

THE STATE
OF THE WORLD'S
FOREST GENETIC RESOURCES
COUNTRY REPORT
SWAZILAND

This country report is prepared as a contribution to the FAO publication, The Report on the State of the World's Forest Genetic Resources. The content and the structure are in accordance with the recommendations and guidelines given by FAO in the document Guidelines for Preparation of Country Reports for the State of the World's Forest Genetic Resources (2010). These guidelines set out recommendations for the objective, scope and structure of the country reports. Countries were requested to consider the current state of knowledge of forest genetic diversity, including:

- Between and within species diversity
- List of priority species; their roles and values and importance
- List of threatened/endangered species
- Threats, opportunities and challenges for the conservation, use and development of forest genetic resources

These reports were submitted to FAO as official government documents. The report is presented on www.fao.org/documents as supportive and contextual information to be used in conjunction with other documentation on world forest genetic resources.

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**STATE OF THE WORLD'S FOREST
GENETIC RESOURCES**

**COUNTRY REPORT (FINAL)
FOR SWAZILAND**

MINISTRY OF TOURISM AND ENVIRONMENTAL AFFAIRS

SECTION 1: EXECUTIVE SUMMARY

Swaziland is a small landlocked country surrounded by South Africa and Mozambique. Although small, the country is characteristically divided into six distinct physiographic zones. The physiographic zones run parallel from north to south with the Highveld on the west and the Lebombo range on the east of the country. The climate of Swaziland is influenced by the physiographic zones but mainly it is subtropical. The Highveld records the highest rainfall while the Lowveld records the lowest rainfall. Temperatures are high in Eastern Lowveld and are low in the Highveld.

Land tenure is basically divided into two types. These are: the Swazi Nation Land which is held by the King in trust for the Swazi Nation and the powers to allocate it is given to the chiefs and the Title Deed Land which is free land. Access to forest genetic resources is free in the Swazi Nation Land and in the Title Deed Land access is regulated by the owners of the Land. The forest sector is one of the largest employers of many people in the country following after the agricultural and manufacturing sectors. It also generates a lot of foreign revenue for the country.

Seven major forest type categories are recognized in Swaziland: Montane and Afromontane, Riparian, Moist Savannah, Acacia Savannah, Drier Savannah, Bushveld and Plantations. The majority of these forests are on Swazi Nation Land and managed by the communities to some extent while plantations are managed by company owners or estates.

Conservation *in situ* is primarily within existing nature reserves. Nature conservation areas' main focus is conservation of fauna and flora. Four threatened species are included in *in situ* conservation and these are *Warburgia salutaris*, *Cyathea capensis*, *Encephalartos paucidentatus*, *Encephalartos umbeluzienses*, *Prunus africana*, *Protea comptonii* and *Protea parvula*. However, data on the number of populations or stands conserved and the total area covered by the targeted species is not available. Conservation *ex-situ* has not been given the necessary attention in Swaziland. The country is experiencing a serious decline in forest species but the country has not yet formulated programmes to initiate *ex-situ* conservation of forest species. The Government's initiative to establish a national botanic garden failed because of funding not being sufficient to complete the project. However, government is still sourcing funds to embark on the project.

In terms of international cooperation regarding programmes on transfer of seed, Swaziland had not initiated any programme. Seed is sourced within the country except for commercial forest tree species which is sourced outside the country and there is no seed that is taken out to other countries. The country has identified eight tree species for improvement, but there is no capacity to carry out the programme. The species include *Combretum zeyheri*, *Encephalartos spp*, *Englerophytum magalimontanum*, *Pterocarpus angolensis*, *Sclerocarya birrea*, *Syzygium cordatum*, *Vangueria infausta* and *Ximenia caffra*. Although there are institutions involved in

conservation and use of forest genetic resources, the country has not established any national coordination mechanism to include different institutions. Forest genetic resource research has not been prioritised in the country, thus there is no research programme, and the trends for support for forest genetic resources have changed. A number of laws have been enacted to support the conservation of forest genetic resources. The existing legislation need to be improved to adequately manage forest genetic resources. Agro-forestry has just been introduced in Swaziland and the country has been able to establish the programme through the Swaziland Agricultural Development Programme (SADP) with funding from the European Union (EU). The Food and Agriculture Organisation of the United Nations (FAO) is coordinating the funds and projects under the fund.

