be made available from these respective focal institutions or through the CHM for those who have access to the Internet. The biodiversity Clearing House Mechanism is also a requirement under the CBD.

WHAT DOES NDP 9 SAY?

NDP9 does not directly address the issue of improved availability of biodiversity data, but access to key inventories of biodiversity, and information on trends etc. provide the basis planning of any sector related to or based on the use of natural resources.

However, Para 14.49 states the "Databases required for national communications will be shared and jointly maintained."

WHAT DOES NCS SAY

Para 2.1.2 emphasises the importance of access to reliable and up-to-date information about the quality of the country's natural resources as a basis for government decisions.

Strategic targets overview

9.1	National standards established and disseminated to relevant groups for biodiversity data collection, including metadata
9.2	Key inventories computerised and meta data established
9.3	Easy access to environmental, biodiversity, social and economic data
9.4	Botswana biodiversity research data safe-guarded

Strategic targets details

9.1 National standards established and disseminated to relevant groups for biodiversity data collection, including for metadata

Justification

Data standards for collecting of biodiversity data are currently not available. Set standards for data collection will contribute to the usefulness and compatibility of data sets and facilitate analysis of data. The aim is that all projects collecting biodiversity data follow the data standards and data forms, if feasible, so that collected data can be easily incorporated into national data sets. Data standards should be applied to a few key fields.

Actions to achieve targets to

- 9.1.1 Establish national data collection and meta-data standards, that are regionally compatible and comply with accepted international standards, and based on standards design and produce data collection forms (Ref 1.1.2)

Outputs/Products

- Set of biodiversity data standards
- Biodiversity data collecting forms for various types of data

9.2 Key inventories computerised and meta data established

Justification

Computerisation of key inventories and national datasets will improve the usefulness of these inventories and encourage the use of biodiversity data.

Records of metadata will facilitate data searches and identification of existing data, and thereby improve data efficiency.

Actions to achieve targets

- 9.2.1 Computerise selected national inventories to be included in Biodiversity CHM (Ref 9.3.2)
- 9.2.2 Establish institutional responsibilities for maintenance of data and databases
- 9.2.3 Establish metadata guidelines and disseminated information and data forms to data collectors
- 9.3.4 Metadata collected for all national biodiversity datasets and included in CHM (Ref 9.3.2 - CHM)

Outputs/Products

- Up to date digital national inventories
- Data management responsibilities established
- Metadata guidelines
- Searchable metadata part of biodiversity CHM services

9.3 Easy access to environmental, biodiversity, social and economic data

Justification

Easy access to data will encourage the use of this data, and thus contribute to incorporating biodiversity concerns in planning and decision-making. It will also contribute to avoid duplication of data collecting efforts. Improved data availability will be cost effective as it will lead to better use of the data and hopefully limit duplication of data collecting efforts. Grey literature is often difficult to locate and a database, linked with a reference library, of all types of biodiversity literature would help prevent the disappearance of this type of literature.

Clear mandates and responsibilities will increase efficiency in data collecting and maintenance of data records and will greatly improve access to biodiversity information.

Actions to achieve targets

- 9.3.1 Link biodiversity focal point institutions with the responsibility for hosting relevant data collections.
- 9.3.2 Establish biodiversity CHM in accordance with recommendations made by the CHM working group, and acquire the necessary hardware and software
- 9.3.3 Establish links between national data sets and the CHM through agreements with the data provider.
- 9.3.4 Establish a database of literature on biodiversity including "grey literature" and with keywords to facilitate searches in NCSA.
- 9.3.5 Publish national checklists for all biodiversity key groups, including Red Data Lists(Ref 2.4.1 - RDL)
- 9.3.6 Establish a biodiversity website .

Outputs

- Data provision agreements
- Databanks in focal institutions
- Up to date Biodiversity CHM
- Up do date biodiversity literature database in NCSA
- Updated and published national checklists
- Biodiversity website.

9.4 Botswana biodiversity research data safe-guarded

Justification

Loss of research data and results is a waste of resources. It should be ensured that research data and results emanating from biodiversity research activities within Botswana are available in country, for the data itself, and as a record of what research activities have taken place, in order to avoid duplication of efforts. The process of granting of research permits must be transparent, fair and efficient in order to stimulate beneficial research activities and to be cost effective. Records of past and present research activities will also help to guide future research initiatives.

Actions to achieve targets

- 9.4.1 Collect research data and reports for which permits have been issued (Ref 1.3.1 – Allocation of research permits)
- 9.4.2 Establish depository for biodiversity research data and reports
- 9.4.3 Make information on ongoing biodiversity research projects available on CHM

Outputs

- Research data available in country
- Updated list of past and present biodiversity research projects on CHM
- Depository for biodiversity research data

OBJECTIVE 10

RECOGNITION OF BOTSWANA'S AND THE SOUTHERN AFRICAN REGION'S ROLES WITH REGARDS TO BIODIVERSITY

WHY

National biodiversity resources form part of the global biodiversity heritage. For example, there are some endemic plant and reptiles in Botswana, which are not found anywhere else in the world, and if these species go extinct, the world has lost another species.

As a signatory to the CBD Botswana is committed to actively contribute to the conservation and sustainable use of its resources for the global good, and the CBD encourages regional and global collaboration.

Many of Botswana's ecosystems and biodiversity resources such as wildlife span and cross national borders. This has been recognized and addressed through various Transfrontier parks initiative. Regional collaboration, cooperation and consistency are also important when setting standards and developing legal policy obligations, to increase markets and for sharing resources and thus reduce costs. For example, microbiology and biochemistry research is highly specialised and requires sophisticated and expensive equipment and highly trained expertise. Rather than each country building up its on capacity, it would be economically beneficial to share these costs between countries in the region. Taxonomic research is another example of a field where regional collaboration and sharing of resources is useful. And to efficiently conserve biodiversity in the region it is important that access regulations (to wild medicinal plants for example) and management standards (including biosafety and management of IAS) are harmonised.

WHAT DOES NDP 9 SAY?

Paragraph 14.22 states that "Environmental issues often cut across international boundaries and their solution calls for global action. Multilateral Environmental Agreements (MEAs) are one way in which the international community deals with issues of environment.

Paragraph 14.49 adds that "national capacity to actively participate in Conference of Parties and international negotiations will be strengthened and public awareness about MEAs will be intensified during NDP 9."

WHAT DOES NCS SAY

Paragraph 2.6.4 states that "participation by Botswana in international agreements and conventions is one way which external forces, potentially harmful to the environment, can be countered. Through membership of SADC and as a signatory of both the CITES and the African Convention on the Conservation of Mature and Natural Resources, Botswana is better placed to meet its environmental challenges"

Strategic targets overview

Strategic targets details

10.1	Relevant biodiversity related agreements and protocols continually reviewed and signed if appropriate
10.2	Compliance with and efficient implementation of relevant biodiversity related conventions, agreements and treaties
10.3	Regional and transboundary collaborations enhanced (expertise, markets, resources) and active participation in regional biodiversity networking programmes
10.4	Establishment of Botswana at the forefront of biodiversity management and conservation in the region
10.5	Pro-active role in globalisation including bio trade and biotechnology

10.1 Active participation in international biodiversity meetings and relevant biodiversity related agreements and protocols continually reviewed and signed if appropriate

Justification

Botswana has not signed or ratified the African Eurasian Water bird Agreement, the Convention of the Conservation of Migratory Species of Wild Animals or the African Convention on the Conservation of Nature and Natural Resources. To create and maintain a regional and international front position when it comes to biodiversity it is important to ensure that relevant agreements have been signed and are being adhered to.

Active participation in international meetings requires well-prepared delegations. As legal issues are featuring stronger at international levels it is important to strengthen national delegations with environmental/Access and Benefit Sharing (ABS) legal expertise as well as relevant technical expertise. In this respect, funding is a key constraint, especially for participants representing Civil Society. However, with limited funding available participation at meetings need to be prioritised to ensure that key meetings are well attended.

Actions to achieve targets

- 10.1.1 GoB participating actively in key conventions, such as CBD, UNCCD and CITES
- 10.1.2 Signing of relevant regional and international agreements
- 10.1.3 Develop national consensus ahead of major meetings through thematic expert groups, and public consultation as appropriate
- 10.1.4 Establish funding mechanisms for technical expertise to attend important biodiversity meetings
- 10.1.5 Strengthen national human capacity in environmental law and encourage representation by environmental law experts in government delegations to international meetings

Outputs/Products

- Signed agreements
- Thematic expert groups
- Technical and legal expertise represented on Government delegations to international biodiversity related meetings, and broad-based national agenda established before meetings.

10.2 Compliance with and efficient implementation of relevant biodiversity related conventions, agreements and treaties

Justification

To maintain national integrity and credibility it is important to comply with international commitments and responsibilities. International obligations and commitments are not always widely known, outside of the focal institution and implementation is therefore sometimes limited and un-coordinated. Many biodiversity related agreements are crosscutting in nature and require input from several institutions and stakeholders which requires coordination.

Actions to achieve target

- 10.2.1 Design and implement a system for monitoring the implementation of international conventions and agreements related to biodiversity, including regular review of progress
- 10.2.2 Improve mechanisms for effective coordination of commitments and activities related to international agreements, including established lines of communication, to avoid duplication and finding common grounds to make implementation more effective
- 10.2.3 Periodically review all international biodiversity related commitments signed by GoB and assess implementation progress

Outputs/products

- Monitoring and evaluation system for all signed conventions and obligations relating to biodiversity
- Coordinating mechanisms for biodiversity related conventions and obligations
- Implementation status reports

10.3 Regional and transboundary collaborations enhanced (expertise, markets, resources, legislation, enforcement) and active participation in regional biodiversity networking programmes

Justification

Biodiversity resources are often transboundary in nature. Economic and resource efficiency and strength can be achieved through regional collaboration, e.g. biosystematics, environmental early warning, and marketing of veldproducts. Regional cooperation is also required for effective management and conservation of biodiversity resources, especially along borders and with regards to river basins. It is important that national legislation frameworks regarding the movement, import and export of genetic resources are compatible and that enforcement mechanisms are in place to prevent misuse.

Actions required to achieve target

- 10.3.1 Support, as appropriate, the development of bilateral or multilateral agreements and harmonization of policies and legislation within the SADC region on conservation and use of shared or migratory natural resources
- 10.3.2 Work towards the establishment of regional centres of excellence for micro organism and lesser-known organisms research and expertise (Ref 4.4.3 – National Centres of excellence)
- 10.3.3 Strengthen regional cooperation in the area of climate monitoring, drought detection/coping and natural disasters (Ref 5.1.2 – National Early Warning Programmes)
- 10.3.4 Strengthen regional cooperation in the area of natural resource management, including migratory species, river basin planning, transboundary parks
- 10.3.5 Strengthen regional cooperation in the area of biosafety, IAS and phytosanitary controls
- 10.3.6 Build and maintain partnerships of biodiversity conservation and environmental management within SADC to promote sharing of information, best practices and expertise in biodiversity management
- 10.3.7 Set up regional database of biodiversity expertise and training institutions
- 10.3.8 Adopt regional BSAP

Outputs/Products

- Regional agreements on biodiversity conservation and use of shared and migratory resources

- Regional centres of excellence for biodiversity research identified
- Regional agreements on climate monitoring and prevention, preparedness and reaction to natural disasters
- Enforcement of rules pertaining to the movement of genetic resources
- Guidelines for natural resource management, including regional best practices
- Regional training and biodiversity expertise database
- Regional BSAP commitments adopted and implemented

10.4 Establishment of Botswana at the forefront of biodiversity management and conservation in the region

Justification

Botswana should strive to become a regional leader in the conservation field, which means the country would be in a position to lead developments in the field of biodiversity, rather than having to catch up.

Actions to achieve target

- 10.4.1 Adopt the highest standards of biodiversity management
- 10.4.2 Provide direction and leadership in biodiversity management in the region

Outputs/products

- Highest biodiversity conservation and use standards in the region
- Active participation in regional biodiversity initiatives

10.5 Pro-active role in globalisation including bio trade and biotechnology

Justification

Globalisation has potential to dramatically affect Africa, and Botswana would benefit from playing a pro-active rather than reactive role. There is currently little biotechnology development taking place in Botswana and international bio trade is limited, but with relatively unexplored genetic resources and a large market for natural and traditional medicines in the region, there is potential for expansion.

Actions to achieve target

- 10.5.1 Encourage ABS partnerships through an enabling environment
- 10.5.2 Participate actively in international biotechnology and biotrade initiatives

Outputs/Products

- ABS joint ventures and partnerships in biotrade
- Signed international trade agreements which are beneficial to Botswana
- Environmental law expertise

OBJECTIVE 11

IMPLEMENTATION OF THIS BIODIVERSITY STRATEGY AND ACTION PLAN

WHY

It is important for the future health of Botswana's biodiversity that the Biodiversity and Strategy Plan is implemented together with the National Conservation Strategy without delay.

A critical prerequisite for successful implementation is to achieve political and high-level support and will to implement the strategy. This will help to drive the process. Public support and acceptance are also of key importance.

In addition, efficient coordination is a key requirement. It is proposed that a BSAP implementation office be established with the Ministry of Environment, Wildlife and Tourism, with the specific task of coordinating activities. The first step will be to distribute the BSAP to all key actors and to inform them of their responsibilities and establish communication links. The second step is regular monitoring of activities to ensure that activities are on track. Thirdly, implementation of the BSAP needs to be evaluated to determine if the goals have been achieved. Another important task for the unit would be to make sure that BSAP activities are covered by the NDP mid-term review and will be included in the next NDP planning process.

The BSAP coordinating office would also be responsible for the biodiversity Clearing House Mechanism and for maintaining links with the State of the Environment reporting.

For maximum effect and to facilitate district implementation, district BSAPs should be developed based on the national BSAP.

WHAT DOES NDP 9 SAY?

Paragraph 14.52 confirms "The completion of the development of a national Biodiversity Action Plan will be followed by its implementation."

"The implementation of the recommendations will require additional funding as well as human resources."

WHAT DOES NCS SAY

The NCS predates the BSAP and therefore does not address its implementation. However, it contains a commitment to implementation of the NCS and states in Paragraph 8.2.4 that "The Government is committed to ensuring the success of the NCS and specifically the achievement of its goals: *"sustainable development through and with the conservation of natural resources."* As the BSAP builds on the NCS this commitment is taken to extend to the BSAP.

Strategic targets overview

11.1	Political will and coherent government approach to implementation of BSAP established
11.2	Institutional resources for the coordination of the implementation of the BSAP made available and BSAP coordinating unit established
11.3	Components of BSAP streamlined into national development planning and budgeting processes
11.4	Sustainable financial provisions for implementation of the BSAP ensured

Strategic targets details

11.1 Political will and coherent government approach to implementation of BSAP established

Justification

Political will is essential for successful implementation of the BSAP. Political will to make sure the BSAP is implemented is closely linked to awareness of the value of biodiversity and the consequences, economic and biological, of inertia. Targeted awareness and Public Relations campaigns are tools to raise awareness among politicians and other decision-makers.

