

**UNITED NATIONS DEVELOPMENT PROGRAMME**  
**Programme of the Government of Botswana**

**PROGRAMME SUPPORT DOCUMENT**

Programme Support Number: BOT/96/002

Programme Support Title: Support to the  
Environment Programme

Programme Support Short Title: Environment  
Programme

Executing Agent: Min. of Local Gov't Lands &  
Housing

Implementing Agents: National Conservation  
Strategy Agency

Estimated Start Date: March 1997

Estimated End Date: December 1999

Funding Summary US\$ million

UNDP:	
TRAC (1+2)	\$ 0.45
TRAC 3	\$
Other	\$ 0.05
Cost-sharing:	
Government	\$ 1.35
Global Environment Facility	\$1.76
Third-party	\$ 0.43
 UNDP & cost-sharing:	 \$ 4.04

Administrative and operational services  
(Where applicable)

SOF 03	\$
SOF 07	\$
Other	\$

Parallel financing  
(Where applicable)

Classification Information

ACC sector & sub-sector: Natural Resources  
DCAS sector & sub-sector:

Primary areas of focus/sub-focus: Promoting  
environment and natural resources sustainability

Secondary primary areas of focus/sub-focus:  
Improving data and information; Establishment of  
policy, strategy, planning and programme frameworks for  
sustainable development

Primary type of intervention: Institution building  
Secondary type of intervention: Operational assistance

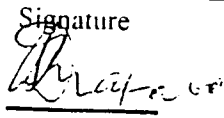
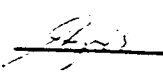
Primary target beneficiaries: Population at large  
Secondary target beneficiaries: Public managers

Government inputs (local currency)

(in kind)	\$ 80,000
(in cash)	\$

**Brief Description of the National Programme Framework and of UNDP Programme Support:**

The PSD identifies a Government programme for UNDP and other support in the area of environment during NDP 8. The areas of intervention are based on priorities identified in the National Conservation Strategy, while recognising existing interventions by Government and donors. Six programme support targets have been identified namely:- Support to the formulation of a national programme; Accelerating community natural resource management; Support to the maintenance of the integrity of wetlands; Supporting Botswana's efforts to meet its goals under global environment agreements; Support for preparation of a national environment monitoring system; and Support for preparation of Botswana's contribution to the Southern African Development Community Water Round Table.

On behalf of:	Signature	Date	Name/Title
Government		<u>24/3/97</u>	O.K. MATAMBO PERMANENT SECRETARY
Executing Agent	_____	_____	_____
UNDP		<u>26/3/97</u>	G.K. KAYIRA RESIDENT REPRESENTATIVE a.i.

# TABLE OF CONTENTS

Page

<b>SECTION I: SUMMARY OF THE NATIONAL PROGRAMME FRAMEWORK</b>	
A.	ANALYSIS OF THE NATIONAL DEVELOPMENT PROBLEM(S)..... 3
B.	OUTLINE OF THE NATIONAL PROGRAMME FRAMEWORK..... 4
1.	Development Objective..... 4
2.	Strategy of the National Programme Framework..... 5
3.	Beneficiaries..... 6
4.	Major Sub-programmes or Components..... 6
5.	Institutional Arrangements..... 7
6.	Funding of the National Programme Framework..... 8
C.	CAPACITY REQUIREMENTS AND ASSESSMENT..... 9
<b>SECTION II: STRATEGY AND TARGETS FOR UNDP SUPPORT</b>	
A.	POLICY FRAMEWORK..... 11
1.	UN Policy Framework and Mandate..... 11
2.	UNDP Mission..... 11
B.	STRATEGY FOR OPTIMAL USE OF UNDP RESOURCES..... 12
C.	PROGRAMME SUPPORT TARGETS..... 13
D.	EXECUTION MODALITY..... 14
E.	MONITORING AND EVALUATION..... 14
F.	RISKS..... 15
G.	LEGAL ASPECTS..... 15
<b>SECTION III: IMPLEMENTATION ARRANGEMENTS</b>	
<b>ANNEXURES</b>	
Annex 1	Proposals
Annex 2	National Policy on Natural Resources Conservation and Development

## ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
CHA	Controlled Hunting Area
CNRM	Community Natural Resource Management
CSN	Country Strategy Note
DANIDA	Danish International Development Agency
DWNP	Department of Wildlife and National Parks
EIA	Environmental Impact Assessment
GEF	Global Environment Facility
GHG	Greenhouse Gases
GOB	Government of Botswana
HIV	Human Immunodeficiency Virus
IFAD	International Fund for Agricultural Development
MFDP	Ministry of Finance and Development Planning
NCS	National Conservation Strategy
NCSA	National Conservation Strategy Agency
NDP7	Seventh National Development Plan, 1991-1997
NDP8	Eighth National Development Plan, 1997-2003
NGO	Non Governmental Organisation
PDF	UNDP Programme Development Fund
PSD	Programme Support Document
SADC	Southern African Development Community
TRAC	UNDP Total Resources Available from the Core
UN	United Nations
UNDP	United Nations Development Programme
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
WMA	Wildlife Management Area

## SECTION I : SUMMARY OF THE NATIONAL PROGRAMME FRAMEWORK

### *A) Analysis of the National Development Problem(s)*

Sustainable development entails sustainable management of the environment and in particular, the maintenance of capital stocks of renewable natural resources. This is notoriously difficult in an arid setting, with limited access to water and a rapidly growing population.

There is clear evidence in Botswana that renewable resources are under pressure, with annual off-take exceeding annual yield being evident, for example, in rangeland degeneration, steep decline in the abundance of larger wildlife species and biomass, depletion of fuel wood around larger settlements, and non-sustainable use of groundwater.

The rapidly growing urban and industrial sectors are associated with increasing pollution of water, land, vegetation and air.

Diminishing or reversing overuse of renewable natural resources is particularly problematic in the absence of enterprise alternatives which provide equal or greater return. Such alternatives are part of the slow process of creating a sustainable and diversified economy, especially in rural areas.

Addressing urban and industrial pollution is administratively and financially costly when ameliorating efforts are made after the fact rather than within physical and industrial planning that reflect appropriate environmental policy, legislation and the Environmental Impact Assessment (EIA) process.

In 1983, the Government of Botswana accepted the need for the preparation of a National Conservation Strategy (NCS) which could ensure the sustainability of all future development. The strategy was approved by Parliament in 1990 as the National Policy on Natural Resources Conservation and Development. In preparing Botswana's National Conservation Strategy and formal policy, great emphasis was placed on consulting at all levels of society and among all interested parties, in order to reach consensus and to create an appropriate sense of public ownership and commitment. Specifically, consultation was widespread at village level and throughout district and central government, non-governmental organisations (NGOs), parastatals, donors, higher education and research units. Surveys covered some 3000 households in villages throughout the country and 30 local authorities (District Councils, Town Councils, Land Boards). Twenty-seven preparatory technical reports were prepared.

In addition to the NCS, several other Government policies support conservation. The Tourism Policy promotes low intensity tourism; the Agriculture Policy advocates food security and sustainable methods of production; while the National Water Master Plan guides the development of the water sector. The National Settlement Policy is geared at rationalising the distribution and development of settlements.

Apart from policy, Botswana has a large body of environmental legislation such as the Water Act, the Agricultural Resources Conservation Act, and the Wildlife Conservation and National Parks Act. Recently, the National Conservation Strategy Agency (NCSA) has initiated the development of environmental assessment legislation to address the possible impact of development projects. It is notable that negative effects of renewable natural resource overuse are normally most felt by the poorer and rural sector of the population, especially female headed households. Any intervention, therefore, with regard to the environment must pay careful attention to ensure the alleviation of poverty particularly among female-headed households and the mainstreaming of gender concerns in all environmental matters.

Poverty is considered a driving variable of environmental degradation. Protection of the environment and adoption of environmentally sustainable approaches to use of natural resources will make important contributions to realising long term economic and employment creation potential of natural resources. By enabling the economic base in rural areas to be expanded and sustained, an important contribution will be made towards poverty alleviation.

Several limitations face the implementation of the programme:-

- i) The greatest threat to Botswana's national conservation programme is slow or no growth in sustainable diversification of the rural economy. Substantial growth through sustainable diversification is essential to reduce pressure on the renewable natural resource base.
- ii) The institutional changes required by the conservation and development programme involve both the strengthening of new institutions (NCSB and NCSA) and the adjustment of civil service relationships. Both are difficult, but necessary for success of the programme.
- iii) Botswana is fortunate to be financially able to undertake environmental commitments of the magnitude of the national environment programme. Nevertheless, this programme is in competition with longer established priorities for both budget and manpower.
- iv) There are signs that 'environment' is losing momentum at the level of government institutions. Re-establishing momentum is essential for realization of the programme.