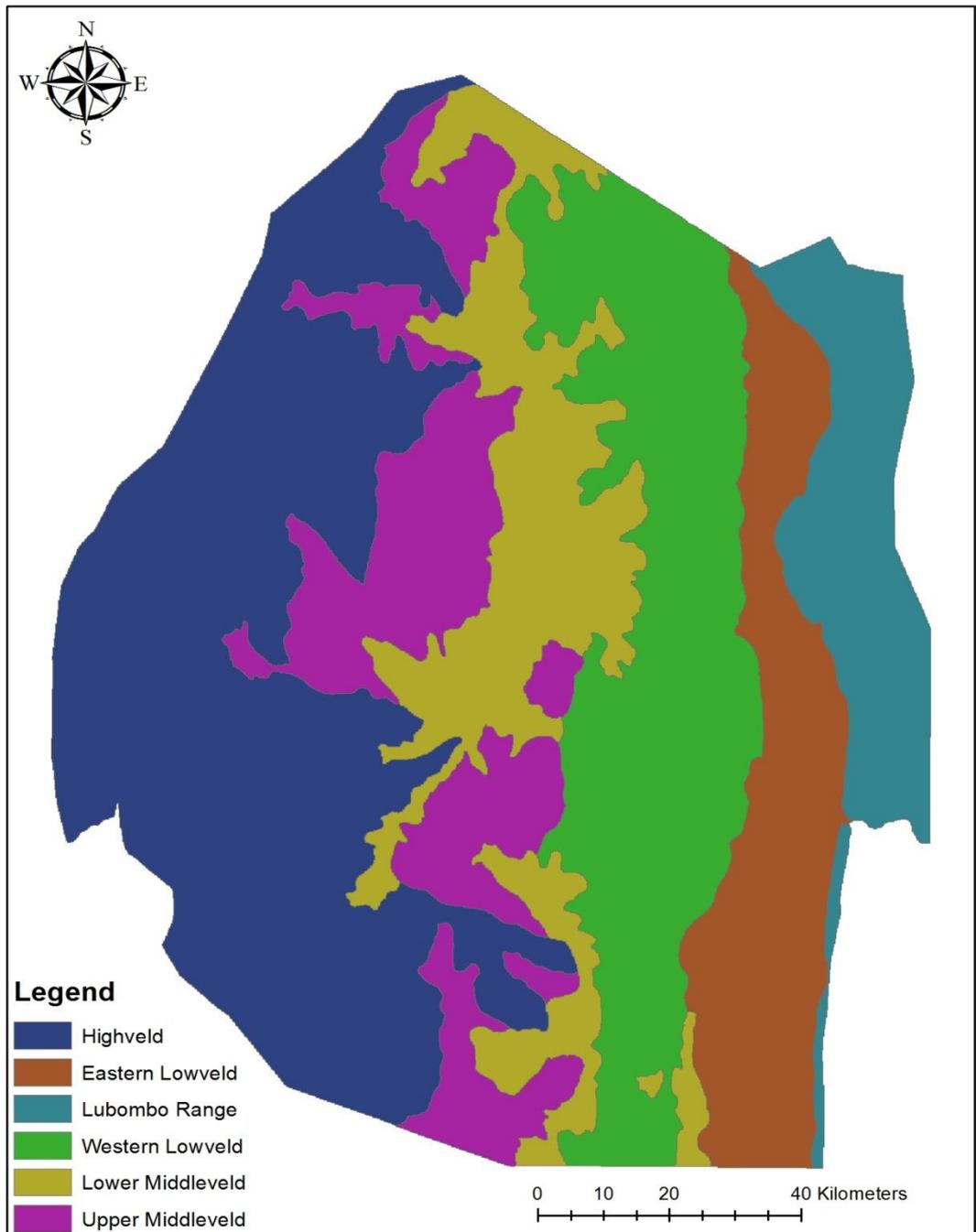
Swaziland is a signatory to a number of regional and international conventions, protocols and agreements. These include the United Nations (UN) Convention on Biological Diversity, The United Nations (UN) Convention to Combat Desertification, the Convention on International Trade in Endangered Species of Wild Fauna and Flora etc. There are also several legal instruments that were put in place as a result of the international and regional conventions, protocols and agreements in which the country is a signatory to. These include The Environment Management Act, 2002, the Flora Protection Act, 2001, the Plant Control Act, 1981 etc.