Actions to achieve target

- 11.1.1 Preparation of Government white paper on biodiversity based on BSAP
- 11.1.2 Prepare and hold high level (directors' level and up) BSAP seminar and technical level seminars for line ministries
- 11.1.3 Design a BSAP awareness raising campaign aimed at senior management and at political level to continue building support for implementation of BSAP
- 11.1.4 Publicize the BSAP through public relations (PR) campaign in local languages, in line with Vision 2016 and the Education Policy.

Outputs/Products

- Biodiversity White paper
- High level biodiversity seminar
- Technical level BSAP seminars
- Biodiversity information campaign outlines and materials

11.2 Institutional capacity for the coordination of the implementation of the BSAP enhanced

Justification

Inadequate national implementing capacity will weaken the impact of the BSAP and thus long term development. As biodiversity conservation and management are cross cutting in nature, it is essential to have strong coordination of the strategy for successful implementation. The NCSA has been given the specific mandate for implementing the National Conservation Strategy, under which the BSAP falls. However, to ensure implementation of the BSAP a specific unit with special responsibility for coordinating, implementing and monitoring progress of the BSAP is essential.

Actions to achieve target

- 11.2.1 Establish 5 year budget for BSAP implementing unit and secure funding
- 11.2.2 Make BSAP coordination and implementation office operational by providing offices and appointing 1 project manager + 1 assistant
- 11.2.3 Prepare ToRs and workplan for BSAP coordination unit and define roles and responsibilities for effective implementation

- 11.2.4 When the national BSAP unit is established, assign and allocate officers at district and sub-district levels for the implementation of the BSAP

Outputs/Products:

- 5 year budget
- BSAP funding proposals
- Committed funding
- Operational BSAP implementing unit
- ToR and workplan for BSAP implementing unit
- District and sub-district BSAP implementation officers assigned

11.3 Components of BSAP streamlined into national and district development planning and budgeting processes

Justification

Implementation of the BSAP will only happen if it is included in the national and district planning and budgeting processes. While policy and legal frameworks will need to be agreed at the national level, many of the BSAP activities will be implemented at district level. To encourage and facilitate implementation it is therefore important to break the BSAP down into manageable units, i.e. to sort activities according to key actors and inform these key actors or "drivers of the activities" of what is expected from their respective sectors/ministries or organisations. The responsibility for ensuring that BSAP activities are incorporated into national and district development plans (mid-term review for NDP 9 and preparations for NDP10) will lie with the respective ministry.

Actions to achieve target

- 11.3.1 BSAP coordinating unit to sort BSAP activities according to key ministries or key players, and national and district implementation levels
- 11.3.2 Distribute BSAP to all lead agencies and key partners and to inform them of their responsibilities and establish communication links
- 11.3.3 Monitor implementation of the national BSAP on a yearly basis, evaluate the results and make adjustments as necessary.
- 11.3.4 Update BSAP for the next NDP period, taking District BSAPs into consideration (Ref – 2.1 District BSAPs)

Outputs/Products

- BSAP and outline of responsibilities distributed to all ministries, departments and institutions involved in its implementation
- Annual monitoring reports and an evaluation report after 5 years
- District BSAP guidelines
- District BSAPs
- Mechanisms for integration of BSAP into national planning
- Updated BSAP for 2008-2013

11.4 Sustainable financial provisions for implementation of the BSAP and biodiversity programmes ensured

Justification

Financial resources are needed for the implementation of the BSAP. Each ministry will be responsible for ensuring that BSAP activities are included in the national and development planning processes to secure funding for implementation by government institutions. The BSAP should also be used to guide donor funding.

Actions to achieve target

- 11.4.1 Review existing financing mechanisms and prepare funding strategy for BSAP related project, including donor funding proposals
- 11.4.2 Strengthen existing biodiversity financing mechanisms if necessary, communicate national

biodiversity and environment priorities to external donors, and proactively seek funding for BSAP projects

11.4.3 Update and revise estimates of required financing

11.4.4 Develop guidelines for biodiversity joint ventures including the private sector and NGOs

Outputs/Products

- Funding strategy
- Detailed ministerial BSAP budgets
- Government biodiversity priorities and funding proposals submitted to donors
- Finance estimate
- Joint venture guidelines

5 THE ACTION PLAN

The Biodiversity Strategy Action Plan is the result of a fairly long process, starting with the BSAP Stock take report and followed by the BSAP Outline report, and subsequently the Biodiversity Strategy itself. The Action Plan has been compiled based on inputs from the national consultation process, the BSAP consultancy team the BSAP Steering Committee and the National Biodiversity Authority.

The Action Plan is a large scale planning tool providing indications of actors, timeframes and cost implications of the proposed activities. The Action Plan contains the following columns or fields:

Heading	Comment
<ul style="list-style-type: none"> ▪ Number of Strategic aim 	Reference number
<ul style="list-style-type: none"> ▪ Strategic aim 	Description of strategic aim. The expected outputs are listed in Chapter 4
<ul style="list-style-type: none"> ▪ Number of activity 	Reference number
<ul style="list-style-type: none"> ▪ Participating institutions 	<p>Institutions suggested in implementation of the action. Where appropriate, specific national NGOs have been identified, but in other cases the appropriate NGO will need to be identified. Relevant ministries, and wherever possible departments have been identified and in places; specific departments. In most cases the involvement of Civil Society, including NGOs, CBOs and the private sector, should be considered.</p> <p>Institutions marked in bold are suggested lead institution with key responsibility to drive the action. Funding for NGOs is today a major problem and the future of some may therefore be questionable, which is why the chosen lead institution is usually a government institution, as these are considered more stable.</p>
<ul style="list-style-type: none"> ▪ Time frame 	Timeframe for implementation of activity. In most cases limited to the end of 2008 to coincide with NDP9, but a few actions have been given a 10 year limit.
<ul style="list-style-type: none"> ▪ Cost 	Indicative cost estimates based on manpower and infrastructure requirements.
<ul style="list-style-type: none"> ▪ Sources of verification 	Sources to indicate if an activity has been successfully completed, to be used in evaluation of the BSAP
<ul style="list-style-type: none"> ▪ Priority 	Priority of action on a scale from 1-3 where 1 indicates highest priority. The prioritisation also reflects the sequence of activities to some extent.

Implementation of the BSAP is closely linked to National Development Plan 9 (NDP). Many of the activities are however currently not directly referred to or included in NDP 9, and it is therefore extremely important that the relevant ministries, championed by key actors and institutions together with the Ministry of the Environment in general work towards incorporating them during annual and mid term reviews of the National Development Plan.

The Strategy and Action Plan should also work as a guiding document for donor funds.

Abbreviations used in the Action Plan

ABS	Access and Benefit Sharing
ACG	Accountant General
AGC	Attorney General's Chambers
BAMP	Botswana Agricultural Marketing Board
BLB	BirdLife Botswana
BCA	Botswana College of Agriculture
BDF	Botswana Defence Force
BEDIA	Botswana Export Development and Investment Agency
BIDPA	Botswana Institute for Development Policy Analysis
BMC	Botswana Meat Commission
BNTSC	Botswana National Tree Seed Centre
BOBS	Botswana Bureau of Standards
BOCCIM	Botswana Confederation of Commerce Industry and Manpower
BOCOBONET	Botswana Community Based Organisation Network
BOCONGO	Botswana Council of Non Governmental Organisation
BOTEC	Botswana Technology Centre
BRIMP	Botswana Rangeland Inventory and Monitoring Project
CBD	Convention on Biological Diversity
CBO	Community Based Organisation
CEDA	Citizen Entrepreneur Development Agency
CHM	Clearing House Mechanism
CI	Conservation International
Com	Communities
CPR	Common Property Resources
CSO	Central Statistics Office
DA	District Administration
DAR	Department of Agricultural Research
DCE/BURS	Department of Customs and Excise/Botswana Unified Revenue Services.
DCO	District Commissioner's office
DDC	District Development Committee
DEA	Department of Environmental Affairs
DFRR	Department of Forestry and Range Resources
DIT	Department of Information and Technology
DLUPU	District Land Use Planning Unit
DMC	Disaster Management Committee
DMS	Department of Meteorological Services
DNLS	Department of National Library Services
DWNP - DoF	Division of Fisheries
DOL	Department of Lands
DoT	Department of Tourism
DRST	Department of Research and Science Technology
DSM	Department of Surveying and Mapping
DWMPC	Department of Waste Management and Pollution Control
DTRP	Department of Town and Regional Planning
DWA	Department of Water Affairs
DWNP	Department of Wildlife and National Parks
DYC	Department of Youth and Culture
FTRS	Food Technology and Research Services
GCB	Government Computer Bureau
GMO	Genetically Modified Organisms
GOB	Government of Botswana
HATAB	Hospitality and Tourism Association of Botswana
HOC	House of Chiefs
HOORC	Harry Oppenheimer Okavango Research Centre
AIS	Alien Invasive Species
IK	Indigenous Knowledge

IPA	Important Plant Areas
IPR	Intellectual Property Rights
IUCN	International Union for the Conservation of Nature
IVP	Indigenous Vegetation Project
KCS	Kalahari Conservation Society
KDT	Kuru Development Trust
KY	Kgetsi ya Tsie
LB	Landboard
MCST	Ministry of Communications, Science and Technology
MEWT	Ministry of Environment, Wildlife and Tourism
MFAIC	Ministry of Foreign Affairs and International Cooperation
MFDPr	Ministry of Finance and Developing Planning
MLG	Ministry of Local Government
MLH	Ministry of Lands and Housing
MLHA	Ministry of Labour and Home Affairs
MMEWr	Ministry of Mineral, Energy and Water Resources
MOA	Ministry of Agriculture
MOE	Ministry of Education
MOH	Ministry of Health
MSP	Ministry of the State President
MTI	Ministry of Trade and Industry
MWT	Ministry of Works and Transport
NACA	National AIDS Coordinating Agency
NARS	National Archives and Records Services
NCS	National Conservation Strategy
NDMO	National Disaster Management Office
NGO	Non Governmental Organisation
NHBG	National Herbarium and Botanical Gardens
NMAG	National Museum and Art Gallery
OAU	Organisation of African Union
ODMP	Okavango Delta Management Plan
OP	Office of the President
OPWT	Okavango Peoples Wildlife Trust
PC	Permaculture Botswana
PR	Public Relations
PS	Private Sector
RD	Red Data
RDC	Regional Development Commission
RDL	Red Data List
SADC	Southern African Development Community
SEA	Strategic Environmental Assessment
SOER	State Of the Environment Report
ST	Somarelang Tikologo
TA	Tribal Administration
TAC	Technical Advisory Committee
TC	Town Council
TL	Thusano Lefatsheng
UB	University of Botswana
UNCCD	United Nations Convention to Combat Desertification
VDC	Village Development Committee
VPRD	Veldproduct Research and Development
WAD	Women's Affairs Department
WDM	Water Demand Management

Objective 1: Better understanding of biodiversity and ecological processes

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
1.1	National inventories of components of biodiversity (species and ecosystems) established	1.1.1	Clarify and establish government institutional responsibilities and focal organisations (wildlife, flora, birds, fish, insects, fungi etc) for collection and maintenance of national biodiversity data (Ref Objective 9 – Access to data), and establish mechanisms to facilitate and encourage deposit of biodiversity data collected by other data collectors and researchers at these focal organisations (Ref 9.4.2).	MEWT (DEA)	MCST; NHBG; DWNP; DAR; UB; NCSA	12	12/08	NA	Organogram; Named institutions; TORs	1
		1.1.2	Establish national data collection standards through peer reviewed process and taking cognisance of international and regional standards, and disseminate to concerned institutions (Ref 9.1- data standards)	BOBS	BCA, BRST, DFRR, DMS; CSO; DAR; DWNP; NHBG; UB	12	12/08	240,000	Set of standards; Data forms	2
		1.1.3	Set up national survey programmes for under-surveyed biodiversity groups, with priority given to the rare and endangered species, and implement programme (Ref 1.2.1 – target taxa)	DEA	NHBG, DWNP; DAR; UB; BCA; DCO; CSO; MEWT, NGOs	24	12/08	324,000 pa	Checklists and distribution maps	3
		1.1.4	Include birds, fish, reptiles, amphibians and rare and endangered animal species in wildlife counts to monitor species levels and thus provide an indication of trends of biodiversity levels	MEWT (DWNP)	NHBG; UB; AHP; Birdlife, NGOs/CBOs	24	12/08	1,200,000	Published inventories	3
		1.1.5	Develop a detailed national vegetation map based on most effective technologies, including satellite information and make it easily available through the biodiversity CHM (Ref.9.3.2 - CHM)	DFRR	UB; CHM; DSM, MCST	24	12/08	1,200,000	Vegetation map	1
		1.1.6	With the vegetation map as a base, establish national criteria and guidelines for ecosystems classification and delineation through consultation and peer reviewed process	DFRR	MEWT; UB; NGOs; MLG (DDC, DLUPU)	2	06/08	120,000	Ecosystems criteria	2

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		1.1.7	Classify and map ecosystems at district level according to established national classification criteria and standards.	MEWT (DFRR, DWNP)	DDC; DLUPU; MOA; NGOs; UB	18	12/08	400,000	District ecosystems map	2
		1.1.8	Produce a national ecosystems map based on the district maps and make the map easily accessible through the biodiversity CHM (Ref 9.3.2- CHM)	MEWT (DFRR, DWNP)	DDC, DLUPU; DSM	3	06/08	60,000	National ecosystems map	3
1.2	National biodiversity reference collections established for key groups	1.2.1	Identify and prioritise target taxa and areas according to established criteria for vertebrates and plants.	DEA	MEWT; NHBG; DWNP; DAR; UB; BCA	1	06/08	20,000	Priority list for various groups of biodiversity	3
		1.2.2	Appoint/Establish national centres of excellence with responsibility for collecting, housing and curating national <i>ex situ</i> and <i>in situ</i> collections and reference collections (link with data depository in 1.1.1) and strengthen national ability to classify and name taxa of main groups (mammals, birds, fish and plants).	NMAG	NHBG, DWNP; DAR; UB; BCA	6	12/08	TBA	Assigned focal centres	2
		1.2.3	Undertake large scale/multiple site collections of identified target taxa to strengthen national reference collections	NMAG	NHBG, DWNP; DAR; UB; BCA; NGOs	24	12/08	744,000 pa	Collection statistics	3
		1.2.4	Actively curate collections to maintain quality	NMAG;	MEWT, DWNP, NHBG, UB, MOA	24	12/08	1,460,000 pa	Collections	1
1.3	A focused biodiversity research programme aimed at establishing biodiversity trends, understanding ecological processes and finding suitable biodiversity management solutions	1.3.1	Improve efficiency in allocating research permits for biological research and decentralise the monitoring of permits and collection of research results for better efficiency. Link permits with the requirement to use national data collection standards, (Ref 1.1.2 – data standards), to ensure compatible data and with legal and biosafety requirements for moving organisms (Ref 4.3.- legal framework)	MCST (DRST)	OOP, UB	24	12/08	60,000	Number of research permits granted	3
		1.3.2	Review and update the Research Act taking the recommendations from the BSAP into consideration.	MCST (DRST)	UB; MEWT, DAR, BCA	24	12/08	360,000	Updated Research Act	3
		1.3.3	Establish a biodiversity research fund	MCST	MEWT; MFDP; UB	24	12/08	960,000	Biodiversity Research Fund	2

