SWAZILAND'S SECOND NATIONAL

BIODIVERSITY STRATEGY & ACTION PLAN

2016

Convention on Biological Diversity

UNEP

FOREWORD BY THE HONOURABLE MINISTER OF TOURISH AND ENVIRONMENTAL AFFAIRS

The Ministry of Tourism and Environmental Affairs on behalf of the Swazi Government would like to express its gratitude to the Global Environmental Facility for the financial support, the United Nations Environment Programme (UNEP) and the secretariat to the Convention on Biological Diversity (CBD) for the technical support and guidance throughout the revision process of the National Biodiversity Strategy and Action Plan II (NBSAP). Gratitude also goes to all our national stakeholders who participated and contributed to the formation of the NBSAP 2.

For the implementation of the first National Biodiversity Strategy and Action Plan from 2001 to 2012, Swaziland has been able to establish three Transfrontier Conservation Area (TFCAs) focusing on the eco-system wide management approach in areas of highly significant biodiversity shared with Mozambique and South Africa. The country also established the first community-based Conservation Management Area at Shewula, formulated and implemented the Biosafety framework.

The conversion of natural habitats by large scale irrigated agriculture, invasion of habitats including protected areas by alien species, indiscriminate use of fires, unsustainable use of natural resources and climate change are causing a decrease in the diversity and distribution of our biodiversity. The revised National Biodiversity Strategy and Action Plan (NBSAP 2) presents us with an opportunity to rekindle our efforts in addressing these threats and challenges to our biodiversity.

The NBSAP 2 is our main vehicle to spearhead actions across all sectors of Government and society for the sustainable management of biodiversity and ecosystems. Our recently revised National Development Strategy recognizes environmental management and sustainable development as one of the key macro-strategic areas that will ensure the achievement of the country's vision as we strive for economic growth.

We recognize the importance of biodiversity and healthy ecosystems, the very essence of being for the Swazi Nation depends on a rich biodiversity base. Implementation of this strategy and achieving the results outlined therein requires full commitment of Government and all stakeholders, technical and financial resources and great leadership to ensure attainment of results. Throughout the implementation period of this strategy (2016 – 2022), biodiversity will be placed at the centre of our development efforts to achieve economic growth and alleviate poverty in our country, especially in the rural areas.

It is a great pleasure to present to the Swazi Nation the Second National Biodiversity Strategy and Action Plan and I am confident that its effective implementation will contribute in the realization of our National Development Strategy, Vision 2022.

C.M. Gamedze

Minister of Tourism and Environmental Affairs (MP)

ACKNOWLEDGMENTS

The Swaziland Environment Authority as the focal point of the Convention of Biological Diversity and coordinating institution for the development of the second National Biodiversity Strategy and Action Plan (NBSAP 2) greatly acknowledges the contribution of all stakeholders in the development of this strategy. The NBSAP 2 had been prepared in a highly participatory and consultative manner. A wide range of stakeholders and sectors made inputs throughout the various stages of developing the Strategy.

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ACRONYMS AND ABBREVIATIONS

AEZ Agro-ecological Zones

AMESD African Monitoring of the Environment for Sustainable Development

AEWA Africa Eurasian Waterbird Agreement

BCPD Biodiversity Conservation and Participatory Project

BGP Big Game Parks

BPIC Biodiversity Programme Implementation Committee

CASP Comprehensive Agricultural Sector Policy for Swaziland

CBD Convention on Biological Diversity

CBO Community-Based Organisation

CBS Central Bank of Swaziland

CITES Convention on International Trade in Endangered Species of Wild Fauna and Flora

CMS Convention on the Conservation of Migratory Species of Wild Animals

COP Conference of the Parties

COSPE Cooperation for the Development of Emerging Countries

CSIR Council of Scientific & Industrial Research

CSO Central Statistics Office

DPM Deputy Prime Minister

DWA Department of Water Affairs

EA Environmental Assessment

ERM Environmental Resource Management

FAO Food and Agriculture Organization

FDI Foreign Direct Investment

GDP Gross Domestic Product

GEF Global Environment Facility

GHG Greenhouse Gas

GOS Government of Swaziland

HDI Human Development Index

IAS Invasive Alien Species

IAPS Invasive Alien Plant Species

IPBES Intergovernmental Platform on Biodiversity and Ecosystem Services

IPCC Intergovernmental Panel on Climate Change

ITPGRFA International Treaty on Plant Genetic Resources for Food and Agriculture

IPR Intellectual Property Rights

IUCN International Union for the Conservation of Nature

JRS Joint Sector Review

LMO Living Modified Organisms

LUC Land Use Change

LULUCF Land Use, Land-Use Change and Forestry

LUM Land Use Management

MCTI Ministry of Commerce Trade and Industry

MDG Millennium Development Goals

MEA Multilateral Environmental Agreements

MEPD Ministry of Economic Planning and Development

MESA Mainstreaming Environment and Sustainability in African (Universities Partnership)

MNRE Ministry of Natural Resources and Energy

MoA Ministry of Agriculture (also MoAC)

MoET Ministry of Education and Training

MoF Ministry of Finance

MoH Ministry of Health

MoHUD Ministry of Housing and Urban Development

MP Member of Parliament

MPWT Ministry of Public Works and Transport

MTA&D Ministry of Tinkhundla Administration and Development

MTEA Ministry of Tourism and Environmental Affairs

NAP National Adaptation Plan

NAPA National Adaptation Plan of Action

NBSAP National Biodiversity Strategy and Action Plan

NCC National Curriculum Centre

NDS National Development Strategy

NCSA National Capacity Needs, Constraints and Priorities for the Implementation of the Climate Change, Desertification and Biodiversity Conventions

NEF National Environment Fund

NEP National Energy Policy

NGO Non-Governmental Organizations

NHSSP National Health Sector Strategic Plan

NMS National Meteorological Service

NR Natural Resources

NSAIP Swaziland National Agricultural Investment Plan

NTFP Non-timber Forest Products

PA Protected Area

PSC Project Steering Committee

PRS Poverty Reduction Strategy

PRSAP Poverty Reduction Strategy and Action Plan

PWA Protection-Worthy Area

RDP Regional Development Plan

SANBI South African National Biodiversity Institute

SEA Swaziland Environment Authority

SEAP Swaziland Environment Action Plan

SERA Swaziland Energy Regulatory Authority

SGRA Swaziland Game Ranchers Association

SHIES Swaziland Household Income and Expenditure Survey

SOER State Of the Environment Report

SNPAS Strengthening the National Protected Areas System of Swaziland

SRA Swaziland Revenue Authority

STA Swaziland Tourism Authority

STI National Science, Technology and Innovation (Policy)

STREA Strategic Environmental Assessment

SMTE National Science, Mathematics and Technology Education (Policy)

SPB Strategic Plan for Biodiversity 2011-2020

SNEP Swaziland National Energy Policy

SNL Swazi Nation Land

SNTC Swaziland National Trust Commission

SOE State of the Environment

STA Swaziland Tourism Authority

SWADE Swaziland Water Development Enterprise

SWASA Swaziland Standards Authority

SWSC Swaziland Water Services Corporation

TDL Title Deed Land

TEEB The Economics of Ecosystems and Biodiversity

THO Traditional Healer's Association

UNCBD United Nations Convention on Biological Diversity

UNCCD United Nations Convention to Combat Desertification

UNDP United Nations Development Programme

UNEP United Nations Environment Programme

UNESCO United Nations

UNFCCC United Nations Framework Convention on Climate Change

UNISWA University of Swaziland

VAC Vulnerability Assessment Committee

WFP World Food Program

WHC Convention Concerning the Protection of the World Cultural and Natural Heritage

WIPO World Intellectual Property Organization

WTO World Tourism Organization

GLOSSARY OF TERMS AND PHRASES

Awareness-raising	: Activities aimed at making people cognizant of something.
Biodiversity	: (also referred to as **biological diversity**) – The variety and variability of life on Earth, the variety within and between all species of plants, animals and micro-organisms and the ecosystems within which they live and interact.
Biodiversity/Ecosystem conservation	**:** The preservation, protection, or restoration of the natural environment, natural ecosystems, vegetation, and wildlife
Biodiversity hotspots	**:** A biogeographic region that is both a significant reservoir of biodiversity and is threatened with destruction.
Convention	: An agreement between two or more countries covering particular matters, less formal than a treaty.
Crown Land	: Land over which Government holds title.
Drivers of change	: The reasons behind variation in status or condition
Ecosystem management:	: A process that aims to conserve ecological services and restore natural resources while meeting the socioeconomic, political and cultural needs of the current and future generations.
Ecosystem resilience	: Measure of how much disturbance an ecosystem can handle without shifting into a qualitatively different state, the capacity of a system to withstand shocks and surprises and to rebuild itself if damaged.
Ecosystem services	**:** Benefits humans derive from ecosystems and biodiversity.
Endemic	**:** A plant or animal that is native or restricted to a certain country or area.
Fragmentation	**:** The process or state of breaking or being broken into small or separate parts especially used in reference to habitats.
Genetic diversity	**:** The total number of genetic characteristics in the genetic makeup of a species.
Genetic resources	**:** Any material of plant, animal, microbial or other origin containing functional units of heredity which is of actual or potential value.
General populace	**:** All the inhabitants of a place; population.

Germplasm : The genetic material of a species or other related group of organisms, collected for use in study, conservation, and breeding.

Harmful incentives : Transfers of money, advantage or benefit in kind from the State or regional authorities to private or, on occasion, public actors which encourages or has a consequence of directly or indirectly damaging ecosystems and/or biodiversity.

Invasive species : An organism (plant, animal, fungus, or bacterium) that is usually not native (in that case referred to as an alien invasive species) and has negative effects on the economy, environment, or health.

Landscape approach : A framework for making landscape-level conservation decisions, developed by WWF and IUCN.

Land transformation : The act or an instance of altering the condition, state or use of an area or piece of land.

Legal framework : Broad system of rules that governs and regulates decision-making, agreements, laws.

Local communities : People living in rural areas.

Mainstreaming : Bring an idea or something into the prevailing current or direction of activity or influence.

Making the case for ecosystem services: Elucidating the value of ecosystem services to ensure better decision-making, so that policies take into account the costs and benefits to the natural environment and by highlighting much more clearer the implications for human well-being, while providing policy development with new insights.

Natural habitats : The normal unaltered environment in which a species or group of species lives.

Principles governing the strategy : Issues that are a backbone to the strategy.

Stakeholder : Person or group of people with an interest or concern in something, especially a business.

Sustainable use : Catering for the needs of the current generation without jeopardising the potential for people in the future to meet their needs.

Swazi Nation Land : Land held in trust by the King for the Nation, comprises.

Title Deed Land : Private Freehold Land, subdivided into rural and urban.

Threatened species : Any species which is vulnerable to extinction in the near future.

Traditional knowledge	: Know-how, information, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity.

EXECUTIVE SUMMARY

1. INTRODUCTION

Biodiversity provides a range of goods and services to the people of Swaziland. The natural ecosystems provide many essential services for the nation. Large portion of the country's economy is heavily dependent on biodiversity including livestock ranching, horticulture and agriculture, use of medicinal plants and ecotourism. The overall socio-economic well-being of the people of Swaziland is dependent on the achievement of balance between development and conservation which involves sustainable use of biodiversity. The implications of loss of biodiversity are particular severe for the Swazi Nation, where tradition and culture have been preserved and continue to play an important role in the lives of most Swazis. The rich Swazi tradition relies heavily on an equally rich biodiversity base which is currently under threat ranging from anthropogenic to climate change.

The National Development Strategy, 2014, recognisees the essential role of the National Biodiversity Strategy and Action Plan (NBSAP) in reversing or halting the alarming loss of biodiversity and the associated impacts. Swaziland prepared its first NBSAP in 2001, however implementation has been limited and challenged by a number of factors including mainstreaming of the NBSAP into the National Development and Economic Planning Processes.

The second National Biodiversity and Action Plan (NBSAP 2) has been prepared in a highly participatory and consultative manner involving multiple national stakeholders. A number of consultative meetings were held throughout the various stages of the development of the strategy. Stakeholders made inputs and validated a number of reports throughout the various stages. A National Think-Tank of local experts involved in biodiversity issues also met on a number of occasions to deliberate on specific technical biodiversity issues. Special stakeholder groups, for example, Chiefs, were consulted at special regional workshops. Consultations were held with experts in South Africa to ensure adequate coverage of both local and regional biodiversity issues.

Building from the lessons learnt from the implementation of the first NBSAP as well as from the national prioritization exercise, the NBSAP 2 has been formulated to capitalize on the following issues;

- Improving the status of the country's biodiversity by monitoring, reduction of threats and pressures, safeguarding ecosystems and encouraging sustainable utilization.
- Generation of reliable information data for continued monitoring of the status of biodiversity.
- Mainstreaming and integration Biodiversity into National Plans and Strategies and contribute to the National Development objective.
- Building and strengthening human capacity in all aspects pertaining to conservation and management of biodiversity.
- Strengthening the existing legislative and policy framework to improve the management and sustainable use of biodiversity and ecosystem.
- Exploitation of synergies with other Multilateral Environmental (MEAs)
- Increasing awareness on biodiversity to the citizenry of Swaziland.

The NBSAP 2 has been formulated to be in line with the CBD Strategic Plan and and its Aichi strategic goals. The five Strategic Goals had been adopted to form the framework of the NBSAP 2. Twenty national targets for the NBSAP 2 are presented below.

STRATEGIC GOAL A: ADDRESS THE UNDERLYING CAUSES OF BIODIVERSITY LOSS BY MAINSTREAMING BIODIVERSITY ACROSS GOVERNMENT AND SOCIETY.

Target 1: By 2022, more than 70% of Swaziland Nationals will be cognizant of biodiversity and ecosystems, their value and the steps they can take to conserve and use these sustainably.

Target 2: By 2022, biodiversity values have been integrated into all national, regional, municipal and rural development and poverty reduction strategies and planning processes, and are being incorporated into accounting and reporting systems.

Target 3: By 2020, positive incentives that benefit biodiversity are encouraged, while harmful incentives, including subsidies, are eliminated or reformed

Target 4: By 2022, the Government of Swaziland, municipalities, businesses, local communities and stakeholders at all levels have developed and are implementing plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits

STRATEGIC GOAL B: REDUCE THE DIRECT PRESSURES ON BIODIVERSITY AND PROMOTE SUSTAINABLE USE

Target 5: By 2022, the rate of loss, degradation and fragmentation of all Swaziland's natural habitats is at least halved and where feasible brought close to zero.

Target 6: By 2022 all of Swaziland's aquatic resources are sustainably managed.

Target 7: By 2022, all areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of Swaziland's biodiversity.

Target 8: By 2022, Pollution in Swaziland has been brought to levels that are not detrimental to ecosystem function and Biodiversity

Target 9: By 2022, invasive species that are alien to Swaziland and their pathways are identified and prioritized; priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

Target 10: By 2022 pressures on Swaziland's vulnerable and most valuable ecosystems such as (Savannah woodland Mosaic forests and wetlands) are identified and prioritized; priority pressures are controlled or eradicated.

STRATEGIC GOAL C: IMPROVE THE STATUS OF BIODIVERSITY BY SAFEGUARDING ECOSYSTEMS, SPECIES AND GENETIC DIVERSITY

Target 11: By 2022, at least 10 per cent of Swaziland's land area, especially areas of particular importance for biodiversity and ecosystem services, protected landscapes and multiple resource use areas are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas.

Target 12: By 2022, the extinction of species known to be threatened in Swaziland has been prevented and their conservation status, particularly of those that are endemic and those most in decline, has been improved and sustained.

Target 13: By 2022, the genetic diversity of cultivated plants, farmed and domesticated animals and their wild relatives, including other socio-economically as well as culturally valuable species, in

Swaziland, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

STRATEGIC GOAL D: ENHANCE THE BENEFITS TO ALL FROM BIODIVERSITY AND ECOSYSTEM SERVICES.

Target 14: By 2022, the capacity of ecosystems to deliver essential services and support the livelihood of the people of Swaziland is maintained.

Target 15: By 2022, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced in Swaziland, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

Target 16: By 2016, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and by 2022 fully operational and consistent with national legislation.

STRATEGIC GOAL E: ENHANCE IMPLEMENTATION THROUGH PARTICIPATORY PLANNING, KNOWLEDGE MANAGEMENT AND CAPACITY BUILDING

Target 17: By 2016, Swaziland has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

Target 18: By 2022, the traditional knowledge, innovations and practices of local Swazi communities relevant for the conservation and sustainable use of biodiversity and their customary use of biological resources, are documented, recognized and promoted.

Target 19: By 2022, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied in Swaziland.

Target 20: By 2020 the NBSAP is fully integrated in the government and relevant implementing institutions' budgeting systems and other sources of funding are mobilized.

The Action Plan was formulated to have strategic initiatives to help guide achievement of each target. Each strategic initiative has a number of indicative actions that are proposed by the strategy in fulfilment of the strategic initiative. For each of the strategic initiatives, a lead agency (-ies) has been designated and indicators developed for monitoring.

Implementation of the NBSAP 2 requires mainstreaming of biodiversity across all sectors, especially sectors whose activities have significant impacts on biodiversity. The Swaziland Environment Authority working with the Biodiversity Programme Implementation Committee (BPIC) will coordinate the implementation of the NBSAP 2.

Evaluation and monitoring of progress of the NBAP 2 will be done biannually. The action plan has indicators that will be used to gauge the success and progress made for each of the strategic initiatives. As noted in the lessons learnt from the first NBSAP implementation, monitoring and evaluation is paramount to the success of the strategy. Successful implementation of each strategic initiative will ultimately demonstrate the success of the NBSAP 2. This will in turn lead to improvement in the status of biodiversity and ecosystems in the country thus contributing towards the achievement of the CBD Strategic Plan and its Aichi Targets.

1. INTRODUCTION

1.1 COUNTRY BACKGROUND INFORMATION

Nestled between South Africa and Mozambique, with an area of 17 364km^2 Swaziland is one of the smallest countries in Africa. It has a highly diverse landscape with elevation ranging from 21m above sea level (where the Great Usutu River enters Mozambique) to 1862m above sea level (Bulembu). From west to east and running north to south, is the Highveld (cool with rain), the Middleveld (warmer with rain), the Lowveld (hot and dry) and the Lubombo Plateau (warm and dry). The country is divided into four administrative regions Hhohho, Manzini, Shiselweni, Lubombo and further into 55 constituencies (*Tinkhundla*). The Land tenure system in the country has three categories as a consequence of a very complicated history. The categories are Swazi Nation Land (SNL, covering about 75%), Title Deed Land and Crown Land (the remaining 25%). SNL is held in trust for the nation by the King (more than 70% of the country's population). More than half of the country's total land area is used for communal grazing with the rest committed to subsistence cropping, forestry, ranching, large-scale cropping and 4.6% for residential use, water reservoirs and wildlife conservation (GOS 2010).

Swaziland has an agriculturally-based economy with a total GDP of USD 1.7 billion in 2014 and a GDP growth rate estimated at about 2.5% in 2014 (CBS, 2014). She faces a number of economic issues such as low foreign direct investment and a weak business climate. The country has a number of challenges which include high poverty levels, a high HIV/AIDS prevalence, a low human development index score, an uneven distribution of resources, and high unemployment.

The majority of households (about 70%) in the country have access to clean and secure water but only a small section of these has access to improved sanitation services (Swaziland Statistics Office, 2012). The main sources of energy are electricity, fuel wood and petroleum products, with little input from alternative sources. Less than 30% of the total population has access to electricity, with the majority generally relying on fuel wood.

The population of Swaziland was estimated at 1,106,190 in 2012 with a growth rate of 0.4% (GOS, 2007); and more than 75% of this number residing in rural areas. The mean population density is 73 people per km^2 (World Bank, 2013) with the north and north-west portions of the country having the highest population density. However, the urban areas are the most populous with Manzini having the highest population followed by Mbabane. Of this population only 4% is above 65 years, 44% are younger than 15 years while females comprise 53%. Literacy is at 87% (GOS, 2007) but only a small percentage has tertiary education. Though 66% own and use cell phones, access to internet services is limited to about 22% (GOS, 2007). In 2012, the unemployment rate stood at 28.2% and about 41% were living below the poverty line of USD 1.25 per day (World Bank 2012).

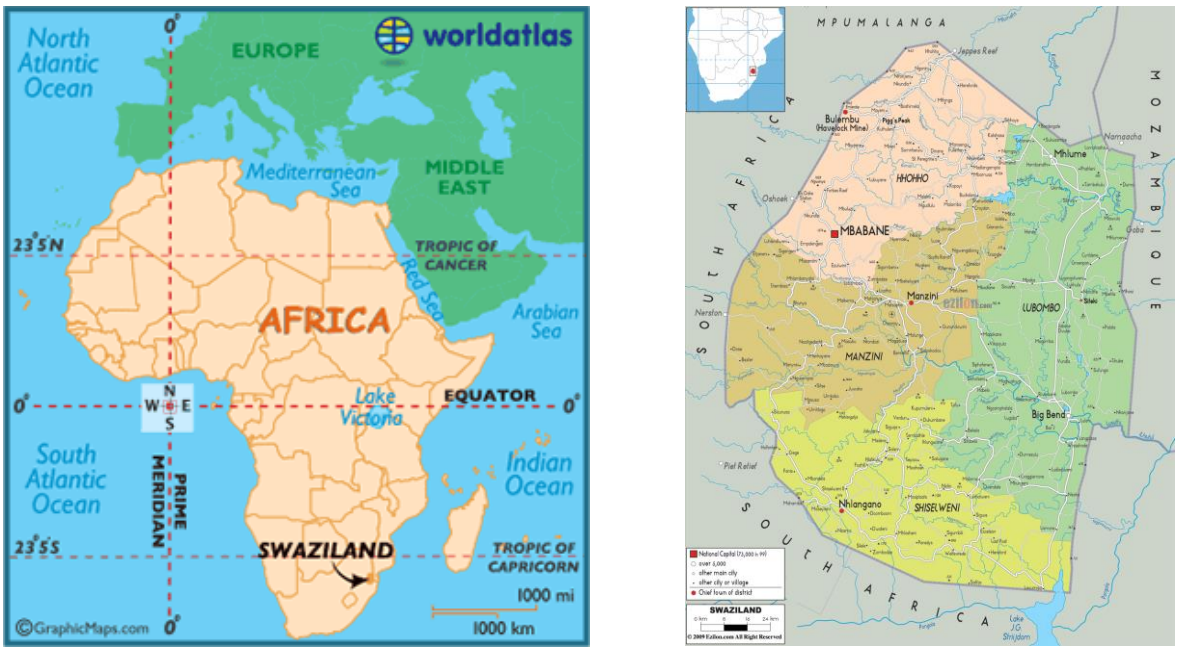

Figure 1 Map of Africa showing the position of Swaziland (L) and Map of Swaziland (R)

1.2 BIODIVERSITY AND ECOSYSTEMS

1.2.1 ECOSYSTEMS

Four ecosystems are recognized in Swaziland, these are: Montane grasslands, Savanna-woodland mosaic, Forests and Aquatic systems (Figure 3). The Montane grasslands are in the Highveld, the Savanna-woodland Mosaic is in the Middleveld and Lowveld while the Forests are mainly in the Highveld and the Lubombo mountains. The Aquatic ecosystem is made up of streams, rivers and wetlands. Only a tiny fraction (just over 3%) of these ecosystems is legally protected highlighting the fact that these ecosystems, and the biodiversity they harbour, are under threat.

The Montane grassland originally covered 46% of the country's land area and is very important from a conservation perspective as it is home to: 72% of Swaziland's endemic flora; the only endemic vertebrate; and a large percentage of the country's threatened flora and fauna (Dlamini & Dlamini, 2002; Monadjem *et al*., 2003; Loffler & Loffler, 2005). It provides valuable ecosystem services such as food, medicinal plants, grazing lands, and is the watershed for most rivers arising within the country. However, it is very prone to erosion and faces numerous other anthropogenic threats. These include agricultural expansion, alien invasive plant species and unsustainable grazing and resource harvesting. Consequently, the area of Montane grassland in a natural state has been reduced in extent by 25% (GOS, 2001).