The country is working on a number of initiatives through international collaboration such as the Technical Cooperation Programme (TCP) Project proposal for Community-based Fire Management (CBFIM) in Swaziland in which the Government of Swaziland is working with the Food and Agricultural Organisation of the United Nations (FAO), the collaboration between Swaziland, the Republic of South Africa and Mozambique on the Transfrontier Conservation Areas (TFCAs), etc. International collaboration is still needed to improve on awareness programme. The existing regulations on forest genetic resources are not very specific. The Flora Protection Act, 2001 needs to be reviewed to be in line with the present trends. The trends observed over the past ten years include increase in reliance on forests products for wood fuel, medicines and poverty reduction, enforcement of legislation to control access to forest genetic resources, increase in number of community forests and forests destroyed by wild fires. The main driving forces to these trends include over-exploitation of forest resources by human activities, increase in human population, poverty and increase in demand for traditional medicines. Swaziland needs assistance to review the existing legislation so that it can address the emerging trends affecting forest resources. The country needs to improve on capacity building and initiate research programmes. It is also important for Swaziland to address the problem of *ex-situ* conservation as a matter of urgency and to improve on awareness campaigns on forest resources conservation. A number of forests need to be protected to conserve indigenous plant species constituting the forests.

SECTION II: INTRODUCTION TO THE COUNTRY AND FOREST SECTOR

Swaziland in Brief:

Swaziland is a small country in Africa with a total area of about 17 364 sq, km and a population of slightly over one million people. The country lies between the 26th and 27th latitudes and 31st and 32nd longitudes. It is landlocked, bounded on the north, west and south by South Africa and on the east by Mozambique. It is divided into six physiographic zones taking into account elevation, landforms, topography, geology, soils and vegetation (Rammelzwaal, 1993).



Source: Rammelzwaal, 1993. Physiographic Map of Swaziland

- Highveld is the mountainous region to the west, with an altitude range of 900 – 1400m above sea level (asl). It is an area of short grassland with patches of natural forests with widespread commercial forest plantations.
- The Upper Middleveld is at an intermediate level of the overall escarpment with an altitude range of 600 – 800 asl. It consists of strongly eroded plateau remnants and hills.
- The Lower Middleveld lies on the east of the Upper Middleveld with an altitude range of 400 - 600 asl. It consists of rolling plains with basins and isolated hills.
- The Western Lowveld with an altitude of between 250 – 400m asl. It consists of undulating plains
- The Eastern Lowveld is a transition to the Lubombo range on the east of the country. It has an altitude range of between 200 – 300m asl.
- The Lebombo Range on the east of the country has an altitude of between 250 – 600m asl. It consists of undulating plateau with steeply dissected escarpment.

Swaziland has a typically subtropical climate with summer rains (October – March) and distinct seasons. Rainfall is highest in the Highveld (1450 mm) and lowest in the Lowveld (550mm) annually (Loffler and Loffler 2005). Temperatures follow the same pattern as the rainfall. Highest January mean maximum temperatures are recorded in the Eastern Lowveld (34⁰c at 200m asl) and the lowest in the Highveld (22⁰c at 1450m asl). The lowest July minimum temperatures range from 5⁰c to 10⁰c.