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		1.3.4	Establish biodiversity priority research topics, including under-represented taxa, species with genetic centres in Botswana, understanding of ecological processes and ecosystems management including carrying capacities, to guide allocation of funds.	MEWT (DEA)	MCST; MFDP, UB; NGOs	6	12/08	180,000		2
		1.3.5	Encourage cooperation and partnership development between Government, NGOs, communities, the private sector and regional and international institutions in biodiversity research through funding for example	MCST	UB; MEWT; PS; NGOs; CBOs	24	12/08	240,000	Research fund statistics	3
		1.3.6	Move towards setting of indicators for biodiversity and ecosystem functioning taking cognisance of regional and international standards, and establish carrying capacity levels for livestock and larger wildlife.	MEWT (DEA)	DWNP, NHBG, UB, MOA; DFRR, AHP, DMS	18	06/08	45,000	List of standards Carrying capacities	1
		1.3.7	Design compatible national and district level monitoring systems of biodiversity and ecosystem function, and assign responsibility for monitoring, including user based monitoring where relevant	MEWT (DEA)	DWNP; NHBG; UB; MOA; NGOs; Communities; DFRR; DMS	12	12/08	120,000	Monitoring programme	1
		1.3.8	Develop training packages for monitoring by communities and other biodiversity users	MEWT (DEA)	NGOs; CBOs; DWNP; NHBG; UB;	24	12/08	420,000	Training package	2
		1.3.9	Analyse monitoring data at appropriate spatial and temporal scales, establish trends, and use to establish national conservation priorities.	MEWT (DEA)	DWNP; NHBG; UB; MOA; DFRR; CSO	24	12/08	140,000	Progress reports	2
		1.3.10	Disseminate status and trends to planners, managers and decision makers through progress reports and link with the State Of the Environment reporting	MEWT (DEA)	DWNP; NHBG; UB; MOA	24	12/08	20,000	Distribution lists	3
1.4	Better understanding of the effects of socio-economic issues on biodiversity, including demographic change and HIV/AIDS	1.4.1	Evaluate the impact of HIV/AIDS on future biodiversity management and conservation capacity	NACA (MOH)	CSO; MEWT; MOA; MEWT; MOA; MOH; NGOs, Private Sector Individual Researchers	24	12/08	720,000	Research report	2

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		1.4.2	Evaluate the impact of demographic change on future biodiversity management, preservation of traditional methods, varieties and indigenous knowledge.	MEWT	CSO; UB; NGOS, CBOs	24	12/08	240,000	Research report	3
		1.4.3	Analyse the economic and cultural importance of livestock and veldproducts to individual Batswana to guide national planning and provision of livelihood alternatives.	MDFP	MOA; MEWT, BIDPA	12	12/08	360,000	Government briefing notes including cost benefit analysis of livestock and veldproduct sectors;	1

Objective 2: Long-term conservation of Botswana's biological diversity, genetic resources and related knowledge

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
2.1	Conservation efforts prioritised at national, district and levels	2.1.1	Develop national and district criteria for conservation priority setting, including cost benefit analysis (Ref 4.6 – Economic valuing of ecosystems)	MEWT	CBOs, NGOs, DA, BIDPA	3	12/08	60,000	List of criteria	1
		2.1.2	Develop guidelines and framework for development of district level BSAPs and priority setting of activities, based on the national BSAP	MEWT	DA, DLUPU; DWNP; DTRP; MOA	2	12/08	120,000	Guidelines	1
		2.1.3	Prepare biodiversity and conservation strategies and action plans for each district	MEWT	DA; DWNP; DTRP; MOA; NGOs (local); CBOs, DFRR	10	12/08	1,200,000	10 District BSAPs	1
2.2	Comprehensive protected area network to conserve ecosystems and species	2.2.1	Identify potential gaps in protected area network through district BSAPs and national inventories	MEWT (DWNP)	NMAG; DFRR;	1	12/08	20,000	Map and list of habitats	2
		2.2.2	Taking district BSAPs and RDL species into consideration, amend protected area network, including national monuments, to make it comprehensive, addressing critical connections between national and regional protected area networks and all major biodiversity groups	MEWT; MLH	DWNP, DTRP; LBs, Councils, TA; NMAG; Communities	12	12/08	500,000	Protected area network	3
		2.2.3	Establish Important Plant Areas (IPAs) according to international standards and link these and Important Bird Areas into protected area network	NHBG (MLHA)	LB; NGOs (KCS, TL, VPRD); Traditional healers, DWNP, BLB	6	12/08	380,000	List of IPAs	2
2.3	Effective ecosystems management practices in place	2.3.1	Strengthen the mandate and efficiency of the CBNRM Technical Advisory Committees (TACs).	DA	Relevant district institutions	2	12/08	50,000	TACs	3
		2.3.2	Review current national and regional land management systems (including rangeland and fire management practices) and land uses in terms of effectiveness in biodiversity conservation, identifying weaknesses, strengths and best practices (Ref 10.3.6 – learning from regional experiences; 3.5 – Sustainable rangeland management; 3.3 – involving communities)	MEWT (DFRR)	DWNP, MOA; MTI, MMEWR; MLH; MLG, DFRR; NGOs (local + KCS, IUCN, KDT, BLB, OPWT), MWT; CBOs	12	12/08	740,000	Report with landuse systems prioritised for conservation	1

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)	
		2.3.3	Identify and fill potential gaps and strengthen existing institutions including the extension service to enhance ecosystem management capacity	MEWT	DWNP, MOA; MTI, MMEWA; MLH; MLG, DFRR; NGOs (local), MWT; Communities	12	12/08	100,000	Organogram; Number of staff trained in ecosystems management	2	
		2.3.4	Seek and secure funding for effective long-term ecosystems management (Ref 4.5 – financial mechanisms)	MEWT	DWNP; MFDP; NGOs; Donors; PS	12	12/08	240,000	Accounts	1	
		2.3.5	Encourage conservation measures in designated Wildlife Management Areas (WMA) and areas bordering the protected areas through incentives and education	MEWT	DWNP; DFRR; NGOs; Donors; PS, CBOs	24	12/08	200,000		2	
		2.3.6	Research and attempt to minimise areas of conservation and land-use conflict, and put research results into practice through incentives and policy framework.	MEWT	NGOs; UB, DFRR, DWNP, DLUPU	12	12/08	720,000		1	
2.4	Needs of species, in particular threatened and endemic species addressed	2.4.1	Establish conservation status and develop National Red Data Lists for all major animal and plant taxa in Botswana and develop mechanisms for biannual updating processes	MEWT (DEA)	NHBG; MOA; DFRR; NGOs; UB, IUCN	24	12/08	1,224,000 pa	RDLs	1	
		2.4.2	Develop and implement management and recovery plans for priority taxa, including RD species (Ref 5.2.1 – early warning)	Focal institutions TBA	MEWT		24	12/08	1,144,000	Recovery plans; RDL statistics; Ex situ and in situ collections	2
		2.4.3	Support and promote <i>in situ</i> and <i>ex situ</i> conservation activities for rare, threatened and endemic species (Ref 5.2.2 – conservation of RD species)	Focal institutions TBA			24	12/08	1,224,000 pa	Facilities	1
2.5	Effective management systems for economically important non-domesticated species in place	2.5.1	Undertake inventories of the key traded (medicinal, food and collectible) faunal and floral species, identify species of economic value and assess conservation status and level of protection required	ARB (MEWT)	Traditional healers; NHBG; AGC; DWNP; DCE	8	12/08	280,000	Collections; Legislation	1	
		2.5.2	Develop propagation and harvesting protocols for key animal and plant species with commercial value which are under potential threat from over-harvesting and encourage domestication and cultivation	NHBG (MLHA); MOA	MEWT; NGOs (PC; TL, VPRD, FAB); Com, Farmers' Association	12	12/08	3,700,000	List of cultivated species and varieties	2	

No	Str.	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)	
2.6	Conservation of agricultural biodiversity	2.6.1	Determine availability and distribution of agrobiodiversity in Botswana and identify farming systems which sustain high diversity as well as the human resource base needed to maintaining agrobiodiversity (Ref 2.5.2 – description of agrobiodiversity)	MOA	NGOs, BCA, UB	24	12/08	2,400,000	Survey report	1
		2.6.2	Based on the above, establish a national agro biodiversity database containing distribution of species, varieties and strains available in the country and conservation status and make provisions for regular updates	MOA	NGOs	24	12/08	1,920,000	Agrobiodiversity database	3
		2.6.3	Design and implement a collecting programme for long-term <i>ex situ</i> preservation of agro biodiversity.	MOA	NGOs; BCA	24	12/08	504,000 pa	Agrobiodiversity collections	2
		2.6.4	Continue characterisation, research potential and use (breeding, genes for biotechnology) focusing on the groups which have genetic centres in Botswana (Ref 8.4 Bio-prospecting)	MOA	BCA, NGOs, UB	12	12/08	1,920,000 pa	Described species and varieties	1
		2.6.5	Based on 2.6.1, develop models and approaches, which promote a living landscape, and <i>in situ</i> preservation of agro biodiversity at species and genotype levels. Subsequently, actively promote and support the adoption and implementation of biodiversity-friendly farming systems	MOA	MEWT, NGOs, Com	24	12/08	960,000	Agrobiodiversity management plan; MOA statistics	2
		2.6.6	Involve communities in <i>in situ</i> conservation of agro biodiversity and encourage the inclusion of indigenous knowledge systems into farming systems	MOA, MEWT	NGOs (PC); Communities; BAMB	24	12/08	1,440,000	MoA and market statistics	2
		2.6.7	Develop mechanisms for the protection of plant breeders' rights, including landraces, linked with IPR	MOA	MEWT, AGC	6	12/08	360,000	IPR	3
2.7	Development and implementation of methods for appropriate rehabilitation and restoration of degraded ecosystems	2.7.1	Develop easy to use guidelines on the principles of rehabilitation and restoration for various sectors (Ref 6.3.2 – promotion of indigenous plants)	MEWT	UB; MCST	6	12/08	1,800,000	Guidelines	2

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		2.7.2	Develop cost calculations for restoration and rehabilitation of destroyed habitats and include in EIA cost benefit analysis (Ref. 4.6 – economic value)	MEWT	MFDP, MLH, MMEWR	12	12/08	720,000	List of costs	2
		2.7.3	Intensify measures to rehabilitate degraded rangelands. District authorities to set targets.	MEWT/MOA	Com	24	12/08	4,000,000	BRIM data	1
		2.7.4	Introduce a system linking land-use rights with the responsibility for rehabilitation and restoration if appropriate and structures for enforcement (Ref. 7.2 – Linking access with responsibility). For example, develop biodiversity damage compensation and charge system to land uses with adverse biodiversity impacts (Biodiversity impacts internalised)	MEWT	MOA; MOLH; MLG; LBs; Com	24	12/08	240,000	Land use contracts	1
2.8	Indigenous knowledge recorded and conserved	2.8.1	Establish legal and financial principles and procedures for collecting and disseminating indigenous knowledge	MLHA	NMAG; DEA; NGOs; Com, Traditional healers; UB	24	12/08	TBA	National IKS records	1
		2.8.2	Establish responsibility for collection and storage of indigenous knowledge and when Intellectual Property Rights (IPR) legislation is in place, collect and record indigenous knowledge	MEWT; MLHA	NMAG; DEA; NGOs; Com, Traditional healers; UB	6	12/08	180,000	Guidelines for IKS	2
		2.8.3	Preserve local knowledge of medicinal plants and encourage the transfer of knowledge through, for example, school market gardens and medicinal plant displays in botanical gardens (Ref 6.5.2 – school market gardens; 6.6.7 – medicinal gardens)	MOA, MEWT	NGOs, NHBG; Com; MOE	24	12/08	530,000	National records of medicinal plants;	2

Objective 3: Sustainable utilisation of all components of biodiversity in Botswana through appropriate land and resource use practices and management

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
3.1	Biodiversity consideration and essential ecological processes adequately incorporated into national land use and resource planning processes	3.1.1	Institutionalise the operational guidelines of the ecosystem approach and the BSAP into resource management and sustainable land use strategies at all levels in institutions concerned with policy, planning and conservation and management of biological resources, through a) Adaptation of guidelines and planning manuals; b) Preparations of information materials c) Training of staff	MEWT	MFDP; MOA; MLG; MLH; MLHA; MMEWR; MTI; MWT, DA; BIDPA	12	12/08	240,000	No of trained staff; Planning manuals; Guidelines, DDPs and NDPs	2
		3.1.2	Integrate biodiversity concerns into Strategic Environmental Assessment (SEA) guidelines and carry out SEAs for major policies and programmes	MFDP	MEWT	12	12/08	240,000		1
		3.1.3	Include biodiversity consideration into national audits and accounts (Ref 5.7.1 – cost of pollution; 4.6 – environmental costs).	MEWT	DWNP; DLUPU; MOA	12	12/08	250,000	Protected area network	2
		3.1.4	Designate appropriate areas for biodiversity conservation, including wildlife corridors, making allowances for migration routes and other species requirements as appropriate and gazette (e.g. WMAs). (Ref. 2.3.5; 2.7)	MEWT	DWNP; DLUPU; MOA	12	12/08	300,000	Protected area network	2
3.2	Identification and promotion of biodiversity compatible land and resource uses, including tourism	3.2.1	Evaluate the impact of different land management policies on biodiversity conservation	MEWT	MOA; MLH; MLG; DTRP, Com; IVP	3	12/08	60,000	Rangeland and veld product policy and evaluation reports	1
		3.2.2	Develop land use best practices guidelines and consider creation of incentives for appropriate land-uses, taking regional CBNRM experiences into consideration (Ref 4.1.2 – Review of policies and incentives).	MEWT; MLH	MOA; MMEWR; MLG; MTI; NGOs (CI; IUCN, KCS, KDT, FAB, BLB, PC, TL, CPRD)	12	12/08	255,000	Guidelines	1
		3.2.3	Investigate tourism potential in support of biodiversity and landscape conservation and promote conservation partnerships where relevant.	DOT (MEWT)	MEWT; HATAB	12	12/08	1,220,000	Tourism statistics	3
		3.2.4	Promote integrated landscape planning, with priority given to around protected areas and urban areas	DTRP	TC, DWNP	6	12/08	120,000	Land use plans	2