## ***B) Outline of the National Programme Framework***

### ***1. Development Objective***

The over-riding objective of Botswana's national programme on environment is sustainable development. The programme is specifically geared to conserve the sustainability of the country's natural resources by increasing the effectiveness of their management, not least by co-ordinating the potentially disparate efforts of sectoral ministries and NGOs.

Government's identified strategic goals cover both development and conservation:-

- i) development goals
  - a) development of new, sustainable natural resource uses;
  - b) optimization of existing uses;
  - c) diversification of the rural economy to generate new jobs; and
  - d) education and participation of all members of society in improving the environment.
  
- ii) conservation goals
  - a) conservation of all main ecosystems;
  - b) protection of endangered species;
  - c) maintenance of stocks of renewable resources;
  - d) controlling the depletion of exhaustible resources (e.g., minerals) at optimal rates;
  - e) distributing economic income more equitably, in the interest of conservation;
  - f) cost-effective restoration of degraded renewable natural resources; and
  - g) prevention and control of pollution.

## 2. Strategy of the National Programme Framework

The development of the National Conservation Strategy was a responsibility of the Ministry of Local Government and Lands, assisted by the World Conservation Union (IUCN), reporting, with the support of a set of interministerial committees, to Cabinet and ultimately to the National Assembly.

As a result of the thorough consultation in preparation of the Botswana National Conservation Strategy, the following were identified as the main issues:-

- i) growing pressure on water resources resulting from increase in population, urbanization and development;
- ii) degradation of rangeland through exploitation in conjunction with recurrent drought;
- iii) depletion of wood resources
- iv) over-utilization of specific veld products possessing commercial value;
- v) pollution of air, water, soil and vegetation in both urban, industrial and rural settings.

\* Other important issues given lesser weight were:-

- i) pressure on resources due to growth in human population;
- ii) depletion of wildlife; and
- iii) necessity for greater public awareness of natural resource problems and opportunities.

It was recognized that successful implementation of a programme to address these issues would require institutional measures to enhance cooperation among ministries, central and district government and other interested parties - NGOs, the University, and the private sector, both rural and urban.

As an integral part of strategy preparation, technically and financially feasible measures were prepared to address the principal issues in the form of 'solution packages'. Each package covers a range of technologic, institutional, legal, planning and incentive measures.

Sustainable development opportunities to generate jobs were also identified in:-

- i) animal husbandry and cropping;
- ii) forestry and fisheries;
- iii) wildlife and veld products utilization; and
- iv) tourism.

### 3. Beneficiaries

The main beneficiaries of the environment programme will be the rural people who constitute about 80 percent of the country's population and who also depend directly on natural resources for subsistence. It is estimated that 47 percent of the rural households live below the poverty datum line and a significant number of these are headed by women. Particular attention will, therefore, be paid in all interventions to the disaggregated collection of data with respect to gender, to ensuring that gender specialists are consulted throughout the process, and that careful attention is paid to the impact interventions will have on women. In addition, policy-makers will benefit from improved institutional arrangements.

### 4. Major Sub-programmes or Components

Many environment projects have been implemented by sectoral ministries such as Mineral Resources and Water Affairs, Agriculture, Local Government, Lands and Housing, and Commerce and Industry during NDP 7 and previous plan periods. However, the projects have not resulted from a multi-sectoral planning exercise. There is need for a comprehensive programme on the environment which would be formulated by all concerned ministries so that duplication may be avoided.

In addition to Government interventions, there are also other projects funded by donors, including UNDP. A number of signed projects or projects in an advanced stage of preparation are either integral to the environment support programme or contribute to its objectives, notably:-

- i) Helping Botswana to Fulfil its Obligations under the United Nations Framework Convention on Climate Change (BOT/95/G31);
- ii) Implementation Arrangements for Initial Support to the National Action Plan to Combat Drought and Desertification in Botswana (UNSO/MOU/BOT/96X12);
- iii) Integrated Management of the Okavango River Basin (RAF/95/G43);
- iv) Moderating the Impact of Veterinary Fences and other Threats to the Greater Okavango Ecosystem (Reference number pending);
- v) Global Environment Facility - Small Grants Programme (BOT/92/G51).

The total cost of these projects is estimated at US\$ 2.19 million.

#### 5. Institutional Arrangements

In the Botswana Policy on Natural Resource Conservation and Development Government committed itself to:-

- i) designate Environmental Liaison Officers within each central ministry and local authority;
- ii) establish a National Conservation Strategy Advisory Board (NCSB) under the chairmanship of the Minister of Local Government and Lands;
- iii) establish a National Conservation Strategy Agency (NCSA) to act as secretariat for the Board and to ensure, through liaison, co-ordination and management that the conservation and development programme is realised.

Both the NCSB and NCSA have been established. The Agency has 17 professional and 8 administrative posts. However, the system of Environmental Liaison Officers is not operating satisfactorily.



It is the intention of Government, as yet unfulfilled, to submit to the National Assembly draft legislation, covering:-

- i) the rights and obligations of sectoral ministries, local authorities, parastatals, the NCSB and NCSA with regard to environmental management for sustainable development; and
- ii) the necessity for new development projects, whether public or private, with potentially significant environmental impact, to be preceded by professionally prepared and approved Environmental Impact Assessment.

6. Funding of the National Programme Framework

Government has accepted to lead funding of the conservation and development programme explicit in the strategy and policy, with complimentary contributions from the private sector and donors. Major elements of this funding obligation are:-

- i) cost of establishing and operating the NCSB and NCSA;
- ii) cost of adjustment within existing government organizations; and
- iii) cost of activities and projects arising, e.g.:-
  - a. provision of solution packages,
  - b. formulation and implementation of projects at national, district and village levels,
  - c. conduct of research,
  - d. provision of extension,
  - e. additional education and training facilities,
  - f. conduct of information campaigns,
  - g. creation of data systems,
  - h. preparation of management plans for all National Parks, Game/Forest Reserves, Wildlife Management Areas,
  - i. ratification, when appropriate, of international natural resource conservation conventions, and
  - j. provision of support to conservation NGOs.

The financial commitment of Government to implementing the National Policy during NDP 8 has not been set (11 December, 1996). An approximation is possible from estimated expenditure during NDP 7 on relevant capital projects, plus the annual recurrent costs of the National Conservation Strategy Board and Coordinating Agency.

Annual recurrent costs of the NCS Board and Agency were some US\$ 411,726 (P1,5 million) in 1995/96.

Estimated expenditures for relevant projects over the NDP 7 plan period (actual expenditure for the first four years plus estimates for the last two years), comes to US\$ 8 million. These projects which can be considered as being part of the National Programme Framework are:-

- AG 304 Land Use Monitoring and Planning
- AG 163 National Land Management and Livestock Project
- CI 203 Wildlife Conservation Education
- CI 204 Wildlife Law Enforcement
- CI 205 Development of Department of Wildlife and National Parks
- CI 206 Wildlife Research
- CI 208 Promotion of Wildlife Utilisation
- CI 209 National Parks and Game Reserves
- LG 125 Land Use Planning
- LG 701 Environment Management Activities
- MR 116 Renewable Energies
- MR 216 Ground Water Studies and Protection
- MR 317 Aquatic Vegetation Control
- MR 413 Mining and Air Pollution Control

*C) Capacity Requirements and Assessment*

Capacity limits within UNDP preclude a thorough assessment of the capacities required for successful implementation of a complex programme such as Botswana's programme to implement its National Conservation Strategy and National Policy on Natural Resources Conservation and Development. As a consequence of this judgement, the programme support planning process has attempted to achieve a general understanding of capacity limits, while striving both to elicit from responsible national authorities their sense of requirements and from an independent point of view, to identify major gaps which responsible national authorities may have over-looked in the to and fro of programme planning and management. There are several issues which emerge:-

- i) Botswana is now able to finance all of the recurrent costs arising from its capital development budgets as well as the preponderance of its capital requirements. Botswana's management of external finance, including donor finance, is of a high calibre.
- ii) The process of policy formulation and preparation of supporting legislation frequently involves a measure of outside expertise.