The Savanna-woodland mosaic originally covered 48% of the country's land area but has been reduced by 25% (GOS, 2001). Second only to the Montane grassland, this ecosystem is home to about half of the country's flora species complement and more than half of the fauna. It has a moderate number of threatened and endemic plants and vertebrates (Table 1). This ecosystem provides food, grazing, medicinal plants, timber and fuel. It is threatened by agriculture, unsustainable grazing and resource use, alien invasive plant species as well as bush encroachment.

Table 1 Percentages of the country's flora and fauna in each of the ecosystems (GOS-SEA, 2013).

	Grassland	Savanna	Forest	Aquatic
Biodiversity				
Flora	51	47	10	4
Fauna	30	57	14	23
Threatened Species				
Flora	70	31	23	3
Fauna	38	44	13	23
Endemic Species				
Flora	72	11	17	0
Fauna	100	0	0	0

The Forest ecosystem originally covered 5% of the country but has been reduced by 26%. It has suffered from unsustainable resource utilization, urbanization as well as invasion by alien plant species. It provides traditional medicine, timber, fuel and food. The flora and fauna found in the Forest ecosystem are shown in Table 1.

The Aquatic ecosystem occupies the smallest surface area and is also the least well known of the country's ecosystems (GOS, 2001). This ecosystem is unique in that it provides critical services such as water, flood control, food and other products. It is threatened by urbanization, alien invasive plant species, erosion and unsustainable utilization patterns.

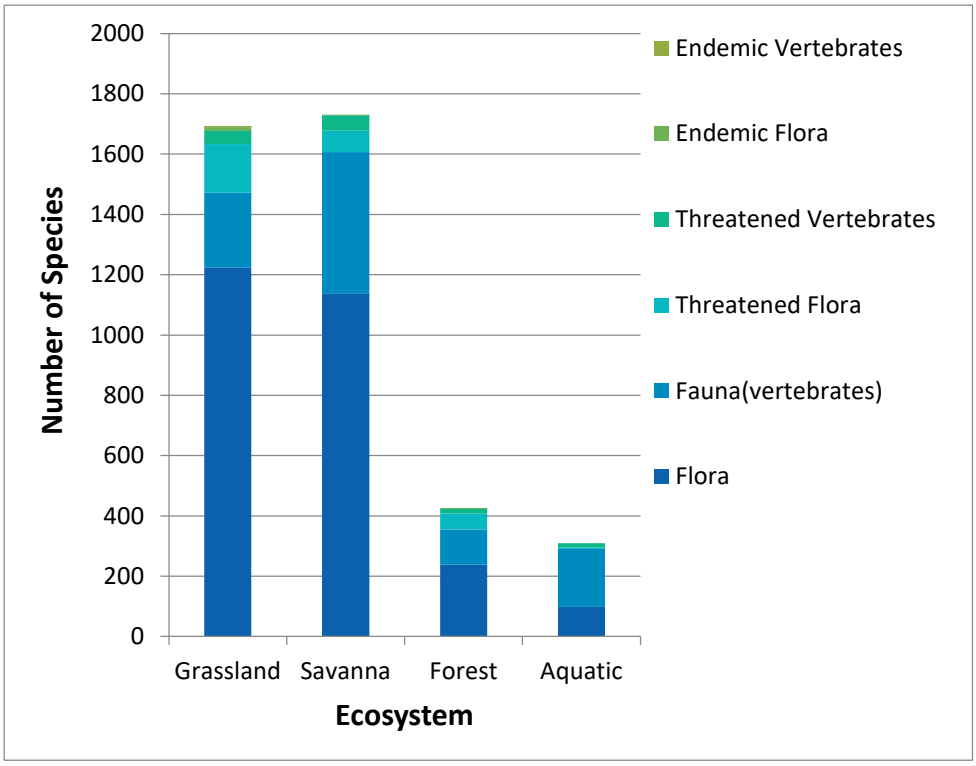

Figure 2: Number of species in each of the ecosystems.

Though, each of these ecosystems have unique flora and fauna the Savanna and the Grassland ecosystems have the highest number of species (Figure 2) and the Forest and the Aquatic ecosystems have the least. The vegetation map of the country (Figure 4) shows how the Savanna and Grassland ecosystems are further divided at the vegetation unit scale.

Table 2: Extent and protection status of ecosystems in Swaziland (GOS-SEA, 2013)

Ecosystem	Grassland		Savanna		Forest		Aquatic		Total	
	Km^2	%	Km^2	%	Km^2	%	Km^2	%	Km^2	%
Extent of coverage	7,990	46	8,327	48	870	5	213	1	17,400	100
Area formally protected	190	2	426	5	20	2	4	2	640	4
Area informally protected	4	0	426	2	3	0	3	1	174	1

Of the country's total land area, just 4% is under legal protection with the Savanna having the greatest area under legal protection (Table 2). There are some areas that are informally protected and with the passing of new legislation pertaining to categories of legal protection, the number and areas covered by these may increase. The existing protected area network does not adequately protect all species in the country and for this reason and that the area under protection is small, there has been a number of efforts to increase the network. These efforts have brought to the fore a number of areas that have been deemed protection-worthy (PWAs) (Figure 5).

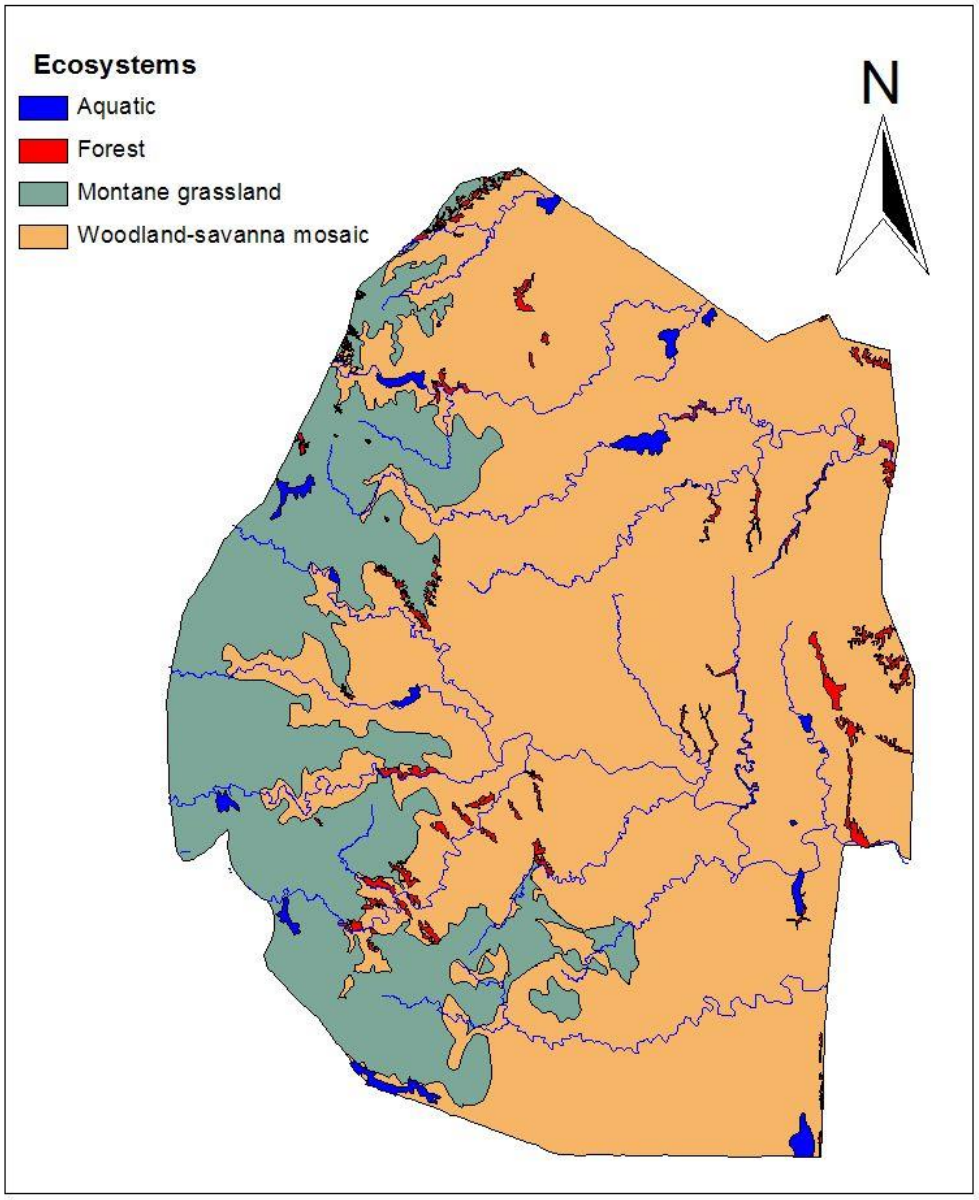

Figure 3: Map of Swaziland showing the distribution of the four ecosystems.

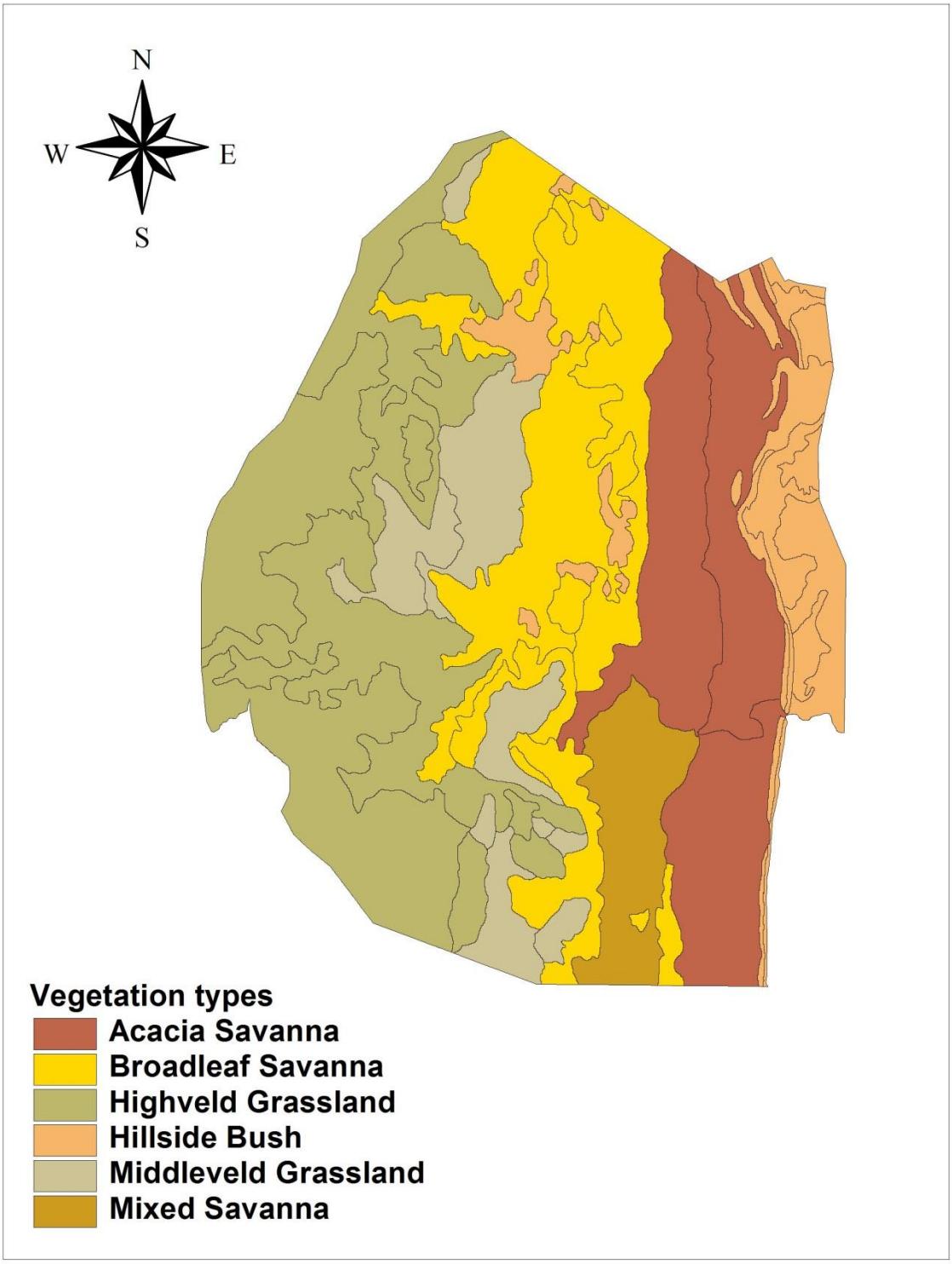

Figure 4: Map of Swaziland showing the distribution of vegetation types.

1.2.2 BIODIVERSITY

For a small country, Swaziland has a rich floral and faunal diversity. Currently, 14 phyla have been recorded, or are suspected to occur in the country. Though the invertebrate phyla have not been adequately surveyed, 265 families and about 1,300 genera of arthropods have been recorded (GOS-SEA, 2001). The vertebrates are the only well documented group, presently, 813 species (445 genera in 144 families) have been recorded (Boycott, 1992; Hyslop, 1992; Parker, 1994; Monadjem, 1998; Monadjem et al., 2003). Only one endemic vertebrate species is known, a lizard (*Afroedura major*). Despite being relatively well known, more research is still required for this group, as only the distribution and status of the country's birds are satisfactorily known. Of the 3,678 plant taxa that have been recorded in the country, 12 species are endemic (GOS-SEA 2013b). In order to develop and implement effective programmes for the conservation and maintenance of Swaziland's biodiversity a complete survey of the country's flora and fauna is urgently needed.

Although the information base on Swaziland's biodiversity is incomplete, studies have shown that a great proportion of Southern Africa's plant and animal species occur here, as Swaziland has a diverse assemblage of ecosystems and habitats. Eastern Swaziland is part of the Maputaland Centre of Plant Diversity (one of the World's "hotspots" of floral, as well as faunal species richness and endemism), and western Swaziland is part of the Drakensberg Escarpment Endemic Bird Area, as well as the Barberton Centre of Plant Diversity.

Swaziland's biodiversity has been markedly reduced over the past century, for example, the larger mammals that once roamed the grasslands and savannas are now confined to protected areas (Monadjem *et al.* 2003). These larger mammals are not the only species facing threats; 89 species of vertebrates and 305 species of plants are listed in national Red Data Lists (Monadjem *et al.* 2003; Dlamini and Dlamini 2002). Land transformation for agriculture, urbanisation, alien plant invasion, bush encroachment, pollution, over-harvesting, livestock mismanagement and soil erosion are some of the threats faced by Swaziland's flora and fauna. To counteract the threats and ameliorate their impacts and ensure proper management of the country's biodiversity, ecosystems and habitats is a task that rests with the Swaziland National Trust Commission (SNTC) and the Swaziland Environment Authority (SEA).

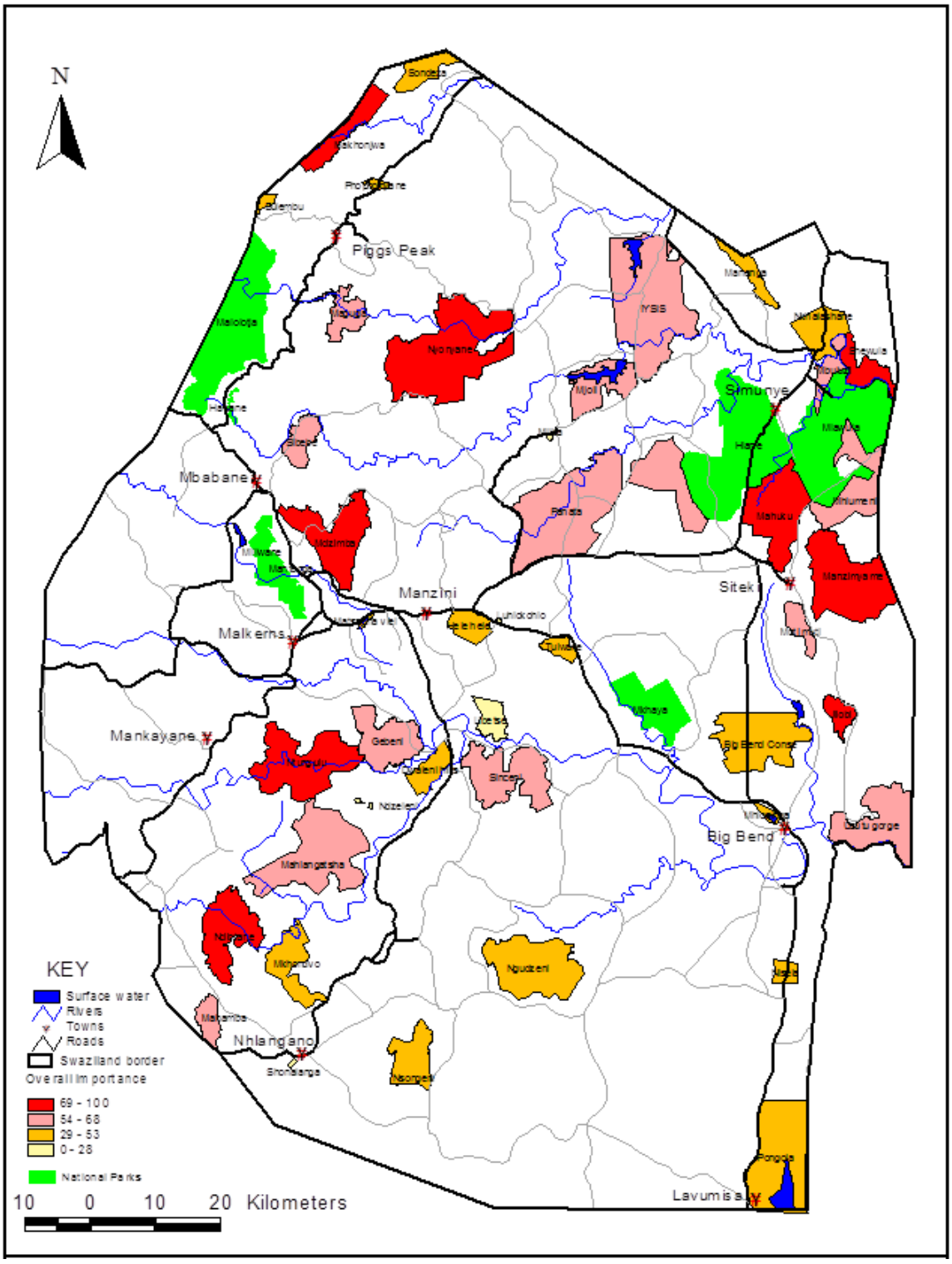

Figure 5: Map of Swaziland showing "Protection-worthy Areas" (GOS-SEA, 2002).

1.2.3 ECOSYSTEM AND BIODIVERSITY USES AND BENEFITS

Swaziland's ecosystems and biodiversity make significant contributions to its economy, for example, through ecotourism and also by supporting livelihoods and wellbeing of rural communities. The NBSAP Stocktaking Report (GOS, 2013a) summarises these as follows:

- Water
  - Ecosystems provide and purify water which is crucial for the country's agricultural sector as well as human wellbeing.
  - Ecosystems provide pollination services which are important for the agriculture sector and for numerous natural products.
  - Ecosystems bear the costs associated with the adverse effects of anthropogenic activities such as pollution from industries and agriculture.
- **Food**: A large number of invertebrates, vertebrates and plants are used as food contributing not only to nutritional diversity but to additional food in times of shortages. In many cases, these food items play a role in livelihoods as they are traded.
- **Traditional medicine**: More than 85% of the country's population has been shown to rely on traditional medicine either entirely or in combination with modern medicine. Based on work in South Africa as much as 692 tons of traditional medicine may be consumed in a year excluding an equal or larger amount that is exported to neighbouring countries.
- **Traditional and cultural practices**: The people of Swaziland have very close links with its ecosystems and biodiversity. A number of cultural practises and traditional dress items depend directly on biodiversity. The National Prayer (Incwala), Reed Dance (Umhlanga) as well as the National Hunt (Butimba) are all inextricably tied to the country's biodiversity.
- **Firewood and structural timber:** Over 70% of Swazis rely on firewood as a source of energy for cooking and heating. In rural areas timber is harvested for construction of housing for humans and livestock, as well as for fencing. It also provides income as both firewood and timber are traded by the rural unemployed.
- **Handicrafts and utensils:** grass mats, wooden bowls and numerous other household items are made from plant and animal parts. The country boasts a growing handicraft industry which has markets beyond the region in overseas countries. The contribution of these items to livelihoods is very significant especially in female-headed households or in cases where the male household head is unemployed.
- **Grazing:** In 2010, the country had more than 600,000 head of cattle (GOS, 2011), which were supported by the communal grazing lands and privately owned ranch lands. This economic service is priceless as beef contributes 1% of the total exports from the country. Small stock such as goats are increasingly becoming commercialized, however the size of current populations is uncertain which means that their contribution to GDP cannot be accurately calculated.
- **Tourism**: The breath-taking beauty of Swaziland's landscapes, its surreal forest walks, rock formations and waterfalls, are well known. This together with the country's biodiversity has contributed to a growing tourism industry which is making a significant contribution to the country's GDP In 2008 the country earned more than E100 million from tourism (GOS-SOER, 2011). The nation has a number of cultural, nation building activities that are anchored in its biodiversity and ecosystems.

A conservative estimate made in 2002 (Forest Policy Legislation Project) set the monetary value of forest products at USD 15.92 million. This estimate did not include a number of crucial ecosystem services such as water and air purification. It is believed that if ecosystem service accounts were performed these would show that ecosystem services are worth much more than this estimate. This is in line with observations made in the first NBSAP which estimated the contribution of the forest ecosystem services to be USD 32.66 million per year (36% of the GDP) (GOS, 2001). This subsidy from nature is rarely accounted for or even acknowledged in Swaziland.

1.3 THREATS TO BIODIVERSITY

Swaziland's biodiversity is contending with a number of pressures which are a consequence of a growing population with the resultant increased resource utilization, changes in land use and emissions (GOS-SEA, 2013). Habitats available to flora and fauna have subsequently been entirely lost or been reduced in extent and quality. Causes of loss of biodiversity and threats to biodiversity can be summed up as (GOS-SEA, 2013):

- Rapid population growth and pressure on land.
- Poverty and lack of alternative sources of livelihood.
- Inequities in land tenure, access and user rights.
- Lack of influence of stakeholders, in particular women.
- Substitution of natural habitat by other systems of production and land use.
- Over-exploitation of communal lands, including unsustainable extraction of fuel wood, and other products.
- Inappropriate and uncontrolled burning of forests and rangelands (altered fire regimes).
- Lack of value assigned to biodiversity and its products.
- Lack of recognition and use of traditional knowledge.
- Lack of capacity to manage biodiversity.
- Illegal trade in natural products.
- Breakdown of traditional leadership and land disputes.
- Inappropriate government policies.
- Poor environmental awareness.
- Poor environmental monitoring.
- Poor enforcement of laws and regulations.

In addition to the anthropogenic threats Swaziland's biodiversity also faces the challenge of climate change. Shifts in climate will cause changes in the habitats available to species and this may require a re-evaluation of the country's protected area network.

1.4 LEGAL AND INSTITUTIONAL FRAMEWORK

To conserve and safeguard biodiversity, the Government of Swaziland has passed numerous laws (Table 3). These laws do not only protect biodiversity but ecosystems too. The Biodiversity Needs Assessment Report (GOS-SEA, 2003) examined the country's legislation pertaining to biodiversity and showed its strengths and weaknesses. A critical shortcoming identified by that report was the fact that these laws are housed in various Government Ministries and hence suffer from the effects of this dispersion.