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
3.3	Increased levels of community participation and use of indigenous knowledge systems in land use and sustainable management processes	3.3.1	Diversify (geographically and natural resource use) and strengthen support to CBNRM (Ref. 6.7.1 – role of communities and NGOs)	MEWT	MEWT; Parliament; DWNP; DTI; DFRR;	6	12/08	120,000	CBNRM policy approved; Number and location of non wildlife based CBNRM activities	2
		3.3.2	Re-establish effective Common Property Resources (CPR) regimes, including access to communal resources, and develop a plan for implementation of Community Based Strategies	MEWT	DWNP; MLG; NGOs (CI; IUCN, KCS, KDT, FAB,BLB, PC, TL, CPRD); DTI; DFRR;	6	12/08	120,000	CPR guidelines	1
		3.3.3	Integrate poverty alleviation measures, in accordance with the Millennium Poverty Reduction Target and Vision 2016, into biodiversity conservation policies and programmes	MFDP	RDC; DA	12	12/09	340,000	Anti poverty programme; Labour statistics	2
		3.3.4	Strengthen mechanisms to allow communities to engage effectively in policy dialogue, planning, design and management of natural resources and biodiversity in community areas, and thereby allow for inclusion of indigenous knowledge systems and traditional practices.	MLG	DLUPU, DDC; NGOS (all), CBOS, Communities; BOCOBONET	2	12/08	40,000	Consultation reports	1
		3.3.5	Strengthen the capacity of NGO and CBOs in sustainable biodiversity use and management through human resources development	MEWT	MOA; CBOs; NGOs (all)	5	12/08	1,050,000	Workshop reports	3
3.4	Sustainable use of fuelwood and forest resources	3.4.1	Update and approve the Forestry Policy and subsequently the Forestry Act	MEWT	DFRR; Parliament; AGC; FAB	24	12/08	720,000	Forestry Policy, Forestry Act	1
		3.4.2	Based on the updated Forestry Act establish enforcement mechanisms.	MEWT	DFRR; Police; BDF	24	12/08	600,000	DOF organogram; Forest Reserve Management Plans	2
		3.4.3	Update the biomass inventory and assess forestry biodiversity trends and patterns	MEWT	FAB; DFRR	6	12/08	120,000	Report	3
		3.4.4	Identify and introduce alternative energy sources through a) Inventory of available alternatives; b) evaluation of alternatives; c) financial incentives introduced for environmentally friendly energy sources; d) Information campaign	MMEWA; MEWT	MFDP; DFRR; NGOs (FAB; ST, IUCN); PS; BOTE C	24	12/08	720,000	Reports; Information materials; Alternative energy subsidies	1

Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
	3.4.5	Promote and establish network of fuel wood plantations and community woodlots using indigenous species in all 10 districts	DFRR (MEWT)	NGOs (FAB), CBO; VDC, VET, Farmers committees, Forest conservation committees, Soil conservation units	12	12/08	800,000	No of woodlots	1
	3.4.6	Develop Forest Reserve Management Plans			12	12/08			3
3.5 Rangeland/dryland biodiversity maintained through promotion of sustainable use of natural rangelands for economic growth and ecological balance	3.5.1	Survey rangeland biodiversity (ref Indigenous Vegetation Project and BRIMP) and continue rangeland monitoring, including bush encroachment, allocation and use of water points, stocking and grazing levels, donkey population, fire etc.	BRIMP (MOA); DFRR (MEWT)	MOA, MEWT; DFRR; LB	12	12/08	1,320,000	BRIMP reports	1
	3.5.2	Continue extension on rangeland management including conservation measures, stocking rates and alternative uses such as game farming to encourage sustainable use	MOA	Farmers committee, DLUPU, Conservation Committees, Cooperatives Societies	24	12/08	1,100,000	Stocking and rangeland statistics; BRIMP reports	1
	3.5.3	Review the Tribal Grazing Land Policy and other legal and policy instruments related to grazing rights and the use of communal land	MFDP	MOA;MLH; MLG; MEWT	3	12/08	60,000	TGLP	1
	3.5.4	Complete gazetting of Wildlife Management Areas (WMAs), grazing areas and mixed farming areas, and develop and implement Management plans.	MLH	MEWT; MLG; Land boards; District offices; Com	6	12/08	120,000	Gazetted land	1
	3.5.5	Introduce and implement appropriate water charges - Ref 5.5 - Water	MMEWR; MEWT	MEWT; MOH	12	12/08	240,000	Water charges	1
	3.5.6	Provide incentives to reduce overgrazing and to restore rangeland degradation, as per the recommendations in the National Conservation Strategy and recommendations by the Indigenous Vegetation Project	MOA	MEWT; Com; NGOs; MLH	24	12/08	500,000	Official policies and subsidies	1

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		3.5.7	Encourage and promote schemes to clear and utilise bush encroachment, and link with the search for alternative energy sources (3.4.4 – inventory of alternative fuel sources) and community participation in conservation (Ref. 3.3).							
3.6	Sustainable use of wetlands ecosystems, biodiversity and ecological processes	3.6.1	Approve wetland policy and start implementation	Parliament, MEWT	UB; Com; NGOs	2	12/07	40,000	Wetland	1
		3.6.2	Implement wetland management strategy making provisions for increased community participation in wetlands management and planning, and give special consideration to issues of access	HOORC (MOE), MEWT	MLH, DLUPU; DTRP; DoF; DWA; regional institutions, Communities	24	12/08	1,500,000	Wetland Management Strategy	2
		3.6.3	Continue implementation of the Ramsar Convention on Wetlands and wetland management plans	MEWT	DoF; DWA; DWNP; NHBG; DOT; DMS; NGOs (CI, IUCN, KCS; OPWT); Communities; BDF; Police; BURS; AGC; DLUPU	24	12/08	100,000	Ramsar reports	3
		3.6.4	Enhance national capacity for wetlands management, protection regulation and enforcement and integrate the principles of ecological water needs in planning and implementation	MEWT	DoF; DWA; DWNP; NHBG; DOT; DMS; NGOs (CI, IUCN, KCS; OPWT); Communities; BDF; Police; BURS; AGC; DLUPU	24	12/08	1,200,000	Workshop and training courses; Legislation	2
		3.6.5	Strengthen regional river basin management collaboration	MFAIC;	MEWT; SADC; DWA; NGOs	24	12/08	240,000	Regional agreements	2
3.7	Sustainable use of wildlife resources and wild plants	3.7.1	Develop a comprehensive strategy and programme for sustainable use of wildlife resources including setting of quotas, monitoring of resources (Ref. 1.3.7 and 1.3.8 – National and community monitoring of resources) and strengthening of enforcement capacity at the national level	DWNP (MEWT)	DFRR; NGOs (BLB, CI, IUCN, KCS, KDT, OPWT, PC, TL, VPRD), communities; BDF; BURS, Police	24	12/07	4,400,000		2

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		3.7.2	Assess current intervention strategies for community livelihood loss due to wildlife conflict and promote farming systems which minimise wildlife conflict through the extension services, and strengthen the effectiveness of these programmes in consultation with affected communities (Ref 2.3.6 – Reduction of land-use conflicts; 2.7.1 and 3.8.2 – farming systems).	DWNP (MEWT)	MEWT; CBNRM; CBO; Communities	24	12/07	240,000	Compensation regulations; Compensation paid	1
		3.7.3	Develop community capacity to utilize natural resources in income generating activities and to secure access for sustainable use strategies (Ref 3.3.5 - Capacity; Objective 7- Access and benefits)	NGOs (CI, KCS, KDT, OPWT, PC, TL, VPRD, ST)	CBOs, com; CEDA; DWNP; MTI; MLG	24	12/08	600,000	Number of people trained; ABS legislation	2
		3.7.4	Provide communities and individual with livelihoods options through assisting with assessment of potential markets for the sale of natural resource products and facilitated access through credit and enterprise schemes, while linking with quality control and resource allocation permits as appropriate (Ref 6.6.2 – Women's credit schemes; 3.9.2 - Veldproducts)	MFDP	MEWT; CEDA; MOA; NGOs; Com	24	12/08	1,000,000	CBNRM reports	2
		3.7.5	Develop code of conduct for traditional healers and users of medicinal species (7.3.2 - IKS)	MEWT	Traditional healers; DFRR; NHBG; MOH; NGOs (IUCN, VPRD, TL)	2	12/08	40,000	Code of conduct	2
3.8	Sustainable use of agricultural biodiversity	3.8.1	Implement programme and strategy for maintenance of agro-biodiversity (breeds and strains) and identify and promote best practices (Ref 2.7 – Use of indigenous species in habitat restoration)	MOA	NGOs (PC); Communities	24	12/08	3,600,000	Strategy; best practices guidelines	1
		3.8.2	Create awareness about the value of genetic diversity and locally adapted breeds and promote indigenous farming systems which encourage high diversity (Ref. 2.6 – Conservation of agro-biodiversity)	MoA	NGOs (CI, IUCN, KCS, KDT, OPWT, PC, TL, VPRD, ST); Farmers Associations; Communities; MEWT	24	12/08	3,600,000	Agricultural statistics	2
		3.8.3	Improve availability of traditional and improved seed varieties and breeding materials to smallholder and other farmers.	DAR (MOA)	BAMB; PS; NGOs (PC); BCA	24	12/08	2,000,000	Agricultural statistics	2

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		3.8.4	Review Government seed distribution/drought relief and encourage distribution of more traditional varieties.	MOA.	NGOs; PC; Communities	2	12/08	40,000	Seed distribution statistics	3
		3.8.5	Encourage the uses of traditional varieties and strains/breeds of livestock and crops for special uses for the development and support of niche markets that will in turn encourage individuals, communities and institutions take interest in availability of the propagation materials.	MOA	BCA; Communities; NGOs (PC); Farmers Associations; BMC	24	12/08	480,000	Agricultural statistics	2
		3.8.6	Educate farmers about the benefits and risks of Genetically Modified Organisms, integrated pest management and the pros and cons of hybrid and improved varieties versus land races and traditional varieties (Ref 5.6 – threats to biodiversity; 8.2.3 – GMO guidelines)	MOA	NGOs (PC); Farmers Association	24	12/08	1,080,000	Agricultural statistics	2
3.9	Sustainable and efficient use and trade in veldproducts for maximum economic and livelihoods benefits	3.9.1	Develop and approve veld product policy	DFRR (MEWT); Parliament	MOA; DWNP; NGOs (CI, IUCN, KCS, KDT, KY, OPWT, PC, TL, VPRD); Communities; BAMB; BIDPA	8	12/08	120,000	Veldproduct policy	2
		3.9.2	Decentralise harvest allocations of non-threatened species to a multidisciplinary team chaired by the Tribal Authority (Chiefs) and provide them with the necessary tools and guidelines to ensure sustainable use and transparency and accountability in the allocation process. National control should be maintained over the RDL species and species threatened by overexploitation.	DFRR (MEWT), Chiefs	MEWT; MLG	12	12/07	245,000	Annual reports	2
		3.9.3	Extend the DFRR veld product monitoring system to include models for quota setting, carrying capacity guidelines, monitoring and enforcement capacity in local and national resource users, organisations and regulatory agencies	DFRR (MEWT)	Conservation Committee, DLUPU; MEWT; NGOs (VPRD, KY, TL); Communities; UB; NHBG; DCE ; CSO	24	12/08	4,920,000	Monitoring system	1

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		3.9.4	Identify enterprise development opportunities and alternatives in community based natural resources and conduct product feasibility studies and market assessments to form the basis for viable industries, taking the regional context into consideration (Ref 3.7.4 – Use of natural resources).	MTI	DFRR; NGOs (CI, KCS, KDT, KY, OPWT, PC, TL, VPRD, ST); CBOs; communities; CEDA	24	12/08	480,000	Feasibility reports	2
		3.9.5	Facilitate access through credit and enterprise schemes, while linking with quality control and resource allocation permits as appropriate (Ref 3.7.4 – Use of natural resources, 10.3 - Regional markets, Object 7 – Access and benefit-sharing)	MTI	CEDA; DFRR; MEWT; SADC; concerned NGOs	24	12/08	1,100,000	Trade statistics	2
		3.9.6	Introduce regulated tendering for commercial resource rights, taking precautions not to disempower poorer households.	ARB (MEWT)	MFDP; MEWT; MTI	2	12/08	200,000	Trade and Industry statistics	3
		3.9.7	Expand Natural Resources Allocation (NRA) programme to wildlife, rangelands and key veldproducts	MEWT	MFDP	2	12/07	40,000	Report	3
		3.9.8	Support the setting up of commercial village craft centres and let prices be determined by the forces of supply and demand at these centres (Ref 3.9.4 – market opportunities and credit schemes)	CBOs; NGOS; PS	CEDA; BEDIA; MTI	24	12/08	2,000,000	Trade statistics	3

Objective 4: An institutional environment, including financial and human capacity, conducive to effective biodiversity conservation, sustainable use and management

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
4.1	Cross sectoral coordinated approach to national biodiversity conservation and use with roles and responsibilities clearly defined and mechanisms in place to facilitate coordination	4.1.1	While overall national responsibility for biodiversity conservation has been assigned to MEWT, specific roles for various components of biodiversity and management between government, NGOs and the private sector clarified and responsibilities assigned	MEWT	Focal institutions TBA; UB; NHBG; DWNP; DoF, DFRR; NGOs; MOA;	1	12/07	20,000	Organogram	1
		4.1.2	Review the NCS and other relevant sectoral policies, action plans, incentives, subsidies and other programmes of government ministries, departments and institutions, and NGOs for biodiversity issues, in order to avoid duplication, to harmonise activities and to identify and address perverse incentives and subsidies if necessary (Ref. 4.2.1 – Biodiversity Policy)	MEWT	All sectoral ministries, LB, TA; BIDPA; DLUPU; DA	10	12/08	600,000	BD coverage as part of SEA; adjustments in existing policies	1
		4.1.3	Based on the BSAP, National Conservations Strategy (NCS) and the policy review, develop an integrated strategic policy framework to address cross cutting issues such as decentralisation and local management, incentives and regulatory framework, integration with international conventions, CBD ecosystem approach, threats to biodiversity and measures to mitigate declines in economic activities due to HIV/AIDS	MEWT	All concerned sectoral ministries; NGOs; Com; PS; UB	18	12/08	1,080,000	Policy framework	2
		4.1.4	Establish and staff an environmental policy formulation and evaluation unit for intersectoral planning and policy formulation, and develop and implement an integrated and intersectoral policy framework for sustainable natural resource management and biodiversity conservation (Ref 4.2.1- Biodiversity policy)	MFDP	All sectoral ministries, LB, TA; BIDPA; DLUPU; DA; NGOs	3	06/08	60,000	workshop	3
		4.1.5	At district level form biodiversity crosscutting committees under the District Development Committees (DDC), linking with the Technical Advisory Committees (TACs) (Ref 2.3.1 – Technical Advisory Committees), with mandate to coordinate biodiversity issues and set up biannual meetings	DA (MLG)	DDC; DLUPU; DWNP, FDRR; MOA; DOT; Police; Immigration; DCE	25	12/08	500,000	Committee meeting minutes	2
		4.1.7	Coordinated by MEWT, set up permanent task force groups for the various components of biodiversity conservation and management, with representative from all sectors, focusing on various components of biodiversity conservation and management. Use these groups for policy	MEWT	All concerned sectoral ministries; NGOs; Com; PS; UB	3	12/08	60,000	Task force groups, membership lists and minutes	3