	1992/3		1993/4		1994/5		1995/6	
	Actual (\$)	Actual (\$)	Actual (\$)	Actual (\$)	Actual (\$)	Actual (\$)	Estimate	Source
AG 102 Livestock and Water Development								
AG 163 Land Management and Livestock Proj								
AG 168 Bush Fire Control	2030944	1117020	359852	270602	85550	715502	DDF/IBRD	
AG 304 Land Use Planning and Monitoring	988390	213771	325138	71883	371378	514857	DDF	
AG 358 Soil Conservation	42473	65977	82430	231630	120081	255635	UNDP/DDF	
AG 359 Forestry Development	0	105462	167378	276294	235080	589428	DDF	
CI 203 Wildlife Conservation Education	36752	2767	14125	326929	298128	1275428	DDF/UNDP/EDF/CIDA	
CI 205 Department of Wildlife and National Pa	85556	343241	244681	86552	237370	350914	EDF/DDF	
CI 206 Wildlife Research	55266	156917	144532	248384	649009	1188604	USAID/EIB/EDF/DDF	
CI 209 National Parks and Game Reserves	260900	193071	231707	144710	214979	380631	EDF/DDF	
LG 125 Land Use Planning	502173	1392323	1416376	866833	918198	1505237	EIB/EDF/DDF	
MR 101 Environment Management Activities	158757	854758	642891	2235202	146115	286604	DDF	
MR 116 Renewable Energies	1562	32716	16832	128272	5439	102746	DDF/EDF/UNDP/SIDA	
MR 216 Ground Water Studies and Protection	24057	45939	13172	8435	7256	78853	DDF	
MR 317 Aquatic Vegetation Control	667902	1059842	3417115	971066	614726	75061	DDF/Fr	
MR 413 Mining and Air Pollution Control	1928	21958	831	6483	982	19816	DDF	
	24497	41602	1072	190987	414667	714316	DDF/USAID/NORAD	
	88115	367461	8579152	6064262	168439362	8053632		

Source: 1996 Botswana Government Project Review

- iii) Macro-economic planning is of an excellent standard. Sectoral and project planning operate at a high standard, but frequently requires outside expertise as a minor supplement. Annual budgeting proceeds at a high standard. The tracking and control of expenditure is excellent.
- iv) Institutional capacity (capacity to design and efficiently operate government institutions), is at a high level. However, skilled management is spread too thinly and the process of work planning and programming can be weak, with consequent loss of delivery on time.
- v) It follows from weakness in management, work planning and programming that reporting, monitoring and evaluation tend not to be timely and incisive.
- vi) Human resources at technical and professional level are of good to excellent quality, but spread too thinly, especially at district level and in rural areas. Technology transfer through training and provision of both short and long-term expertise still plays a valuable role in Botswana's development when either very specialized or highly experienced experts are used. On the other hand, professional volunteers also are widespread and continue to play a valuable role, especially in the field, because of high demand and the limited stock of citizen professionals.
- vii) In general, the UNDP support programme for the national programme on environment has not been designed to reflect the above generalities, but to respond to capacity gaps apparent in the area of intervention which it is proposed to support. These are largely assistance to increase institutional capacity, but include policy formulation, supplementing professional capacity in specific areas, and supporting programme management.

## SECTION II : STRATEGY AND TARGETS FOR UNDP SUPPORT

### A) *Policy Framework*

#### 1. UN Policy Framework and Mandate

Proposed programme support for management of the Botswana environment conforms with applicable UN General Assembly resolutions, viz:-

- i) 44/211 which emphasizes the human dimension of development, including maximum participation at grassroots level of local communities and non-governmental organizations, and calls for formulation of integrated national programme frameworks;
- ii) 47/199 which prioritizes building capacity for national execution;

The environment programme specifically seeks to enhance in Botswana the global commitments and goals defined in:-

- i) Agenda 21 from the United Nations Conference on Environment and Development (1992);
- ii) the United Nations Framework Convention on Climate Change (1992);
- iii) the United Nations Convention on Biological Diversity (1992);
- iv) the United Nations Convention to Combat Drought and Desertification (1994);  
and
- v) the UN Special Initiative on Africa (1995).

In addition, the global goals with regard to poverty alleviation, population, and the betterment of lives of women as enunciated in the following plans of action are cross cutting areas of concern to the environment:-

- i) Programme of action adopted at the International Conference on Population and Development (1994)
- ii) Programme of action of the World Summit for Social Development (1995)
- iii) Platform for Action adopted at the Fourth World Conference on Women (1995)

## 2. UNDP Mission

The programme is congruent with the substantive theme of environmental problem resolution and enhanced natural resource management specified in UNDP Governing Council decision 90/34.

The environment programme follows directly from the GoB/UN Country Strategy Note, 1997-2003, and UNDP Advisory Note for the Country Cooperation Framework 1997 - 2003, which set out the strategic and programmatic framework for UN assistance to Botswana during the period of Botswana National Development Plan 8.

This strategy mandates:-

- i) enhancing GOB capacity to implement NDP 8 policies and strategies;
- ii) focusing UNDP effort on sustainable human development, through programme assistance in five main areas:-
  - a. job creation/poverty alleviation;
  - b. advancement of women;
  - c. HIV/AIDS; and
  - d. sustainable management of the environment.

The environment programme explicitly acknowledges the important and positive contribution of job creation, poverty alleviation, education and empowerment at local level, particularly of women, to better management of the environment. Particular attention will, therefore, be paid in the environment programme to the linkages that can be established between environment, poverty alleviation, and enhancing the well-being of women.

Programme support for environment in the sixth UNDP country programme for Botswana follows smoothly from efforts made during the fifth country programme. This is because the fifth programme had as an area of concentration, natural resources conservation and utilization; UNDP had been requested by the Government to focus attention on institutional strengthening within each area of concentration; and had begun conversion from projects to programme planning.

At an inter-programme level, in the sixth country programme, the linkage of the environment programme with job creation, poverty reduction, human resource development planning and advancement of women are synergistic.

### ***B) Strategy for Optimal use of UNDP Resources***

A scoping mission considered possible areas of UNDP support in October 1996, taking into account priorities identified in the National Conservation Strategy as well as ongoing measures to address them.

Consequently, the UNDP strategy for resource use has two elements:-

- i) to initiate first steps which will lead to the adoption by Government of a proper national programme on the environment by NDP 9;
- ii) to initiate immediate support to a number of targets which will be relevant for the envisaged national programme either:-
  - because they address priority concerns identified in the strategy and for which no or few initiatives have been started;
  - because it will build essential capacities which will be necessary for such a national programme to be implemented.

### *C) Programme Support Targets*

Six programme support targets have been identified based on specific requests from the Government and review of:-

- i) national environment programme implementation status;
- ii) preparatory documentation for NDP 8;
- iii) donor programmes;
- iv) comparative advantage in capacity building of the UN system.

The programme support targets are:-

- i) institutional review of the NCSA and Board;
- ii) accelerating Community Natural Resource Management, with specific emphasis on poverty alleviation and focus on the impact on female-headed households;
- iii) support to the maintenance of the Integrity of Wetlands, with particular emphasis on the sustainability of Botswana's tourism base to ensure employment creation and poverty alleviation;
- iv) supporting Botswana's efforts to meet its goals under Global Environment agreements;
- v) support for preparation of a National Environment Monitoring System; and;
- vi) support for preparation of Botswana's contribution to the Southern African Development Community Water Round Table.

During the first half of 1997, Government intends to review the structure and responsibilities of the NCSA. This will assist the NCSA to define more clearly its medium term goals and programme of work.

Community Natural Resource Management is a relatively new and extremely promising thrust in Botswana, which has heretofore been heavily supported by one donor (USAID) at a level which might not be maintained by that donor throughout NDP 8. The challenge is co-ordination of substantial donor interest in the application of effort. A premise of programme support for this thrust is that rangeland degeneration, depletion of firewood resources, overuse of veld products and conservation of wildlife can be addressed effectively, albeit not totally, through a community management approach.

The relative importance of Botswana wetlands and the Okavango in particular, have recently become more than usually prominent because of Botswana's imminent ratification of the Ramsar Convention and proposals by Namibia to abstract water from the Okavango River for use in Windhoek and its surroundings.

Assisting Botswana to augment its capacity to meet the obligations of global environment conventions is an established commitment for UNDP assistance.

The establishment of an environmental monitoring system and preparation of a State of the Environment Report supports a commitment made by Government in the National Policy on Natural Resource Conservation and Development.

Preparation of Botswana's Contribution to the SADC Water RoundTable supports the management of a resource which has been identified as a priority in the National Policy on Natural resource Conservation and Development.

#### *D) Execution Modality*

The Ministry of Local Government, Lands and Housing will be entrusted with the execution of the programme of support. The National Conservation Strategy Agency will be the implementing agent for support targets i-v. The Department of Water Affairs will implement target vi.

It is the intention to go progressively into NEX in order to develop the capacity of Government so that when a full environment programme is developed during NDP 9, the Government will be empowered to implement it.