Land Tenure Systems in Swaziland

Basically, there are two main types of land tenure systems in Swaziland. These are: (1) The Swazi Nation Land (SNL) which takes about 74% of the total land and (2) the Title Deed Land (TDL) which takes about 26% of the total land in Swaziland (M.E.T. E C. 1999).

Title Deed Land (TDL) is land that is privately owned by individuals or companies and access to this land and its resources is regulated by the owner, hence resources under this type of land tenure system can be more easily conserved and managed. While under the Swazi Nation Land, land holdings are allocated by the chiefs to individuals for purposes of building homesteads, grazing livestock and crop farming on behalf of the king who holds the land in trust for the Swazi nation. This land can never be sold or leased to any person. Land is held communally and community members have free access to the land and its resources. Such open access to forest genetic resources presents a serious threat to their sustainable utilization and conservation. However, it must be mentioned that community rules for regulating the management of plant genetic resources do exist in the country. A good example is the time of the year when a piece of land is subjected to fire a form of management and this regulation is enforced.

The Forestry Sector

The forest sector is very important in Swaziland. It accounts for 16-18% of Swaziland's work force. The sector contributes about 26% of the country's revenue. Total annual industrial production is about 100 000m³ sawn timber, 70 000m³ mining timber and panels and 420 tons of dry wattle bark for tannin (Dlamini 2003).

Commercial forests accounts for diversity of product that earns foreign revenue for Swaziland. The major forestry products are unbleached kraft-pulp which closed down in early 2010, sawn timber, poles for fencing, construction and transmission lines, and sawn timber for furniture making. There are other products from forestry which are non-wood forestry products. These include foliage, medicine, honey, edible fruits and nuts, mushrooms and silk worms.

Forest genetic resources provide employment in the commercial forests. They are also used in addressing poverty in terms of products sold in market and also addressing the food security problems. There is also more reliance to medicines derived from forests genetic resources for healthcare by a large population in the country.

Forest genetic resources also play an important role in minimizing the effects of climate change and addressing soil erosion problems.

Changing demands and driving forces in the Forestry Sector

The trends in forest genetic conservation, management and production observed over the past 10 years and the main driving forces are:

- a) Establishment of additional nature conservation reserves (e.g Mahamba Gorge Conservancy and Shewula Community Conservation Area).
- b) Strengthening of existing conservation areas to include conservation of plant species and targeting endangered species like *Warburgia salutaris*.
- c) Increase in the number of community forests and woodlots established.
- d) Enforcement of legislation to control access to forest genetic resources.
- e) Reduction in pine tree species and an increase in Eucalyptus tree species.
- f) Stoppage of production of pulp which was one of the largest earners of foreign revenue.
- g) Forests and habitat fragmentation in all the ecological zones of the country.

The main driving forces are:

- a) Over-exploitation of forests for different products.
- b) Increase in human population resulting in more forested areas being cleared for development purposes (i.e. agricultural development, roads and dams construction, schools and settlements).
- c) Poverty driving people to harvest fresh trees from forests to sell on roadsides as firewood.
- d) Increase in demand for forest genetic resources for medicinal purposes.
- e) Increase in the demand for forest tree species for making handcrafts.
- f) Increase in illegal logging that has resulted in serious loss of forest genetic diversity.

- g) Wide spread of invasive alien plant species which include *Chromolaena odorata*, *Lantana camara*, *Solanum mauritianum* and *Caesalpinia decapetala*.
- h) Increase in wild veld fires that starts within the country and from across the borders of the country.

The changes in forest and tree resource management systems to meet the changing demands over the next 10 years are:

- a) Reviewing and amendment of existing legislation to improve access to forest genetic resources.
- b) Designate more forest areas as protected forest areas.
- c) Promote awareness (awareness programmes) to improve public knowledge on participation in forest resources management.
- d) Swaziland need assistance to formulate and initiate research programmes on forest genetic resources.
- e) Capacity building is required to equip personnel involved in promoting forest genetic resources management in Swaziland with skills and knowledge.