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
			advice and reference and link with Technical Advisory Committees and District Development Committees (Ref 4.1.5 – District Development Committees; 2.3.1 – CBNRM TAC)							
		4.1.8	Establish a multi sectoral cross sectoral resource allocation and charge model	MEWT	MFDP	3	12/08	200,000	Revised charges and allocation mechanisms	2
		4.1.9	Streamline the BSAP into the State of the Environment reporting and other national environmental programmes	MEWT		5	12/08	100,000	SOER	3
4.2	Comprehensive legal framework for the protection of species and ecosystems with appropriate mechanisms in place for implementation and enforcement	4.2.1	In line with the recommendations of the NCS and the BSAP establish an over-arching National Conservation Act or other omnibus suitable legislation framework to cover the various aspects of environmental issues including biodiversity	MEWT	Concerned institutions; NGOs; UB; Private sector	36	12/08	7,200,000	Legislative framework	1
		4.2.2	Identify gaps in current legislation with regards to national, regional and international standards and needs, relating to biodiversity conservation and sustainable use of biodiversity. Update and complement the legal framework accordingly, while aiming to harmonise laws within the region	MEWT	AGC; MOA; NGOs	18	12/08	1,080,000	Project report	1
		4.2.3	Empower all law enforcement organisations and departments to implement the biodiversity legal framework, including related laws, policies and bye-laws (Ref 5.4.3 – enforcement of EIA)	MSP; Parliament	AGC; MEWT; DC, TA; VDC; ARB; MLHA; MLG; DCE	6	12/08	4,000,000	Enforcement plan	2
		4.2.4	Develop incentive strategies which promote community involvement in enforcement activities	MLHA	MEWT; DWNP; DCE	12	12/08	240,000	Communities part of monitoring scheme	3
		4.2.5	Strengthen and streamline licensing and permit system for import and export of biodiversity components, including for research (Ref 1.3.1 – Research permits), to include transparent mechanisms, printed guidelines and set time/performance targets.	ARB (MEWT)	MEWT; NBSC; DCE; UB	24	12/08	480,000	Import and export statistics	1
4.3	Enhanced institutional biodiversity capacity at all levels for effective planning, research, monitoring and legal enforcement.	4.3.1	Establish MEWT/DEA district offices/officers to improve communication between the national and district levels (Ref 6.2.2 – dissemination of policy)	MEWT	MLG; DA	6	12/07	2,424,000 pa	Organogram	2
		4.3.2	Review existing institutional infrastructure and capacity with regards to planning, research, monitoring and legal enforcement in biodiversity conservation and sustainable use (Ref 5.6.8)	MEWT	All ministries; PS; NGOs	6	12/08	360,000	Consultancy report	1
		4.3.3	Based on the above appoint and establish national or regional, if relevant) centres of excellence for biodiversity key groups (invertebrates, flora, birds, fungi, micro-organisms etc. Responsibility for wildlife has already been established through	MEWT	Focal institutions TBA; UB; NHBG; DWNP; DoF, DFRR; NGOs; MOA; SADC; NGOs; PS	18	12/08	4,320,000	Established focal centres	1

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
			DWNP), clarifying institutional responsibilities and draw up TORs to include establishment and curation of national biodiversity collections, mechanisms for depository of data, and hosting of data etc (Ref. 9.3.1 – Access to data; 1.2.2. – Housing of data and reference collections).							
		4.3.4	Strengthen the DFRR for effective veldproduct management and monitoring	DFRR (MEWT)	MEWT	24	12/08	1,050,000	Species monitoring systems in place	1
		4.3.5	Strengthen Ministry of Environment, Wildlife and Tourism (MEWT) capacity for effective management of Environmental Impact Assessments (EIAs), including preparation of national EIA guidelines and quality control of EIAs (Ref. 5.4.1- EIA guidelines)	DEA (MEWT)	MEWT; MFDP	24	12/08	960,000	No approved EIAs	1
		4.3.6	Review and evaluate existing taxonomic and biosystematics capacity and infrastructure and provide adequate funding for strengthening national ability to identify organisms of major groups (plants, mammals, birds, fish, pests)	MEWT	UB; NGOs; NHBG; DWNP; Concerned ministries	3	12/08	800,000	Biology expertise database	3
		4.3.7	Compile and publish a national and regional register/directory of bio systematic expertise	MEWT		3	12/08	160,000	Directory of expertise	2
		4.3.8	Actively encourage training to fill gaps as identified in biodiversity training needs assessment	MFDP	MEWT; Donors, PS	6	12/08	120,000	Biodiversity fund increase	2
		4.3.9	Train planners in environmental economics at national and district levels	MEWT	MFDP; All ministry planners; DLG	6	12/07	700,000	Workshops	1
		4.3.9	Organise study tours for key planning officers to study new ways of implementing and incorporating environmental planning principles into national, district and town planning procedures and decision-making. South Africa, is at the forefront of implementing innovative methods to encourage mainstreaming of environmental and biodiversity concerns into planning processes and decision-making	MFDP	MEWT; District Planners	24	12/08	500,000	No of study tours	2
4.4	National <i>in situ</i> and <i>ex situ</i> conservation capacity strengthened	4.4.1	Develop comprehensive <i>ex situ</i> genetic resources conservation programmes for wild and domesticated animals and plants (Ref 1.2.3 – Collecting programmes)	MEWT/MOA	DWNP; NHBG; UB; NGOs; PS; Com	12	12/08	720,000	Ex situ conservation programme	2
		4.4.2	Strengthen human capacity and infrastructure in existing herbaria, museums, national parks and gene banks	NMAG; MOA; UB; MEWT	NHNG; DWNP;	24	12/08	1,780,000	Status and health of collections	2
		4.4.3	Develop a living collection of medicinal plants at National Botanical Gardens, and duplicate in other botanical gardens as appropriate	NMAG	NHBG	24	12/08	290,000	Living collection	3
4.5	Financial mechanisms and finance in place for biodiversity related activities	4.5.1	Develop funding mechanisms and funding guidelines for biodiversity activities, e.g. reinvest biodiversity charges towards conservation and	MEWT	MFDP	12	12/08	720,000	Funding guidelines; biodiversity account	2

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
			rehabilitation in line with the proposed Environmental Fund under NDP9 (Ref. 3.1.4 – national audit; 2.3.4 – Seek funding)							
		4.5.2	Extend legal requirements to include the "polluter pays principle" and extend to reasonable levels of rehabilitation of destroyed habitats, and combine with adequate enforcement mechanisms.	MEWT	AGC	24	12/08	1,000,000	EIA legislation; Enforcement statistics	3
		4.5.3	Through the national accounts, provide sufficient financial means to ensure good curation and maintenance of invaluable national <i>ex situ</i> and <i>in situ</i> genetic collections (Ref. 3.1.4)	MEWT	MFDP; ex situ facilities; NMAG; MOA; UB	24	12/08	1,500,000	Ex situ facilities; National accounts	1
4.6	Economic value of ecosystems and other relevant environmental values and cost established and incorporated into national accounts	4.6.1	Value and carry out cost-benefit analysis of the most important natural resources, including the livestock and wildlife sectors, and ecosystems	MEWT	MFDP; MoA; NGOs; MTI, Communities	24	12/08	2,727,000	Valuation reports; use of results in resource planning and NDP10	2
		4.6.2	Develop case study material for Botswana to show how environmental costs can be estimated	MEWT	MFDP; MEWT; MLG; DA	18	12/08	1,827,000	Reports; use of results in amending policies and programmes	1
		4.6.3	Incorporate environmental costs into national accounts and establish specific resource accounts for wildlife, veldproducts, wood and grazing resources (Ref 3.1.4, 2.3.4,2.8.3 – cost of restoration4.11.1)	MEWT	MoA, DWNP; CSO	24	12/07	1,840,000	Established accounts	1

Objective 5: Coping with environmental change and threats to biodiversity

No	Strategic target	No	Activity	Lead institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
5.1	Early warning mechanisms and mitigation plans in place to minimise effects of natural disasters on biodiversity	5.1.1	Develop national environmental indicators and monitoring sites as part of a long-term biodiversity/environmental early warning monitoring programme through a peer reviewed process and implement programme (Ref 1.3 – monitoring and trends)	MEWT	NDMO; TAC; Expert groups; UB; MOA, CBOs	24	12/08	1,800,000	Sites; list of indicators	1
		5.1.2	Based on the above monitoring programme, set up a national biodiversity early warning system with defined mechanisms of response action, which is linked with regional and international early warning programmes (ref. 10.3.3 – regional cooperation).	MEWT	DMS; MOA; MEWT, DPC, NDMO	24	12/08	780,000	Early warning plan	2
		5.1.3	Establish channels for making early warning results and decision regularly available to the Disaster Management Office and to policy makers, planners and managers of biodiversity and other stakeholders.	MEWT	MOA; DMC	12	12/08	100,000	Early warning reports	3
		5.1.4	Based on the early warning system, design specific mitigation plans and put necessary infrastructure in place to cope with potential natural disasters	NDMO (MSP)	Concerned ministries, BDF	24	12/08	800,000	Mitigation plans	2
		5.1.5	Mainstream environmental disaster management into the national development budget (Ref 4.6 – financing mechanisms)	MFDP	NDMO; DMC; concerned ministries TBA	5	12/08	100,000	NDP	1
5.2	Conservation strategies and facilities in place to address identified threats.	5.2.1	Make detailed assessment of current biodiversity threats by district and develop appropriate prevention strategies with identified key actors (District BSAPs – 11.3) and links to the national biodiversity early warning system (ref 5.1.2); Report results in the State of the Environment Report and distribute to all involved sectors	MEWT	MOA; NHBG; ARB; NGOs; Communities	24	12/08	740,000	Prevention strategies	1
		5.2.2	Design recovery and management plans for all RD species and carry out <i>ex situ</i> conservation of appropriate species (Ref 2.4.3 – conservation of RD species)	Focal institutions TBA	MEWT	24	12/08	500,000	Management plans	1

No	Strategic target	No	Activity	Lead institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
5.3	Effects of climate change on vegetation, animals and livelihoods investigated to allow for appropriate responses	5.3.1	Research effects of climate change on biodiversity, focusing on impacts on vulnerable species and areas (Ref. 10.3.3 – regional cooperation)	DMS (MEWT)	Focal institutions TBS; NGOs	12	12/08	2,100,000	Research reports	1
		5.3.2	Integrate drought and other climatic concerns into sectoral planning especially agriculture (Ref 5.1.5 – environmental disasters)	MEWT	MOA; Communities	8	12/08	100,000	Sectoral plans, NDP	2
		5.3.3	Establish breeding programmes for drought tolerant agrobiodiversity varieties and breeds and develop appropriate agricultural methods	MOA	NGOs	12	12/08	1,220,000	New varieties; guidelines	3
5.4	Reduced levels of habitat destruction and degradation	5.4.1	Develop national EIA guidelines to cover all sectors and incorporate EIA into the sub district development plans	MEWT	AGCs, MMEWA, DDC, MLG, MFDP	12	12/07	360,000	National guidelines	1
		5.4.2	Develop and set standards for EIAs, including biodiversity and habitat considerations, for all sectors	MEWT	MMEWA; MWT; MOA; MLH; MLG	9	12/08	360,000	Standards	1
		5.4.3	Enforce EIA and mitigation measures through appropriate penalty scheme for non compliance (4.3.3 – Enforcement capacity, 7.2.2 – EIA follow-up)	MEWT	MFDP; AGC; Police	12	12/08	900,000	EIA unit statistics	2
		5.4.4	Critically examine the effects of the Agricultural Policy, of 1991 especially the accelerated fencing component and the Tribal Grazing Land Policy (TGLP), on biodiversity in the rangelands, and revise if necessary (Ref 4.1.2 – Review of policies)	MOA	MFDP; MEWT, MLH	8	12/08	180,000	TGLP and Agricultural Policies	1
5.5	Sustainable water use and management with the objective to maintain biodiversity levels	5.5.1	Promote wise use of water through: a) awareness campaigns; b) support of Department of Water Affairs' Water Demand Management (WDM) programme; c) improved allocation of water resources; d) up-dated water accounts; e) increase in direct re-use of wastewater	DWA (MMEWR)	WUC; DSWM; MEWT; NGOs; MLG; Comm	10	12/08	2,100,000	Water use statistics	1
		5.5.2	Include environmental impacts of dams into national planning and improve water supply planning to adequately include down stream water issues	MMEWR	MEWT; WUC	9	12/08	100,000	Water use statistics	1

No	Strategic target	No	Activity	Lead institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		5.5.3	Include monitoring of aquatic species, including IAS, in water monitoring programmes (Ref 5.6.2 – Invasive and Alien Species survey)	MMEWA	WUC; DWA; DOF, MEWT	30	12/08	600,000	Reports	1
		5.5.4	Implement water release calculations as stated in dam Environmental Impact Assessments	DWA (MMEWR)	MEWT	5	12/08	100,000	Water release reports	1
		5.5.5	Regularly monitor groundwater levels and characteristics	HOORC (UB)	DWA	24	12/08	9,700,000	Ground water reports	2
		5.5.6	Enforce EIAs in connection with ground water exploration and borehole schemes	MEWT	DWA	12	12/08	850,000	EIAs	1
5.6	Effective management of invasive species	5.6.1	Stop government distribution of known IAS through government nurseries	MEWT	NGOs, PS, MOA	24	12/08	1,200,000		2
		5.6.2	Survey levels of Invasive Alien Species (IAS) and indigenous invasive species infestation at ecosystem level and publish updates regularly. (Ref 5.5.3 – Aquatic species and 5.8.3 – Bush encroachment)	NHBG (MLHA)	MEWT; NGOs, UB, MOA	24	12/08	1,830,000	Reports	1
		5.6.3	Establish database on IAS, including indigenous invasive species and desirable alien organisms, and research the effects of introduction	DAR (MOA)	BCA; FTRS, UB, MEWT, DWA	12	12/08	410,000	Database	1
		5.6.4	Prepare an IAS strategy and policy including classification of IAS and indigenous invasive species and related measures to monitor and control invasive species, with the aim to prevent introduction and spread of IAS, while promoting the use of indigenous species (Ref 6.2)	MEWT	SADC; NHBG; UB; DWA; BCA; NGOs; MOA	6	12/08	360,000	IAS strategy	1
		5.6.5	Monitor import, export and movement (translocation) of genetic resources with special emphasis on IAS and indigenous invasive species and disease causing agents, and rare and endangered species and ensure effective enforcement of quarantine and phytosanitary controls	MEWT	BURS; Police; BDF, MOA (PPD)	12	12/08	2,100,000	Import and export statistics	2
		5.6.6	Produce IAS identification guides and relevant information materials for selected target groups, i.e. farmers, tourists etc	MEWT	MOA, UB, DWA	12	12/08	1,360,000	Guides	1