The country has also crafted a number of policies and strategies that impact upon biodiversity and its conservation. Some of these are listed below (GOS-SEA, 2013):

- The National Constitution
- The National Development Strategy
- The Poverty Reduction Strategy and Action Plan
- Swaziland Environment Action Plan (SEAP)
- The National Environmental Policy
- The National Water Policy
- Biotechnology and Biosafety Policy

- National Gender Policy
- The National Pharmaceutical Policy

Table 3 List of legislation relating to biodiversity conservation and management (GOS-SEA, 2003)

Acts impacting Upon Biodiversity Conservation	Housing institution
The Swaziland National Trust Commission (Amendment) Bill of 2009 The Biosafety Bill of 2009 The Biodiversity Management and Conservation Bill of 2007 The Access and Benefit Sharing Bill of 2006 The Environment Management Act of 2002 The Swaziland Tourism Authority Act of 2001 The Environment Audit, Assessment and Review Regulations of 2000 The Swaziland Environmental Authority Act of 1992 The National Trust Commission Act of 1972 (amended in 1973) The National Trust Commission Regulations of 1972 The Forest Preservation Act of 1910 The Forest Bill (2010) The Flora Protection Act of 2001	Ministry of Tourism and Environmental Affairs
The Wild Mushroom Control Order of 1973 The Plant Control Act of 1981 (which repealed The Plant Protection Act of 1959 and the Noxious Weeds and Wild Mushrooms Acts) The Grass Fires Act of 1955 The Private Forests Act of 1951 The Protection of Fresh Water Fish Act of 1937 The Fresh Water Fish Regulations of 1937 (amended 1952 and replaced 1973) The Noxious Weeds Act of 1929 The Noxious Weeds Control Regulations of 1929 The Wild Birds Protection Act of 1914	Ministry of Agriculture
The Water Act of 2002 The Natural Resources Act of 1951 The Natural Resources (Public Stream Banks) Regulations of 1951	Ministry of Natural Resources and Energy
The Game Act of 1953 (amended 1991 and 1993) The Non-bailable Offences Order of 1993	King's Office/Ministry of Justice
The Swazi Administration Order of 1998	Deputy Prime Minister's Office

1.4.1 INTERNATIONAL CONVENTIONS TO WHICH SWAZILAND IS PARTY

- The Convention on International Trade in Endangered Species (CITES) regulates international trade in specimens of wild animals and plants. CITES was signed on 3 March 1973 and Swaziland acceded to it on 26th February, 1997.
- The International Treaty on Plant Genetic Resources for Food and Agriculture of the Food & Agriculture Organization seeks to ensure conservation and sustainable use of plant genetic resources for food and agriculture as well as the fair and equitable sharing of benefits accruing from their use. Though it was adopted in 2001 and Swaziland signed it on 06th June 2002, the treaty came into force in June 2004. Swaziland ratified the treaty in January 2013. This treaty is aimed at the conservation and sustainable use of plant genetic resources for food and agriculture as well as the fair and equitable sharing of benefits accruing from their use for sustainable agriculture and food security.
- The World Heritage Convention attempts to link conservation of nature with cultural preservation. The Convention places an obligation on member states to identify, protect, conserve, present and ensure transmission to future generations of the cultural and natural heritage protected under its provisions. It was adopted by a UNESCO general Conference on 16 November 1972 and Swaziland ratified it on 30 November 2005.
- The Convention on Wetlands of International Importance Especially as Waterfowl Habitat, also called the Ramsar Convention, is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and associated resources. It was signed in Ramsar, Iran, on February 2, 1971. Swaziland acceded to the convention on 15 February 2013 and it entered into force for the country on 15 June 2013.
- The United Nations Framework Convention on Climate Change is a framework for intergovernmental efforts to tackle challenges posed by climate change. Its basis is the recognition of the universality of the earth's climate system whose stability can be affected by emissions of greenhouse gases. The convention was adopted on 9 May 1992 and entered into force on 21 March 1994. Swaziland signed the convention on 12 June 1992 and ratified it on 7 October 1996 and it came into force in the country on 5 January 1997. This convention is a forum where governments:
    - share information on greenhouse gas emissions, national policies and best practices
    - launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries
    - cooperate in preparing for adaptation to the impacts of climate change
- The United Nations Convention to Combat Desertification (UNCCD) was borne of the recognition of desertification as one of the greatest challenges to sustainable development at the Rio Summit in 1992. UNCCD was established in 1994 and is the only international agreement that links environment and development to sustainable land management. It focuses on the arid, semi-arid and dry sub-humid areas, with their very vulnerable ecosystems and human inhabitants. The major goal of this convention is: "to forge a global partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas in order to support poverty reduction and environmental sustainability". Swaziland signed the UNCCD on July 26 1994, ratified it on October 07 1996 and it came into force in the country on 5 January1997.
- The World Trade Organization and its agreements deals with the global rules of trade between nations ensuring that trade flows smoothly, predictably and freely. Swaziland joined the WTO on 1st January 1995.
- The International Plant Protection Convention created in 1951 by the Food and Agriculture Organization aims to ensure coordinated, effective action to prevent and to control the introduction and spread of pests of plants and plant products, to protect cultivated plants, natural flora and plant products. Swaziland signed this convention in November 1997.

- The World Intellectual Property Organization was established in 1967 with the aim of encouraging creativity and promoting the protection of intellectual property. It has a number of international agreements which seek to ensure cooperation and administrative cooperation among states. Swaziland joined WIPO in 1988 and is signatory to all the WIPO administered treaties with all but two in force in the country.

2. DEVELOPMENT OF THE SECOND EDITION OF THE NBSAP

The second NBSAP was developed in a consultative process that involved stakeholders representing numerous stakeholder categories. The process was led and coordinated by SEA, working with and through the Biodiversity Project Implementation Committee (BPIC) which was the project steering committee. This committee was formulated to craft the first edition of the NBSAP and on its completion the committee was changed into a project implementation committee. This committee comprises representatives from key government ministries and departments as well as strategic stakeholder institutions.
Stakeholders in the NBSAP are those organizations or government ministries, departments and individuals that have a bearing in the conservation, utilization, valuation and any other aspect of biodiversity. Individuals with special skills and or knowledge were drafted into a "think tank". This was a flexible grouping whose formulation was on a "need" basis, to address a specific issues pertaining to the NBSAP as they arose.

2.1 STAKEHOLDERS

2.1.1 ORGANIZATIONS

Swaziland National Trust Commission

Trans-Frontier Conservation Areas

Big Game Parks

Shewula Community Reserve

Mbuluzi Nature Reserve

Lubombo Conservancy

Phophonyane Nature Reserve

All Out Africa

Swazi Trails

Natural History Society of Swaziland

Swaziland National Association of Journalists

Swaziland Science Teacher's Association

Hotels Association of Swaziland

Ministry of Tinkhundla Administration and Development

Ministry of Foreign Affairs and International Cooperation

Ministry of Agriculture

Ministry of Tourism and Environmental Affairs

Ministry of Sports, Culture and Youth Affairs

Ministry of Commerce, Industry and Trade

Ministry of Education and Training

University of Swaziland

National Curriculum Centre

Ngwane Teacher Training College

William Pitcher Teacher Training College

Traditional Healers Association

Traditional Healers Organization

Dealers in Biodiversity e.g. in the markets

Dealers in firewood and timber

Non-governmental Organizations
Swaziland Foresters
King's Office
Land Management Board

Individuals and stakeholders consulted are listed in Appendix 1 to 3.

2.2 METHODOLOGY FOR THE CONSULTATION PROCESS

A stakeholder list was compiled and selected stakeholders were invited to attend multi-stakeholder sessions. The stakeholders formulated a list of prioritised key issues, provided input at various stages of the development of the NBSAP, as well as validated the reports at all stages of the process. A National Think-Tank of local experts involved in biodiversity issues met on a number of occasions to deliberate on specific technical biodiversity issues. Special stakeholder groups, for example, Chiefs, were consulted at special regional workshops.

Consultations were held with experts in South Africa to ensure adequate coverage of both local and regional biodiversity issues. Scientists from the South African National Biodiversity Institute (SANBI), Council of Scientific & Industrial Research (CSIR) and Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES) were consulted on national and regional aspects of the NBSAP and NBSAP process.

The Development of the second NBSAP was kick-started in 2012 with the appointment of a team of consultants to carry out the revision and stocktaking on the first NBSAP. This exercise assessed the level of success in the implementation of the first NBSAP as well as re-examined the value/importance of biodiversity to the people of Swaziland. Gaps and weaknesses in the first NBSAP were highlighted and reasons for the failure to implement some elements of the NBSAP were elucidated.

In 2013, another team of consultants were appointed to continue the process of putting together the second NBSAP. After the inception phase, the stakeholders were assembled for the launch of the second NBSAP. At this workshop, the successes and failures in the implementation of the first NBSAP were discussed with a view to strengthening the second one. The principles governing the strategy were proposed, discussed and agreed upon. The Aichi Targets, from the Strategic Plan for Biodiversity 2011-2020, on which the country's targets and strategy will be modelled were introduced. A number of workshops were held around the country introducing the planned second NBSAP to critical stakeholders, the chiefs and through them their subjects who constitute the majority of the country's population. The principles governing the strategy and the nation's biodiversity targets were further discussed at a stakeholder workshop in March 2014 and finalised in December 2014 in another stakeholder workshop. At the latter stakeholder workshop the targets were adopted as the nation's targets. The draft strategy was presented to the SEA Secretariat and Project Steering Committee in May 2015 and the draft NBSAP in July 2015. The NBSAP was finalised in September 2015. This is summarised in the figure below.

Stocktaking and Assessment Phase 2012/2013
•The legal and institutional framework,
•Lessons learnt from development and implementation of the first NBSAP
•The values of biodiversity and ecosystem services in Swaziland,
•Contribution of ecosystems and biodiversity to well-being and livelihoods,
•Causes and consequences of biodiversity loss.
Inception Phase and Launch of NBSAP 2 December - March 2014
•Appointment of consultants
•Stakeholder workshops
•Presentation of SPB 2011 -2020 and Aichi Tartgets
•Preparation of National principles and targets
The Nation's Targets December 2014
•Stakeholder workshop
•National Principles and Targets presented
The Draft Strategy May 2015
•Preparation of Draft Strategy
Preparation of Draft NBSAP July 2015
•Preparation of draft strategy and action plan
Draft NBSAP October 2015
•Presentation of draft NBSAP 2 to SEA
•Presentation of draft NBSAP 2 to BPIC/PSC
•Presentation of draft NBSAP 2 to MEAs Focal Points
•Presentation of draft NBSAP 2to Stakeholders
•Finalisation of NBSAP 2

2.3 LESSONS LEARNED FROM THE FIRST NBSAP

The first NBSAP brought to light a number of lessons which had to be, and were, taken into consideration in the drafting of the second NBSAP. The lessons are:

- Engagement and involvement of stakeholders: There is a need for continuous engagement extending into implementation, review and reporting. This will also require early development of a communication plan and strategy that will target stakeholders at all levels from community, technical and policy-making level.
- Closer alignment with action plans for other MEAs: There is a need for closer cooperation and collaboration with focal points for other related MEAs.
- Targets, indicators and responsibilities: Implementation can be greatly enhanced not only by having clear targets and measurable indicators as the strategic plan calls for but also indicating responsibility to specific institutions in line with their mandates.
- Ownership of and commitment to the NBSAP: Greater ownership and commitment to the NBSAP will needs to be facilitated by ensuring approval of the document at policy-making level rather than technical level.
- Streamlining of NBSAP approval processes: There is a need to reflect on and streamline the processes around approval of documents such as the NBSAP as the lengthy delays cause significant delays in implementation.

3. OVERVIEW OF THE SECOND NBSAP

3.1 BACKGROUND TO THE SECOND NBSAP

Swaziland is party to numerous biodiversity-related international environmental agreements (GOS-SEA 2013a, GOS-2013b), one being the Convention on Biological Diversity (CBD) which was adopted in 1992 as the only international instrument that comprehensively addresses the conservation and management of biological diversity. As much as the CBD affirms the sovereignty of each country over its biological diversity, each signatory is bound to its objectives. The objectives of the CBD are: 1), the conservation of biological diversity; 2) the sustainable use of its components; and 3) the equitable sharing of the benefits arising from the utilisation of genetic resources. In addition to reporting to the CBD Secretariat through periodic country national reports, Parties to the convention are further obliged to:

i) *Develop national strategies, plans or programs for the conservation and sustainable use of biological diversity or adapt for this purpose existing strategies, plans or programs which shall reflect, inter alia, the measures set out in the Convention, relevant to the Contracting Party concerned; and*

ii) *Integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programs and policies.*

Swaziland as a contracting party to the CBD has an obligation to develop and implement a National Biodiversity Strategy and Action Plan (NBSAP). The NBSAP should incorporate strategies for biodiversity conservation, sustainable use of biological resources, equitable sharing of benefits derived from genetic (and other) resources, the conservation and sustainable use of agricultural biodiversity and biosafety (Hagen, undated).

At the Tenth Conference of the Parties to the CBD in 2010 in Nagoya, Japan, the Parties adopted the Strategic Plan for Biodiversity (SPB) as a framework to facilitate planning and monitoring. The SPB has the following Mission:

"Take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet's variety of life, and contributing to human well-being, and poverty eradication. To ensure this, pressures on biodiversity are reduced, ecosystems are restored, biological resources are sustainably used and benefits arising out of utilization of genetic resources are shared in a fair and equitable manner; adequate financial resources are provided, capacities are enhanced, biodiversity issues and values mainstreamed, appropriate policies are effectively implemented, and decision-making is based on sound science and the precautionary approach."

To achieve this mission 20 targets (Aichi Targets) were set out and agreed upon for the period 2011 – 2020 and these were grouped within the following 5 strategic goals.

Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society.
Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use

Strategic Goal C: Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity
Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services.
Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building.

The Aichi Targets are specific actions that the Parties committed to in order to achieve the above goals and in the process the mission of the SPB. Swaziland, therefore, is in the process of updating its National Biodiversity Strategy and Action Plan to be in line with the SPB. Despite the fact that the first NBSAP was formulated and accepted, most of its goals were not achieved. This updated NBSAP aims at being accepted by all the stakeholders and being used by policy-makers as the nation's roadmap towards the conservation and sustainable utilization of the country's biodiversity.
The first NBSAP was formulated with the following principal objectives: To conserve the biodiversity of Swaziland, to encourage the sustainable use of biodiversity in Swaziland and to ensure that benefits accrued from the utilisation of Swaziland's biodiversity are shared equitably. To achieve these objectives six goals were identified as follows:

1. A viable set of representative samples of Swaziland's full range of natural ecosystems are conserved through a network of protected areas.
2. Biological resources of natural ecosystems outside of the protected areas network are used sustainably.
3. The genetic base of Swaziland's crops and livestock breeds is efficiently conserved.
4. Risks associated with the use of living, modified organisms (LMOs) in Swaziland are minimized.
5. The institutional, policy and legal frameworks, as well as the human resources needed to implement the Biodiversity Strategy and Action Plan, are developed.
6. Public awareness of, and support for, biodiversity conservation in Swaziland is enhanced.

A recent study (GOS-SEA, 2013b) showed that for the majority of these goals there has been little or no progress. The second NBSAP reformulates the national goals so that they are in line with the Aichi Targets and creates new strategies or refines those in the first NBSAP to make them more effective and achievable.

3.2 ORGANIZATION OF THE DOCUMENT

Section 1: Gives a brief background to the country; it highlights pertinent information on the geography, biodiversity and ecosystems. Threats to biodiversity and its value and benefits are presented. The legal and institutional framework governing the protection of biodiversity and ecosystems is briefly discussed. The international conventions to which the country is party are touched upon.

Section 2: Here the approach used in the involvement of the stakeholders and who the stakeholders are as well as lessons from the first NBSAP are all laid out.

Section 3: This section provides an overview of the second NBSAP, giving the background to the NBSAP the long term vision for biodiversity in the country and the principles governing the strategy. It introduces the key/priority areas for the second NBSAP and lays out the structure of the document.

Section 4: Presents the National Biodiversity Strategy. Here the national targets are presented grouped into five strategic goals.

Section 5: The Biodiversity Strategy and Action Plan. The five goals presented in Section 4 are broken down into targets. Each target is examined in terms of the strategic actions needed to achieve it, the indicators, role players and timelines as well as estimated costs are given.

Section 6: The implementation plan for the strategy is presented. Here the strategies for mainstreaming biodiversity into other sectors, human and technical capacity development, communication and outreach strategy as well as resource mobilization are all discussed in detail.

Section 7: In this final section the coordination structures, that is, those who will coordinate and oversee the implementation of the NBSAP are given. The section further details the monitoring and evaluation framework.

3.3 LONG TERM VISION FOR BIODIVERSITY IN THE COUNTRY

To empower the people of Swaziland to conserve, restore and sustainably use the country's biodiversity equitably sharing the benefits from ecosystem services and utilization of biodiversity.

3.4 PRINCIPLES GOVERNING THE STRATEGY

These principles were formulated in a consultative manner with all stakeholders involved; the original NBSAP had guiding principles that are still generally applicable. These were modified, added to and refined for the current NBSAP.

1. *The components of the biodiversity of Swaziland should continue to be identified, monitored and researched for the purposes of conservation, education, sustainable use, commercial use and leisure.*

   Though some work has been done in the last decade or so, Swaziland's biodiversity still remains largely unknown. Species lists and distribution maps have been drafted for an increasing number of animal and plant groups, but these still cover only a small proportion of the country's biodiversity. Furthermore, for most species, changes over time cannot be observed since baseline population and distribution data are not available. The main obstacles to documenting the biodiversity of Swaziland are restricted funding opportunities and a critical shortage of human capacity.

2. *The close link between the traditional Swazi way of life and biodiversity needs to be recognised and promoted in line with conservation principles.*

   Swazi Tradition has a very close relationship with the country's ecosystems and biodiversity. This relationship includes, but is not limited to, sustainable utilization and conservation of biodiversity. The modern conservation practices in the country and the NBSAP would greatly benefit from these traditional knowledge systems. It is hoped that including these in NBSAP would lead to better acceptance and uptake of these conservation strategies especially in the populous rural areas.

3. *Participation and involvement at all levels is necessary for the conservation of biodiversity in Swaziland.*

   A participatory approach involving all stakeholders, at all levels was adopted as the vehicle not only for the crafting of the NBSAP but also for its implementation. Stakeholders were and will continue to be consulted to ensure that they all claim ownership of the NBSAP and all processes linked to it.

4. *Benefits derived from technological advances based on the use of indigenous knowledge and genetic resources should be shared equitably.*

   The equitable sharing of benefits accruing from the country's ecosystems and biodiversity is the object and purpose of the upcoming ABS strategy. Where the benefits are equitably shared, people will have an incentive for taking better care of the environment.

5. *Biodiversity is best conserved in-situ (both within and outside of protected areas), but where necessary ex-situ methods should be developed to support in-situ efforts.*

   In-situ conservation should be applied as much as possible since it ensures the conservation of not only the target species but also its habitat and, by default the various other species inhabiting that habitat. However, there are cases where the only remaining option is *ex-situ* conservation. This strategy advocates the use of whatever ecological tools it can to ensure the survival of biodiversity and ecosystems in the country.

6. *Threats to biodiversity should be addressed through an appropriate multi-disciplinary forum.*

   Biodiversity affects, and is affected by, a large cross-section of society. Therefore, for effective management and amelioration of the threats to biodiversity, cooperation between all stakeholders is essential. A multidisciplinary, multi-stakeholder approach will ensure that these diverse (and often isolated) sectors are brought together.

7. *Access to genetic resources rests with the State.*

   Genetic resources within Swaziland belong to the people but are held in trust for the Nation by the King. The control and management of these resources has been delegated to various government Ministries and Departments as well as Chiefs and their Inner Councils in the rural areas. A number of legislative instruments empower the delegated authorities to act on behalf of the King and the people of Swaziland.

3.5 KEY PRIORITY AREAS FOR THE SECOND NBSAP

The second NBSAP has been framed to continue work started in the implementation of the first NBSAP in addition to addressing new issues. It builds on the lessons learned from the successes and challenges of the earlier strategy. The key priority areas for this strategy are:

- **Improving the status of the country's biodiversity by monitoring, reduction of threats and pressures, safeguarding ecosystems and encouraging sustainable utilization.**
  The recent national State of the Environment Report (GOS-SEA 2013b) highlighted numerous threats that are imposing serious negative impacts on the country's biodiversity and ecosystems. As a consequence of these threats the country's biodiversity stocks are believed to be declining with a large number of species in the Red Data List. Critical ecosystems such as montane grasslands, aquatic and savannas are in decline.
- **Generation of reliable information data**
  Information base on Swaziland's biodiversity is not complete. Generating reliable baseline information depicting the current status of biodiversity and ecosystems is not only crucial for monitoring trends but will also help establish the status quo on critical area such as the value of these ecosystems to the Swazi Nation.

- **Build and strengthen human capacity in all aspects pertaining to conservation and management of biodiversity.**
  The country's institutions with a mandate for biodiversity conservation have limited human capacity to fulfil their mandate (GOS, 2003a). The institutions were observed to have

insufficient numbers of staff with limited skills to carry out tasks associated with biodiversity conservation and sustainable use.

- To strengthen the existing legislative and policy framework to improve the management and sustainable use of biodiversity and ecosystem.
  Certain laws need revision and updating especially those governing the proclamation of protected areas and the protection of biodiversity on Swazi Nation Land. A number of protection-worthy areas have been identified and some private landowners wish to have their properties proclaimed conservation areas. The proclamation of these areas has been delayed in part by the lack of legislation that allows different categories of protected areas.

- Mainstreaming and integration Biodiversity into National Plans and Strategies and contribute to the National Development objective.
  The vision of the National Development Strategy, 2014, attaches a high premium on improving the quality of life and prosperity for all citizens of the country. The NDS recognises environmental management and sustainable development as one of the key macro-strategic areas that will ensure the achievement of the country's vision. This means that ecological balance must be attained and maintained at all times, that both public and private sectors mainstream environmental considerations in policies, strategies and programmes. Biodiversity is critical in maintaining ecosystems that provide essential services, the very foundations for sustainable development and human well-being. The need to mainstream biodiversity at all levels of government and society is cornerstone for the NBSAP 2.

- Exploitation of synergies with other Multilateral Environmental (MEAs)
  Swaziland is a party to a number of biodiversity related Conventions. These include the CITES, ITPGR, RAMSAR, UNFCCC, UNCCD, Convention on migratory birds species. These Conventions are closely linked to the objectives of the CBD. Exploring synergies and mutual supportiveness by integrating objectives of these Conventions is cornerstone of the NBSAP 2. Focal Points for these Convections were closely consulted and engaged in the NBASP 2 formulation process.

- Increasing awareness on biodiversity in the citizenry of Swaziland.
  For the successful implementation of this NBSAP and the consequent conservation and sustainable use of the country's biodiversity all the citizens of the country as individuals and in their stakeholder groups have to be aware of the importance of biodiversity. They further have to be aware of the NBSAP and its contents as well as their role in the conservation and sustainable use of biodiversity. The first NBSAP had limited success in its implementation as a small fraction of the citizenry was aware of its existence.
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4. THE NATIONAL BIODIVERSITY STRATEGY

4.1 STRATEGIC GOAL A: ADDRESS THE UNDERLYING CAUSES OF BIODIVERSITY LOSS BY MAINSTREAMING BIODIVERSITY ACROSS GOVERNMENT AND SOCIETY

The role played by the country's leadership and government in advocating for the conservation of biodiversity is acknowledged. However, to stem the loss of biodiversity and degradation of habitats, personal behavioural change is needed in the populace. For this to happen, there must be general awareness on the importance and values of biodiversity as well as what must be done to conserve and sustainably use it.

Target 1: By 2022, more than 70% of Swaziland nationals will be cognizant of biodiversity and ecosystems, their value and the steps they can take to conserve and use these sustainably.

The general level of understanding is thought to be insufficient to ensure sustainable utilization of ecosystems and biodiversity, even though environmental issues receive some coverage in the media and do form part of the agenda in certain fora. This is possibly the result of the insufficient up-to-date information on the status of the country's biodiversity and ecosystems. To date, no baseline countrywide study has been carried out to determine the status of flora and fauna as well as the state of habitats. The few studies that have taken place had limited coverage and their outcomes have been published in scientific journals, private libraries or environmental impact assessment reports. The nation needs to be aware of what the status of its ecosystems is and to take informed decisions with regards to sustainable use and management of these ecosystems. The curriculum in schools and institutes of higher learning needs more content on environmental issues. Initiatives like the MESA Chair are laudable but they need to build upon a stronger foundation that has been laid down in the school system.