#### *E) Monitoring and Evaluation*

Basic units for preparation of programme reporting are:-

- i) quarterly financial reports for each discrete intervention, sub-programme or project;



### SECTION III : IMPLEMENTATION ARRANGEMENTS

Financial resources identified for UNDP support to Botswana's environment programme are:-

	US\$ million
i) UNDP PDF	0.05
ii) UNDP TRAC	0.45
iii) Global Environment Facility	1.76
iv) DANIDA	0.43
<b>Total</b>	<b><u>2.69</u></b>

This total can be expected to increase substantially during programme negotiation through application of Botswana Government co-financing and additional donor support. Government co-financing will be according to cost-sharing arrangements in effect between Government and UNDP.

The UNDP support programme in environment constitutes some one quarter of the UNDP Botswana programme as a whole.

Tables 2 - 4 present information on the interventions which will be funded from UNDP TRAC funds and Government Cost-Sharing, specifically:-

- i) outputs and success indicators for each programme support target;
- ii) workplan for 1997; and
- iii) programme support budget.

**Table 2: Outputs and Performance Indicators**

Programme Support Targets		Outputs		Performance Indicators		
No.	Title	No.	Title	Year 1	Year 2	Year 3
T01	Support to institutional review of NCSA and Board	01	Responsibilities, functions, and institutional location clarified	Reference group established ToR prepared Workshop to initiate programme held Consultant engaged Report prepared	NCSA work programme developed	Workshop on development of national environment programme
T02	Accelerating Community Natural Resource Management	01	Inventory of natural resources in 3 selected community areas	Reference group formed ToR prepared Consultant engaged 3 communities identified and consulted Inventory report produced 3 Selected communities mobilised and sensitised in NRM	Study tour within region	Seminar held to review implementation progress
		02	Institutional reinforcement and capacity building	Government extension officers trained in implementing CBNRM program NGOs trained in facilitating community participation in CBNRM		
		03	Community projects	Community trusts established + trained in project management Community projects formulated		

No.	Title	No.	Title	Year 1	Year 2	Year 3
T03	Support to the Maintenance of the Integrity of Wetlands	01	Inventory of wetlands	Reference Group established ToR prepared Consultant engaged Affected parties consulted Inventory conducted Final report produced		
		02	Wetland policy and strategy	Reference group established ToR prepared Consultant engaged Reference group formed Workshop held	Consultations undertaken Draft policy and strategy prepared	Policy finalised Wetlands mapped Wetlands gazetted
		03	Wetland management plan for sowa		Reference group established ToR prepared Consultant engaged Consultations done Management plan completed Consultant engaged	
		04	Inventory of contextual threats to Okavango system	Reference Group established ToR prepared	National contextual threats identified	

<p>T04 Support Botswana's Efforts to Meet its Obligations under Global Environment Agreements</p>	<p>01 Preliminary report to the CoP of the Biological Diversity Convention</p> <p>02 Biological Diversity policy and strategy</p> <p>03 Action plan</p>	<p>Reference Group formed</p> <p>ToR prepared</p> <p>Consultant engaged</p> <p>Implementing organisations consulted</p> <p>Report approved and submitted to CoP</p>	<p>Reference Group established</p> <p>ToR prepared</p> <p>Consultant engaged</p> <p>Stakeholders consulted</p> <p>Workshop held</p>	<p>Draft policy and strategy prepared</p> <p>Policy approved</p> <p>Reference committee established</p> <p>ToR prepared</p> <p>Consultant engaged</p> <p>Workshop held</p> <p>Action plan completed</p>
<p>T05 Support for the Preparation of a National Environment Monitoring System</p>	<p>01 Strategic plan for environmental monitoring system</p> <p>02 Environment Database</p> <p>03 State of the Environment report</p>	<p>Reference group established</p> <p>ToR prepared</p> <p>Consultant engaged</p> <p>Procedures for coordinated national environmental monitoring established</p> <p>Reference group formed</p> <p>ToR prepared</p> <p>Consultant engage</p> <p>Consistent data gathering system established</p>	<p>Data collectors and managers trained</p> <p>Data collected</p> <p>Data processed and stored</p> <p>Study tour within region</p>	<p>Reference group established</p> <p>ToR prepared</p> <p>Consultant engaged</p> <p>State of the Environment Report prepared</p>

T06 Support Preparation of Botswana's Contribution to the SADC Water Round Table	01 Report to Round Table	Reference group established ToR prepared Consultant engaged Major stakeholders consulted Final report prepared		
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Table 3

Workplan for 1997

A	B	D	E												
			Management actions, responsibility and deadlines												
			E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
T01	1	Reference group established				*									
	1	ToR prepared				*									
	1	Workshop held				*									
	1	Consultant engaged				*									
T02	1	Reference group formed					*								
	1	ToR prepared					*								
	1	Consultant engaged					*								
	1	3 communities identified/ consulted								*					
	1	Inventory report prepared									*				
	2	3 selected communities mobilised												*	
	2	Extension officers trained												*	
T03	1	Reference group established				*								*	
	1	ToR prepared				*								*	
	1	Consultant engaged				*								*	
	1	Affected parties consulted					*							*	
	1	Inventory conducted						*						*	
	1	Final report produced									*			*	
	2	ToR prepared				*							*		
	2	Reference group established				*								*	
	2	Consultant engaged				*								*	
	2	Workshop held				*			*					*	
	3	Reference group established				*				*				*	
	3	ToR prepared				*				*				*	
	3	Consultant engaged				*			*					*	
	1	Reference group formed				*			*					*	
	1	ToR prepared				*			*					*	
	1	Consultant engaged				*			*					*	
	1	Organisations consulted				*			*					*	
	1	Report approved and submitted				*			*					*	
	1	Reference group established				*			*					*	
	1	ToR prepared				*			*					*	
1	Consultant engaged				*			*					*		
1	Monitoring procedure established				*			*					*		
1	Data gathering system established				*			*			*		*		
1	Reference group established				*			*			*		*		
1	ToR prepared				*			*			*		*		
1	Consultant engaged				*			*			*		*		
1	Major stakeholders consulted				*			*			*		*		
1	Final report prepared				*			*			*		*		

## APPENDIX 1: SUPPORT PROPOSALS

### PROPOSAL 1

#### Support to the Institutional Review of the National Conservation Strategy Agency and Board

##### 1.0 Background

Responsibility for the management of natural resources is shared by several ministries and departments such as the Ministry of Mineral Resources and Water Affairs, Ministry of Agriculture, and Ministry of Local Government, Lands and Housing. In addition, many statutory boards, such as the Water Utilities Corporation, the Agricultural Resources Board, and the Water Apportionment Board, have been established to administer certain resources. The extent of sectoral responsibilities is not always clear resulting sometimes in overlap or neglect of certain issues.

The National Conservation Strategy Coordinating Agency and Board, together with the system of environmental liaison officers, were established in part with the aim of addressing the problem of inadequate coordination. The NCSA and NCSB location in the Ministry of Local Government Lands and Housing was provisional pending further consultations.

The members 17 of the NCS Advisory Board, drawn from NGOs, Government, and parastatals have been appointed. The powers of the Board are advisory. Many ministries have appointed environmental liaison officers. The NCSA, which implements the decisions of the Board, is operating with a complement of 22 professional posts distributed among the following divisions:-

- i) Environmental Research and Monitoring.
- ii) Programmes and Projects.
- iii) Environmental Education.
- iv) Waste Management.

The broad tasks of the Board are to:-

- i) cooperate, consult and work with all central Government ministries, local government authorities, parastatals, and all other organisations in the broad interest of ensuring that the intentions of Government concerning environmental conservation are achieved;
- ii) promote the coordination of environmental policy formulation and implementation by all institutions;
- iii) promote and oversee the implementation of legislation and policies relating to the monitoring of the environment;
- iv) help to increase the environmental awareness of society;

- v) assess the adequacy of existing environmental legislation and make proposals for new legislation;
- vi) supervise regular updating of the NCS; and
- vii) prepare regular State of the Environment review.

During 1997, Government will undertake an organisation and methods exercise which will, among others, review the powers, functions, responsibilities, staffing, and location of the NCS institutions.

## 2.0 Outputs

Outputs will be:-

- i) a report outlining the responsibilities, functions, and institutional location of the NCSA.

The report will also help the NCSA define more clearly its goals and work programme and facilitate the development of a comprehensive environment programme.



## PROPOSAL 2

### Support for Community Based Natural Resource Management

#### 1.0 Background

The Department of Wildlife and National Parks (DWNP), working with local authorities and the Ministry of Local Government, Lands and Housing, has zoned all Controlled Hunting Areas (CHAs) in Botswana into six categories:-

- i) commercial multi purpose;
- ii) commercial photography;
- iii) community managed wildlife utilization in Wildlife Management Areas (WMAs);
- iv) community photographic areas in WMAs;
- v) community managed wildlife utilization in livestock areas; and
- vi) other CHAs.