No	Activity	Lead institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)		
5.6.7	Put on information campaigns about IAS, especially at borders, airports etc.	MEWT	MOA; DCE	12	12/08	200,000	Campaigns; import and export statistics	2		
5.6.8	Train customs and excise staff in basic identification of IAS, the importance of avoiding introduction of IAS, where to get assistance with identification if in doubt and generally about phytosanitary principles (Ref 4.5.2)	BURS (MFDP)	MEWT; MOA	10	12/08	230,000	No trained staff	2		
5.6.9	Amend legislation to tally with IAS and GMO strategy and regional standards assure that the import permit procedures for genetic material include assessment of IAS identification and prohibition (Ref. 4.3 - Legislation)	MEWT/MOA	AGC;DCE; NBSC; UB, BCA	12	12/08	720,000	Legal framework	1		
5.6.10	If necessary undertake programmes to control IAS, as per 5.6.4	DWA (MEWA/MEWT/MOA)	DCE; AGCs; Comm	TBA	12/08	TBA	IAS control programmes	2		
5.7	Water and air pollution levels reduced to reduce biodiversity loss	5.7.1	Study the effects and costs of pollution of biodiversity and value the biodiversity losses and include in cost analysis Ref 3.1.4 – (Environmental audit)	MEWT	UB; MOA; MMEWA; DSWM ; SADC	6	12/08	138,000	cost estimates of BD losses	2
		5.7.2	Develop, and/or refine, implement and enforce pollution standards, to include pollution of air, water and land.	MEWT	MMEWA; BOBS	12	12/08	340,000	Standards; Pollution statistics	2
		5.7.3	Identify sources and root causes of pollution and implement mitigation measures to reduce pollution at source and establish pollution covenants between government and the private sector and enforce the polluter pays principle.	MEWT	MMEWA	6	12/08	220,000	number of poll. Control covenants	2
		5.7.4	Monitor hydrological change and water quality, especially around urban centres and around industries	DWA (MMEWA)	MEWT	24	12/08	1,700,000	Pollution statistics	2
		5.7.5	Investigate and implement wider use of integrated pest management to reduce pesticide use (Ref 3.8.6 - Awareness of farmers)	MOA	NGOs; MEWT	12	12/08	240,000	Pesticide sales	3

No	Strategic target	No	Activity	Lead institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
5.8	Improved understanding of threats to biodiversity	5.8.1	Research the effects of bushfires on different components of biodiversity and identify and implement strategies and training to minimise the negative effects of bushfires and include in fire and land management plans	MEWT	NFREB, UB	24	12/08	480,000	Fire statistics; Research reports	2
		5.8.2	Research the effects of large elephant populations on biodiversity and long-term elephant population trends in Botswana	DWNP (MEWT)	MOAC, NGOs, Private Researchers	12	12/08	264,000	Research reports	2
		5.8.3	Review existing information, and if necessary continue research into the effects and management of bush encroachment, over-grazing and over stocking on rangelands	MOA/Indigenous vegetation project/BRIMP	UB; MEWT, NGOs, Comm	12	12/08	700,000	Bush encroachment statistics and management tools	1
		5.8.4	Review existing information and continue investigation and research into potential and new threats to biodiversity in Botswana	MEWT	UB; Relevant institutions	24	12/08	2,000,000	Published research	2

Objective 6: Raised public awareness and appreciation of biodiversity together with active public participation in biodiversity related activities and decision-making processes

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
6.1	Raised public awareness about the value of and need to conserve Botswana's biodiversity, related indigenous knowledge and traditional practices, and related policies	6.1.1	Develop and implement a national biodiversity awareness and advocacy strategy aimed at all levels of society (Ref. 11.1.3 – Specific high level BSAP awareness)	MEWT	MOA; NMAG; UB; MOA; MCST; MOE; NGOs; CBOs; Schools & colleges	6	12/08	220,000	Plan of action; Workshops; Broadcasts; Information materials	1
		6.1.2	Continue dissemination of existing biodiversity and CBD information material and, if necessary, develop new training and information materials in appropriate languages, using a variety of media	MEWT	MOE; MCST	12	12/08	290,000	Training materials	2
		6.1.3	Incorporate biodiversity awareness (the importance of maintaining biodiversity and related indigenous knowledge such as traditional and cultural practices, such as taboos, totems) in the national curriculum at all education levels and develop appropriate teaching aids	MOE	Regional education Office, teachers; MEWT; NGOs; CBOs	24	12/08	720,000	Curricula; Text books and teaching aids	2
		6.1.4	Establish biodiversity/environmental information centres in each district, linking with museums and NGOs as appropriate	MEWT	NMAG; NGOs; MEWT; PS	24	12/08	4,800,000	Biodiversity information centres	3
		6.1.5	Encourage regular community skill transfer workshops on indigenous knowledge and traditional practices	NMAG (MLHA)	NGOs; MEWT;	20	12/08	410,000	Workshop proceedings	1
		6.1.6	Within the botanical gardens establish medicinal plant gardens to encourage further development of knowledge and skills associated with the local use of medicinal plants	NMAG (MLHA)	NHBG; Natural Healers	12	12/08	100,000	Medicinal display	2
6.2	Promotion and priority given to use of indigenous species in public places and in habitat restoration programmes	6.2.1	Government nurseries to focus on propagation and distribution of indigenous species wherever possible	BNTSC	MEWT	3	12/08	100,000	Production and sales figures	1

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		6.2.2	Active promotion of the use of indigenous flora in habitat restoration programmes, around public buildings and Council managed areas (Ref. 2.7 - Restoration).	MEWT	All GoB institution	5	12/08	120,000	Public green spaces	3
		6.2.3	Encourage domestication, breeding and propagation of indigenous species with horticultural potential	ARB (MEWT)	MOA, NHBG; BNTSC; PS; NGOs	24	12/08	1,600,000	Production and sales figures	3
6.3	Quality of life and appreciation of biodiversity enhanced through increased access to green recreational areas	6.3.1	Strengthen the link between biodiversity conservation and poverty alleviation schemes (Ref 3.3.3 – Poverty alleviation)	MEWT	MFDP; CBOs, MOA	6	12/08	40,000	Poverty project documents	2
		6.3.2	Encourage development and maintenance of parks and green areas in and around urban centres and other settlements	MEWT	TC; DTRP, MLHA	6	12/08	150,000	Green area	3
		6.3.3	Establish smaller botanical gardens in urban areas other than Gaborone, for recreation and education and link with school market gardens and urban and village vegetable plots	NMAG (MLHA)	PS, MEWT, MOE; MLHA	24	12/08	1,200,000	No of botanical gardens	3
6.4	Enhanced participation by community, civil society, including youth in biodiversity related activities	6.4.1	Review existing biodiversity programme and identify current and potential role of communities and NGOs in biodiversity conservation (Ref 3.3.1 – Diversification of CBNRM)	MEWT	DEA, DWNP; MLHA and ARB	2	12/08	40,000	Biodiversity guidelines for CBNRM; Report	1
		6.4.2	Amend and approve CBNRM policy and initiate implementation	Parliament	NGOs; MEWT; ARB; MOA	4	12/07	40,000	CBNRM policy; implementation plan	1
		6.4.3	Prepare and publish CBNRM manual	CBNRM Forum	MEWT; NGOS; BOS; Com	6	12/08	90,000	Cinema Manual	2
		6.4.4	Review African experiences on programmes to encourage active youth participation in biodiversity related activities and transfer of traditional knowledge.	DCY & DYA (MLHA)	DCY & DYA (MLHA); NGOs; MEWT	6	12/08			2
		6.4.5	Initiate a national programme to encourage youth participation in biodiversity, including agrobiodiversity, conservation activities	DCY & DYA (MLHA)	MOE; Schools; Tertiary institutions; NGOs; CBOs	10	12/08	230,000	Youth project statistics	2
6.5	Gender issues mainstreamed into the biodiversity planning framework to enhance participation	6.5.1	Evaluate gender access and ownership of natural resources with regards to the current institutional and policy environment, with the aim of addressing gaps or inequalities in national policy	WAD (MLHA)	NGOs; MEWT; BIDPA	12	12/08	320,000	Policy report	3

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		6.5.2	Improve women's access to credit facilities in order to utilize natural resources such as veld products and medicinal plants	WAD (MLHA)	; BEDIA; MFDP	12	12/08	500,000	Credit statistics	3

Objective 7: Fair access to biological resources and equitable sharing of benefits arising from the use of biological resources

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
7.1	Fair access to biological resources and benefit sharing	7.1.1	Develop Access and Benefit Sharing (ABS) strategy, policy and mechanisms for distribution of benefits and include international transfer of genetic resources and related knowledge. While waiting for the ABS strategy ensure that all genetic materials sent out of the country are accompanied by relevant Memoranda of Understanding (MOUs) and Material Transfer Agreements (MTA)	MEWT	AGC; MTI; NGOs; PS; MCST	12	12/07	360,000	ABS	1
		7.1.2	Establish guidelines for access to biodiversity, benefit sharing and prospecting	MEWT	MCST; UB	3	12/08	60,000	ABS Guidelines	1
		7.1.3	Provide legislative and regulatory framework on access to biodiversity, taking regional experiences into consideration	MEWT	MEWT; AGC MLG; MLH; DWNP; TA; Traditional healers; NGOs, CBOs; PS; UB; MCST, MTI	24	12/08	480,000	Legal framework	1
		7.1.4	Ensure that all transfers of genetic resources are in line with the Convention on Biological Diversity, the International Treaty on Plant Genetic Resources for Food and Agriculture and other applicable international and regional agreements and standards	MEWT	MFDP, BURS; UB	12	12/08	2,400,000	Transfer permits, Customs statistics	1
7.2	Access to biodiversity linked to responsibility for sustainable management	7.2.1	Ensure access to resources and responsibility for sustainable development is covered in Veldproduct Policy (to be developed - Ref. 3.9.1)	DFRR (MEWT)	MEWT; NGOs; Com	6	12/08	20,000	Veldproduct policy	1
		7.2.2	Active follow-up on EIAs to ensure that mitigation activities are carried out satisfactorily (Ref 5.4.3 enforcement)	MEWT	PS; All concerned ministries	6	12/08	500,000	EIA + developments	2
		7.2.3	Introduce resource access with responsibility for monitoring of resources (Ref. 1.3.7 – User based monitoring)	MEWT	ARB; NGOs, CBOs	12	12/08	720,000	Access permits	2

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
7.3	Legal protection of innovations associated with genetic resources, local knowledge and skills improved	7.3.1	Develop a blueprint on protection of intellectual property rights including indigenous knowledge adopting OAU model law on IPR and Indigenous Knowledge (Ref 7.1.3 – Access legislation)	MEWT	MEWT; NMAG; MLG; MLH; DWNP; TA; Traditional healers; NGOs, CBOs; PS; UB; MCST; Communities	24	12/08	480,000	Legal framework; Policies and legislation related to Indigenous Knowledge	1
		7.3.2	Develop a national policy framework on Indigenous Knowledge with special provision for traditional medicine research and use (Ref 10.5 – regional trade)	MOH	MLH; MLG; Traditional healers; AGC; MTI	12	12/08	720,000	Traditional medicine framework	2
		7.3.3	Make Access and Benefit Sharing Agreement guidelines and templates easily available and promote joint ventures which are beneficial to the country and individuals	MEWT	MEWT; AGC; MTI; UB; Funding organisation	8	12/08	120,000	ABS templates	2
		7.3.4	Document trade data on biological resources and their products to establish trade flows	MTI	BURS; CSO	10	12/08	220,000	Trade statistics	2
		7.3.5	Adopt OAU model law on IPR and Indigenous knowledge	Parliament	AGS; MEWT	12	12/08	50,000	Legal framework	1

Objective 8: Safe industrial and technological development and other services based on national biodiversity resources for future prosperity

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
8.1	Increased capacity in dealing with biotechnology and biosafety	8.1.1	Develop institutional structures, ensuring regional harmonization, which will assure safe use of biotechnology in Botswana, including physical containment facilities, and institutionalising regulation approach, i.e. implementation of the Biosafety Framework	DAR (MOA)	MCST; MEWT	6	12/08	120,000	Organogram	2
		8.1.2	Assess government training needs for implementation of the National Biosafety Framework and develop strategy to address needs assessment results	DAR (MOA)	BOTEC, NAFTA, CHM, DPSM	6	12/08	360,000	Consultancy report	2
		8.1.3	Expand present information technology use in Government institutions to assure the regulatory personnel have access to the latest information on emerging biotechnology use and risks	DAR (MOA)	DEA, BCA	3	12/08	2,060,000	Internet access in government; computers	3
		8.1.4	Develop a biosafety clearing house with up to date biosafety information relevant to the Botswana situation and make it available on the World Wide Web	MOA	MEWT; CHM	6	12/08	220,000	Biosafety Clearing House Mechanism	2
		8.1.5	Estimate and develop capacity in biotechnology related fields, including legal issues, and implement training programme accordingly	DAR (MOA)	MOE; UB, MCST, DEA	24	12/08	1,000,000	MOE training statistics	3
		8.1.6	Establish Biotechnology and Biosafety Expert Reference Group to provide technical backstopping for regulatory staff in Risk Analysis and Management activities, with membership reviewed biannually and adjusted as necessary	DAR (MOA)	PS; UB, BCA, BOTEC, NAFTA	0.5	12/07	70,000	Biosafety reference group	2
		8.1.7	Carry out training programmes on biosafety for Customs officials, the police and other stakeholders	DAR (MOA)	MEWT; MOE; Police, BURS, UB	5	12/08	100,005	No courses and participants	3
8.2	Safe use of biotechnologies ensured in Botswana	8.2.1	Finalise and implement biosafety framework	NBSC DAR (MOA)	MOA; UB, MFDP, BOCONGO, BOCOBONET, BOCCIM, DAR, DEA; MoH, NAFTA, BURS, AGC, MEWT	60	12/08	1,200,000	National Biosafety Framework	1
		8.2.2	Develop and adopt the policy and legal instruments to support the biosafety framework	NBSC (MOA)	AGC, MoA, UB, MFDP, NGOs BOCCIM, DAR, DEA; MoH, NAFTA, BURS,	60	12/08	600,000	Legal and policy framework	2

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		8.2.3	Develop and implement technical guidelines and procedures to control handling and the transboundary movement of genetically modified organisms (GMOs) and their products	NBSC (MOA)	MEWT AGC, MoA, UB, MFDP, NGOs, MoA DAR, MEWT; MoH, NAFTAC, MFDP BURS	3	12/08	180,000	Technical guidelines and procedures; Customs reports	1
8.3	Raised biosafety and biotechnology awareness	8.3.1	Develop public and political awareness programmes on biosafety and biotechnology for various sectors	NBSC (MOA)	MCST, MLG; Media, UB, MFDP, NGOs, BOCCIM, DEA; MoH, NAFTAC, BURS, MEWT	12	12/07	770,000	Campaign programmes and feedback	2
		8.3.2	Integrate biosafety and biotechnology studies into curricula both at secondary and tertiary centres of learning	DAR (MOA)	BOTA; TEC; UB, BCA, MEWT; MFDP	24	12/08	4,320,000	Curricula; Textbooks	2
		8.3.3	Assess national training needs in the field of biotechnology and biosafety and establish specialist capacity	DAR (MOA)	MEWT; UB; BCA, BOTECH, NAFTAC, DPSM	10	12/08	360,000	Report	2
8.4	Bio-prospecting and citizen-based innovation encouraged through creation of an enabling environment	8.4.1	Improve national and local capacity to participate and benefit from bio trade by encouraging the formation of user groups and by providing communities with appropriate training	MTI	CBNRM, CBO, NGOs, BEDIA, BOCCIM; DCE	12	12/08	200,000	Training reports	2
		8.4.2	Ensure that new legal framework addressing genetic resources, while providing the necessary safety regulatory framework does not stifle bona fide research and bio prospecting enterprises unnecessarily. This can be achieved through extensive consultation with all concerned groups in connection with updating of the legal framework	AGC	MTI, MCST; MEWT; PS, UB, NGOs; CBNRM, CBOs	12	12/07	200,000	Consultation reports	2
		8.4.3	Carry out feasibility studies and market surveys for biodiversity and biotechnology based products and production and link with investment opportunities	MTI	BEDIA, MCST, NGOs	12	12/07	750,000	Feasibility reports	1
		8.4.4	Promote value added research and sustainable trade in genetic resources through education campaigns and financial incentives	MTI/MCST	MOE; UB, PS, CBNRM, CBO, NGOs; ;MTI, MEWT; DFRR; OP; IFS, MEWT, Enterprise Botswana	18	12/08	350,000	Trade statistics	2
		8.4.5	Ensure that the standards, regulatory processes and legal framework are compatible with regional and international biosafety regulations	DAR (MOA)	SADC; AGC; MEWT, BOBS	9	12/08		Regional and national regulatory frameworks	1