There is, therefore, a need to gauge the current level of awareness on biodiversity in the country and work to increase this to the desired level. To raise awareness, initiatives and fora that deal in public awareness on environmental issues need to be empowered and capacitated. The curricula of schools and tertiary institutions must be revised to include environmental issues.

Strategic Initiative 1: Ascertain the current level of awareness on biodiversity and raise public awareness on the importance of the need to conserve and sustainably use biodiversity.

Strategic Initiative 2: Raise public awareness on the importance of the need to conserve and sustainably use biodiversity

Target 2: By 2022, biodiversity values have been integrated into all national, regional, municipal and rural development and poverty reduction strategies and planning processes, and are being incorporated into accounting and reporting systems.

Biodiversity and ecosystem services are perceived as 'public goods' of which no maintenance is required and of which there is an endless supply. As much as biodiversity and ecosystems make a major contribution to livelihoods, health and other spheres of life, this contribution is rarely accounted for. Hence where management is required to ensure ecosystems are sustainable, this is never budgeted for or done and is generally seen as an expense that can be foregone.

With decision-makers at all levels being more aware of the value of ecosystems and biodiversity in addition to strategies for sustainable use, they will be able to include these in their plans and budgets. The knowledge on the level of support provided by ecosystem services, development and poverty reduction strategies will incorporate these services. These strategies may even include actions to improve the quantity and quality of some of the ecosystem services.

Strategic Initiative 1: Demonstrate the economic, environmental and social value of biodiversity and ecosystems.

Strategic Initiative 2: Integration of biodiversity and ecosystems values into decision-making and national planning processes.

Target 3: By 2020, positive incentives that benefit biodiversity are encouraged, while harmful incentives, including subsidies, are eliminated or reformed.

Government has in place a number of programmes that were intended to assist the people of the country but have over the years proved to be harmful to biodiversity. There is a need to reform or phase out such incentives and enhance those that have positive impacts on conservation. This requires an assessment of the country's policies and practices to ensure they are in harmony with the principles of the Convention of Biodiversity (CBD).

Strategic Action 1: Analyse existing positive, negative and potential incentives to biodiversity conservation.

Strategic Action 2: Identify appropriate economic instruments to effect reformation or elimination of harmful subsidies.

Strategic Action 3: Encourage positive incentives to benefit the environment

Target 4: By 2022, the Government of Swaziland, municipalities, businesses, local communities and stakeholders at all levels have developed and are implementing plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

Even though the general populace at personal, homestead and business levels relies on biodiversity and ecosystem services, the impacts of this reliance have not been sufficiently studied or documented. Unsustainable utilization of biological resources has been cited as one of the pressures and threats on the country's biodiversity. Long term plans and actions are needed to bring utilization to sustainable levels, that is, reduce the country's "ecological footprint."

Strategic Action 1: Develop and implement plans for sustainable production and consumption of natural resources.

4.2 STRATEGIC GOAL B: REDUCE THE DIRECT PRESSURES ON BIODIVERSITY AND PROMOTE SUSTAINABLE USE OF NATURAL RESOURCES

The last State of The Environment Report (GOS-SEA, 2013) brought to the fore the pressures on the country's natural habitats and the biodiversity they harbour. Unsustainable and unregulated harvesting, land transformation, soil erosion, alien plant invasion, bush encroachment and pollution are the key pressures on the country's biodiversity. Though the country has in place legislation that protects flora and fauna, the enforcement of these laws has not been effective. Plants and animals are harvested unsustainably for medicinal, food and other uses. Land transformations for residential, industrial, agricultural and other purposes has further put pressure on biodiversity as it has reduced and fragmented the available habitats. Soil erosion, alien plant invasion and bush encroachment have generally come as a result of bad land management practises such as overstocking and cultivation on unsuitable slopes. Though efforts are in place to reduce these pressures, the impact of these efforts has not been evaluated.

Target 5: By 2022, the rate of loss, degradation and fragmentation of Swaziland's natural habitats is at least halved, and where feasible brought close to zero.

The most conspicuous form of land degradation in Swaziland is soil erosion, in particular gully erosion, however also degradation of landscapes, natural vegetation and forests is widely encountered. Poor management and overgrazing has caused severe human-induced erosion and generally moderate to poor grazing conditions. Almost a third of the country and more than half of all communal grazing land has a serious or very serious erosion status. Certain types of forests are reported to degrade and showing a decrease in regeneration. Climate change is expected to have a further negative effect on land degradation through reduction of vegetation cover and changes in species composition, as well as through increased deforestation, desertification and disaster hazards.

The conversion of natural habitats to other uses is another significant cause of biodiversity loss in Swaziland. Land use change alters or destroys natural habitat, frequently with secondary consequences of degradation and fragmentation of remaining habitats, all of which result in losses of biodiversity, decline in ecosystem health, and changes in the provision of ecosystem services. Extensive fragmentation of the savanna habitat by intensive agriculture also poses a threat to the loss of biodiversity. Measures to reduce the loss of biodiversity through habitat loss, degradation and fragmentation should be put in place. These will require multi-stakeholder involvement as well as human capacity and monetary inputs.

Strategic Initiative 1: Determine the status of the country's natural habitats and ecosystems.

Strategic Initiative 2: Reduce the loss, degradation and fragmentation of natural habitats by half or if possible to zero.

Target 6: By 2022 all of Swaziland's aquatic resources are sustainably managed.

A small percentage (about 1%) of the country's aquatic habitats is under legal protection. The aquatic and forest ecosystems have the highest number of species per unit area, however, the aquatic ecosystem is the least studied in the country. Aquatic habitats are under threat mainly from pollution, habitat alteration and unsustainable harvesting of resources.

Aquatic systems in particular are under threat from agricultural development as wetlands are drained for development (agriculture, roads and housing) or are negatively affected by changes within their catchment.

Strategic Initiative 1: Ensure optimal utilization and conservation of aquatic resources (wetlands, rivers, etc.)

Target 7: By 2022, all areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of Swaziland's biodiversity.

The country is in the process of introducing conservation agriculture but the extent to which this new technology has been adopted is as yet unknown. There is further need to utilize existing agricultural lands for maximum productivity as well as revisions in policy with regards to large farms and small homestead level farms. There is debate as to which, between few large plantations and a large number of small plots is more productive; this needs to be investigated for Swaziland and the best approach adopted. Agriculture, aquaculture and forestry must be made more productive and sustainable.

Strategic Initiative 1: Promotion of Sustainable agriculture, fisheries, aquaculture and forestry.

Target 8: By 2022, all forms of pollution in Swaziland have been brought to levels that are not detrimental to ecosystem functioning and biodiversity.

The country has in place pollution control legislation whose effectiveness has not been determined. To bring pollution levels down to acceptable levels the ecosystems that are polluted must be prioritized and the pollutants and their sources determined. Behavioural changes must be undergone by the polluters and general citizenry and these may come as a result of increased awareness as well as legislative deterrents.

Strategic Initiative 1: Monitor and manage levels of pollution through a range of effective measures.

Strategic Initiative 2: Identify/determine the different types of pollutants in the ecosystems.

Strategic Initiative 3: Monitor and manage all forms of waste through a range of effective measures.

Target 9: By 2022, invasive species that are alien to Swaziland, and their pathways, are identified and prioritized; priority species are controlled or eradicated, and measures are put in place to manage pathways to prevent their introduction and establishment.

In 2003, the problem of the proliferation of IAPS was noted in the Northern Hhohho region. In 2005/2006 the Government of Swaziland declared IAPS a national disaster. This was then followed by formulation and implementation of a Capital Project to control and manage invasive plant species. An estimated total area of 15 000ha was cleared within Swazi Nation Land (SNL) and over 4 000ha within protected areas.

The project outputs were: creating public awareness, field combating operations, survey data set, map of selected IAPS in Swaziland including species accounts, brief description of species, spatial distribution and intensity of infestation. In addition two documents were produced: A draft National Strategy for the Control and Management of IAPS and a draft Forestry Bill of 2010. The project was temporarily stalled due to administrative challenges, however, efforts to resuscitate the project are underway. Within protected areas, control and management of IAPS is on-going.

Invasions in aquatic systems from exotic fish species, such as the rainbow trout (*Onychorhynchus mykiss*) and the largemouth bass *(Micropterus salmoides)* can have devastating effects on local fish populations. The introduced red claw lobster (*Cherax quadricarinatus*) in the Sand River Dam near Mhlume is reported to be adversely affecting dam wall and canal structures as well as local waterways. Despite the efforts made to control and manage alien invasive species, more work needs to be done.

Strategic Initiative1: Minimize negative impacts caused by Invasive Alien Species (IAS) to the country's biodiversity.

Strategic Initiative2: Stabilize the current level of IAS infestation.

Target 10: By 2022 pressures on Swaziland's vulnerable and most valuable ecosystems are identified and prioritized; priority pressures are controlled or eradicated.

Climate change and anthropogenic activities are some of the major pressures on ecosystems and are expected to drive changes in biodiversity in the country. Projected impacts on ecosystems from selected global climate models show a westward shift and shrinking of both the grassland and savannah ecosystem types of Swaziland. The country is projected to see the introduction of a tropical very dry forest type of ecosystem in the eastern part of the country replacing half of the current subtropical ecosystem. The savannah ecosystem is ranked third most important (GOS-SEA, 2001) while the first ranked ecosystem (grassland) faces the greatest number of threats.

An assessment of the country's ecosystems will enable determine their levels of vulnerability and prioritization of efforts to control and manage these pressures so that ecosystem integrity is maintained. Adaptation measures for these ecosystems needs to be developed.

Strategic Initiative 1: Undertake a vulnerability assessment and develop relevant adaptation measures on the most valuable ecosystems.

4.3 **STRATEGIC GOAL C:** IMPROVE THE STATUS OF BIODIVERSITY BY SAFEGUARDING ECOSYSTEMS, SPECIES AND GENETIC DIVERSITY

For this goal to be attained the country's protected area network needs to be expanded so it affords protection to all species known to exist in the country. Red Data List species must recover and subsequently there must be fewer species in the Red Data List. The conservation of crop plant and domestic animal species, especially those of cultural and economic importance is another facet of this goal.

Target 11: By 2022, at least 20 per cent of Swaziland's land area, especially areas of particular importance for biodiversity and ecosystem services, protected landscapes and multiple resource use areas are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas.

Covering an area of 17,364 km^2, Swaziland has 2,600 species of flowering plants, approximately 121 species of mammals, 153 amphibians and reptiles, and 350 species of birds; making her unique in floral and faunal species richness. The country also contains one of the largest remaining intact altitudinal gradients of natural ecosystems in Southern Africa, and is the only place where this continuum is concentrated in relatively short distance (of about 200km). Such an intact gradient holds great significance for biodiversity conservation because it allows ecological processes such as migration and gene flow, and provides the opportunity for population shift as an adaptation to climate change. This considerable biodiversity is contained in four distinct ecosystems; namely montane grassland, savannah-woodland mosaic, forests and aquatic systems.

Despite the global significance of its biodiversity, Swaziland's Protected Area (PA) estate is comprised of very small and vulnerable PAs poorly distributed across ecosystems and formal PAs cover only 3.9% of the country. There is, therefore, a need to expand the PA estate, while strengthening PA management competencies. This in turn will require the participation of a broad range of stakeholders, including private landholders, local communities and the tourism industry to establish a new State PA, private and community managed reserves. A landscape approach is needed to strategically place these different PAs in proximity to one another, and manage land in immediately adjacent areas to reduce threats to biodiversity and improve connectivity between PA sites. The recently inaugurated GEF-funded SNPAS project is a step in achieving this target. This project seeks to strengthen the existing protected area network and improve the level of protection for biodiversity in reserves.

Strategic Initiative 1: Assessment of the country's biodiversity and ecosystems to identify hotspots (protection-worthy areas).

Strategic Initiative 2: Expand the protected area network and governance types using the landscape approach.

Strategic Initiative 3: Strengthening protected areas through improved conservation management and operational support.

Strategic Initiative 4: Develop management plans for PWAs.

Target 12: By 2022, the extinction of species known to be threatened in Swaziland has been prevented and their conservation status, particularly of those that are endemic and those most in decline, has been improved and sustained.

Swaziland has prepared two red data lists; one for plants (Dlamini and Dlamini, 2002) and vertebrates (Monadjem *et al*, 2003a). The former list has been updated for trees (Loffler and Loffler, 2005). A total of 132 species of vertebrates are listed in the Red Data list; consisting of 11 species of fish, 4 species of amphibians, 14 species of reptiles, 55 species of birds and 48 species of mammals. These threatened species constitute 9-20% of the total vertebrates occurring on the country. A total of 305 species of plants have been included in list, representing 9% of the total plant species richness.

Despite all efforts to conserve habitats and ecosystems, there is continued concern with the species that constitute these ecosystems. Many species in the country have declining populations, some of which have already gone extinct such as the African wild dog (*Lycaon pictus*). Threatened species are useful indicators of the overall health of ecosystems and serve, with varying degree of success, as "umbrellas" for the protection of other organisms and ecosystems. This involves a thorough understanding of the species, their habitats, the pressures and threats they are facing and the management of these pressures and threats. For some species degraded habitats may have to be restored. The achievement of this target will be evidenced by the removal of species from the red data lists with no new species being added to the lists.

Strategic Initiative 1: Improve the status of threatened species.

Strategic Initiative 2: Restore, maintain or reduce the decline of populations of selected taxonomic groups.

Target 13: By 2022, the genetic diversity of cultivated plants and domesticated animals and their wild relatives, including other socio-economically as well as culturally valuable species, in Swaziland, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

The gene pools of plants and animals that are culturally and economically important need to be maintained by conserving the genetic diversity of existing species and that of their wild relatives. The country has made initiatives for keeping germplasm of wild and crop plants, however, more efforts is still needed. A plant genetic resource centre has been established but to date, it is still under resourced. A botanic garden has been planned, however, availability of resources are delaying its establishment. A National Tree Seed Centre was established in 1994 but it is also under resourced. Some government and private ranches are engaged in multiplying and keeping stocks of special breeds of cattle (Nguni). These programmes need to be assisted and expanded so they have all the important plant and animal species in their "storage". There should be *in situ* and *ex situ* stocks of both the animal and plant species.

Strategic Initiative 1: Assessment of genetic diversity of cultivated plants, farmed and domesticated animals and their wild relatives.

Strategic Initiative 2: Maintain the genetic diversity of crops, livestock, fish, harvested tree species and wildlife and other valuable species

4.4 **STRATEGIC GOAL D:** ENHANCE THE BENEFITS TO ALL FROM BIODIVERSITY AND ECOSYSTEM SERVICES

The services that are provided by biodiversity and ecosystems need to be known, qualified and quantified. The ecosystems providing those services must also be determined and their status known. Where the ecosystems are under pressures and threats these must be removed and managed so that the ecosystems can sustainably provide those services. This is particularly important in a country where a large percentage of the population depends heavily on biodiversity and ecosystem services. Public awareness of the importance and value of the ecosystem services is essential as all stakeholders must be involved for the success of sustainable management efforts.

Target 14: By 2022, Swaziland's ecosystems that provide essential services are restored and safeguarded taking into account the needs of women and children, local communities and those of the poor and vulnerable.

Naturally functioning ecosystems deliver valuable services and benefits to humankind. The loss and degradation of ecosystems has serious implications for the Swazi society. The country's diverse economy; agriculture, forestry and manufacturing heavily rely on functional ecosystems. Furthermore, majority of the Swazi population are heavily dependent on natural resources for their livelihoods. The overall socio-economic well-being of the people of Swaziland is dependent on the achievement of a balance between development and sustainable use of biodiversity.

Biodiversity and ecosystems play a role in building a sustainable future. They are critical infrastructure to support development. Raising awareness on the importance of ecosystem services and biodiversity to achieving development goals, restoring and managing ecosystems and biodiversity as well as in-cooperating ecosystem services into development and planning are the key strategic initiatives proposed.

Strategic Initiative 1: Making the case for ecosystem management.

Strategic Initiative 2: Restore and maintain the capacity of ecosystems to deliver services.

Strategic Initiative 3: Incorporating ecosystems management into development planning (national planning processes).

Target 15: By 2022, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced in Swaziland, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

The high unemployment rate in the country and a number of other factors has placed a huge burden on the country's ecosystems. Where ecosystems are carrying beyond their capacity their resilience and productivity are reduced. A holistic multidimensional approach needs to be adopted to ensure that ecosystems are restored to sustainable levels. Legislation may need to be better enforced or modified to protect ecosystems, job-creation and self-help initiatives would need to be put in place to reduce dependence on ecosystems. This will have benefits in ensuring resilience to climate change as well as better provision of ecological services.

Sub Strategy 1: Strengthen Swaziland's key ecosystems to ensure that the country remains a net carbon sink.

Strategic Action 2: Reduce greenhouse gas emissions emanating from land use, land-use change and forestry (LULUCF).

Target 16: By 2016, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational in Swaziland, consistent with national legislation.

Swaziland has aligned herself to the precepts of the Nagoya Protocol though it has not yet ratified it. The protocol is in the process of being "domesticated" and operationalised. A draft ABS Bill was developed before adoption of the Protocol, hence, the need to finalise and harmonise it with the provisions of the Protocol. The Swaziland Environment Authority has been designated the country's focal point for the Protocol. The country is currently conducting awareness raising initiatives to key stakeholders to facilitate accession and implementation of the Protocol. Domestication of the Protocol will ensure sharing of benefits when genetic resources leave the country and strengthen the ability of communities to benefit from the use of their knowledge, innovations and practises relating to the genetic resources.

Strategic Initiative 1: Ensure that the Nagoya Protocol is domesticated by 2016.

Strategic Initiative 2: Operationalize the National ABS Regulatory Framework.

Strategic Initiative 3: Strengthen capacity to research and develop commercial products from local genetic resources..

4.5 STRATEGIC GOAL E: ENHANCE IMPLEMENTATION THROUGH PARTICIPATORY PLANNING, KNOWLEDGE MANAGEMENT AND CAPACITY BUILDING

For implementation of the NBSAP it will need to be accepted at all levels, from grassroots to the top level decision-makers and policy-makers. The country will be required to harness and build capacity to carry out the required actions. It further requires resources and political will.

Target 17: By 2016, Swaziland has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

Stakeholder participation has been a key element in the drafting of the NBSAP and should continue to implementation. It is a key element to the acceptance of the document as a national policy. The Biodiversity Programme Implementation Committee (BPIC) needs to vigorously "sell" the NBSAP to all stakeholders especially those in higher government offices and Parliament.

Strategic Action 1: Advocate for the adoption of the NBSAP 2 as a policy instrument.

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Target 18: By 2022, the traditional knowledge, innovations and practices of local Swazi communities relevant for the conservation and sustainable use of biodiversity are documented, respected and integrated into national conservation strategies. A great percentage of the country's population lives in rural areas and has a close relationship with biodiversity and ecosystems. Even those that live in towns and cities they maintain close ties with rural relatives and practices. The Swazi people are also highly cultural, with a culture that is closely tied to biodiversity. Unfortunately, certain components of Swazi culture and traditional knowledge are not documented, which makes incorporation into conservation initiatives difficult. For NBSAP to be effectively implemented it has to take into account traditional knowledge and practises. In the drafting of the NBSAP stakeholders at all levels have been involved to ensure the incorporation of this important aspect.

Strategic Action 1: Promote the role of Traditional Knowledge in conservation.

Strategic Action 2: Protect and document traditional knowledge, innovations and practises relevant to conservation and sustainable use of biodiversity..

Target 19: By 2022, the knowledge, science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied in Swaziland.

Though research institutions do work on the country's biodiversity and ecosystems this research has not been directly focussed on the issues of their values, function, status, trends and consequences. Resources need to be provided so this crucial research is carried out and information from researchers made generally available and accessible to all.

Strategic Action 1: Put in place programmes to generate information on biodiversity in the country.

Strategic Action 2: Establish mechanisms to coordinate and share biodiversity information and technologies.

Target 20: By 2016 the NBSAP is fully integrated into the government's and implementing institutions' budgeting systems and alternative sources of funding are mobilized.

The NBSAP is an important policy document that requires substantial funding and resources for its effective implementation. Stakeholders and implementing agencies must plan NBSAP into their budgets and exploit synergies with on-going initiatives to reduce costs.

Strategic Action 1: Develop and implement a coordination and resource mobilization strategy to facilitate implementation of the NBSAP2.

5. THE BIODIVERSITY ACTION PLAN

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
STRATEGIC GOAL A: ADDRESS THE UNDERLYING CAUSES OF BIODIVERSITY LOSS BY MAINSTREAMING BIODIVERSITY ACROSS GOVERNMENT AND SOCIETY							
Target 1: By 2022, more than 70% of Swaziland Nationals will be cognizant of biodiversity and ecosystems, their value and the steps they can take to conserve and use these sustainably.							
1.1 Ascertain baseline level of awareness and build capacity on conservation and sustainable use of biodiversity.	1. Undertake an assessment of the current level of biodiversity and ecosystem awareness to identify gaps and key groups.	*1.* No baseline information on biodiversity and ecosystem awareness level. *2.* Data from stakeholders like SWADE, USSF.	1. Baseline information on biodiversity awareness within target groups.	• SEA	• SNTC • MoET-UNISWA • NGOs • Media	2015 - 2016	15

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
1.2 Raise public awareness on the importance of, the need to conserve and sustainably use biodiversity	1. Build capacity of government institutions, civil society, traditional authorities, private sector on conservation and sustainable use of biodiversity. 2. Support and encourage government departments, schools, NGOs and communities that carry out biodiversity awareness initiatives. 3. Promote community based ecotourism initiatives. 4. Mainstream biodiversity and ecosystem issues into schools and tertiary institutions' curricula. 5. Develop an integrated environmental awareness and communication strategy to disseminate biodiversity information. 6. Reinforce, capacitate and equip the information office at SEA to deal with biodiversity issues.	1. Swaziland Environmental Action Plan (SEAP) addressing issues of environmental education and awareness. 2. STI Policy 3. SMTE Policy 4. Current information office within SEA	1. Trends in the awareness levels in periodic monitoring reports. 2. Communication Strategy on environmental awareness developed to disseminate biodiversity information and implement the biodiversity initiatives. 3. Collaborative activities with ecotourism community initiatives. 4. Biodiversity and Ecosystem management issues mainstreamed into the curricula. 5. Integrated environmental awareness and communication strategy developed. 6. Functional information office at SEA.	• SEA • SNTC • Forestry Dept.	• SNTC • MoET-UNISWA • MESA-Chair • NCC • MoA • MTA&D • NGOs • Media • STA • Forestry Dept. • Private sector • Traditional leaders • Local communities	2016 - 2017	26

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
Target 2: By 2022, biodiversity values have been integrated into all national, regional, municipal and rural development and poverty reduction strategies and planning processes, and are being incorporated into accounting and reporting systems							
2.1 Demonstrate the economic, environmental and social value of biodiversity and ecosystem services.	1. Identify key/important biodiversity and ecosystem services for valuation. 2. Undertake valuation of these ecosystem services to inform decision making. 3. Capacitate local biodiversity experts on The Economics of Ecosystems and Biodiversity (TEEB) 4. Sell the economic case for the importance of biodiversity and ecosystems to policy makers through briefings / consultations	*1.* No Baseline on valuated biodiversity and ecosystems services. *2.* Natural accounts on water *3.* COSPE Study on ecosystem services in selected communities	1. Important ecosystem services identified 2. Trends in the number of ecosystem services valuations. 3. A pool of biodiversity experts capacitated in TEEB 4. Trends in policies considering biodiversity and ecosystem services in environmental assessment	• SEA • SNTC • BGP • Game Rancher's Association	• UNISWA • MEPD (Stat Dept.) • MNRE • Forestry Dept. • CBOs • MCTI	2016-2018	26
2.2 Integration of biodiversity and ecosystems values into decision-making and national planning processes.	1. Mainstreaming of biodiversity and ecosystems values in national planning instruments and processes.	1. Revised National Development Strategy (NDS) & Poverty Reduction Strategy and Action Plan (PRSAP) incorporating	*1.* Biodiversity priorities mainstreamed into the NDS and Poverty Reduction Strategy and Vision 2022. *2.* Number of briefings / consultations undertaken to policy-	*6.* SEA	• MTEA • Forestry Dept. • MEPD • Cabinet • Parliament • MoA	2017-2022	150