Limiting factors and major constraints affecting productivity and efficiency are:

- a) Lack of research programmes.
- b) Lack of capacity especially on government agencies.
- c) Legislation that does not address the emerging trends.
- d) Poverty resulting in unsustainable harvesting of forest genetic resources.
- e) Declining world markets for timber resulting in plantation companies scaling down production.

Roles forest genetic resources will play in meeting future demands for forest products and services in Swaziland over the next 10 years.

- a) Provide employment to a large population as the demand is increasing.
- b) Poverty and food security will be addressed as there will be an increase in demand for forest genetic resources for food and for sale.
- c) Forest genetic resources will be used in the health sector to treat emerging diseases.

Area under Agro-Forestry

Swaziland has just started on agro-forestry programme in 2011. The area under agro-forestry at the present moment stands at 13.5 hectares. There are plans to increase the hectares as there is some minimum funding provided by the European Union (EU) and coordinated by the Food and Agriculture Organisation of the United Nations (FAO) through the Swaziland Agricultural Development Programme (SADP).

SECTION III: MAIN BODY OF THE COUNTRY REPORT

CHAPTER 1: THE CURRENT STATE OF FOREST GENETIC RESOURCES

Table 3. Major Forest type categories and main tree species

Major Forest types	Area covered by forest type	Trees	Other species if applicable
Riparian Forest	2344 ha	<i>Breonadia salicina</i> <i>Celtis africana</i> <i>Bridelia micrantha</i> <i>Acacia xanthophloea</i> <i>Acacia ataxacantha</i> <i>Combretum erythrophyllum</i> <i>Deinbollia oblongifolia</i> <i>Faidherbia albida</i> <i>Trichillia emetica</i> <i>Syzygium cordatum</i> <i>Syzygium guinesse</i> <i>Rhus chirindensis</i> <i>Vernonia myriantha</i> <i>Ziziphus mucronata</i>	<i>Adenia gummifera</i> <i>Passerina filiformis</i> <i>Phoenix reticulatus</i> <i>Phyllanthus retulatus</i> <i>Salix mucronata</i> <i>Rhus grandidens</i> <i>Sesbania sesban</i> <i>Vernonia amygdalina</i> <i>Harpephyllum caffrum</i>
Moister Savannah	112720 ha	<i>Acacia grandicornuta</i> <i>Acacia davyi</i> <i>Acacia karroo</i> <i>Acacia xanthophloea</i> <i>Pterocarpus angolensis</i> <i>Pavetta edentula</i> <i>Vangueria infausta</i> <i>Sclerocarya birrea</i>	<i>Gardenia cornuta</i> <i>Kraussia floribunda</i> <i>Pavetta lanceolata</i> <i>Aloe marlothii</i>
Acacia Savannah	150590 ha	<i>Acacia caffra</i> <i>Acacia davyi</i> <i>Acacia natalitia</i> <i>Acacia sieberiana</i> var. <i>woodii</i> <i>Acacia swazica</i> <i>Albizia versicolor</i> <i>Acacia nigrescenes</i> <i>Berchemia zeyheri</i> <i>Dichrostachys cinerea</i> <i>Combretum imberbe</i> <i>Euphorbia ingens</i> <i>Peltophorum africanum</i> <i>Sclerocarya birrea</i> <i>Warburgia salutaris</i>	<i>Bauhinia galpinii</i> <i>Flacourtia indica</i> <i>Combretum molle</i>