Objective 9: Improved availability and access to biodiversity data and information, and promotion of exchange of information

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
9.1	National standards established and disseminated to relevant groups for biodiversity data collection, including for metadata	9.1.1	Establish national data collection and meta-data standards, that are regionally compatible and comply with accepted international standards, and based on standards design and produce data collection forms (Ref 1.1.2)	MEWT	CSO; Key focal institutions; UB; BOBS, MCST	12	12/09	720,000	Set of standards; Data forms	1
9.2	Key inventories computerised and meta data established	9.2.1	Computerise selected national inventories to be included in Biodiversity CHM (Ref 9.3.2)	MEWT (DEA)	BOBS	24	12/08	760,000	Databases	3
		9.2.2	Establish institutional responsibilities for maintenance of data and databases	MEWT (DEA)	MCST	6	12/08	20,000	Date of update	1
		9.2.3	Establish metadata guidelines and disseminated information and data forms to data collectors	MEWT	CSO, BOBS, MCST	6	12/09	70,000	Meta data guidelines	1
		9.2.4	Metadata collected for all national biodiversity datasets and included in CHM (Ref 9.3.2 - CHM)	MEWT	ALL (MCST, MOA, MMEWA, UB, BCA, NAFTAC, BOTECH)	8	12/08	520,000	CHM	2
9.3	Easy access to environmental, biodiversity, social and economic data	9.3.1	Link biodiversity focal point institutions with the responsibility for hosting relevant data collections.	MEWT (DEA)	ALL (MCST, MEWT, MOA, MMEWA, UB, BCA, NAFTAC, BOTECH)	NA	12/08	NA	Agreements	2
		9.3.2	Establish biodiversity CHM in accordance with recommendations made by the CHM working group, and acquire the necessary hardware and software	MEWT (DEA)	CHM Working Group	12	12/07	340,000	CHM	1
		9.3.3	Establish links between national data sets and the CHM through agreements with the data provider.	MEWT	ALL (MCST, MEWT, MOA, MMEWA, UB, BCA, NAFTAC, BOTECH)	6	12/08	NA	Agreements	1
		9.3.4	Establish a database of literature on biodiversity including "grey literature" and with keywords to facilitate searches in NCSA	MEWT	UB, DNLS	18	12/08	410,000	Literature database; Reference library	3

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		9.3.5	Pubush national checklists for all biodiversity key groups, including Red Data Lists (Ref 2.4.1 - RDL)	MEWT	ALL (MCST, MEWT, MOA, MMEWA, UB, BCA, NAFTAC, BOTEK)	24	12/08	1,560,000	Checklists	3
		9.3.6	Establish a biodiversity website.	MEWT (DEA)	DIT, UB, NGOs ALL (MCST, MEWT, MOA, MMEWA, UB, BCA, NAFTAC, BOTEK)	9	12/07	100,000	Website launched	2
9.4	Botswana biodiversity research data safe-guarded	9.4.1	Collect research data and reports for which permits have been issued (Ref 1.3.1 -- Allocation of research permits)	MCST	UB; NGOs; MEWT, MSP	NA	12/08	NA	Library; Research permit statistic	2
		9.4.2	Establish depository for biodiversity research data and reports (Ref 1.1.1)	MCST	UB; NGOs; MEWT	6	12/08	20,000	Biodiversity research library (hardcopy and digital)	1
		9.4.3	Make information on ongoing biodiversity research projects available on CHM	MEWT	MCST, CHM Working Group	NA	12/07	NA	CHM	3

Objective 10: Recognition of Botswana's international and regional role with regards to biodiversity

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
10.1	Active participation in international biodiversity meetings and relevant biodiversity related agreements and protocols continually reviewed and signed if appropriate	10.1.1	GoB participating actively in key conventions, such as CBD, UNCCD and CITES	MFAIC	MEWT, OP	12	12/08	240,000	Trip reports from COPs and technical meetings	1
		10.1.2	Signing of relevant regional and international agreements	MFAIC	MEWT	NA	12/07	NA	Signed agreements	2
		10.1.3	Develop national consensus ahead of major meetings through thematic expert groups, and public consultation as appropriate	MEWT	Relevant ministries, NGOs; PS, UB	NA	12/08	TBA	Minutes from meetings	2
		10.1.4	Establish funding mechanisms for technical expertise to attend important biodiversity meetings	MEWT	Relevant ministries, Donors	5	12/08	100,000	Back to office reports; meeting minutes	2
		10.1.5	Strengthen national human capacity in environmental law and encourage representation by environmental law experts in government delegations to international meetings	MSP (AGCs)	PS, MOE, MEWT	12	12/08	400,000	Back to office reports; meeting minutes	1
10.2	Compliance with and efficient implementation of relevant biodiversity related conventions, agreements and treaties	10.2.1	Design and implement a system for monitoring the implementation of international conventions and agreements related to biodiversity, including regular review of progress	MEWT	ALL (MCST, MEWT, MOA, MMEWA, UB, BCA, NAFTAC, BOTEK)	5	06/08	120,000	Monitoring system, Annual reports	1
		10.2.2	Improve mechanisms for effective coordination of commitments and activities related to international agreements, including established lines of communication, to avoid duplication and finding common grounds to make implementation more effective	MEWT	ALL (MCST, MEWT, MOA, MMEWA, UB, BCA, NAFTAC, BOTEK)	10	12/08	230,000	Annual reports	1
		10.2.3	Periodically review all international biodiversity related commitments signed by GoB and assess implementation progress	MEWT	Implementing institutions	5	12/08	100,000	Annual report on implementation	1

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
10.3	Regional and transboundary collaborations enhanced (expertise, markets, resources) and active participation in regional biodiversity networking programmes	10.3.1	Support, as appropriate, the development of bilateral or multilateral agreements and harmonization of policies and legislation within the SADC region on conservation and use of shared or migratory natural resources	MFAIC	MEWT; Implementing institutions;; SADC	TBA	12/08	TBA	List of signed agreements	1
		10.3.2	Work towards the establishment of regional centres of excellence for micro organism and lesser-known organisms research and expertise (Ref 4.4.3 – National Centres of excellence)	MEWT	MFAIC; Relevant ministries; SADC	TBA	12/08	TBA	Centres of excellence	3
		10.3.3	Strengthen regional cooperation in the area of climate monitoring, drought detection/coping and natural disasters (Ref 5.1.2 – National Early Warning Programmes)	MEWT	DMS; MEWT; SADC; MFAIC	TBA	12/08	TBA	Regional agreements; regional climate models; regional early warning system	1
		10.3.4	Strengthen regional cooperation in the area of natural resource management, including migratory species, river basin planning, transboundary parks	MEWT	SADC, MMEWA; NGOs	TBA	12/08	TBA	Signed agreements	1
		10.3.5	Strengthen regional cooperation in the area of biosafety, IAS and phytosanitary controls	MOA	SADC; MEWT; BURS	TBA	12/08	TBA	Signed agreements; regional standards and guidelines	1
		10.3.6	Build and maintain partnerships of biodiversity conservation and environmental management within SADC to promote sharing of information, best practices and expertise in biodiversity management	SADC	MEWT; MOA; MLHA	TBA	12/08	TBA	Regional project documents and reports	2
		10.3.7	Set up regional database of biodiversity expertise and training institutions	SADC	ALL (MCST, MEWT, MOA, MMEWA, UB, BCA, NAFTA, BOTEC)	3	12/07	80,000	Database	1
		10.3.8	Adopt regional BSAP	MEWT	SADC	NA	12/06	TBA	Regional BSAP	3
10.4	Establishment of Botswana at the forefront of biodiversity management and conservation in the region	10.4.1	Adopt the highest standards of biodiversity management	MEWT	ALL (MCST, MEWT, MOA, MMEWA, UB, BCA, NAFTA, BOTEC);	NA	12/08	NA	Regional standards	2

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
					BOBS; DCE					
		10.4.2	Provide direction and leadership in biodiversity management in the region	MEWT	ALL (MCST, MEWT, MOA, MMEWA, UB, BCA, NAFTA, BOTEC) MFAIC	NA	12/08	NA	Regional standards; minutes	3
10.5	Pro-active role in globalisation including bio trade and biotechnology	10.5.1	Encourage ABS partnerships through an enabling environment	MEWT	PS; CBNRM, AGCs	TBA	12/08	TBA	ABS agreements	3
		10.5.2	Participate actively in international biotechnology and biotrade initiatives	DAR (MOA)	ALL (MCST, MEWT, MOA, MMEWA, UB, BCA, NAFTA, BOTEC)	TBA	12/08	TBA	Proceedings and reports	3

Objective 11: Implementation of this Biodiversity Strategy and Action Plan

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
11.1	Political will and coherent government approach to implementation of BSAP established	11.1.1	Preparation of Government white paper on biodiversity based on BSAP	MEWT	ALL (MCST, MEWT, MOA, MMEWA, UB, BCA, NAFTA, BOTEC)	2	12/07	120,000	White paper	1
		11.1.2	Prepare and hold high level (directors' level and up) BSAP seminar and technical level seminars for line ministries	MEWT	All ministries	1	06/07	60,000	Seminar proceedings	1
		11.1.3	Design a BSAP awareness raising campaign aimed at senior management and at political level to continue building support for implementation of BSAP	MEWT	MCST	6	01/08	120,000	Campaign outline; information materials	2
		11.1.4	Publicize the BSAP through public relations (PR) campaign in local languages, in line with Vision 2016 and the Education Policy.	MEWT	BTV, Media; District extension teams; MCST	6	06/08	220,000	Campaign outline; articles; broadcasts; information materials	2
11.2	Institutional resources for the coordination of the implementation of the BSAP enhanced	11.2.1	Establish 5 year budget for BSAP implementing unit and secure funding	MEWT	MFDP	2	12/08	40,000	Budget; Committed funds	1
		11.2.2	Make BSAP coordination and implementation office operational by providing offices and appointing 1 project manager + 1 assistant	MEWT	ALL (MCST, MEWT, MOA, MMEWA, UB, BCA, NAFTA, BOTEC)	4	12/08	586,000 pa	BSAP office	1
		11.2.3	Prepare ToRs and workplan for BSAP coordination unit and define roles and responsibilities for effective implementation	MEWT	ALL (MCST, MEWT, MOA, MMEWA, UB, BCA, NAFTA, BOTEC)	1	12/07	20,000	ToRs	1
		11.2.4	When the national BSAP unit is established, assign and allocate officers at district and sub-district levels for the implementation of the BSAP	MEWT	DA; MFDP	8	12/07	TBA	MEWT organogram	1
11.3	Components of BSAP streamlined into national development planning and budgeting processes	11.3.1	BSAP coordinating unit to sort BSAP activities according to key ministries or key players, and national and district implementation levels	MEWT	DEA	1	03/08	20,000	List of activities and responsibilities by ministry	1

No	Strategic target	No	Activity	Lead Institution	Key partners	Duration (months)	Deadline	Estimated Cost	Sources of verification	Priority (1-3)
		11.3.2	Distribute BSAP to all lead agencies and key partners and to inform them of their responsibilities and establish communication links	MEWT	DEA, BNLS	0.5	06/07	10,000	Distribution list	1
		11.3.3	Monitor implementation of the national BSAP on a yearly basis, evaluate the results and make necessary adjustments	MEWT	ALL (MCST, DEA, MOA, MMEWA, UB, BCA, NAFTAC, BOTECH)	6	12/08	120,000	Evaluation Report	2
		11.3.4	Update BSAP for the next NDP period, taking District BSAPs into consideration (Ref – 2.1 District BSAPs)	MEWT	ALL (MCST, DEA, MOA, MMEWA, UB, BCA, NAFTAC, BOTECH)	2	12/08	40,000	Revised BSAP	3
11.4	Sustainable financial provisions for implementation of the BSAP ensured	11.4.1	Review existing financing mechanisms and prepare funding strategy for BSAP related projects	MEWT	MFDPA; Donors; PS; NGOs	1	12/06	40,000	List of funding; funding strategy	1
		11.4.2	Relevant ministries to prepare detailed BSAP budgets and ensure that BSAP activities are included in NDP9 mid-term review and preparations for NDP 10 as appropriate	All concerned ministries	MEWT, MFDPA	NA	12/07 & 06/09	NA	Ministerial budgets, NDP10	1
		11.4.3	Strengthen existing biodiversity financing mechanisms if necessary, communicate national biodiversity and environment priorities to external donors, and proactively seek funding for BSAP projects	MEWT	Donors; PS, MFDPA	1	12/07	20,000	External funding	2
		11.4.4	Update and revise estimates of required financing	MEWT	ALL (MCST, MOA, MMEWA, UB, BCA, NAFTAC, BOTECH)	2	12/08	40,000	Revised BSAP budget	3
		11.4.5	Develop guidelines for biodiversity joint ventures including the private sector	MEWT; MTI	ALL (MCST, MOA, MMEWA, UB, BCA, NAFTAC, BOTECH)	1	12/08	20,000	Guidelines	3

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ANNEXES

ANNEX 1: EXTRACT FROM BIODIVERSITY STOCKTAKE REPORT – THREATS TO BIODIVERSITY

Listed below are some of the threats to Botswana's biodiversity. They vary in severity and they affect different groups of biodiversity, but they have in common that they are detrimental to biodiversity in one form or another. These threats have been grouped according to the types of effort that is needed to counter-act the threats. Threats specific to flora, fauna and agrobiodiversity sectors can be found in the MEWT, 2004. BSAP Stocktake Report.