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
		biodiversity issues. 2. Forest Inventory 3. Fish survey report 2004 4. Protection worthy surveys Red data lists 5. IPBES	makers and the general public. 3. Budgetary allocations for biodiversity in national plans. 4. Ecosystem values integrated in all sectors and strategy documents.		• MNRE • Tinkhundla • MOHUD		
Target 3: By 2020, positive incentives that benefit biodiversity are encouraged, while harmful incentives, including subsidies, are eliminated or reformed.							
3.1 Analyse existing positive, negative and potential incentives to biodiversity conservation.	1. Undertake an assessment study on positive (tax reduction, awards, subsidies, compliance certificates, etc.) negative and potential incentives. 2. Undertake a study on socio-economic repercussions on the incentives.	1. Innovative financing mechanisms Sustainable funding for conservation of protected areas 2. Sustainable funding for conservation of protected areas (Shewula Community Conservancy) 3. GEF baseline study of strengthening of PAs 4. NCSA report for the implementation of	1. Trends of assessments undertaken (reports produced).	• SEA	• UNISWA • MoA • MCTI • Cabinet • Parliament • MNRE • King's Office • MEPD • SERA • Forestry Dept. • SNTC • Tinkhundla • MoHUD	2016-2018	15

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
		CBD, UNFCCC & UNCCD					
3.2. Identify appropriate economic instruments to effect reformation or elimination of harmful subsidies.	1. Develop / review policies and legislative frameworks on environmental subsidies. 2. Introduce environmental taxes and levies to reform harmful subsidies (e.g. Carbon Taxes, etc.). 3. Introduce payments for ecosystem services, biodiversity offsets. 4. Subject Policies, Programmes and Plans to Strategic Environmental Assessment.	1. GEF baseline study on Strengthening of Protected Areas.	1. Report on policies and legislation on subsidies with environmental impacts 2. Number of environmental taxes and levies introduced. 3. The monetary value of ecosystem services and biodiversity is recognized and reinvestment into environmental sustainability initiatives practised. 4. Policies, Programmes and Plans subjected to StrEA	• SEA	• MCTI • Private Sector • SRA • UNISWA • MoA • MCTI • Cabinet • Parliament • MNRE • King's Office • MEPD • SERA • Forestry Dept. • SNTC	2016-2017	22
3.3. Encourage positive incentives to benefit the environment.	1. Promote/encourage positive environmental investments (e.g. subsidizing alternative energy sources, subsidies on clean energy, payments for ecosystem services)	• Sustainable funding for conservation of protected areas	1. Number of incentives in place. 2. Reduction of harmful subsidies.	• SEA	• MCTI • Private Sector • SRA • UNISWA • MoA • MCTI • Cabinet • Parliament	2016-2018	22

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
					• MNRE • King's Office • MEPD • SERA • Forestry Dept. • SNTC		
Target 4: By 2022, the Government of Swaziland, municipalities, businesses, local communities and stakeholders at all levels have developed and are implementing plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.							
4.1. Promote sustainable production and consumption of natural resources	1. Incorporate biodiversity into integrated sustainable development plans for local authorities, regions, Chiefdoms and Tinkhundla 2. Integrate the EA process into new and existing businesses 3. Promote proper land use practices 4. Promote sustainable use of natural resources including renewable energy. 5. Intensify natural resource production processes e.g.	1. Development plans within selected chiefdoms. 2. Inventory of project subjected to EA process. 3. Climate Change Policy and Strategy. 4. UNCCD National Action Plan e addressing promotion use of renewable resources. GEF project on	1. Integrated sustainable development plans at all levels have a biodiversity component 2. New and existing businesses have gone through the EA process. 3. Land use practises more sustainable. 4. Sustainable utilization of natural resources. 5. Positive impacts of production and utilization enhanced and negative impacts mitigated.	• SEA	• MoHUD • King's Office • DPM's Office • Forestry • MNRE • MoA • Private sector • SWADE • MCIT • THA • THO	2016-2018	15

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	commercial livestock practises. 6. Encourage development and implementation of environmental management strategies within municipalities (biospheres). 7. Promote environmental standards in businesses and municipalities.	strengthening of Pas.	6. Environmental management strategies and biospheres developed within municipalities. 7. Businesses and municipalities adhere to set environmental standards.				
GOAL B: REDUCE THE DIRECT PRESSURES ON BIODIVERSITY AND PROMOTE SUSTAINABLE USE							
Target 5: By 2022, the rate of loss, degradation and fragmentation of all Swaziland's natural habitats is at least halved and where feasible brought close to zero.							
5.1 Determine the status of the country's natural habitats and ecosystems.	1. Strengthen baseline data on the state of the country's natural habitats and ecosystems (field surveys and collate existing data on the country's habitats) 2. Develop future outlook/ projections on the status of the country's ecosystems and habitats.	1. SNTC website 2. Academic publications 3. Private researchers' libraries 4. Red data lists 5. Mammals of Swaziland 6. IAPS survey and mapping report	1. Baseline data on the country's natural habitat and ecosystems. 2. Future scenarios or outlook on status of ecosystems. 3. Action plan to safeguard ecosystems.	• SEA • MoA-land use planning dept.	• Meteorology Dept. • Forestry Dept. • SNTC • UNISWA • MNRE • Cotton Board • MEPD • SWADE	2016-2019	30

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	3. Recommend possible responses/actions to safeguard ecosystems.	7. Draft IAPs control and management strategy 8. Swaziland's National communications on UNFCCC. 9. Vulnerability Assessment report on biodiversity and ecosystems.					
5.2 Reduce the loss, degradation and fragmentation of natural habitats by half or if possible to zero.	1. Identify the main drivers 2. Prioritize measures to address the main drivers of habitat loss, degradation and fragmentation. 3. Develop monitoring and evaluation plans for habitats and biodiversity. 4. Promote ecosystem based adaptation strategies 5. Promote alternative eco-friendly livelihoods such as community based rangeland rehabilitation,	1. SOER 2. NAP-UNCCD 3. Forestry Inventory 4. LUSLIM project 5. National Environment Fund Projects enhancing livelihoods while reducing pressures on biodiversity. 6. REDD+ 7. EIA process	1. Priority list of main drivers of habitat loss in place. 2. Monotoring plans developed. 3. Implementation of monitoring plans 4. Ecosystem-based adaptation strategies put in place. 5. Implementation of alternative eco-friendly livelihoods options 6. Restored and rehabilitated natural habitats.	• SEA • MoA-Land Use Planning Dept	• Forestry Dept. • Meteorology Dept. • SNTC • MoA • UNISWA • MNRE • MEPD • MTAD • Media Houses • SWADE	2016-2018	22

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	forest management and crop land management. 6. Undertake restoration and rehabilitation of prioritised natural habitats. 7. Enforce existing legislation on land degradation 8. Integration with already existing programmes and projects.		7. Land degradation laws enforced. 8. A holistic plan of action in place, reduction in habitat loss and fragmentation				
Target 6: By 2022 all of Swaziland's aquatic resources are sustainably managed.							
6.1 Ensure sustainable utilization and conservation of aquatic resources (wetlands, rivers, etc.)	1. Develop and implement integrated watershed management programmes for all major river basins. 2. Establish local fisheries management authorities as per the revised Fisheries Bill 2013 3. Map country's wetlands of importance as per the Ramsar Convention. 4. Collect and collate data on the status of aquatic ecosystems. 5. Promote sustainable aquaculture	1. Revised Fisheries Bill 2013 2. Ramsar Convention. 3. Fish survey report 4. Agreements on shared water courses	1. Watershed management programmes in place 2. Local fisheries management authorities in place 3. Mapped country's wetland as per the Ramsar Convention. 4. Report on status of aquatic ecosystems 5. Sustainable aquaculture widely practised	• SEA • SNTC • MoA-Fisheries Dept.	• MNRE-DWA • River Basins Authority • SWADE • KOBWA • SWSC	2016-2019	74

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	6. Establish Ecological flow regimes for all riparian zones.						
Target 7: By 2022, all areas under agriculture, fisheries, aquaculture and forestry are managed sustainably, ensuring conservation of Swaziland's biodiversity.							
7.1. Promotion of Sustainable agriculture, fisheries, aquaculture and forestry.	1. Promote best eco-friendly food production technologies and processing systems. 2. Develop and implement climate smart forestry, fisheries, aquaculture and agricultural production systems 3. Develop and implement incentives and policies supporting sustainable agriculture, fisheries, aquaculture and forestry. 4. Enforce Environmental Assessments on food production systems and forestry. 5. Promote establishment of conservation areas within agric. and forestry plantations (e.g. green belts). 6. Enforce and maintain buffer vegetation along	1. Comprehensive Agricultural Sector Policy 2. NSAIP 3. Livestock Policy 4. Diversification Policy 5. JRS Assessment Report 6. Agric. Research Policy 7. Draft Research Bill 8. Fisheries Policy 9. Fisheries Bill 2013 10. Forest Policy 11. Poverty Reduction Strategy and Action Plan 12. Climate Smart Agriculture project 13. Climate strategy and action plan	1. More eco-friendly food production technologies applied. 2. Trends in climate smart agricultural production systems. 3. Policies on sustainable agriculture, aquaculture and forestry in place. 4. Trends in the number of undertakings carried out under the Environmental Assessment systems. 5. Conservation areas within agriculture and forestry plantations in place. 6. Buffers vegetation along streams, riparian zones and wetlands established.	• MoA • MTEA - Forestry Section	• SEA • Private Sector (e.g. forest industry, sugar industry) • Farmers Union • Agricultural parastatals (e.g. cotton board, NAMBoard) • UNISWA • Meteorology	2017-2019	371

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	streams, riparian zones and wetlands 7. Develop relevant national training programmes in agricultural diversification. 8. Practice and implement best practices in food production systems	14. Climate Policy	7. Agricultural diversification increased. 8. Trends in best practices in agriculture and forestry.				
Target 8: By 2022, Pollution in Swaziland has been brought to levels that are not detrimental to ecosystem function and Biodiversity.							
8.1 Monitor and manage levels of pollution through a range of effective measures.	1. Determine the impact of existing pollution prevention and control initiatives, including water, air and land pollution monitoring infrastructure. 2. Capacitate institutions responsible for pollution control. 3. Perform gap analysis on the country's pollution control legislations. 4. Amend and or develop new pollution prevention and control legislation to fill gaps in the existing legislation. 5. Develop new legislation to address non-point	1. Solid Waste management strategy. 2. Waste regulations, 2000. 3. Ozone Depletion Substances Regulation, 2010 4. Pesticides Control Bill 5. Inventories on GHGs including waste sector 6. Water Pollution control Regulations, 2010. 7. River health monitoring programmes	1. Trends in pollution levels. 2. Number and capacity of staff and equipment in pollution control institutions. 3. Report(s) on gap analysis 4. Pollution control legislations amended and or developed. 5. New legislation to address non-point sources of pollution developed. 6. Increased awareness on pollution prevention and control.	• SEA	• MoH • MoA-Crop Production, Fisheries and Livestock. • MCIT • MTEA-Met Dept. • Private sector • Farmers Union • MNRE-DWA	2016-2018	37

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	sources of pollution (import and export of hazardous chemicals). 6. Raise awareness on pollution prevention and control legislation. 7. Enforce legislation on pollution control. 8. Monitor and evaluate compliance to legislation	8. Air pollution Control Regulation, 2010.	7. Pollution control legislation enforced. 8. Reports on monitoring and evaluation of compliance to anti-pollution legislation.		• SWSC • SRA-Customs dept.		
8.2 Identify/determine the different types of pollutants in the ecosystems	1. Establish/create baseline data on the status of pollution in key ecosystems. 2. Promote research and create links with research institutions on emerging issues of concern to ecosystem functioning and biodiversity. E.g. impacts of nano-materials and environmental persistent pharmaceutical products. 3. Identify priorities for action. 4. Identify point and non-point sources for pollutants.	1. None	1. Reports and trends of pollution in key ecosystems 2. Research projects running and finished 3. Action plan with priority actions. 4. Report on sources of pollutants.	• SEA	• MoH • MoA-Crop Production, Fisheries and Livestock. • MCIT • MTEA-Met Dept. • Private sector • Farmers Union • MNRE-DWA • SWSC	2016-2017	20

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
					• SRA-Customs Dept.		
8.3 Monitor and manage all forms of waste through a range of effective measures.	1. Review waste management strategy to enable effective implementation. 2. Enforce revised Waste Management Strategy and Litter Regulations of 2011. 3. Facilitate gazetting of Plastic Control Regulations	1. Solid waste management strategy 2. Litter Regulations, 2011. 3. Draft Plastic Control Regulations 2015 4. Swaziland National Communications to the UNFCCC, Rotterdam, Stockholm, Basel Conventions.	1. Revised waste management strategy in place and implemented. 2. Waste Management Strategy and Litter Regulations of 2011 enforced. 3. Plastic Control Regulations gazetted and implemented.	• SEA	• Municipalities • Tinkhundla (Ministry)	2016-2018	15
Target 9: By 2022, invasive species that are alien to Swaziland and their pathways are identified and prioritized; priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.							
9.1 Minimize negative impacts caused by Invasive Alien Plant Species to the country's biodiversity	1. Undertake a countrywide assessment of new and established IAPS. 2. Finalize the existing draft strategy and implement it) 3. Identification of major pathways to effectively address the impacts.	1. Survey & Mapping distribution and intensity of infestation of AIPS, 2010 Report Invasive Alien Plant Species draft Strategy 2. Draft Forest Bill	1. Trends in number of new and established invasive alien species 2. Finalised IAPS Control and Management Strategy implemented. 3. Trends in invasive alien species	• MTEA-Forestry dept. • SEA	• SNTC • MoA • UNISWA • NGO's • Private landowners	2016-2020	41

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	4. Developing effective mechanisms for detection, surveillance, monitoring and responding to any invasive threats posed by both new and established IAPS. 5. Strengthen public awareness activities. 6. Capacity building on the control and management of IAPS 7. Review and enforce existing legislations on IAPS control and management	3. Draft Biodiversity Management Bill 4. State of the Environment Report (SoER) 5. Vulnerability and Assessment Reports	pathways management. 4. Preparedness and response plan in place 5. General populace aware and able to identify, control and manage IAPS 6. Trained specialists in management and control of IAPS. 7. Existing legislations on IAPS enforced		• Municipalities • MTAD • MNRE/ DWA • Kings Office • Media Houses		
9.2 Stabilize the current level of IAS infestation	1. Undertake a countrywide assessment of invasive alien animal species. 2. Capacity building on the control and management of IAS 3. Community and other stakeholders mobilized to participate in the control and management of IAS	1. Fisheries Survey Report 2. Fisheries Bill 3. Red Data List book 4. SNTC Website	1. Inventory of invasive alien animal species. 2. Trends in the introductions and translocation of IAS. 3. Trends in control programmes implemented by communities & stakeholders towards control & management of IAS.	• MoA-Fisheries dept. • SEA	• Private land owners • MoA • MNRE • Communities • Municipalities • MTAD • SNTC • UNISWA	2016-2018	20

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	4. Prevention of illegal IAS introduction & translocation 5. Identify invasive free areas and prevent their colonisation. 6. Finalize the Fisheries Bill		4. Numbers of specialist trained in AIS control and management. 5. Fisheries Act in place and operationalised.				
Target 10: By 2022 pressures on Swaziland's vulnerable and most valuable ecosystems such as (Savannah woodland Mosaic forests and wetlands) are identified and prioritized; priority pressures are controlled or eradicated.							
10.1 Undertake a vulnerability assessment and develop relevant adaptation measures on most valuable ecosystems	1. Undertake a study to identify the most vulnerable and valuable ecosystems. 2. Identify and prioritize anthropogenic pressures affecting these ecosystems for control and management. 3. Develop adaptation, mitigation and rehabilitation measures (plans, strategies, programmes etc.) 4. Implement appropriate measures to control and manage the identified pressures. 5. Conduct Monitoring and Evaluation.	1. SOER 2. Swaziland Red Data Books 3. Climate Change Policy and Strategy 4. GEF project studies on strengthening of Protected Areas. 5. SNTC Act, 1974 and the SNTC amended Bill 6. Climate Change Policy 7. Vulnerability Assessment reports -National Communications	1. Vulnerable and valuable ecosystems identified. 2. Anthropogenic pressures identified and prioritized for control and management 3. Adaptation and mitigation programs in place. 4. Appropriate control and management measures in place and implemented.	• SEA • SNTC	• Forestry Dept. • UNISWA • Private partners • NGOs • Meteorology Dept.	2017-2018	74

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
STRATEGIC GOAL C: IMPROVE THE STATUS OF BIODIVERSITY BY SAFEGUARDING ECOSYSTEMS, SPECIES AND GENETIC DIVERSITY							
Target 11: By 2022, at least 10 per cent of Swaziland's land area, especially areas of particular importance for biodiversity and ecosystem services, protected landscapes and multiple resource use areas are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas.							
11.1 Assessment of the country's biodiversity and ecosystems to identify biodiversity hotspots (protection-worthy areas)	1. Collate existing data on biodiversity and ecosystems to determine biodiversity hotspots. 2. Review and Update the PWA Report 3. Identify and Prioritize identified protection worthy areas for conservation. 4. Carry our Carbon stock assessment for prioritised PWA 5. Develop a management plan	1. Data on the current protected area network 2. Study on protection worthy sites	1. Total area of Protection worthy sites identified 2. Priority list of PWAs for conservation 3. Swaziland: 118/119 Biodiversity and Forest Assessment	• MTEA - Forestry dept. • SNTC • BGP • SEA	• UNISWA, • MoA • MTDA • MNRE • NGOs • STA	2016-2020	220
11.2 Expand the protected area network and governance types	1. Revise existing laws for the proclamation of protected areas to cover more categories/governance	1. Only 4% of the total land area is legally protected 2. Protection Worthy Areas Survey	1. Number (and area) of (well-connected) gazetted and managed PAs in different	• SNTC • BGP • SEA	• UNISWA, • MoA • MTDA • MNRE • NGOs	2016-2018	750

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
using the landscape approach	types of protection and to include Swazi Nation Land. 2. Gazette and manage identified protection-worthy areas using SNTC Act, Game Act and Flora Protection Act. 3. Support the Traditional Authorities to utilize the Swazi Administration Order to effectively protect and regulate the usage of biodiversity and ecosystems in the areas under their jurisdiction. 4. Publish information booklet to enhance the implementation of NRM in rural areas 5. Provide incentives for owners of land with unique/special ecosystems to maintain important ecosystems. 6. Develop an Off-setting framework to handle land conversion (e.g. mining, agriculture, etc.).	3. GEF Project Baseline Report on strengthening of PAs (SNPAS) 4. SNTC Amendment Bill	categories/governance types 2. Number of streamlined landscape management structures and plans implemented. 3. Traditional Authorities more actively involved in biodiversity management. 4. Measures in place to incentivise land owners involved in conservation to continue with their programmes. 5. Improved level of interaction between traditional leaders and the conservation scientists 6. Trends in the number of biodiversity offsets for areas converted to other land uses.	• MTEA - Forestry dept.	• STA • Rancher's association • Chiefs • Private farm owners • LMB • SRA		

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
11.3 Strengthening protected areas through improved conservation management and operational support.	1. Build capacity among stakeholders (private, communities, local authorities) in integrated landscape management (with conservation, ecotourism, enhancement of carbon stocks and sustainable land management) 2. Improve conservation infrastructure and equipment for PAs 3. Develop ecotourism infrastructure, product development or marketing programmes. 4. Develop and implement sustainable land management best practices and plans that integrate conservation efforts with sustainable economic development practices in representative ecosystems and/or production landscapes.	1. Protected Area Management Plans 2. GEF Baseline Report	1. Number of capacity building programmes developed. 2. Quantity and quality of conservation infrastructure and equipment. 3. Number of ecotourism infrastructure, product development or marketing programmes. 4. Number of operational landscape-based management plans.	• SNTC • BGP • SEA • Forestry • Landowners	• UNISWA, • MoA • MNRE • NGOs • STA	2017-2018	150

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
11.4 Develop management plans for PWAs	1. Class each PWA into an appropriate conservation category 2. Draw management plans for each PWA that are in line with the conservation goals	1. Protection Worthy Areas Survey 2. SNTC Amendment Bill	1. Report with PWAs in appropriate categories 2. Management plan for each PWA	• SNTC • BGP • SEA • Forestry • Landowners	• UNISWA, • MoA • MNRE • NGOs • STA	2017-2018	150
Target 12: By 2022, the extinction of species known to be threatened in Swaziland has been prevented and their conservation status, particularly of those that are endemic and those most in decline, has been improved and sustained.							
12.1 Improve the conservation status of threatened species.	1. Update Red data list for all threatened species. 2. Adopt the Landscape approach to manage critical ecosystems occurring in multiple land use areas.	1. Red data books for vertebrates and plants including trees. 2. Biodiversity Policy and Bill 3. RAMSAR Report 4. SNTC Website 5. CBD National Reports 6. GEF baseline report on SNPAS 7. Rural Development Plans	1. Updated Red Data Lists. 2. Improved conservation status of critical ecosystems in multiple land use areas.	• SNTC • Forestry • SEA • BGP	• SGRA • MoA • UNISWA • NGO's • Private landowners • Industry • MNRE	2016-2019	20
12.2 Restore, maintain or reduce the decline of populations of	1. Develop a framework for species management plans 2. Develop and implement species management	1. Red data books for vertebrates and plants including trees	1. Framework for species management plans 2. Species management plans for red data list species implemented	• SNTC • Forestry • BGP	• SGRA • MoA • UNISWA • NGO's	2017-2022	220

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
selected threatened species	plans for all red data list species 3. Strengthen PA management of threatened species 4. Strengthen community capacity and management		3. PA management strengthened especially for habitats of threatened species 4. Communities more actively involved in		• Private landowners • Industry • MNRE		
Target 13: By 2022, the genetic diversity of cultivated plants, farmed and domesticated animals and their wild relatives, including other socio-economically as well as culturally valuable species, in Swaziland, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.							
13.1 Assessment of genetic diversity of cultivated plants, farmed and domesticated animals and their wild relatives	1. Carry out assessment of genetic diversity of crop plants, livestock and their wild relatives 2. Establish and/or strengthen germplasm and DNA banks	1. Plant Genetic Resource Centre and the National Tree Seed Centre.	1. Report with accession numbers of the country's genetic diversity of crop plants, livestock and their wild relatives 2. DNA and/or germplasm of crop plants, livestock and their wild relatives safely and securely stored.	• SEA • MoA • MTEA	• UNISWA • Farmer's Groups	2016-2019	500
13.2 The genetic diversity of crops, livestock, fish, harvested tree species and	1. Promote maintenance of in-situ/ on-farm conservation areas. 2. Capacitate the National Plant Genetic Resource	1. Germplasm collections at the plant genetic resource centre, gene bank and	1. Trends in genetic diversity of domesticated animals, cultivated plants, and fish	• MoA – research dept. and	• SEA • SNTC • BGP	2016-2017	350

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
wildlife and other valuable species is maintained.	Centre and the National Tree Seed Centre. 3. Facilitate for the establishment of a National Botanical garden. 4. Develop and implement a genetic diversity strategy. 5. Implement the Biosafety Act 2002 and its provisions. 6. Develop guidelines for on-farm conservation areas	the tree seed centre. 2. Biosafety policy, Biosafety Act, 2012 and its regulations. 3. Cartagena Protocol on Biosafety.	species of major socio-economic importance. 2. Trends in the abundance and distribution of selected species. 3. Biodiversity used in food and medicine maintained 4. Biodiversity used in food and medicine safeguarded. 5. Cautious and controlled use of living modified organisms 6. On-farm conservation areas established.	Fisheries dept. • MTEA - Forestry • BGP	• Private Land owners • UNISWA		
STRATEGIC GOAL D: ENHANCE THE BENEFITS TO ALL FROM BIODIVERSITY AND ECOSYSTEM SERVICES.							
Target 14: By 2022, the capacity of ecosystems to deliver essential services and support the livelihood of the people of Swaziland is maintained.							
14.1 Making the case for ecosystem management	1. Undertake rapid assessments of the linkages between key ecosystem services and human well-being, state	1. SOER 2. PWA (Protection Worthy Areas) 3. BEVAR (Biodiversity &	1. Reports from assessments of ecosystems services and their linkages to human well-being	• SEA	• SNTC • Forestry dept. • MNRE-DWA	2016-2022	440