The three community categories cover some 50 CHAs.

The CHAs for community management are mostly in the western parts of Botswana, which are characterised by high levels of poverty.

The DWNP Natural Resource Management Project has demonstrated that Botswana communities can organize to manage wildlife quotas sustainably, at substantial profit, when provided the security of tenure offered by a 15 year lease and the opportunity to contract with commercial tourism and safari operators.

In these demonstrations, wildlife has become a means to sustainably diversify the rural community's economy. The equitable allocation of the benefits from the wildlife quota are no doubt increasing the people's perception of the value of the resource and the importance of its management for sustained yield.

The immediate constraint on expansion of this Community Natural Resources Management (CNRM) effort is staffing, especially at district level. A medium term constraint is rebuilding wildlife populations to a point at which consumption off-takes become commercially attractive.

The potential exists for wildlife CNRM to take on a broader identity, as a national rural development programme. At a general level, CNRM qualifies as a community based programme to diversify rural economic activity and reduce poverty. At a specific level, there is merit in systematically extending quota devolution to community level in forestry, fisheries and veld products of commercial interest. To be effective, this work must be done by local authorities.

The draft poverty study<sup>1</sup> recommends Government institute a continuing, labour intensive public works programme. One focus for such a programme could be works, supporting CNRM, through restoration, maintenance or enhancement of renewable natural resources.

In 1995, the Ministry of Agriculture, recognizing the potential of CNRM for management of resources within the ministry's mandate, requested the International Fund for Agricultural Development (IFAD) to consider credit support for a country-wide CNRM effort. In August 1995, an interministerial task force, chaired by DWNP, began to plan for the country-wide programme.

The present schedule for preparation of the programme is:-

- |      |                       |   |                         |
|------|-----------------------|---|-------------------------|
| i)   | next task for meeting | - | January 1997            |
| ii)  | stake holder workshop | - | February 1997           |
| iii) | formulation mission   | - | March/April 1997        |
| iv)  | appraisal             | - | July 1997               |
| v)   | credit negotiation    | - | August 1997             |
| vi)  | credit approval       | - | September/December 1997 |

Extending CNRM on a country-wide basis is ambitious and likely to be the work of a generation. The IFAD credit programme might cover a time frame of 10-15 years.

Specification of UNDP support to this process requires UNDP involvement in i-iii above (1.9). Potential components for UNDP support include technical assistance in the expansion of the programme.

## 2.0 Outputs

Outputs of UNDP support will be:-

- i) inventory of natural resources in three community areas;
- ii) institutional reinforcement and capacity-building; and
- iii) development and support to community projects.

The design of projects as well as capacity-building will pay particular attention to the needs of women who are important users of natural resources. In addition, the above interventions will address poverty which is most prevalent in rural female-headed households.

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<sup>1</sup> Botswana Institute for Development Policy Analysis. Study of Poverty and Poverty Alleviation in Botswana, Phase One (Draft) 1996.

## PROPOSAL 3

### Maintaining the Integrity of Botswana's Wetlands

#### 1.0 Background

Wetlands are globally acknowledged as centres of biological diversity, mitigators of floods, nutrient sinks, purifiers of polluted waters, water sources and generally life support systems for many of the earth's life forms. The Ramsar Convention defines wetlands as: ".....areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salty, including areas of marine water the depth of which at low tide does not exceed six metres."

Several types of wetland have been identified in Botswana. The most prominent in terms of size are the Okavango Delta, the Chobe/Linyanti River and Makgadikgadi Pans systems. These and others have supported pre-historic and modern civilisations while playing a crucially important ecologic role in maintaining biodiversity. This is not surprising. Botswana is predominantly a semi-arid country whose wetlands are pivotal in determining human settlement and wild animal distribution.

Botswana lacks a coherent policy on management of wetlands as a sustainable resource. This gap in national planning strategy has resulted in wetlands being perceived by individual stakeholders as important only for sectoral interests. For example, the water authority perceives rivers and deltas as sources of water, the wildlife authorities see them as habitats for wildlife, the fisheries authorities see them as sources of fish, while tourism authorities see them as scenic areas with aesthetic qualities that attract tourists. These sectoral interests have led to conflicts over the utilisation of wetland resources and created threats to their integrity and survival. Nevertheless, these sectoral interests can be accommodated, if the wetland systems are managed as part of a natural resource system capable of satisfying varied needs under coordinated management.

This proposal is intended to initiate a process for sustainable wetland management and utilization and contribute to Botswana's implementation of the Ramsar Convention which will become effective for Botswana in April 1997.

Sua Pan, because of its combination of industrial development and ecological significance, constitutes a challenge to sustainable wetlands management. For this reason, it should have a high priority for management planning.

In addition, although a lot of work has been done on the Okavango, a comprehensive identification of long term threats as well as a vision of the delta are necessary.

An inventory of the types and importance of wetlands from social, economic and ecological perspectives is a starting point for the above tasks.

## 2.0 Outputs

Outputs will be:-

- i) inventory of wetlands;
- ii) wetlands policy, strategy and strategy;
- iii) wetland management plan for sua pan; and
- iv) inventory of contextual threats to the Okavango in Botswana.

The conservation of the country's precious wetland ecosystems will maintain the base for tourism which is important for both rural development and poverty alleviation.

## PROPOSAL 4

### Enabling Botswana to fulfil its Commitments to the UN Convention on Biological Diversity

#### 1.0 Background

The Convention was opened for signature at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil in June 1992 and became legally binding on 29 December 1994. Botswana ratified the Convention on Biological Diversity in October 1995.

The Convention is intended to ensure effective international action to curb the destruction of biological resources, habitats and ecosystems; and to maintain sustainable biological diversity.

Elements of the Convention of special interest to Botswana are:-

- i) adoption of policy and practices that conserve national biological resources;
- ii) preparation of national strategies on conservation of biological diversity and incorporation of such biodiversity strategies into national development plans;
- iii) developed countries to assist in funding developing countries in the implementation of the Convention;
- iv) recognition and fostering of traditional methods and knowledge held by indigenous people for the management and sustained utilisation of biological resources;
- v) protection of ecosystems, natural habitats and maintenance of viable populations of species in natural surroundings;
- vi) strengthening national capabilities through human resource development and institution building;
- vii) relevant research and training, public awareness and education;
- viii) conduct of environmental impact assessments, and implementation of plans arising which minimise adverse impacts of economic development; and
- ix) regulation of access to genetic resources.

Botswana has protected and remains with a full range of representative communities, natural habitats and ecosystems. Approximately 40% of Botswana lies within national parks, game reserves, wildlife management areas and forest reserves.

## PROPOSAL 5

### Support for Preparation of a National Environment Monitoring System and State of the Environment Review

#### 1.0 Background

The National Policy on Natural Resource Conservation and Development acknowledges the legitimacy of widespread concerns within Botswana over pollution and exploitation of renewable natural resources. Among other means to address these issues, the policy requires the National Conservation Strategy Advisory Board to produce a State of the Environment Report (SER) on a yearly or biennial basis.

Broadly speaking, an SER is a comprehensive document which sets out the state and trends in the fundamental, natural, human and economic stocks of a nation. Its production requires the collation of disparate information sets, of varying quality, generated by different institutions, using different methods, for different purposes. Production of an SER is in one sense, a scholarly work. A good SER is a valuable tool for national resource conservation.

An immensely useful complement to the comprehensive SER stock-taking is a deft, cost-effective monitoring system which can alert managers to unexpected alterations in an environment through repeated systematic sampling of a carefully selected set of fields. Intensity of the sampling requires judgement on the trade-offs of confidence, precision and cost. Monitoring reports are a most valuable input to the SER production process. They are specifically designed to cover key elements, in an objective, valid, reliable and low cost fashion.

The concept of environment, covering basic elements of society and economy as well as man's physical and biologic worlds, is a domain of many institutions. In order to overcome their institutional boundaries and create linkages useful for comprehensive understanding, requires major effort in coordination and management.

It follows that consensus on objectives, tasks and outputs is a major first step in the production of an SER and creation of an environment monitoring system.

Subject coverage is inevitably an issue. Fortunately, in the case of Botswana, guidance is provided by the 'issues' formally identified in the National Policy of Natural Resources Conservation and Development. The judicious addition of issues achieving prominence since 1990 would be sensible.

The methods to be applied in monitoring and production of an SER are subjects for decision. In addition to experience in data gathering and information processing from traditional on-the-ground work, Botswana Government has notable experience with using fixed-wing aircraft for systematic survey in the Department of Wildlife and National Parks and using satellite data for environmental analysis in the Ministry of Agriculture.