Conservation and Sustainable Use

Biodiversity protection not complete

Climate change

Competition between livestock and wildlife for scarce graze and water resources

Construction of roads, dams, and infrastructure

Cross breeding

Destructive harvesting methods

Drought/moisture deficiency

Erosion (wind, water)

Ground water extraction

High elephant levels

High livestock levels - overgrazing

High water abstraction for agriculture leading to salinisation of groundwater and surface water

HIV AIDS leading to loss of manpower

Hunting/logging

Ineffective resource allocation/quotas

Introduction of AIS (micro organisms by tourists)

Introduction of AIS, pests and diseases

Introduction of GMOs

Livestock invasions in protected areas

Logging

Mine pollution

Mining

No management of veldproduct

Noise and light pollution from tourism activities

Over harvesting

Over population around urban centres and settlements

Physical pressure around urban areas and settlements

Population pressure from tourism

Publication of botanical national monuments

Retracting water resources

Roaming livestock

Sand mining

Spread of noxious weeds

Surface water extraction

Tourism infrastructure

Unsustainable use of other resources (water, firewood)

Use of pesticides

Veterinary pests and diseases

Wildlife invasion into farm areas

Policies and Incentives measures

Acid rain

Agricultural subsidies

Bias toward exotic seeds by seed sector

Biodiversity concerns not routinely incorporated in planning

Car fumes

Commercialisation of biodiversity

Conversion to agriculture

Distribution and sale of AIS plant species by government

Fencing

High firewood demand and collection around settlements

Holistic approach missing in Government – little coordination between ministries

Increasing global/regional markets for medicinal plants

Lack of AIS policy

Lack of alternative livelihoods

Lack of Forestry policy

Lack of gazetted wetlands policy

Lack of GMO policy

Lack of resource markets in Botswana

Lack of Veldproducts policy

Limited money from tourism reaching local communities

Loss of rural labour

Low interest by youth in agriculture

Planning and policy gaps

Poor implementation of some international agreements

Resource costs are underestimated

Resource value is under estimated

Strong culture of mono sector planning with agriculture and wildlife being favoured

Unavailability of traditional agricultural varieties

Identification, Monitoring, Research and Training

Analysis of species population trends missing

Basic biodiversity data and research missing

Change from traditional to modern lifestyle

Flooding

Human/wildlife conflict

Introduction of aquatic weeds

Lack of detailed data on faunal distribution (except avian and Artydotalid species)

Lack of game bird, monitoring, assessment of bag limits and hunting season ban

Loss of indigenous knowledge

Natural disasters

No IAS survey

No national plant survey

No survey of micro organisms

Poor resource base monitoring

Red Data List plant species are data deficient

Temperature increases

Unavailability of national biodiversity data

Veld fires

Public Education and Awareness

Increased littering

Increased use of water

Increased waste levels

Lack of participation by civil society in biodiversity issues

Low level of biodiversity awareness

Low public awareness of the risks associated with import and export of genetic resources

Poor waste management practices

Tourism - importation of AIS, disease

Vandalism of species and habitats

Institutional Resources

Biodiversity fragmented between several ministries leading and poor coordination

Customs officials not familiar with CITES species and risks associated with import/export of biodiversity

Lack of Biodiversity Strategy

No functional Land Area Advisory Committee for protected areas outside Chobe

Pouching of wildlife

Legal, Access and Benefit Sharing

Access and benefit sharing instruments missing

Collections of rare species/eggs

Import and export of genetic resources poorly covered by laws

Ineffective CITES legislation for RDL plants

Lack of ratification of the CMS and African-Eurasian Waterbird Agreement

Legal framework generally inadequate

Legal framework not in line with region

Little control of biodiversity export

Poor enactment of legislation

ANNEX 2 - BSAP CONSULTATION WORKSHOPS – SUMMARY

Prepared by IUCN Botswana and NCSA

A total of 7 workshops addressing 10 districts were held throughout the country. Although these workshops were focused on seeking participants' inputs into the BSAP Outline we realized after the first workshop that it was necessary to provide an overview of the CBD, the NSAP Project and revisit some of the stocktaking issues. This was done to provide the workshop participants with enough background to comment on the BSAP Outline and make suggestions on the Action Plan required. Workshop participants were divided into groups and asked to look at the strategic goals that are of priority to their districts and provide their comments as well as suggest the actions required to address the objectives in the outline.

This report begins with a summary of the recommendations drawn from the consultative workshops followed by recommended action plan from each of the workshops.

Workshop Recommendations:

- The participants observed that although programmes for biodiversity conservation exist, there needs to be some economic gains from these conservation activities otherwise people will not conserve biodiversity. They therefore felt that there is a need to boost and regulate trade (especially cross border trade) in natural resources. The following recommendations were made;
 - the permit system in the country needs to be strengthened.
 - Central to the trade issue was the capacity to add value to natural resources in order for traders to benefit more. Undervaluing natural resources was said to force people into increasing harvests in order to get more money. So if the government can help with the valuation this would mean that people will get enough from the little they harvest and they would not need to harvest a lot and thus result in conservation of resources.
 - Furthermore, if value adding industries were to be situated in Botswana then this would restrict the amount of raw materials leaving the country examples being unprocessed Sengaparile (*Harpagophytum procumbens*). The workshop participants appreciated the fact that in order to do this there is a need for appropriate technology and skills which may not be available in the country.
 - Participants recommended establishment of 'smart partnerships' with companies/interested manufacturers with the know - how so that these are located in Botswana and can employ Batswana and transfer skills in the process.
 - They also mentioned the problem of finance in the development of product processing industries by small business people. They recommended that the government should encourage Batswana and especially CBOs to set up game ranches by providing funding to interested parties.
- Linked to the above discussion were issues of biopiracy and control of the movement of natural resources in order to control alien invasive species. The following recommendation was made;
 - The workshops recommended the need for phytosanitary units at border posts and other ports of entry in the country.

- The participants requested that the BSAP should be speeded up so that Botswana can also benefit from their biological resources. They said that it seems as though there are other people who are benefiting from these resources who are not Botswana.
- The participants were concerned that chiefs and other traditional institutions do not have enough powers to implement the policies and laws that government introduces. They said that they do not have the authority to control access to biodiversity within their areas. They further argued that local participation in biodiversity conservation needs to be strengthened. The following recommendations were made;
 - Government was urged to implement a law guiding access to biodiversity and that Tribal leaders should be given authority to control access to resources in their areas.
 - Communities need to be educated about the importance of biodiversity and associated threats. In order to do this long-term outreach or extension services need to be provided on a continuous basis.
 - Committees need to be formed at the village level that will educate the community about the importance of biodiversity. They added that there should be programmes that are funded to assist the conservation of biodiversity and for the implementation of i.e. sustainable tourism/ecotourism.
 - The participants expressed concern that youth are not interested in biodiversity conservation which is detrimental to the culture. They urged a cultural revival so that traditional methods of biodiversity conservation could be maintained.
 - for purposes of communicating the biodiversity related issues and raising public awareness, the participants recommended that discussions and materials used should be translated into Setswana and other local languages.
 - More vigorous campaigns are needed in order to educate people and raise awareness about alien invasive species.
- The participants were also concerned that the Government was also contributing to the loss of biodiversity by using exotic breeds to 'improve' local breeds. They said that this would lead to the eventual loss of traditional Tswana breeds and the eventual loss of biodiversity. They therefore recommended that;
 - Government should have programmes that promote the conservation of traditional agro-biodiversity.
- The participants acknowledged the importance of indigenous knowledge systems and its role in biodiversity conservation and management. The following recommendations were made;
 - Research needs to be carried out in order to capture and document indigenous knowledge and management systems for the benefit of future generations to come.
 - Some of the workshop participants raised concern about sharing their local/traditional/indigenous knowledge fearing that they will stand to benefit nothing while researchers get financial benefits from the use of such knowledge. They therefore recommended that policies be put in place to outline issues of access and benefit sharing as well as protection of traditional knowledge.
 - The participants suggested that places in the country that still have cultural practices that are in fact should be profiled so that other communities can learn from them how to revive useful traditional practices and involve the youth.
 - Participants recommended that where permit systems are introduced they need to take into account the socio-economic impacts of those that is to look at how the livelihoods of the harvesters will be affected.
 - The participants recommended that cultural education should be included in the curriculum.

- Participants raised concern that it seems as if most of Government's funding efforts are going to HIV/AIDS related issues and stated that efforts to maintain a healthy environment need to be strengthened. The following recommendations were made;
 - Government should commit more funds for purposes of biodiversity conservation.
 - Government departments should be mindful of biodiversity issues so as to ensure that the projects they are promoting or implementing are not threatening biodiversity conservation. i.e. the Forestry Department needs to promote planting of indigenous trees through tree planting campaigns.
- Law enforcement agencies and customs agents need to be educated on alien invasive species so as to prohibit the entry of these into the country.

ANNEX 3 – CBD GOALS AND TARGETS

CBD 2010 Focal areas, goals and target

The Conference of the Parties has developed a framework to enhance the evaluation of achievements and progress in the implementation of the Strategic Plan and its 2010 Biodiversity Target (paragraph 1 of decision VII/30). This framework includes the following focal areas

- (a) Reducing the rate of loss of the components of biodiversity, including: (i) biomes, habitats and ecosystems; (ii) species and populations; and (iii) genetic diversity;
- (b) Promoting sustainable use of biodiversity;
- (c) Addressing the major threats to biodiversity, including those arising from invasive alien species, climate change, pollution, and habitat change;
- (d) Maintaining ecosystem integrity, and the provision of goods and services provided by biodiversity in ecosystems, in support of human well-being;
- (e) Protecting traditional knowledge, innovations and practices;
- (f) Ensuring the fair and equitable sharing of benefits arising out of the use of genetic resources; and
- (g) Mobilizing financial and technical resources, especially for developing countries, in particular least developed countries and small island developing States among them, and countries with economies in transition, for implementing the Convention and the Strategic Plan.

GLOBAL STRATEGY FOR PLANT CONSERVATION TARGETS

1. The global targets for the year 2010 are as follows:

a. Understanding and documenting plant diversity:

(i) A widely accessible working list of known plant species, as a step towards a complete world flora;

(ii) A preliminary assessment of the conservation status of all known plant species, at national, regional and international levels;

(iii) Development of models with protocols for plant conservation and sustainable use, based on research and practical experience;

b. Conserving plant diversity:

(iv) At least 10 per cent of each of the world's ecological regions effectively conserved;

(v) Protection of 50 per cent of the most important areas for plant diversity assured;

(vi) At least 30 per cent of production lands managed consistent with the conservation of plant diversity;

(vii) 60 per cent of the world's threatened species conserved in situ;

(viii) 60 per cent of threatened plant species in accessible *ex situ* collections, preferably in the country of origin, and 10 per cent of them included in recovery and restoration programmes;

(ix) 70 per cent of the genetic diversity of crops and other major socio-economically valuable plant species conserved, and associated indigenous and local knowledge maintained;

(x) Management plans in place for at least 100 major alien species that threaten plants, plant communities and associated habitats and ecosystems;

c. Using plant diversity sustainably:

(xi) No species of wild flora endangered by international trade;

(xii) 30 per cent of plant-based products derived from sources that are sustainably managed;

(xiii) The decline of plant resources, and associated indigenous and local knowledge, innovations and practices that support sustainable livelihoods, local food security and health care, halted;

d. Promoting education and awareness about plant diversity:

(xiv) The importance of plant diversity and the need for its conservation incorporated into communication, educational and public-awareness programmes;

e. Building capacity for the conservation of plant diversity:

(xv) The number of trained people working with appropriate facilities in plant conservation increased, according to national needs, to achieve the targets of this Strategy;

(xvi) Networks for plant conservation activities established or strengthened at national, regional and international levels.

2. These targets provide a framework for policy formulation and a basis for monitoring. National targets developed within this framework may vary from country to country, according to national priorities and capacities taking into account differences in plant diversity.

CBD 2010 goals and sub –targets, and how they relate to Botswana BSAP

The tables below contain the CBD goals and sub-targets, and lists the Botswana BSAP objectives and strategic targets that directly or indirectly address the specific goals and targets

Focal Area: Protect the components of biodiversity

No.	Target	BSAP Objectives and Strategic targets
Goal 1. Promote the conservation of the biological diversity of ecosystems, habitats and biomes		Objective 2
1.1	At least 10% of each of the world's ecological regions effectively conserved.	2.2 2.3 2.7 2.9 4.8
1.2	Areas of particular importance to biodiversity protected	2.1 2.2 2.3 2.9 4.8
Goal 2. Promote the conservation of species diversity		Objectives 2 and 3
2.1	Restore, maintain, or reduce the decline of populations of species of selected taxonomic groups	2.2 2.4 2.5 2.6 2.7 2.8 2.9
2.1	Status of threatened species improved.	2.4 2.5 2.6
Goal 3. Promote the conservation of genetic diversity		Objective 2

No.	Target	BSAP Objectives and Strategic targets
3.1	Genetic diversity of crops, livestock, and of harvested species of trees, fish and wildlife and other valuable species conserved, and associated indigenous and local knowledge maintained.	2.5

Focal Area: Promote sustainable use

No.	Target	BSAP Strategic targets
Goal 4. Promote sustainable use and consumption		Objective 3 and 5
4.1	Biodiversity-based products derived from sources that are sustainably managed, and Production areas managed consistent with the conservation of biodiversity.	2.6 2.8 2.3 3.4 3.5 3.7 3.8 3.9
4.2	Unsustainable consumption, of biological resources, or that impacts upon biodiversity, reduced	3.4 3.5 3.7 3.8 3.9
4.3	No species of wild flora or fauna endangered by international trade	3.8 3.9 4.3

Focal Area: Address threats to biodiversity

No.	Target	BSAP Strategic targets
Goal 5. Pressures from habitat loss, land use change and degradation, and unsustainable water use, reduced		Objective 5
5.1	Rate of loss and degradation of natural habitats decreased	3.1 3.2 3.3 3.5 3.6 5.4 5.5
Goal 6. Control threats from invasive alien species		Objective 5
6.1	Pathways for major potential alien invasive species controlled.	5.6
6.2	Management plans in place for major alien species that threaten ecosystems, habitats or species.	4.3 5.6
Goal 7. Address challenges to biodiversity from climate change, and pollution		
7.1	Maintain and enhance resilience of the components of biodiversity to adapt to climate change	5.3
7.2	Reduce pollution and its impacts on biodiversity	5.7

Focal Area: Maintain goods and services from biodiversity to support human well-being

No.	Target	BSAP Strategic targets
Goal 8. Maintain capacity of ecosystems to deliver goods and services and support livelihoods		Objectives 2, 4 and 5
8.1	Capacity of ecosystems to deliver goods and services maintained.	Objective 5
8.2	Biological resources that support sustainable livelihoods, local food security and health care, especially of poor people maintained	3.3 6.5

Focal Area: Protect traditional knowledge, innovations and practices

No.	Target	BSAP Strategic targets
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Goal 9 Maintain socio-cultural diversity of indigenous and local communities		Objectives 3, 7, 8
9.1	Protect traditional knowledge, innovations and practices	2.10 4.10 6.6 6.7
9.2	Protect the rights of indigenous and local communities over their traditional knowledge, innovations and practices, including their rights to benefit sharing	4.2 4.3 6.6

Focal Area: Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources

No.	Target	BSAP Strategic targets
Goal 10. Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources		Objectives 7 and 8
10.1	All transfers of genetic resources are in line with the Convention on Biological Diversity, the International Treaty on Plant Genetic Resources for Food and Agriculture and other applicable agreements.	7.1 10.2 10.3
10.2	Benefits arising from the commercial and other utilization of genetic resources shared with the countries providing such resources	6.6 7.3 8.3

Focal Area: Ensure provision of adequate resources

No.	Target	BSAP Strategic targets
Goal 11. Parties have improved financial human, scientific, technical and technological capacity to implement the Convention		Objective 1, 4, 8, 10 and 11
11.1	New and additional financial resources are transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with Article 20.	11.4
11.2	Technology is transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with its Article 20, paragraph 4.	8.3