Dryer Acacia Savannah	34024 ha	<i>Acacia tortillis</i> var. <i>woodii</i> <i>Acacia swazica</i> <i>Combretum apiculatum</i> <i>Combretum imberbe</i> <i>Combretum hereroense</i> <i>Euphorbia ingens</i> <i>Euphorbia confinalis</i> <i>Barchemia zeyheri</i> <i>Combretum zeyheri</i> <i>Drypetes gerrardii</i>	<i>Aloe spicata</i> <i>Encephalartos lebomboensis</i> <i>Drypetes reticulata</i>
Bushveld	151890 ha	<i>Acacia burkei</i> <i>Acacia caffra</i> <i>Acacia gerrardii</i> <i>Azelia quanzensis</i> <i>Combretum zeyheri</i> <i>Dodonaea angustifolia</i> <i>Dombeya rotundifolia</i> <i>Cussonia natelensis</i> <i>Cussonia paniculata</i> <i>Cussonia spicata</i> <i>Euphorbia ingens</i> <i>Euphorbia grandidens</i> <i>Androstachys johnsonii</i> <i>Spirostachys africana</i> <i>Terminalia sericea</i>	<i>Hyphaene coriacea</i> <i>Euphorbia grandicornis</i> <i>susp. grandicornis</i> <i>Dichrostachys cinerea</i> <i>Grewia flava</i> <i>Grewia hexamita</i> <i>Xanthocercis zambesiaca</i> <i>Acacia senegal</i> var. <i>rostrata</i>
Plantations	135000 ha	<i>Pinus patula</i> <i>Pinus elliotti</i> <i>Eucalyptus grandis</i> <i>Eucalyptus saligna</i> <i>Acacia mearnsii</i>	<i>Pinus kesiya</i> <i>Pinus daeda</i> <i>Acacia decurrens</i> <i>Acacia dealbata</i>
Montane and Afromontane Forest	11920 ha	<i>Brachylaena transvuaalensis</i> <i>Combretum kraussii</i> <i>Englerophytum magalismontanum</i> <i>Halleria lucida</i> <i>Ilex mitis</i> <i>Pittosporum viridiflorum</i> <i>Pordocarpus latifolius</i> <i>Prunus africana</i> <i>Eugenia natalitia</i> <i>Rothmania capensis</i> <i>Cassipourea malosana</i>	<i>Kiggelaria africana</i> <i>Canthium ciliatum</i> <i>Curtisia dentata</i> <i>Faurea macnaughtonii</i> <i>Diospyros whyteana</i> <i>Rhoicissus tomentosa</i> <i>Gnidia burchellii</i> <i>Burchellia bubalina</i> <i>Strelitzia caudata</i> <i>Bridelia micrantha</i>

Source: Compton 1976, Magagula 2002

1.1 Priority forest tree and other woody plant species

Table 4. Priority species (scientific name)

Scientific name/ Priority species	Tree (T) or Other (O)	Native (N) or Exotic (E)	Reasons for priority
<i>Acacia mearnsii</i>	T	E	Economic
<i>Acacia nigrescens</i>	T	N	Economic, social
<i>Acacia nilotica</i>	T	N	Social, food
<i>Acacia xanthophloea</i>	T	N	Social, cultural
<i>Adansonia digitata</i>	T	N	Threatened
<i>Afrocarpus falcatus</i>	T	N	Economic, social
<i>Azelia quanzensis</i>	T	N	Economic, social
<i>Albizia versicolor</i>	T	N	Social, economic
<i>Androstachys johnsonii</i>	T	N	Economic , social
<i>Berchemia zeyheri</i>	T	N	Economic, food
<i>Cassipourea malosana</i>	T	N	Social, cultural
<i>Caesalpinia decapetala</i>	O	E	Invasive
<i>Chromolaena odorata</i>	O	E	Invasive
<i>Combretum imberbe</i>	T	N	Economic
<i>Cyathea capensis</i>	T	N	Threatened
<i>Cyathea dregei</i>	T	N	Social
<i>Faideherbia albida</i>	T	N	Economic, social
<i>Faurea macnaughtonii</i>	T	N	Cultural, social
<i>Faurea rochetiana</i>	T	N	Social
<i>Faurea saligna</i>	T	N	Economic
<i>Encephalartos spp.</i>	T	N	Threatened
<i>Eucalyptus spp.</i>	T	E	Economic
<i>Pinus spp.</i>	T	E	Economic
<i>Podocarpus latifolius</i>	T	N	Economic
<i>Protea comptonii</i>	T	N	Threatened
<i>Protea parvula</i>	O	N	Threatened
<i>Prunus africana</i>	T	N	Threatened
<i>Pterocarpus angolensis</i>	T	N	Economic, threatened
<i>Lantana camara</i>	O	E	Invasive
<i>Solanum mauritianum</i>	O	E	Invasive
<i>Sclerocarya birrea</i>	T	N	Economic, social
<i>Warburgia salutaris</i>	T	N	Threatened, cultural
<i>Xanthocercis zambesiaca</i>	T	N	Food