Geographic Information Systems based on ARC/INFO software are available in the University of Botswana, Ministry of Local Government, Lands and Housing and Ministry of Agriculture.

Botswana is fortunate in having within Government, the University, NGOs and several industrial firms, a wealth of relevant data bases and information, which require assessment, winnowing and collation in order to form the factual basis for an SER.

Some preliminary work on how the SER might be prepared has been done by the NCSA in collaboration with IUCN through NORAD support.

Linking the databases, through a computer process, allows monitoring, SER production, analysis of environmental relationships and communication between institutions and experts to be swifter, broader and more profound. Such electronic linkage requires a substantial input of sophisticated information technology and is a medium to long-term process.

Botswana unquestionably has substantial stocks of scientific, economic and sociologic expertise able to analyze and present the state of understanding for each issue defined in the national policy. What is missing is the actual experience, in country, with producing an SER and creating an effective broad based monitoring system. Getting the process moving and carrying it through the first SER and monitoring report can be facilitated by Consultant expertise.

The complexity of the universe of environment, the variety of stakeholders, institutions, experts, sources of information and methods available, suggest the need to start with a preparatory project, to facilitate consensus on how to create a monitoring system and produce the first national SER.

## 2.0 Outputs

- i) Strategic plan for environment monitoring
- ii) Environmental database
- iii) State of the Environment report

The state of the Environment report will disaggregate data by gender where appropriate.

## **PROPOSAL 6**

### **Support for Preparation of Botswana's Contribution to the Southern African Development Community Water Sector Round Table**

#### **1.0 Background**

Recent droughts in Southern Africa have demonstrated the vulnerability of the economies of the region to water shortage. The impact of water scarcity and the failure to plan adequately for it, have made it increasingly difficult to achieve national and regional development objectives, including the alleviation of poverty. Water resources will become more expensive in future and more difficult to provide, thus affecting the lives of women most. Failure to plan for water scarcity and recurrent drought will deter future investment. There is need for an assessment of water availability and requirements, and of the institutional and regulatory frameworks responsible for water management.

In 1995 the SADC Ministers responsible for water called for a Round Table to address water issues. The SADC Water Round Table is based on the realisation that increasing reliance on shared water resources and the increasing expense of water resources calls for a long term approach to planning for its use and allocation among competing sectors. The principal purpose of the Round Table is to mobilise additional development assistance and to facilitate the most effective use of resources. The Round Table is expected to result in monitorable commitments in the form of:-

- i) policies and regulatory reform,
- ii) institutional capacity building, and
- iii) investment in physical infrastructure that would achieve long term security in the region.

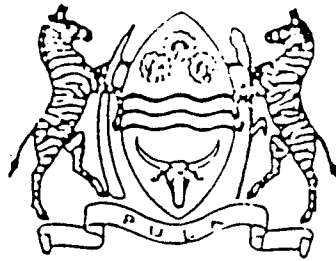
Botswana prepared in 1991 a comprehensive National Water Master Plan which assessed water resources demand up to the year 2020.

The primary output of the consultancy will be a country issues report (Situation Report) which will constitute Botswana's contribution to the Round Table. The report will be based on the National Water Master Plan.

#### **2.0 Outputs**

- i) Botswana Water Sector Situation report





REPUBLIC OF BOTSWANA

Botswana

National Conservation Strategy

NATIONAL  
POLICY ON NATURAL RESOURCES  
CONSERVATION AND DEVELOPMENT

GOVERNMENT PAPER NO. 1 of 1990

As approved by the National Assembly  
On the 17th December 1990

## 1. INTRODUCTION AND BACKGROUND

- 1.1 In 1983 the Government of Botswana accepted the need for the preparation of a National Conservation Strategy (NCS). This need emerged from close co-operation between the Government and UNEP in the preparation of the Clearing House Mission Report. That Report reflected the importance attached to identifying policies and other measures, which would ensure, whenever and wherever possible, the sustainability of all future development.
- 1.2 The Government attaches great importance to the wide range of natural resources and features which exist throughout Botswana and especially in protected areas: National Parks, Game Reserves, Forest Reserves and the designated Wildlife Management Areas. These resources include fresh air, clean waters, vegetation, livestock, wildlife, soils, human, cultural, visual, archaeological and other related features. It is upon these resources that many people depend directly for their livelihood. Some of the resources are appreciated internationally for their unique values: the Okavango Delta and the Central Kalahari Game Reserve, for example.
- 1.3 There is clear evidence that many of these resources are under pressure. In some cases, this has given rise to concern about the ability of the resources to sustain the needs of future generations. The impacts of these development pressures are manifest by:
  - a) the depletion of fuelwood resources, groundwater resources, wildlife species and indigenous veld products resources;
  - b) land erosion;
  - c) urban and rural pollution; as well as
  - d) rangeland degradation.
- 1.4 The Government has long been committed to 'sustainable development'. It is one of the four main planning objectives of the National Development Plan. Sustainable development entails ensuring that:
  - a) present generations consume no more than the annual output or yield of those natural resources which are renewable; and that thereby
  - b) future generations have access to capital stocks of natural resources, at least similar to those presently available.

Achievement of sustainable development calls for comprehensive evaluation of environmental and economic implications before major new developments are undertaken. Consistent with this, the Natural Conservation Strategy is specifically geared:-

- a) at a minimum, to conserving the sustainability of the country's natural resources;
- b) at best, to improving the ways in which these resources are used, so that the environment is enhanced. The applies particularly wherever new developments, settlements and industries are involved.

The importance attached to 'sustainable development' in Botswana mirrors the experience in other countries where National Conservation Strategies have been prepared. The concept is supported by SADCC neighbours, as well as by many international donor agencies and conservation organizations; UNEP and the World Conservation Union, in particular.

- 1.5 Against this background the Government of Botswana has prepared a National Conservation Strategy, in full consultation with all levels of society in Botswana.

## 2. STRATEGY GOALS

- 2.1 The primary goals in formulating the Strategy are to pursue policies and measure which:-

- a) increase the effectiveness with which natural resources are used and managed, so that beneficial interactions are optimised and harmful environmental side-effects are minimized;
- b) integrate the work of the many sectoral Ministries and interest groups throughout Botswana, thereby improving the development of natural resources through conservation, visa versa.

- 2.2 A series of detailed Strategy goals has also been identified by Government. These specifically cover:-

### Development goals, namely:

- i. the development of new and better natural resources uses, which are sustainable;
- ii. the optimization of the existing uses which are made of all natural resources;

- iii. the development of multiple, rather than single purpose, natural resource uses;
- iv. the diversification of the rural economy so as to generate new jobs;
- v. the increased education of, and participation by, all members of society in improving the environment;
- vi. the development of links with neighbouring countries in conserving resources;
- vii. the establishment of a balance between population growth and the supply of natural resources.

Conservation goals, namely:-

- i. the conservation of all main ecosystems, wildlife and cultural resources;
- ii. the protection of endangered species;
- iii. the maintenance of stocks of renewable resources (e.g. veld products), whilst increasing their sustainable yields;
- iv. the control of the depletion of exhaustible resources (e.g. minerals) at optimal rates;
- v. the distribution of incomes and rewards more equitably, in the interests of conserving natural resources;
- vi. the cost-effective restoration of degraded renewable natural resources, including improved capacity for regeneration of the veld;
- vii. the prevention and control of pollution.

2.3 Fulfillment of these detailed goals entails designing development so as to minimize environmental costs and to enhance the quality of the environment. It likewise requires that, when 'trade-offs' have to be made involving the use of natural resources, full account is taken of the environmental and social costs as well as the economic costs.

### 3. MAIN ENVIRONMENTAL ISSUES AND OPPORTUNITIES

3.1 Extensive public consultations have been carried out by Government in identifying the main environmental issues and opportunities, which need to be addressed in formulating and implementing the strategy.

3.2 The main environmental issues/problems requiring solutions are as follows:

Issue (A) Growing pressure on water resources, resulting from increases in population, urbanization and development;

Issue (B) Degradation of Rangeland Pasture Resources, due to a variety of management and other factors. Quantification is difficult. However, two facts are generally recognized, namely that:

- a significant proportion of the national range is undergoing degradation; and
- such degradation cannot be ascribed solely to drought;

Issue (C) Depletion of wood resources both in commercial harvest of forests and as the main source of domestic fuel in most settlements. Wood harvesting has been largely undertaken in an uncontrolled manner. Insufficient regard has been paid to ensuring that yields are sustainable;

Issue (D) Over-use or exploitation of some veld products (natural products of the desert: fruits, fungi, tubers, etc.). This has damaged their regenerative capacities to provide for both subsistence and commercial needs;

Issue (E) Pollution of air, water, soil and vegetation resources. As a result human life support systems in both urban (including industrial) and rural environments are affected.