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	and trends of ecosystem health and drivers of change. 2. Raise awareness and understanding of the public and decision-makers of the concept of ecosystem management.	Ecosystem vulnerability Assessment Reports) 4. SHIES Report	2. The state, health, and drivers of change of key ecosystem services ascertained and communicated to decision makers and the public. 3. The state, health, and drivers of change of key ecosystem services ascertained and communicated to decision makers and the public. 4. The state and health of key ecosystem services has improved		• Civil Society • Academia • King's Office • Media • MTAD • MoA		
14.2 Restore and maintain the capacity of ecosystems to deliver services.	1. Scale up investments in restoring and maintaining ecological infrastructure (e.g. restoring and maintain the functioning of freshwater ecosystems such as wetlands, clearing of IAPS in catchments and riparian areas, etc.) 2. Build on natural resources management programmes with job creation/livelihoods (such as working for	5. Environmental rehabilitation activities done under the National Environment Fund and other govt. depts./civil society initiatives	1. Trends in the benefits to human well-being derived from ecosystem services. 2. Trends in water quality and quantity in freshwater ecosystems. 3. Number of natural resource management programmes implemented.	• MTEA • SEA	• MEPD • MPWT • SNTC • Forestry dept. • MNRE-DWA • Civil Society • Academia • Private sector	2016-2022	50

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	wetlands, working for water)				• King's Office • MoA		
14.3 Incorporate ecosystems management into development planning (national planning processes)	1. Strengthening inter-sectoral mainstreaming and participation in biodiversity and ecosystem management. 2. Strengthen the evaluation of impacts of infrastructure on biodiversity and ecosystem functioning (through the EIA process) and taking these into account in the planning and design phases.	1. Environmental Management Act, 2002 2. Environmental assessments guidelines	1. Policies, plans and programmes across all sectors incorporating ecosystem management. 2. Trends in participating levels of all key sectors on environmental management issues. 3. Biodiversity inclusive environmental assessments	• MTEA • SEA	• MEPD • MPWT • SNTC • Forestry dept. • MNRE-DWA • Civil Society • Academia • Private sector • King's Office	2016-2018	20
Target 15: By 2022, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced in Swaziland, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.							
15.1 Strengthen Swaziland's key ecosystems to ensure that the country becomes a net carbon sink	1. Train selected communities in sustainable ecosystems management including increasing carbon stocks. 2. Restore at least 15% of all degraded forests and woodlands.	1. GHG inventories 2. Third National Communication to UNFCCC Report 3. UNCCD NAP 4. FAO Fire project 5. AMESD Project/NASA	1. Communities more involved in carbon stocks management 2. Percentage increase in carbon stocks. 3. Improved management of wetlands and increase in carbon sequestered	• MTEA - Forestry Met depts. • SEA	• SNTC • MTAD • Local Authority • SWADE • Civil Society • Private sector	2017-2019	200

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	3. Manage wetland ecosystems for carbon sequestration. 4. Increase and maintain carbon stocks in the country 5. Promote the development and implementation of urban greening programmes		and percentage reductions of GHGs. 4. Percentage of restored degraded forests and woodlands. 5. Number of green city programmes implemented		• Municipalities		
15.2 Reduce greenhouse gas emissions emanating from LULUCF.	1. Streamline agricultural activities to minimize GHGs 2. Develop an integrated fire management strategy 3. Integrate GHGs management issues into urban and rural settlements.	1. GHG inventories 2. Third National Communication to UNFCCC Report 3. UNCCD NAP 4. FAO/ integrated Fire management project. 5. AMESD Project/NASA	1. Improved crop management practises and Swaziland becoming a net sink in 2022. 2. Integrated fire management strategy. 3. GHGs management integrated into settlement practises/policies.	• MTEA • MoA Forestry • Met dept. • SEA	• MoA • SNTC • Civil Society • Academia • Private sector 6. King's Office	2016-2019	75
Target 16: By 2016, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and by 2022 fully operational and consistent with national legislation.							
16.1 Ensuring that the Nagoya Protocol is	1. Facilitate accession to the Nagoya Protocol.	1. Nagoya Protocol text.	1. Accession to the Protocol	• SEA	• Tinkhundla	2016-2017	74

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
domesticated by 2016	2. Put in place national regulatory framework	2. Biodiversity Management Bill.	2. ABS Regulatory Framework in place.		• MoA (Gene Bank) • MNRE • Traditional healers • Traditional authorities • UNISWA • Research institutions • Bio-traders		
16.2 Operationalize the National ABS Regulatory Framework.	1. Establish institutional arrangements and administrative systems for implementation of the Protocol. 2. Create awareness on provisions of the ABS Act 3. Develop procedures and rules for accessing genetic resources and Traditional Knowledge associated with genetic resources	1. ABS awareness raising strategy 2. Needs Assessment report 3. ABS Bill 4. IPR Policy	1. Institutional arrangements in place, including the national focal point, competent authority (s). 2. Administrative Systems in place 3. Predictable conditions for access to genetic resources as well as access to associated	• SEA • IP office • Herbarium	• Tinkhundla • MoA (Gene Bank) • MNRE • MCTI-Intellectual Property Universities	2016-2018	150

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	4. Establish a national fauna genetic resource depository. 5. Strengthen the existing flora gene bank. 6. Support communities to negotiate further on ABS agreements.		traditional knowledge held by communities. 4. National Genetic Resource Depository in place. 5. Valorisation strategy in place 6. Number of negotiation capacity building sessions done with communities.		• MoET • Traditional healers • Traditional authorities • UNISWA • Research institutions • Bio-traders		
16.3 Strengthen capacity to research and develop commercial products from local genetic resources.	1. Strengthen capacity of research institutions to research and develop commercial products from the use of genetic resource. 2. Consider prospects of developing valorisation strategy on genetic resources with potential for ABS. 3. Support communities to encourage sustainable production and value addition on products	1. Information in Research Centres 2. UNISWA-SIRMIP	1. Trained personnel and dedicated programmes in place within research institutions. 2. Valorisation strategy in place 3. Value added products developed by communities.	• SEA • MoA • Research centres-UNISWA etc.	• Universities • MCTI • Local communities • SWASA • SNTC • IPR Office • MICT	2016-2018	150

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	derived from genetic resources.						
STRATEGIC GOAL E: ENHANCE IMPLEMENTATION THROUGH PARTICIPATORY PLANNING, KNOWLEDGE MANAGEMENT AND CAPACITY BUILDING							
Target 17: By 2016, Swaziland has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.							
17.1 Advocate for the adoption of the NBSAP 2 as a policy instrument	*1.* Present NBSAP 2 document to decision-makers for adoption as a policy instrument.	*1.* NBSAP 2 document	*1.* NBSAP 2 adopted as a Policy instrument.	• MTEA • SEA • Focal points of Biodiversity related Conventions	• Cabinet • All key sectors	2015-2016	75
Target 18: By 2022, the traditional knowledge, innovations and practices of local Swazi communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are documented, recognised and promoted.							
18.1 Promote the role of Traditional Knowledge in conservation	*1.* Incorporate Traditional Knowledge and practises in environmental education and awareness raising campaigns.	*1.* Draft IPR Policy	*1.* Traditional Knowledge incorporated in educational and awareness campaigns.	• SEA • IP Office	• Tinkhundla	2015	150

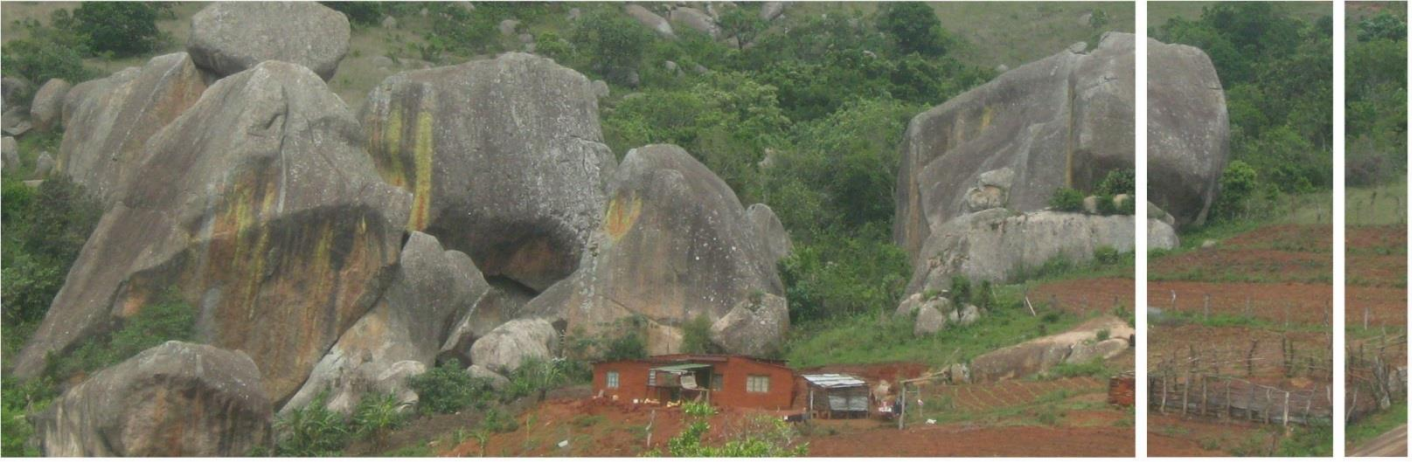
Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
	2. Facilitate harmonisation of Traditional Knowledge and scientific knowledge in conservation.		2. Established fora for exchange of information between indigenous communities and scientists.		• MoA (Gene Bank) • MNRE • Tradition al healers • Tradition al authoritie s • UNISWA • Research institutio ns • Bio-traders • Sports and Culture Ministry • Educatio n Ministry • Commer ce, Industry and Trade MInistry – IP Office		

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
18.2 Protect and document traditional knowledge, innovations and practises relevant to conservation and sustainable use of biodiversity.	1. Develop legislation to protect traditional knowledge related to conservation. 2. Document traditional knowledge, innovations and practises relating to biodiversity conservation and sustainable use	1. Publications on traditional uses of some plants and animals. 2. Draft IPR Policy	1. Number of documents with traditional knowledge. 2. Legislation protecting Traditional knowledge	• SEA • IP Office	• THO • Traditional Authorities • Tinkhundla • MoA (Gene Bank) • MNRE • Traditional healers • UNISWA • Research institutions • Bio-traders • Ministry of Sports, Culture and Youth • Ministry of Education and Training	2017-2020	110

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
					• Ministry of Commerce, Industry and Trade • IP Office		
Target 19: By 2022, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied in Swaziland.							
19.1 Put in place programmes to generate information on biodiversity in the country.	1. Collect and collate existing data and information on biodiversity 2. Establish a national biodiversity research strategy with prioritised research areas. 3. Mobilise resources to support research programmes. 4. Collaborate with research institutions for programmes development and research in biodiversity. 5. Collaborate with tertiary institutions to ensure that there is a pool of emerging scientists.	1. Education policy 2. STI Policy 3. SMTE Policy 4. SEA Website 5. SNTC Website	1. Establishment of Biodiversity Database. 2. National Biodiversity research Strategy established. 3. Number of research programmes supported 4. Research and tertiary institutions with a multiple research programmes in biodiversity. 5. Number of emerging scientists supported by programme	• SEA • UNISWA • Savannah Research Centre.	• MET • Ministry of Labour and Social Security • MCT • SEA • SNTC • MITC • Savannah Research Centre • Conservation Trust • Natural History society • MET	2016-2018	220

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
					• Ministry of Labour and Social Security		
19.2 Establish mechanisms to coordinate and share biodiversity information and technologies	1. Develop and manage a national biodiversity clearing house 2. Make existing data and information on biodiversity accessible to wider stakeholders. 3. Strengthening institutions dealing with biodiversity related Conventions 4. Develop a biodiversity coordinating unit to harness synergies among biodiversity related Conventions.	• SEA and SNTC websites	1. A functional National Biodiversity Data Clearing House. 2. Biodiversity data accessible and availed to the public. 3. Institutions dealing with biodiversity related conventions fulfilling their mandates. 4. A biodiversity coordination unit in place.	• SEA • UNISWA • SNTC	• MET • MoA • BGP	2015-2018	75
Target 20: By 2020 the NBSAP is fully integrated in the government and relevant implementing institutions' budgeting systems and other sources of funding are mobilized.							
20.1 Develop and implement a coordination and resource mobilization strategy to facilitate	1. Advocate for biodiversity to policy makers to sensitise them on the urgent need for joint efforts. 2. Facilitate budgetary allocations for biodiversity	1. Institutional budgets for biodiversity conservation and management. 2. National report to COP 12	1. Increased awareness at all levels of the value of biodiversity and ecosystems 2. Budgetary allocation for biodiversity	• SEA • MEPD	• Focal Points (Biodiv. Rel. Conventions) • Cabinet	2015-2017	75

Strategic Initiative	Indicative activities	Baseline	Indicators	Lead Agency	Partners	Timeline	Costs USD 000.00
implementation of the NBSAP	in national planning across all sectors. 3. Explore, prioritize and follow up, all possible sources of funding including GEF and others for the implementation of the NBSAP 2. 4. Take message to COP 13 on efforts and amounts of money committed to NBSAP implementation (convey the message on the limited resources both financial and human, for the implementation of the NBSAP) 5. Strengthen and expand partnerships with regional and international institutions to enable resource mobilization for implementation of the NBSAP 2.		reflected in national planning. 3. GEF country allocation prioritising biodiversity issues. 4. National report to COP 13. 5. Partnership agreements.				



6. IMPLEMENTATION PLAN FOR THE STRATEGY

6.1 MAINSTREAMING OF BIODIVERSITY INTO OTHER SECTORS

To implement the NBSAP 2 requires integration of biodiversity across all sectors, including the production sector with significant impacts on biodiversity. In accordance with the Environmental Management Act, 2002, each Ministry is required to formulate an Environmental Management Strategy which mainstreams biodiversity issues. Activities with significant impacts on biodiversity should be identified and mitigation measures implemented. The budgeting systems of these Ministries should also reflect resources allocated for biodiversity conservation and its sustainable use.

The strategy proposes the mainstreaming of biodiversity and ecosystem issues into all sectors, including educational curricula, the budgeting and accounting systems of municipalities and government ministries and departments. To achieve the integration of biodiversity into national policies, strategies and plans as well as those of the private sector and society the most crucial action is awareness-raising. The monetary value of ecosystem services should be elucidated in addition to what needs to be done to improve the quality and quantity of those services. This should create the will to care for ecosystems and biodiversity and incorporate such care into tangible actions at the operational level of that stakeholder.

6.2 HUMAN AND TECHNICAL CAPACITY DEVELOPMENT

The implementation of the strategy requires dedicated human and technical capacity which is presently inadequate in the country. A study showed that the institutions with mandates for biodiversity conservation and sustainable use lacked sufficient human capacity and were under-resourced technically (GOS-SEA 2003a). Numerous actions in this strategy need specialized skills, which may not be readily available. Though tertiary institutions provide some training in the field of biodiversity conservation, a wider range of more specialised skills is still needed to effectively conserve and sustainably utilize the country's biodiversity and ecosystems.

The development of human capacity involves the institutions with a mandate for biodiversity management and conservation as well as tertiary education institutions. An assessment of the institutions with a mandate for biodiversity conservation is needed to assess their current manpower and technical needs.

Tertiary education institutions will need to update their programmes to include environmental aspects and new programmes should be created to cover aspects that are currently not covered in existing courses. Funding for new programmes should be availed so institutions have the capacity and resources to introduce the new programmes and provide training.

6.3 COMMUNICATION AND OUTREACH STRATEGY FOR THE NBSAP

For the effective implementation of the NBSAP and achievement of numerous targets within it, an awareness-raising and communication and outreach strategy is required. This strategy needs to be aimed at all strata of Swazi society from the grassroots to the technicians, policy-makers up to cabinet.

The aims of the Communication and Outreach Strategy for the NBSAP are:

- Public awareness
- Public behaviour change
- Policy change
- Planning
- Acceptance and implementation of the NBSAP.

The intended targets of the strategy or the people who need to be informed and educated are the general Swazi populace, Traditional Leadership, Parliamentarians and Cabinet. The general populace can be divided into school going and out-of-school or adults. They need awareness on environmental issues to be able to make the right decisions and changes in behaviour.

There are a number of initiatives on the ground that are already involved in communicating environmental issues. These are, however, under-capacitated, and their impact is very limited. Schools and colleges/universities have environmental clubs, some communities are being educated so they engage in environment-friendly projects and nature reserves have education and outreach offices. Some parastatals and government departments with mandates for biodiversity issues have offices that teach and inform the public. The logical start to the outreach and communication would be to learn from these initiatives and assess their impact. They would need empowering which maybe in the form of human and other resources and information. The Information Office at the SEA should be empowered with information and capacitated with resources to lead the NBSAP communication and outreach activities.

The Outreach and Communication will be in two phases, firstly, to prepare the targets for the NBSAP by creating an understanding of environmental issues and secondly, to introduce and market the NBSAP. For the first phase, the information that needs to be communicated is what ecosystems are there in the country, the biodiversity they harbour and the value and status of the ecosystems and biodiversity as well as the services they provide. This information is in technical documents and scientific publications and will need to be extracted and translated into language appropriate for each target group. A "case for ecosystems and ecosystem services" needs to be made. This involves putting together a multidisciplinary team that includes scientists, publicists, marketing personnel and economists. Available information on ecosystem services and their financial value should be packaged and presented. With the knowledge and understanding of the value and nature of ecosystems this will assist target groups to make, implement and support pro-environment policies and initiatives such as the NBSAP.

With knowledge and understanding of environmental issues, as well as the value of ecosystems and biodiversity a fertile and receptive condition will have been created for the NBSAP. It will no longer be just another policy document or strategy. The NBSAP will have to be broken down into factsheets and pamphlets and MS PowerPoint presentations which should be in non-technical English and SiSwati.

6.4 RESOURCE MOBILIZATION PLAN FOR THE NBSAP

To implement the strategy an estimated basic amount of about USD 30 000 000.00 is required over the next ten years. There is limited data available on the country's current budget for conservation but there is a general perception that it is not adequately funded. The success of the NBSAP's implementation depends on sufficient funding being leveraged from government ministerial budgets

and from internal and external donors. The Ministry of Tourism and Environmental Affairs, being the parent ministry of the NBSAP should budget for its implementation. Some aspects of the action plan have suggested sources of funding while others have to be implemented by other government ministries and departments. Implementing ministries and departments have a role in setting aside funds for the activities they need to carry out. Certain elements of the strategy and action plan link well with on-going internally and externally funded initiatives, and in such cases these synergies should be exploited.

The National Environment Fund needs to be grown from a number of sources including fines for non-compliance with EIA stipulations, application fees for compliance certificates and levies on goods and services that have severe negative impacts on the environment.

Public awareness on environmental stewardship and the need for funding as well as the crafting of innovative funding strategies, may open up sources of funding locally and from outside. The innovative funding strategies have to be practical and fit well within the national economic climate as well as be publicly acceptable.

A cost-benefit analysis exercise for the protection and preservation of biological diversity, and the benefits from its utilization needs to be carried out to ensure that economic and sustainable practices and policies are in place. This will further help create the political will of the country's taxpayers and policy-makers to fund the activities involved in the implementation of the NBSAP.

UNEP has brought to the fore the opportunities that exist for cooperation between the biodiversity related conventions, as listed below:

- Convention on Biological Diversity (CBD)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- Convention on the Conservation of Migratory Species of Wild Animals (CMS)
- International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)
- Convention on Wetlands of International Importance (Ramsar Convention)
- Convention concerning the protection of the World Cultural and Natural Heritage (WHC)
- United Nations Convention to Combat Desertification (UNCCD)
- United Nations Framework Convention on Climate Change (UNFCCC))
- Africa Eurasian Waterbird Agreement (AEWA)

The activities involved in the implementation of these conventions do have overlaps and synergies. Consequently funding and actions towards the fulfilment of the country's obligations to one convention will facilitate the achievement of the obligations to one or more of the others. As part of resource mobilization the links between the conventions Swaziland is signatory to should be explored and synergies exploited.

7. MONITORING AND EVALUATION FRAMEWORK

7.1 NATIONAL COORDINATION STRUCTURES

The Biodiversity Programme Implementation Committee (BPIC) was formulated from the Project Steering Committee for the first NBSAP. This committee is the Project Steering Committee for this second NBSAP and will coordinate and lead its implementation together with the SEA Secretariat and any additional members that may be co-opted to bring in special skills and/or represent certain stakeholders. This arrangement allows the maintenance of institutional memory as well as continuity as the current BPIC has been serving since 2000.

The SEA, being entrusted with the coordination of all National and International Environmental Agreements, is mandated with facilitating and ensuring the country's continued fulfilment of its obligations to the CBD. These include coordinating and leading the crafting and implementation of the NBSAP. The SEA will work with all the stakeholders to ensure proper implementation of the NBSAP and may delegate leadership to a specific stakeholder to implement certain aspects of the strategy.

7.2 MONITORING AND EVALUATION

For effective implementation of the NBSAP evaluation and monitoring are essential. The NBSAP strategy table (Table 3) includes indicators which will be used to gauge the success of each strategic action. As noted in the first NBSAP the process of implementing the NBSAP requires evaluation, that is, whether it is being implemented and if this implementation is going according to plan. The simplest evaluation of the implementation is in whether it is making an improvement in the lot of biodiversity and ecosystems in the country. This requires a programme for regularly monitoring the country's ecosystems and biodiversity especially those species that are particularly sensitive to habitat changes.

The strategy has a time frame included which is important for monitoring. This is meant to ensure that not only are the strategic actions carried out but that they are carried out on time. The BPIC has to regularly review the implementation of NBSAP and take appropriate actions to ensure that the desirable results are achieved. In addition to the time-frame in-built into the strategy, BPIC must periodically assess the implementation process starting two years from the inception of the NBSAP. This will ensure that elements of the strategy that are not doable or are not having the desired impacts are modified so the desired results are achieved. This evaluation should be continued at two-year intervals through the lifetime of the NBSAP. A monitoring and evaluation strategy table is attached (Appendix 4), which gives more detail to the monitoring and evaluation process to be employed. The most critical indicator of the success of the NBSAP will be the recovery of ecosystems as pressures are reduced with the resultant reduction in threatened species. The monitoring activities in the strategy will show the progress of specific initiatives. The success of each of these activities will ultimately demonstrate the success of the whole NBSAP.

8. ANNEXES

Appendix 1: Individuals Consulted in the drafting of the NBSAP in Swaziland

1. Mr. J. D. Vilakati
2. Mr. K. G. Roques
3. Mr. T. Dlamini
4. Mr. W. M. Dlamini

Appendix 2: Individuals Consulted in the drafting of the NBSAP in South Africa

1. Dr. L. Dziba
2. Dr. P. J. Taylor
3. Ms. C. Poole
4. Ms. F. Daniels

Appendix 3: Members of BPIC/PSC

NAME	ORGANIZATION
1. Prof. A. M Dlamini	UNISWA
2. Dr. D. Earnshaw	UNISWA
3. Prof. A. Monadjem	UNISWA (Consulting team)
4. Dr. T. Mahlaba	UNISWA (consulting Team)
5. Mr Similo Mavimbela	MoA DARSS
6. Mr Christopher Mthethwa	MoA SGCS
7. Mr. Thembinkosi Gumedze	MoA Gene Bank
8. Mr Freddy Magagula	MoA- Fisheries (chair)
9. Mr Prince Mngoma	SWADE-LUSLIM
10. Mr Sandile Gumedze	SNTC (Asst. Chair)
11. Mr Seth Maphalala	SNTC-TFCA
12. Mr Mbekeni Nxumalo	MTEA- Forestry dept.
13. Mr Lucky Dlamini	MTEA-Forestry dept.
14. Ms Calsile Mhlanga	SEA
15. Mr Sipho N Matsebula	SEA

16. Mr Bongani Nkabinde	SEA
17. Mr Gcina Dladla	SEA
18. Mr Mbongeni Hlophe	SEA
19. Ms Dumile Sithole	SEA

Appendix 4: MONITORING AND EVALUATION STRATEGY TABLE

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
Target 1: By 2022, more than 70% of Swaziland Nationals will be cognizant of biodiversity and ecosystems, their value and the steps they can take to conserve and use these sustainably.									
1.1 What is the baseline level of awareness on conservation and sustainable use of biodiversity?	1.1 What percentage of the country's population knows of and practises conservation and sustainable use of biodiversity?	1.1 Baseline information on biodiversity awareness within target groups.	Countrywide survey through questionnaire. Results analysed and published as a report.	• SEA • Consultant	2015-2016	15000	• SEA • BPIC • SNTC • MoET-UNISWA • NGOs • Media	• Report document • Meeting minutes	2016
1.2 Has public awareness on the importance of, the	1.2Have government institutions, civil society, traditional authorities and	1.2.1 Increase in percentage (from baseline) of the country's population (at	Countrywide survey through questionnaire. Results analysed	• SEA • Consultant	2017	26000	• SNTC • MoET-UNISWA • MESA-Chair • NCC	▪Report document ▪Meeting minutes	2017

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
need to conserve and sustainably use biodiversity increased?	private sector been capacitated on conservation and sustainable use of biodiversity?	all levels) that knows of and practises conservation and sustainable use of biodiversity	and published as a report				• MoA • MTA&D • NGOs • Media • STA • Forestry Dept. • Private sector • Traditional leaders		
	1.2.2. Are government departments, schools, NGOs and communities that carry out biodiversity awareness initiatives achieving their mandates and goals?	1.2.2. All role players in awareness raising on biodiversity matters effectively carrying out their mandates and goals.	Assessment of the performance and level of involvement in biodiversity initiatives of government departments, schools, NGOs and communities	• SEA • Consultant	2018		• SNTC • MoET-UNISWA • MESA-Chair • NCC • MoA • MTA&D • NGOs • Media • STA	Report document.	2018

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
							• Forestry Dept. • Private sector • Traditional leaders		
	1.2.3 Has an effective integrated environmental awareness and communication strategy to disseminate biodiversity information been developed and implemented?	1.2.3 Communication Strategy on environmental awareness developed to disseminate biodiversity information and implement the biodiversity initiatives	• Country wide survey through questionnaire. Results analysed and published as a report • Assessment of the performance and level of involvement in biodivers	• SEA • Consultant	2016		• SNTC • MoET • UNISWA • MESA-Chair • NCC • MoA • MTA&D • NGOs • Media • STA • Forestry Dept. • Private sector • Traditional leaders	Report documents.	2016

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
			ity initiatives of government departments, schools, NGOs and communities.						
	1.2.4 Has the information office at SEA been capacitated, equipped and reinforced to coordinate the dissemination of biodiversity issues?	Information office at SEA leading and coordinating the drafting and implementation of the Communication Strategy on environmental awareness as well as all awareness	Assessment of the Information Office at SEA in terms of capacity and performance	• SEA • Consultant	2016		• BPIC	Assessment Report document.	2017

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
		raising activities in the country.							
Target 2: By 2022, biodiversity values have been integrated into all national, regional, municipal and rural development and poverty reduction strategies and planning processes, and are being incorporated into accounting and reporting systems									
2.1 Has the economic, environmental and social value of biodiversity and ecosystem services been demonstrated?	2.1.1. Have key/important biodiversity and ecosystem services been identified for valuation.	Report identifying and describing key/important biodiversity and ecosystem services.	Survey of biodiversity and ecosystem services.	• SEA • SNTC • BGP • Game Rancher's Association	2016	26000	• UNISWA • MEPD (Stat Dept.) • MNRE • Forestry Dept. • CBOs • MCTI	• Survey report • Meeting minutes	2016
	2.1.2. Has the valuation of these ecosystem services been undertaken? Is the information available to decision makers?	• Values of selected biodiversity and ecosystem services in a valuation report • Valuation report presented	Valuation of biodiversity and ecosystem services.	• SEA • Consultant	2016			Valuation report.	2017

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
		and availed to decision and policy makers.							
	2.1.3. Have local biodiversity experts been capacitated on The Economics of Ecosystems and Biodiversity (TEEB)?	Number of local experts on TEEB.	Assessment of available staff capacitated on TEEB.	• SEA • Consultant	2017			Assessment report.	2018
	2.1 4. Has the economic case for the importance of biodiversity and ecosystems been 'sold' to policy makers through briefings / consultations	Number of policy/decision-makers briefed/consulted on economic importance of biodiversity and ecosystems.	Meeting minutes.	• SEA • Consultant	2017			Meeting minutes.	2017
2.2 Have biodiversity and	2.2.1. Have biodiversity and ecosystems	National planning instruments	Review of national planning	• SEA	2016	150000	• Parliament • MoA	Review report.	2016

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
ecosystems values been integrated into decision-making and national planning processes?	values been mainstreamed into national planning instruments and processes?	and processes incorporate biodiversity and ecosystem values as well as maintenance costs.	instruments and processes.	• Consultant			• MNRE • Tinkhundla • MOHUD		
Target 3: By 2020, positive incentives that benefit biodiversity are encouraged, while harmful incentives, including subsidies, are eliminated or reformed.									
3.1 What are the impacts of existing incentives on biodiversity conservation?	3.1.1 Has an assessment of the impacts of the existing incentives on biodiversity conservation been undertaken?	Assessment report on the impacts of existing incentives on biodiversity conservation.	Assessment of the impacts of existing incentives on biodiversity conservation.	• SEA • Consultant	2016	15000	• UNISWA • MoA • MCTI • Cabinet • Parliament • MNRE • King's Office • MEPD • SERA • Forestry Dept.	Evaluation report document.	2018

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
							• SNTC • Tinkhundla • MoHUD		
3.2 Have the appropriate economic instruments been identified to effect reformation or elimination of harmful subsidies and promotion of positive ones?	3.2.1 Have the policies and legislative frameworks on environmental subsidies been reformed/review to eliminate negative impacts and promote positive ones on the environment?	Amended policies and legislative frameworks.	Review of policies and legislative frameworks.	• SEA • Consultant	2016	22000	• MCTI • Private Sector • SRA • UNISWA • MoA • MCTI • Cabinet • Parliament • MNRE King's Office • MEPD • SERA • Forestry Dept. • SNTC	Review report.	2017
	3.2.2 Have environmental taxes and levies as well as payments for ecosystem services and biodiversity	Funding for biodiversity and ecosystem restoration available.	Analyses of possible sources of funding	• SEA • BPIC • Consultant	2016			• Report • Meeting minutes	2017

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	offsets been introduced to mitigate harmful subsidies (e.g. Carbon Taxes, etc.)?								
	3.2.3 Have existing Policies, Programmes and Plans been subjected to Strategic Environmental Assessment	Strategic Environmental Assessment Reports.	Analyses of policies, programmes and plans.	• SEA • Consultant	2016			• Report • Meeting minutes	2017
3.3 Are positive incentives to benefit the environment encouraged?	3.3.1 Are positive environmental investments (e.g. subsidizing alternative energy sources, subsidies on clean energy, payments for ecosystem services)	Environment-friendly investments established.	Review of policies and legislative frameworks.	• SEA • Consultant	2016	22000	• MCTI • Private Sector • SRA • UNISWA • MoA • MCTI • Cabinet • Parliament	• Report • Meeting minutes	2018

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	promoted/encouraged?						• MNRE • King's Office • MEPD • SERA • Forestry Dept. • SNTC		
Target 4: By 2022, the Government of Swaziland, municipalities, businesses, local communities and stakeholders at all levels have developed and are implementing plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.									
4.1 Is the sustainable production and consumption of natural resources promoted?	4.1.1 Has biodiversity been incorporated into integrated sustainable development plans for local authorities, regions, Chiefdoms and Tinkhundla?	Integrated Sustainable Development Plans incorporating biodiversity.	Review of integrated sustainable development plans for local authorities, regions, Chiefdoms and Tinkhundla.	• SEA • Consultant	2016	15000	• MoHUD • King's Office • DPM's Office • Forestry • MNRE • MoA • Private Sector	• Report • Meeting minutes	2018

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	4.1.2 Have new and existing businesses been subjected to the EA process?	EA reports from all businesses.	Review of EA reports	• SEA • Consultant	2016		• SWADE • MCIT • THA • THO	• Report • Meeting minutes	2018
	4.1.3 Are proper land use practices promoted?	Available land put to the best possible use.	Land use maps.	• SEA • Consultant	2016			• Report • Meeting minutes	2018
	4.1.4 Is the sustainable use of natural resources including renewable energy promoted?	Natural resources used sustainably.	Survey of biodiversity and ecosystems in use.	• SEA • Consultant	2016			• Report • Meeting minutes	2018
	4.1.5 Are natural resource production processes intensified e.g. commercial	Improved production and condition of rangelands.	Survey of biodiversity and ecosystems in use.	• SEA • Consultant	2017			• Report • Meeting minutes	2018

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	livestock practises?								
	4.1.6 Is the development and implementation of environmental management strategies within municipalities (biospheres) encouraged?	Environmental management strategy reports developed and implemented by municipalities.	Review of Environmental management strategy reports.	• SEA • Consultant	2017			• Report • Meeting minutes	2018
	4.1.7 Are environmental standards in businesses and municipalities upheld?	Businesses and municipalities with environmental standards in their plans and programmes and adhering to them.	Review of EA reports	• SEA • Consultant	2018			• Report • Meeting minutes	2018

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
Target 5: By 2022, the rate of loss, degradation and fragmentation of all Swaziland's natural habitats is at least halved and where feasible brought close to zero.									
5.1 What is the status of the country's natural habitats and ecosystems	5.1.1 Is sufficient, current good quality data available on the state of the country's natural habitats and ecosystems available?	Reports and scientific publications on the country's natural habitats and ecosystems.	Country-wide survey of the natural habitats and ecosystems.	• SEA • MoA • Consultant	2016	• Meteorology Dept. • Forestry Dept. • SNTC • UNISWA • MNRE • Cotton Board • MEPD • SWADE	30000	• Report • Meeting minutes	2017
	5.1.2. What is the future outlook/projections on the status of the country's ecosystems and habitats?	Projections/Outlook reports on the country's natural habitats.	• SOER • Survey reports • Scientific publications	• SEA • MoA • Consultant	2016			• Report • Meeting minutes	2017
	5.1.3 What are the recommended possible responses/actions to safeguard	Recommendations in reports on the projections/outlook on the country's	• SOER • Survey reports • Scientific publications	• SEA • MoA • Consultant	2016			• Report • Meeting	2017

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	the country's ecosystems?	natural habitats.						minutes	
5.2 Has the loss, degradation and fragmentation of natural habitats been sufficiently reduced?	5.2.1 Have the main drivers of habitat loss, degradation and fragmentation been identified and measures to address these prioritized and implemented?	Strategy and action plan to address the loss, degradation and fragmentation of natural habitats	• Review of Strategy and action plan to address the loss, degradation and fragmentation of natural habitats. • Country-wide survey of the natural habitats and ecosystems.	• SEA • MoA-Land Use Planning Dept • Consultant	2017	22000	• Forestry Dept. • Meteorology Dept. • SNTC • MoA • UNISWA • MNRE • MEPD • MTA • Media Houses • SWADE	• Report • Meeting minutes	2018

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	5.2.2 Have monitoring and evaluation plans for habitats and biodiversity been developed and implemented?.	Monitoring and evaluation plan documents with recommended actions being implemented.	Review of Monitoring and evaluation plan documents						
	5.2.3 Are ecosystem based adaptation strategies being promoted?	Adaptation strategy documents based on ecosystems.	Review of Adaptation strategy documents						
	5.2.4 Are alternative eco-friendly livelihoods such as community based rangeland rehabilitation, forest management and crop land management being promoted?	Alternative eco-friendly livelihoods being widely accepted and utilized.	• Livelihoods survey • MEPD survey reports						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	5.2.5 Is the restoration and rehabilitation of natural habitats being undertaken?	Reduction in land area with degraded natural habitats.	Land use maps						
	5.2.6 Is existing legislation on land degradation enforced?	Reduction in land area being degraded.	• Land use maps • Assessment of impact of legislation						
	5.2.7 Are the activities to achieve this goal integrated with already existing programmes and projects?.	Synergized programmes and projects combating land and habitat degradation.	Review of programmes and projects						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	**What do we want to know? (Monitoring Question)**	**How will we know it? (Indicator)**	**Where will the data come from? (Data Source/Method)**	**Who will capture the data? (Responsibility)**	**When will data be captured? (Timeframe)**	**Estimated cost (USD)**	**Who will be involved?**	**How will it be reported?**	**When will the evaluation occur? (Timeframe)**
Target 6: By 2022 all of Swaziland's aquatic resources are sustainably managed.									
6.1 Are aquatic resources (wetlands, rivers, etc.) being sustainably utilized and conserved?	6.1.1 Have integrated watershed management programmes for all major river basins been developed and implemented?	Integrated Watershed management programme documents and the actions proposed in practise.	Review of Integrated Watershed management programme documents and the actions	• SEA • SNTC • MoA-Fisheries Dept. • Consultant	2017	74000	• MNRE-DWA • River Basins Authority • SWADE • KOBWA • SWSC	• Report • Meeting minutes	2018
	6.1.2 Have local fisheries management authorities as per the revised Fisheries Bill 2013 been established?	Local fisheries management authorities in place.	Assessment of MoA						
	6.1.3 Have the country's wetlands of importance been mapped as per	Map of the country's important wetlands.	• Country-wide survey of the natural habitats and						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	the Ramsar Convention?		ecosystems. • Land use maps						
	6.1.4 What is the status of the country's aquatic ecosystems?	Survey and assessment reports on the country's ecosystems.	• Country-wide survey of the natural habitats and ecosystems. • Land use maps						
	6.1.5 Is sustainable aquaculture being widely practised?	Assessment reports on aquaculture in the country.	Assessment of MoA						
	6.1.6 Have Ecological flow regimes been established for all riparian zones in the country?	Reports and scientific publications on the riparian zones of the country.	• Country-wide survey of the natural habitats and						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
			ecosystems. • Land use maps						
Target 7: By 2022, all areas under agriculture, fisheries, aquaculture and forestry are managed sustainably, ensuring conservation of Swaziland's biodiversity.									
7.1 Is sustainable agriculture, fisheries, aquaculture and forestry practised?	7.1.1 Are food production technologies and processing systems eco-friendly?	Assessment reports on the food production technologies and processing systems.	Assessment of food production technologies.	• MoA • MTEA-Forestry Section • Consultant	2017	371000	• SEA • Private Sector (e.g. forest industry, sugar industry) • Farmers Union • Agricultural parastatals (e.g. cotton board, NAMBoard) • UNISWA	• Report • Meeting minutes	2018
	7.1.2 Is climate smart forestry, fisheries, aquaculture and agricultural production systems in practise?	Policy documents on forestry, fisheries, aquaculture and agricultural production systems.	Review of forestry, fisheries, aquaculture and agricultural production systems						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	7.1.3 Are incentives and policies supporting sustainable agriculture, fisheries, aquaculture and forestry in place?	Policy documents on forestry, fisheries, aquaculture and agricultural production systems.	Review of agriculture, fisheries, aquaculture and forestry policies.				• Meteorology Dept.		
	7.1.4 Have food production systems and forestry been subjected to Environmental Assessments?	Environmental Assessment reports on food production systems and forestry	Review of EA reports.						
	7.1.5 Have conservation areas been established within agric. and forestry plantations (e.g. green belts).	Maps of agricultural and forestry plantations with conservation areas.	Land use maps.						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	7.1.6 Is there buffer vegetation along streams, riparian zones and wetlands?	Maps of the country's streams, riparian zones and wetlands with buffer zones.	Land use maps.						
	7.1.7 Are there relevant national training programmes in agricultural diversification in place?	National training programmes in agricultural diversification.	Review of training programmes in agriculture.						
	7.1.8 Are best practices in food production systems being practised?	Assessment report on the country's food production systems.	Assessment of food production systems.						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
Target 8: By 2022, Pollution in Swaziland has been brought to levels that are not detrimental to ecosystem function and Biodiversity.									
8.1 Are the levels of pollution being effectively monitored and managed?	8.1.1 What is the impact of existing pollution prevention and control initiatives?	Assessment reports and scientific publications on pollution in the country.	Survey of pollution in the country.	• SEA • Consultant	2016	37000	• MoH • MoA-Crop Production, Fisheries and Livestock. • MCIT • MTEA-Met Dept. • Private sector • Farmers Union • MNRE-DWA • SWSC • SRA-Customs dept.	• Report • Meeting minutes	2017
	8.1.2 Are institutions responsible for pollution control sufficiently capacitated?	Evaluation report on the capacity and effectiveness of institutions responsible for pollution control.	Assessment of institutions involved in pollution management.						
	8.1.3 Is the country's pollution control legislation adequate?	• An assessment report on the country's pollution control legislation.	Review of the country anti-pollution legislation						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
		• Proposed new legislation and amendments to existing laws to fill gaps in existing pollution prevention and control legislation. • Strategic planning document to improve enforcement and compliance to legislation • Communication and awareness							

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
		-raising strategy on the country's pollution prevention and control legislation.							
8.2 What are the pollutants in the country's ecosystems?	8.2.1 What is the current pollution status of key ecosystems in the country?	Assessment reports and scientific publications on the pollution status of the country's eco systems.	Survey of pollution in the country.	• SEA • Consultant	2017	20000	• MoH • MoA-Crop Production, Fisheries and Livestock. • MCIT • MTEA-Met Dept. • Private sector • Farmers Union	• Report • Meeting minutes	2017
	8.2.2 Is there concerted/synergized research by research institutions on emerging issues of concern to ecosystem	Research programmes and publications.	Review of the research programmes of institutions doing research on pollution						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	functioning and biodiversity. E.g. impacts of nano-materials and environmental persistent pharmaceutical products?						• MNRE-DWA • SWSC • SRA-Customs Dept.		
8.3 Are there measures in place to effectively monitor and manage all forms of waste?	8.3.1 Is the waste management strategy effectively implemented?	Assessment reports on the waste management strategy.	Assessment of the impacts of the waste management strategy	• SEA • Consultant	2017	15000	• Municipalities • Tinkhundla (Ministry)	• Report • Meeting minutes	2018
	8.3.2 Are the revised Waste Management Strategy and Litter Regulations of 2011 in force and enforced?	The Waste Management Strategy and Litter Regulations of 2011 in force and enforced.	Assessment of the impacts of the waste management strategy						
	8.3.3 Have the Plastic Control Regulations been gazetted?	Government Gazette with the Plastic	Review of the relevant government gazette						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
		Control Regulations.							
Target 9: By 2022, invasive species that are alien to Swaziland and their pathways are identified and prioritized; priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.									
9.1 Have the negative impacts of Invasive Alien Plant Species to the country's biodiversity been ameliorated?	9.1.1 What is the status of IAPS in the country?	• Assessment report and scientific publications on the country's IAPS. • Reports and publications identifying major pathways of IAPS	Countrywide survey of IAPS	• SEA • Consultant	2016	41000	• SNTC • MoA • UNISWA • NGO's • Private landowner • Municipalities • MTAD • MNRE/ DWA • Kings Office	• Report • Meeting minutes	2020

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	9.1.2 Is the IAPS strategy finalized and in place?	• IAPS strategy document and implementation plan. • Mechanisms for detection, surveillance, monitoring and responses to threats posed by IAPS	Review of IAPS Strategy				• Media Houses		
	9.1.3 Is the public aware of IAPS and the strategies, legislation and activities in place to address them?	Communication and awareness raising strategy.	National IAPS awareness survey						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	9.1.4 Is existing legislations on IAPS control and management effective?	Assessment report on the adequacy of the country's legislation on IAPS and its enforcement.	Review and assessment of IAPS legislation						
9.2 Has the level of IAS infestation been stabilized?	9.2.1 What is the status of the invasive alien animal species in the country?	Assessment report and scientific publications on the country's invasive alien animal species.	Countrywide survey of IAPS	• SEA • MoA-Fisheries dept. • Consultant	2016	20000	• Private land owners • MoA • MNRE • Communities • Municipalities • MTAD • SNTC • UNISWA	• Report • Meeting minutes	2018
	9.2.2 Does the country have sufficient capacity to control and management of IAS?	An assessment report on the country's capacity building needs with respect to control and	Assessment of national capacity on IAS management and control.						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
		management of IAS.							
	9.2.3 Are community and other stakeholders participating in the control and management of IAS?	A communication and capacitation strategy for all stakeholders drafted and implemented.	Survey of stakeholder involvement in the control and management of IAS.						
	9.2.4 Is the illegal introduction and translocation of IAS prevented?	Reports and publications identifying major pathways of IAPS	Review and assessment of IAPS legislation.						
	9.2.5 Have invasive free areas been identified and protected from colonisation by IAS?	An IAS map of the country in a strategy and action plan document for the protection of invasive free areas.	• IAS map of the country • Review and assessment of IAPS legislation.						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	9.2.5 Has the Fisheries Bill been finalized?	The Fisheries Law passed and enacted.	Review of Fisheries legislation						
Target 10: By 2022 pressures on Swaziland's vulnerable and most valuable ecosystems such as (Savannah woodland Mosaic forests and wetlands) are identified and prioritized; priority pressures are controlled or eradicated.									
10.1 Are there relevant adaptation measures for most valuable ecosystems in place?	10.1.1 What are the most vulnerable and valuable ecosystems? What is their status/condition?	Assessment reports and scientific publications on the vulnerability status of the country's most valuable ecosystems.	Country-wide survey of the natural habitats and ecosystems.	• SEA • SNTC • Consultant	2017	74000	• Forestry Dept. • UNISWA • Private partners • NGOs • Meteorology Dept.	• Report • Meeting minutes	2018
	10.1.2 What pressures are placed by human activities on ecosystems?	Assessment report on human pressures on ecosystems incorporating management strategies.	• SOER • Country-wide survey of the natural habitats and ecosystems.						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	10.1.3 Have adaptation, mitigation and rehabilitation measures (plans, strategies, programmes etc.) been developed and implemented?	• Plans, strategies and programmes for the adaptation, mitigation and rehabilitation of ecosystems developed and implemented. • Monitoring and evaluation plans and strategy documents drafted and implemented.	Review of plans, strategies and programmes for adaptation, mitigation and rehabilitation of ecosystems						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
Target 11: By 2022, at least 10 per cent of Swaziland's land area, especially areas of particular importance for biodiversity and ecosystem services, protected landscapes and multiple resource use areas are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas.									
11.1 What is the status of the country's biodiversity and ecosystems?	11.1.1 Has the available information on the country's biodiversity and ecosystems and PWAs been collated?	• Assessment report identifying and prioritising the country's biodiversity hotspots and PWAs. • Report on the carbon stocks of prioritised PWAs and hotspots. • Management plan for biodiversity hotspots and PWAs.	• Review of available publications and information on the country's biodiversity and ecosystems • Country-wide survey of the natural habitats and ecosystems.	• MTEA-Forestry dept. • SNTC • BGP • SEA • Consultant	2016	220000	• UNISWA, • MoA • MTDA • MNRE • NGOs • STA	• Report • Meeting minutes • National workshop	2020

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
11.2 How much of the country's land area is under protection? Under what categories of protection?	11.2.1 Have the existing laws for the proclamation of protected areas been revised to cover more categories/governance types of protection and do they include Swazi Nation Land?	Amended SNTC Bill passed into law.	Review of biodiversity legislation	• SNTC • BGP • SEA • MTEA-Forestry dept.	2016	750000	• UNISWA, • MoA • MTDA • MNRE • NGOs • STA • Rancher's association • Chiefs • Private farm owners • LMB • SRA	• Report • Meeting minutes • National workshop	2018
	11.2.2 Have the identified protection-worthy areas been gazetted using the amended SNTC Act, Game Act and Flora Protection Act?	Map showing expanded protected area network and the various categories of protection.	Land use map of the country						
	11.2.3 Are the biodiversity and	• Amended Swazi	• Review of						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	ecosystems in the areas under Chiefs adequately protected and sustainably utilized?	Administration Order. • Information Booklet on NRM in rural areas.	biodiversity legislation • Land use map of the country						
	11.2.4 Are there incentives for owners of land with unique/special ecosystems to maintain important ecosystems?	Amended SNTC Bill.	Review of biodiversity legislation						
	11.2.5 Is there a framework to offset pristine land that is lost to industry and other purposes?	Amended SNTC Bill and Land Use Policy.	Review of biodiversity legislation						
11.3 Are protected	11.3.1 Is there adequate	Increase in Conservation	National conservatio	• SNTC	2017	150000	• UNISWA	• Report	2018