The Government of Botswana recognizes the dependence of all sustainable development upon water resources. Accordingly the need to pay priority attention to these resources is accepted. At the same time, both the restoration and conservation of rangelands are regarded as matters of particular significance, in view of the importance of the livestock industry to the nation.

- 3.3 The Strategy also addresses other issues which have an important bearing upon the conservation of natural resources and thus the quality of the Botswana environment. These include resource pressures due to the growth in human population; the depletion and conservation of wildlife resources; and the need for improving public awareness about natural resource problems and opportunities.
- 3.4 The main sustainable development opportunities based on natural resources, which require support from the Government and all interested parties are:
- a) Opportunities in the Livestock Sector through the restoration of degraded rangelands and the adoption of improved management techniques leading to increased offtakes;
  - b) Opportunities in the Arable Sector related in particular to the irrigated production of food and cash crops, in the interests of maintaining strategic food supplies;
  - c) Opportunities in the Forestry Sector for increasing its contribution to the national economy through improved management methods;
  - d) Opportunities in the Fisheries Sector for significantly increasing the annual sustainable harvest from both the natural waters of the country and several man-made dams;
  - e) opportunities for establishing and developing a Wildlife Utilization Industry, consistent with the Government's Wildlife Conservation Policy;
  - f) Opportunities for sustained development of both existing and new Veld Products, based on the results of research;
  - g) Opportunities for expanding the Tourism Sector, consistent with the proposed Tourism Policy;
  - h) Opportunities for developing the Manufacturing and Related Industries Sector. This requires that due regard be paid to the need both for the removal of serious development constraints and for the establishment of new initiatives. These were identified at the National Conference on Strategies for Private Sector Development, held in 1988.
- 3.5 Major aims associated with the realization of these opportunities are the generation of more jobs and the

4.8 In outline, six general types of incentives are envisaged, namely those which will:-

- i. promote good pasture management;
- ii. encourage rangeland restoration;
- iii. encourage diversification into new economic enterprises through an extension of FAP and other instruments;
- iv. provide annual awards to the winners of Environmental Improvement Competitions;
- v. encourage land tenure changes, especially in communal grazing which lead to improved management;
- vi. establish new forms of investment opportunities.

At the same time the Government intends to investigate in detail the design of appropriate disincentives for possible use in conserving the country's natural resources.

4.9 It is recognized that legislative reform can play an important role both in addressing most of the key issues and in supporting diversification. However, it is acknowledged that, in the short-term, there is a limit to the improvements which can be achieved through legislative measures. This applies to measures of all types: enforcement, reform and innovation. There is general recognition that:-

- a) too much reliance upon legislation should be avoided;
- b) high priority needs to be accorded to persuading and encouraging the public to act in ways which are environmentally benign.

Subject to these caveats, the Strategy calls for a series of improved enforcement measures and amendments to existing laws. These include improving the penal sanctions for 'law breakers', so that punishments fit the offenses, and encouraging the participation of local NGOs in enforcement activities. The laws and items for which amendments are proposed include the Forest Act, the National Parks Act, the Fauna Conservation Act, the Water Act, the Atmospheric Pollution (Prevention) Act, the dual grazing rights aspects of the Tribal Land Act, the strengthening of the Land Boards under the Agricultural Resources Act. Some of these

amendments are already in hand. In addition an Act, specifically in support of the NCS, is proposed. The objectives of this are outlined in Section 7.

- 4.10 The Government intends to use these four general measures in devising a series of 'solution packages' for addressing the issues and opportunities, summarized in Section 3.

5. STRATEGY FOR GOVERNMENT ACTION - INDIVIDUAL ISSUES

- 5.1 In devising the 'solution packages' for the key issues, prime consideration has been paid to:-
- a) the acceptability of the solutions to the main target groups;
  - b) the proven technical and financial feasibility of the solutions;
  - c) the availability of institutional capacities necessary for effective implementation;
  - d) the need to establish incentives, which will make the results of diversification into new rural enterprises as financially attractive as those obtained from livestock and arable production.

Solution Package for the Pressure on Water Resources Issue

- 5.2 The solution package devised for dealing with this issue is necessarily wide-ranging. It includes improved planning and administrative measures in the interests of both protecting water resources against pollution and improving multi-purpose use. Gradual extension of the water tariff system into rural areas also features; likewise, the possible introduction of an incentive to encourage the collection of rain water. Most important is the role which the National Water Master Plan, currently under preparation, is expected to play as forming one of the essential cornerstones for implementation of the research measures, it is proposed that priority attention should focus upon: groundwater resources and their recharge rates; rainfall harvesting and water storage methods; recycling of treated effluent; pollution prevention; and inter-regional water transfers.

Solution Package for the Rangeland Pasture Degradation Issue

- 5.3 Of all the issues, this is recognized to be the one which is the hardest to resolve. Whilst many of the solutions have generally been known for considerable time, they run counter



to traditional customs. Thus implementation progress is likely to be slow. However, there is general support for a number of practical initiatives which include:-

- i. strengthening the Range Ecology Unit within MOA;
- ii. extending the zoning and gazetting of land for use of livestock and wildlife;
- iii. developing a comprehensive water supply policy for all forms of livestock and wildlife;
- iv. improving the provision of information to livestock farmers concerning carrying capacities;
- v. improving livestock marketing infrastructure to improve offtake.

Price incentives are proposed towards improving rangeland management, thereby helping to reduce overgrazing and restore degraded rangelands. The Government intends to pursue those, which, following further study, offer the best prospects.

- 5.4 Legal reforms will inevitably continue to present problems. However, the Government is committed to continuing to devise legislation which will lead to improvements in the management of both rangelands and livestock. In addition, continued attention will be paid to finding politically acceptable ways of improving the enforcement of the Tribal Land Act and Agricultural Resources Conservation Act. The provision of professional and technical advisers in support of the Land Boards is recognized to be a crucial step forward, along with the introduction of further educational, training and research programmes.

#### Solution Package for the Depletion of Wood Resources Issue

- 5.5 In recognition of both the potential importance and expansion of the Forestry Sector, the Government intends to up-date its Forestry Policy and, most importantly, to provide a comprehensive National Forestry Management Plan. The purpose of both exercises will be to improve the management of existing resources; to establish additional woodland areas; and to develop an economically viable Forestry Industry in Botswana. Great importance is attached to ensuring that each community will have good access to 'insitu' woodland resources. Consistent with these objectives and initiatives, the Government intends to commission a study investigating the roles which financial incentives and other forms of Government assistance should

discharge, the import and export of chemicals, emission/waste standards, and the siting and use of dumps for the disposal of hazardous wastes. All amendments will be based on the 'polluter pays' principle! In addition, for safety reasons, consideration will be given to the possible introduction of legislation concerning the use, storage, labelling and marketing of all agricultural chemicals. Again, a series of public awareness campaigns will be undertaken by Government concerning all aspects of pollution prevention and control.

- 5,8 In the interests of enhancing all new development, industries and settlements in particular, the Government intends to encourage the enforcement of all aspects of the Town and Country Planning Act. Special attention will be paid to:-
- a) conserving natural resources within the planning areas of all settlements;
  - b) ensuring the improved provision, design and management of human settlements, including public open space and recreation facilities.

The Government appreciates the need to undertake these improvements in the interests of encouraging investment in diversified new enterprises on a joint venture basis.

Solution Package for the Conservation of Wildlife, Heritage and Cultural Resources

- 5.9 This package of measures has been devised in the interests of assisting both the wildlife utilization and tourism industries. The proposed planning, management and incentive measures include:-
- a) the gazettelement of the designated WMAs;
  - b) the upgrading of some game reserves so as to extend the protection given to all forms of wildlife;
  - c) the adjustment of some National Park boundaries to include a number of areas recommended in 1976 for gazettelement, on account of their botanical interest and to consider the Linyanti-Savuti triangle as part of the Chobe National Park of a WMA, as only some 10 km of river swamp frontage is presently protected in the Park;
  - d) the preparation and implementation of management plans;
  - e) the provision of increased anti-poaching controls; and

- f) the execution of wildlife cropping projects, primarily for the benefit of local communities.

Support is also provided for unification of the National Parks Act (Cap 38/03) and the Fauna Conservation Act (Cap 38.01) for the years 1967 and 1961 respectively. Accomplished in principle, this unification is now awaiting final approval.

## 6. THE EXPECTED BENEFITS

- 6.1 The 'solution packages' and initiatives proposed under the Strategy are expected to yield several benefits in both the short and longer term. Three main types of benefits are envisaged: conservation/protection of the environment; environmental development; and community gains.
- 6.2 The principal conservation and protection benefits include reductions in habitat losses; increases in the populations of both endangered and threatened wildlife species; the protection of all natural and cultural areas of outstanding value; and the restoration of degraded rangeland pastures and eroded areas. The changes will benefit the wildlife utilization, livestock and tourism industries, in particular. Improvements in the conservation and cost-effective use of water will benefit all sectors of the economy and community. The same applies in the case of the pollution prevention and control improvements.
- 6.3 Development, based on a policy of diversification, will help to enhance both the economic and physical environments. Not only will new enterprises, industries and investment opportunities be generated under the Strategy, but employment openings will grow.
- 6.4 Under the Strategy both rural and urban communities are expected to benefit; not just in economic and physical ways but socially also. Community participation - especially through Annual Environmental Award Schemes - is expected to grow.
- 6.5 Collectively these benefits are expected to be substantial. As a consequence, the Government is justified in making special provisions to implement the Strategy through new institutions and resource allocations.

## 7. PRE-REQUISITES FOR EFFECTIVE IMPLEMENTATION

- 7.1 It is generally agreed that successful implementation of the Strategy calls for close liaison. This involves all

Ministries and other interested parties: NGOs, the University, the private sector, etc. Thus, Government intends both to strengthen existing organizations and to provide new administrative structures. The latter include:-

- a) establishing an appropriate organizational authority, which will have prime responsibility for both co-ordinating implementation of the NCS and maintaining close links with the National Development Plan process;
- b) providing an extensive consultative framework within which such an authority can effectively operate. It will involve all levels of society in Botswana.

2 The three institutional measures which the Government proposes to take are to:-

- a) establish an NCS Advisory Board, under the chairmanship of the Minister of Local Government and Lands. The Board will report to Cabinet through the Minister. Membership of the Board shall include senior representatives of all relevant sectoral and other Ministries, as well as representatives of Local Authorities, the Chiefs, parastatals, NGOs, the private sector, the business community and special interest groups;
- b) establish an NCS Co-ordination Agency. The main functions of this will include servicing the Board, co-ordinating the execution of its decisions and liaising with other organizations to ensure that the NCS goals and objectives are achieved. The Agency shall initially be located in the Ministry of Local Government and Lands, until otherwise determined in consultation with the Directorate of Public Service Management;
- c) designate Environmental Liaison Officers (ELOs) within each of the Central and Local Government Ministries/Departments. They would be responsible for ensuring that their organizations comply with the NCS Act once passed, and for liaising closely with the NCS Co-ordination Agency. In the case of the relevant Central Government Ministries, the nomination of Environmental Liaison Officers may involve formalizing the representation of the organizations which attend the Inter-Ministerial Co-ordinating Environmental Sub-Group (ICES). It is envisaged that, at the District level, liaison officers will be designated. The importance of ensuring development of the necessary links and regular liaison between Ministries, Department and Local Authorities is well recognized.

The NCS Advisory Board shall have statutory advisory powers in so far as these are compatible with the responsibilities of Ministries.

- 7.3 The Government intends to submit to the National Assembly a Bill, which will cover the measures proposed under the NCS. This enabling legislation will be referred to as "The NCS Act". It will include the following:-
- a) the requirement that all sectoral Ministries, Departments, Local Authorities, parastatals, etc., shall, in the course of their work, show due regard for the conservation and enhancement of the environment in the interests of achieving sustainable development;
  - b) the need for the sectoral Ministries of Government, in particular, to work closely with the NCS Co-ordination Agency in discharging their environmental responsibilities;
  - c) the necessity for new development projects (public and private) to be accompanied by professionally prepared and approved Environmental Impact Assessments (EIAs);
  - d) the obligation for the NCS Agency to prepare annual/biennial State of the Environment Reviews;
  - e) the provision of necessary powers, whereby Planning and other Authorities can be required to prepare conservation and resource strategies at District/Local levels and to review them regularly;
  - f) the encouragement which Government intends to give to NGOs in sharing responsibility for both conservation and enhancement of the nation's environment.
- 7.4 The NCS Advisory Board is intended to play an important role in the operation of the NCS Act. In cases of doubt concerning the discharge of environmental obligations by organizations and individuals under the Act, the Board will provide guidance on how the obligations may best be met. The Board will similarly advise organizations where it believes that the environment is being compromised through either policies or activities which merit review. In addition, the Board will be responsible for presenting and annual/biennial State of the Environment Report and for co-ordinating reviews of environmental legislation.
- 7.5 It is envisaged that both the NCS Advisory Board and Co-ordination Agency will play major roles in helping to implement the EIA provision under "The NCS Act". The

purpose of the assessments will be to enable competent authorities to reach decisions on public and private development projects with the benefit of a full understanding of the environmental, as well as the economic and social, costs which will be incurred in both the short and longer-term.

- 7.6 There is general agreement that effective implementation of the Strategy will involve a range of additional tasks, including planning and co-ordinating policies, analyzing and executing research priorities, establishing educational and training programmes, overseeing promotional and information campaigns, etc.
- 7.7 One of the principal functions of the Agency will be to advise and support the existing line Ministries/Departments and Local Authorities in discharging their various environmental responsibilities. This will include co-ordinating and helping with, as appropriate, the work entailed in undertaking found main types of environmental projects, namely those:-
- i. undertaken at Village and District level, with NGO involvement;
  - ii. undertaken by other Ministries, Government Departments and parastatals, at national level;
  - iii. initiated and managed by the Agency itself, with inputs from other Ministries and organizations as appropriate;
  - iv. undertaken either jointly with or through NGOs.
- 7.8 In the undertaking of all the functions, the roles of both the NCS Advisory Board and the Co-ordination Agency will be to complement rather than duplicate the activities of existing organizations.
- 7.9 It is acknowledged that successful implementation of many of the Strategy proposals and projects will call for the continued support and involvement of NGOs. Most importantly, the implementation provisions outside of Government will involve the private sector: in particular, the leading commercial companies and developers, the hoteliers and safari companies, the banking, engineering and property development professions, etc. Such participation will be encouraged by Government.

7.10 It is recognized that implementation of the NCS involving all sectors of the community, will require the allocation and deployment of additional resources. Government accepts responsibility for providing the necessary lead by contributing resources to:-

- a) the formulation and execution of all policies directed to the sustainable development and conservation of all natural resources: water, rangelands, woodland and timber, veld products and wildlife in particular;
- b) the establishment of the proposed new institutions;
- c) the provision of 'solution packages' for environment problems and development opportunities;
- d) the formulation and execution of projects at national, district and village levels;
- e) the conduct of research and development programmes;
- f) the provision of conservation orientated extension services;
- g) the introduction of additional education and training facilities;
- h) the formulation and implementation of EIA procedures;
- i) the organization of promotional and information campaigns required in support of the NCS;
- j) the advancement of environmental data systems;
- k) the preparation of management plans for all National Parks, Game/Forest Reserves, WMAs and other important conservation areas and features;
- l) the ratification, where appropriate, of International Natural Resource Conservation Conventions;
- m) the provision of support and appropriate assistance to conservation NGOs and private sector organizations in the execution of their responsibilities.

7.11 Government accepts that implementation of the Strategy calls for the provision of significant additional resources, covering four specific requirements:-

- First, there are resources required for both the establishment and operation of both the NCS Advisory

Board and NCS Co-ordinating Agency. The role of the Co-ordinating Agency will be to co-ordinate a range of natural resource planning and managerial issues, EIA work and the co-ordination of environmental improvement measures.

In recognition of the fact that the potential agenda for change under the NCS is large, the Government endorses the appointment of highly experienced personnel to the NCS Advisory Board and to the NCS Co-ordinating Agency.

- Secondly, there are the additional funds required to cover the adjustments within existing Government organizations, in order that they can play their full part in the implementation of the NCS.
- Thirdly, there will be the need for resources to undertake the special training, R&D, data collection, monitoring and promotional programmes outlined earlier.
- Fourthly, a programme for the implementation of projects phased over a five year period, will need to be funded. In total 42 priority project proposals have been recommended by the respective Ministries, in the course of preparing their NCS Technical Reports.

It is recognized that, in implementing the Strategy, Government resources will need to be complemented by contributions from the private sector and the donors.

7.12 It is intended to implement the Strategy through an Action Plan, which will be monitored as part of the NDP process.

7.13 The Government is committed to ensuring the success of the Strategy and specifically the achievement of its twin goals: sustainable development through and with the conservation of natural resources.