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
areas under proper conservation management and capacitated with adequate operational support?	capacity for conservation among stakeholders? (private, communities, local authorities) in integrated landscape management (with conservation, ecotourism, enhancement of carbon stocks and sustainable land management)	related and nature-based livelihoods and activities.	n management capacity assessment	• BGP • SEA • Forestry • Landowners • Consultant			• MoA • MNRE • NGOs • STA	• Meeting minutes	
	Do Protected Areas have adequate conservation infrastructure and equipment?	Report from the assessment of the Protected Areas	Assessment of PA network						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	Does the PA network have adequate ecotourism infrastructure, product development and/or marketing programmes?	Report from the assessment of the Protected Areas	Assessment of PA network						
	Has the country developed and implemented sustainable land management best practices and plans that integrate conservation efforts with sustainable economic development practices in representative	Land management plans crafted, published and implemented.	Review of land management plans.	• SNTC • BGP • SEA • Forestry • Landowners • Consultant	2017	150000	• UNISWA • MoA • MNRE • NGOs • STA	• Report • Meeting minutes	2017

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	ecosystems and/or production landscapes?								
11.4 Have management plans for PWAs been developed?	11.4.1 Class each PWA into an appropriate conservation category	Amended SNTC Act.	Review of biodiversity legislation	• SNTC • BGP • SEA • Forestry • Landowners	2017	150000	• UNISWA • MoA • MNRE • NGOs • STA	• Report • Meeting minutes	2018
	11.4.2 Draw management plans for each PWA that are in line with the conservation goals	Amended SNTC Act.	Review of biodiversity legislation						
Target 12: By 2022, the extinction of species known to be threatened in Swaziland has been prevented and their conservation status, particularly of those that are endemic and those most in decline, has been improved and sustained.									
12.1 What is the general trend in the conservati	12.1.1 Is the Red Data list for all threatened species up to date?	Updated Red Data Books/Lists published.	• Country-wide survey of the natural habitats	• SNTC • Forestry • SEA • BGP	2016	20000	• SGRA • MoA • UNISWA • NGO's	• Report • Meeting	2019

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
on status of threatened species?			and ecosystems. • Review of Red Data Lists	• Consultant			• Private landowners • Industry • MNRE	minutes • National workshop	
	12.1.2 Are critical ecosystems occurring in multiple land use areas being managed using the Landscape Approach?	Reports and scientific publications on the status of critical ecosystems in multiple land use areas.	Monitoring of critical ecosystems.						
12.2 Has the decline of populations of selected threatened species been halted	12.2.1 Has a framework for species management plans been developed?	Framework for species management plans developed.	Review of framework for species management plans	• SNTC • Forestry • BGP • Consultant	2017	220000	• SGRA • MoA • UNISWA • NGO's • Private landowners • Industry • MNRE	• Report • Meeting minutes	2022
	12.2.2 Have species management plans been	Species management plans	• Review of Red Data Lists						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
and/or reversed?	developed and implemented for all red data list species?	developed and implemented.	• Review of species management plans						
	12.2.3 Are protected areas capacitated to manage threatened species?	Improvement in the status of threatened species in PAs.	Assessment of PA network						
	12.2.4 Are communities capacitated to manage threatened species?	Improvement in the status of threatened species on SNL.	Assessment of national capacity for conservation management						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
Target 13: By 2022, the genetic diversity of cultivated plants, farmed and domesticated animals and their wild relatives, including other socio-economically as well as culturally valuable species, in Swaziland, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.									
13.1 Has the genetic diversity of cultivated plants, farmed and domesticated animals and their wild relatives been assessed?	13.1.1 Has an assessment of the genetic diversity of crop plants, livestock and their wild relatives been carried out?	Report with accession numbers of the country's genetic diversity of crop plants, livestock and their wild relatives	Review of assessment report on genetic diversity of crop plants	• SEA • MoA • MTEA • Consultant	2016	500000	• UNISWA • Farmer's Groups	• Report • Meeting minutes	2019
	13.1.2 Have germplasm and DNA banks been established and/or strengthened?	DNA and/or germplasm of crop plants, livestock and their wild relatives safely and securely stored.	Assessment of germplasm and DNA banks						
13.2 Is the genetic	13.2.1 Are in-situ/ on-farm	Assessment reports	Assessment of on farm		2016	350000	• SEA	• Report	2017

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	**What do we want to know? (Monitoring Question)**	**How will we know it? (Indicator)**	**Where will the data come from? (Data Source/Method)**	**Who will capture the data? (Responsibility)**	**When will data be captured? (Timeframe)**	**Estimated cost (USD)**	**Who will be involved?**	**How will it be reported?**	**When will the evaluation occur? (Timeframe)**
diversity of crops, livestock, fish, harvested tree species and wildlife and other valuable species maintained?	conservation areas being maintained?	showing trends in genetic diversity of domesticated animals, cultivated plants, and fish species of major socio-economic importance.	conservation areas	• MoA – research dept. and Fisheries dept. • MTEA-Forestry • BGP			• SNTC • BGP • Private Land owners • UNISWA	• Meeting minutes	
	13.2.2 Does the National Plant Genetic Resource Centre and the National Tree Seed Centre have the necessary capacity?	• Reports on assessment of the operations of the National Plant Genetic Resource Centre and the National Tree Seed Centre	Capacity assessment of the National Plant Genetic Resource Centre						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
		• Assessment reports showing the trends in the abundance and distribution of selected species							
	13.2.3 Has a National Botanical garden been established?	National Botanical Garden with food and medicinal plants in its plant complement.	Assessment of National Botanical Garden						
	13.2.4 Has a genetic diversity strategy been developed and implemented?	Strategy document safeguarding biodiversity used as food and medicine	Review of genetic diversity strategy						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
		developed and implemented.							
	13.2.5 Has the Biosafety Act 2002 and its provisions been implemented?	Assessment reports showing cautious and controlled use of living modified organisms.	Review of the Biosafety Act.						
	13.2.6 Have guidelines for on-farm conservation areas been developed?	Farm maps showing that on-farm conservation areas have been established	Review of Guidelines for on-farm conservation areas,						
Target 14: By 2022, the capacity of ecosystems to deliver essential services and support the livelihood of the people of Swaziland is maintained.									
14.1 Has the case for ecosystem manageme	14.1.1 Have rapid assessments of the linkages between key ecosystem	Report(s) from assessments of ecosystem services and	• National survey of biodiversity and ecosystems	• SEA • Consultant	2016	440000	• SNTC • Forestry dept. • MNRE-DWA	• Report • Meeting	2022

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
nt been made?	services and human well-being, state and trends of ecosystem health and drivers of change been undertaken?	their linkages to human well-being	• Assessment of linkages between ecosystem services and human livelihoods and well-being				• Civil Society • Academia • King's Office • Media • MTAD • MoA	minutes • National workshop	
	14.1.2 Are the public and decision-makers aware of and do they understand the concept of ecosystem management?	• Reports and scientific publications on the state, health, and drivers of change of key	Survey of public knowledge and understanding on ecosystem services						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
		ecosystem services • Policy and behaviour change by decision-makers and the public. • Assessment reports showing positive trends in the state and health of key ecosystem services.							
14.2 Has the capacity of ecosystems to deliver services	14.2.1 Have investments in restoring and maintaining ecological	Assessment reports showing positive trends in ecosystem services.	Survey of investments in ecological infrastructure.	• MTEA • SEA • Consultant	2016	50000	• MEPD • MPWT • SNTC • Forestry dept.	• Report • Meeting minutes	2022

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
been restored and is it being maintained?	infrastructure increased?						• MNRE-DWA • Civil Society • Academia • Private sector • King's Office • MoA		
	14.2.2 Have any natural resources management programmes with job creation/livelihoods been established?	Number of natural resources management programmes implemented.	Survey of investments in ecological infrastructure.						
14.3 Is ecosystems management included in national planning processes?	14.3.1 Has inter-sectoral mainstreaming and participation in biodiversity and ecosystem management been strengthened?	• Policies, plans and programmes across all sectors incorporating ecosystem management. • Reports showing positive trends in	Review of national plants, policies and programmes.	• MTEA • SEA • Consultant	2016	20000	• MEPD • MPWT • SNTC • Forestry dept. • MNRE-DWA • Civil Society • Academia • Private sector	• Report • Meeting minutes	2022

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
		participating levels of all key sectors on environmental management issues.					• King's Office		
	14.3.2 Has the evaluation of impacts of infrastructure on biodiversity and ecosystem functioning (through the EIA process) been strengthened? Are these taken into account in the planning and design phases of projects?	Comprehensive EIA reports that are pro-ecosystems and biodiversity	Review of EIA reports						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
Target 15: By 2022, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced in Swaziland, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.									
15.1 Have Swaziland's key ecosystems been strengthened to ensure that the country becomes a net carbon sink?	15.1.1 Have communities been trained in sustainable ecosystems management including increasing carbon stocks?	Reports showing increased community involvement in carbon stocks management.	National conservation management capacity assessment	• MTEA-Forestry Met depts. • SEA • Consultant	2017	200000	• SNTC • MTAD • Local Authority • SWADE • Civil Society • Private sector • Municipalities	• Report • Meeting minutes	2019
	15.1.2 Are degraded forests and woodlands being restored?	Assessment reports showing positive trends in carbon stocks.	Country-wide survey of the natural habitats and ecosystems.						
	15.1.3 Are wetland ecosystems being managed	Reports from assessment of the status of wetlands showing	Country-wide survey of the natural						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	for carbon sequestration?	positive trends in carbon sequestered and reduction in GHGs.	habitats and ecosystems.						
	15.1.4 Have carbon stocks increased in the country?	Reports and scientific publications showing restoration of degraded forests and woodlands.	Country-wide survey of the natural habitats and ecosystems.						
	15.1.5 Have urban greening programmes been developed and implemented?	Number of green city programmes implemented	Survey of urban green areas						
15.2 Is there a reduction in greenhous	15.2.1 Have agricultural activities been streamlined to minimize GHGs?	• Improved crop management policies and practises	Assessment of agricultural activities	• MTEA • MoA Forestry • Met dept.	2016	75000	• MoA • SNTC • Civil Society	• Report • Meeting minutes	2019

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
e gas emissions emanating from LULUCF?		• Reports showing Swaziland as net carbon sink		• SEA			• Academia • Private sector • King's Office		
	15.2.2 Has an integrated fire management strategy been developed and implemented?	Integrated fire management strategy.	Review of fire management strategy.						
	15.2.3 Are GHGs management issues incorporated into urban and rural settlements?	GHGs management integrated into settlement practises/policies. .	Review of urban and rural settlement policies.						
Target 16: By 2016, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and by 2022 fully operational and consistent with national legislation.									
16.1 Will the Nagoya Protocol be domesticat	16.1.1 Is accession to the Nagoya Protocol being facilitated?	Accession to the Protocol	Review of international conventions the country	• SEA • Consultant	2016	74000	• Tinkhundla	• Report • Meeting	2017

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
ed by 2016?			has acceded to				• MoA (Gene Bank) • MNRE • Traditional healer • Traditional authorities • UNISWA • Research institutions • Bio-traders	minutes	
	16.1.2 Is the national regulatory framework in place?	ABS Regulatory Framework in place	Review of the ABS national regulatory framework						
16.2 Is the National ABS Regulatory Framework operational?	16.2.1 Have the institutional arrangements and administrative systems for implementation of the Protocol been established?	Institutional arrangements in place, including the national focal point, competent authority (s).	Assessment of institutional arrangements and administrative systems for implementation of the	• SEA • IP office • Herbarium • Consultant	2016	150000	• Tinkhundla • MoA (Gene Bank) • MNRE • MCTI-Intellectual Property	• Report • Meeting minutes	2018

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
			Nagoya Protocol				Universities • MoET • Traditional healers • Traditional authorities • UNISWA • Research institutions • Bio-traders		
	16.2.2 Are all the stakeholders informed on and do they understand the provisions of the ABS Act?	Stakeholder participation in ABS issues	Assessment of stakeholder involvement and participation in ABS issues						
	16.2.3 Have the procedures and rules for accessing genetic resources and Traditional Knowledge? associated with genetic resources been developed?	Publications with procedures and rules for accessing genetic resources and Traditional Knowledge associated with genetic resources	Review of the procedures and rules for accessing genetic resources and Traditional Knowledge associated with genetic resources						
	16.2.4 Has a national fauna	National Genetic	Assessment of the						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	genetic resource depository been established?	Resource Depository established.	national fauna genetic resource depository						
	16.2.5 Has the existing flora gene bank been strengthened?	Valorization strategy developed and implemented.	Assessment of the flora gene bank						
	16.2.6 Is there support for communities to negotiate further on ABS agreements?	Communities capacitated on ABS negotiations	Assessment of stakeholder involvement and participation in ABS issues						
16.3 Is there strong capacity to research and develop commercia	16.3.1 Have research institutions been capacitated to research and develop commercial products from	Trained personnel and dedicated programmes established in research institutions.	Assessment of research capacity and review of research programmes of research institutions	• SEA • MoA • Research centres-UNISWA etc.	2016	150000	• Universities • MCTI • Local communities • SWASA	• Report • Meeting minutes	2018

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
l products from local genetic resources?	genetic resources?			• Consultants			• SNTC • IPR Office • MICT		
	16.3.2 Have the prospects of developing valorisation strategy on genetic resources with potential for ABS been considered?	Valorisation strategy in place	Review of valorisation strategy						
	16.3.3 Do communities have support for sustainable production and value addition on products derived from genetic resources?	Value added products developed by communities	Assessment of stakeholder involvement and participation in ABS issues						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
Target 17: By 2016, Swaziland has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.									
17.1 Has advocacy for the adoption of the NBSAP 2 as a policy instrument been carried out?	17.1.1 Has NBSAP 2 document been presented to decision-makers for adoption as a policy instrument?	NBSAP 2 adopted as a Policy instrument	Review of national policies	• MTEA • SEA • Focal points of Biodiversity related Conventions	2015	75000	• Cabinet • All key sectors	• Report • Meeting minutes	2016
Target 18: By 2022, the traditional knowledge, innovations and practices of local Swazi communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are documented, recognised and promoted.									
18.1 Is the role of Traditional Knowledge in conservati	18.1.1 Is Traditional Knowledge and practises included in environmental	Traditional Knowledge incorporated in educational and awareness campaigns.	Review of environmental education awareness campaigns	• SEA • IP Office • Consultant	2015	150000	• Tinkhundla • MoA (Gene Bank) • MNRE	• Report • Meeting minutes	2016

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
on being promoted?	education and awareness raising campaigns?						• Traditional healers • Traditional authorities • UNISWA • Research institutions • Bio-traders • Sports and Culture Ministry • Education Ministry • Commerce, Industry and Trade Ministry - IP Office		
	18.1.2 Have Traditional Knowledge and scientific knowledge in conservation been harmonized?	Fora for exchange of information between indigenous communities and scientists established.	Assessment of TK and scientific knowledge						
18.2 Has traditional knowledge, innovations and practises	18.2.1 Has legislation to protect traditional knowledge related to	Law(s) protecting Traditional Knowledge passed.	Review of national legislation	• SEA • IP Office	2017	110000	• THO • Traditional Authorities • Tinkhundla	• Report • Meeting minutes	2020

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
relevant to conservation and sustainable use of biodiversity been protected and documented?.	conservation been developed?						• MoA (Gene Bank) • MNRE • Traditional healers • UNISWA • Research institutions • Bio-traders • Ministry of Sports, Culture and Youth • Ministry of Education and Training • Ministry of Commerce, Industry and Trade • IP Office		
	18.2.2 Has traditional knowledge, innovations and practises relating to biodiversity conservation and sustainable use been documented?	Legislation protecting Traditional knowledge	Review of documents on TK						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	**What do we want to know? (Monitoring Question)**	**How will we know it? (Indicator)**	**Where will the data come from? (Data Source/Method)**	**Who will capture the data? (Responsibility)**	**When will data be captured? (Timeframe)**	**Estimated cost (USD)**	**Who will be involved?**	**How will it be reported?**	**When will the evaluation occur? (Timeframe)**
Target 19: By 2022, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied in Swaziland.									
19.1 Are there programmes to generate information on biodiversity in the country?	19.1.1 Has existing data and information on biodiversity been collected and collated?	Establishment of National Biodiversity Database	Review of biodiversity metadata and data	• SEA • UNISWA • Savannah Research Centre. • Consultant	2016	220000	• MET • Ministry of Labour and Social Security • MCT • SEA • SNTC • MITC • Savannah Research Centre • Conservation Trust • Natural History society • MET • Ministry of Labour	• Report • Meeting minutes	2018
	19.1.2 Has a national biodiversity research strategy with prioritised research areas been developed and implemented?	National Biodiversity research Strategy established and implemented.	Review of national biodiversity research strategy						
	19.1.3 Are resources to support research programmes available?	Number of research programmes supported	Review of national biodiversity research strategy						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	19.1.4 Is there collaboration with research institutions for programmes development and research in biodiversity?	Research and tertiary institutions with a multiple research programmes in biodiversity.	Review of national biodiversity research strategy				and Social Security		
	19.1.5 Is there collaboration with tertiary institutions to ensure that there is a pool of emerging scientists?	Number of emerging scientists supported by programme	• Review of national biodiversity research strategy • Review of national science training policy						
19.2 Have mechanisms to coordinate	19.2.1 Has a national biodiversity data clearing house	A functional National Biodiversity	Assessment of national data clearing house	• SEA • UNISWA	2015	75000	• MET • MoA • BGP	• Report • Meeting	2016

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
and share biodiversity information and technologies been established?	been established?	Data Clearing House.		• SNTC				minutes	
	19.2.2 Is the existing data and information on biodiversity accessible to wider stakeholder?	Publications with biodiversity data availed to all stakeholders.	Review of national biodiversity research strategy						
	19.2.3 Have institutions dealing with biodiversity related Conventions been strengthened?	Publications with biodiversity data availed to the public Institutions dealing with biodiversity related conventions fulfilling their mandates.	Assessment of the capacity of institutions dealing with biodiversity related conventions						
	19.2.4 Has a biodiversity coordinating unit to harness	A biodiversity coordination unit in place	Assessment of the capacity of institutions						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	synergies among biodiversity related Conventions been established?		dealing with biodiversity related conventions						
Target 20: By 2020 the NBSAP is fully integrated in the government and relevant implementing institutions' budgeting systems and other sources of funding are mobilized.									
20.1 Has a coordination and resource mobilization strategy to facilitate implementation of the NBSAP been	20.1.1 Has advocacy for biodiversity to policy makers to sensitise them on the urgent need for joint efforts been made?	Changes in policies and behaviour as a result of increased awareness at all levels of the value of biodiversity and ecosystems.	Review of minutes from briefings	• SEA • MEPD	75000	2016	• Focal Points (Biodiv. Rel. Conventions) • Cabinet	• Report • Meeting minutes	2017

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
developed and implemented?	20.1.2 Have budgetary allocations for biodiversity in national planning across all sectors been facilitated?	Budgetary allocation for biodiversity reflected in national planning documents.	Review of national planning documents						
	20.1.3 Have efforts been made to explore, prioritize and follow up, all possible sources of funding including GEF and others for the implementation of the NBSAP 2?	GEF country allocation prioritising biodiversity issues.	Assessment of funding available for NBSAP implementation						
	20.1.4 Has the message on efforts and amounts of money committed to NBSAP	National report to COP 13	Review of National Reports to International Organizations						

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost (USD)	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)
	implementation (convey the message on the limited resources both financial and human, for the implementation of the NBSAP) been taken to COP 13								
	20.1.5 Have partnerships with regional and international institutions to enable resource mobilization for implementation of the NBSAP 2 been strengthened and expanded.	Partnership agreements	Assessment of partnerships with regional and international institutions						

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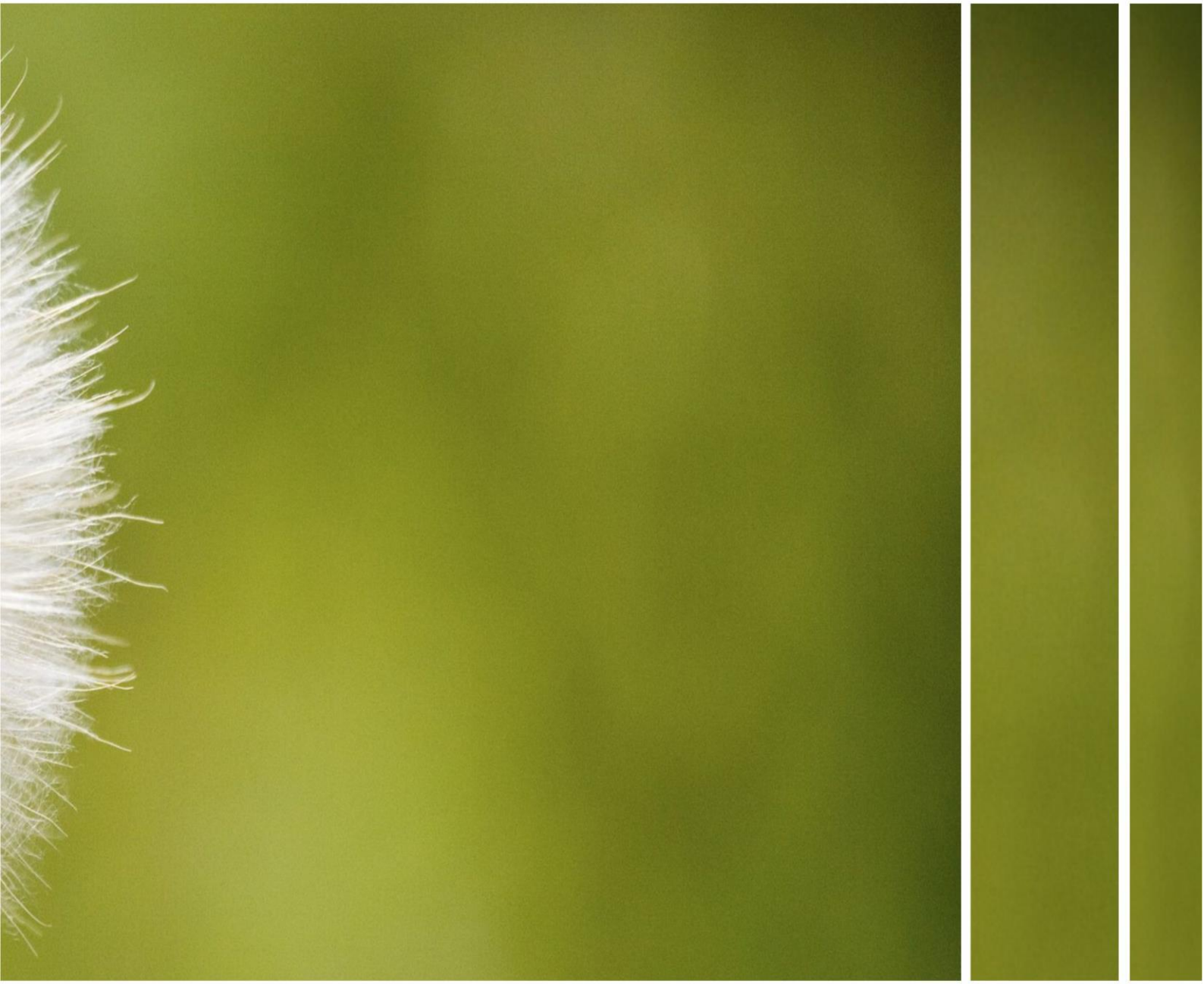

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