Source: Dlamini 2000 (Gemplasm improvement in indigenous fruit trees of Swaziland)

1.2 Table 5. Forest species currently used in the country

Species	Native (N) or Exotic (E)	Current uses (Code)	If managed, type of management system e.g. Natural forest, Plantation, Agro-forestry	Area managed if known (ha)
<i>Pterocarpus angolensis</i>	N	1	Natural forest	No data
<i>Podocarpus latifolius</i>	N	1	Natural forest	No data
<i>Warburgia salutaris</i>	N	4	Natural forest	No data
<i>Xinemia caffra</i>	N	4	Natural forest	No data
<i>Berchemia zeyheri</i>	N	4	Natural forest	No data
<i>Acacia nigrescenes</i>	N	3 and 4	Natural forest	No data
<i>Acacia nilotica</i>	N	3 and 4	Natural forest	No data
<i>Acacia senegal</i>	N	3 and 5	Natural forest	No data
<i>Combretum imberbe</i>	N	3 and 1	Natural forest	No data
<i>Androstachys johnsonii</i>	N	1	Natural forest	No data
<i>Maytenus penduncularis</i>	N	6 (Curios)	Natural forest	No data
<i>Syzygium cordatum</i>	N	4	Natural forest	No data
<i>Trichillia emetica</i>	N	4	Natural forest	No data
<i>Erythrina lysistemon</i>	N	4	Natural forest	No data
<i>Faidherbia albida</i>	N	5	Agro-forestry	3.0 ha
<i>Grevillea robusta</i>	E	5	Agro-forestry	0.5 ha
<i>Calliandra calothyrsus</i>	E	5	Agro-forestry	1.0 ha
<i>Cajanus cajan</i>	E	5	Agro-forestry	3.0 ha
<i>Sesbania sesban</i>	E	5	Agro-forestry	2.0 ha
<i>Eucalyptus spp.</i>	E	2	Plantation	45 000 ha
<i>Pinus spp.</i>	E	2	Plantation	75 000 ha
<i>Acacia mearnsii</i>	E	1 and 3	Plantation	25 000 ha

Source: Stakeholder contributions

Comments: It is not easy to state the number of hectares for each tree species. The last forest assessment for the whole country was conducted in 1999. This caused a lot of problems when data is required. It would be best for the country to get donor funding to conduct full forest assessment so that the data is made available and updated.

1.3 Main tree and other woody forest species providing environmental services or social values.

Table 6. Main tree and other woody forest species providing environmental services or social values

Species	Native (N) or Exotic (E)	Environmental service or social value (Code)
<i>Acacia nigrescens</i>	N	4
<i>Acacia nilotica</i>	N	3 and 7 (Medicinal)
<i>Acacia xanthophloea</i>	N	1, 3 and 5
<i>Breonadia salicina</i>	T	4
<i>Combretum molle</i>	N	4
<i>Dichrostachys cinerea</i>	N	4 and 6
<i>Erythrina lysistemon</i>	N	4, 5 and 6
<i>Faurea macnaughtonii</i>	N	4
<i>Ficus ingens</i>	N	1
<i>Syzygium spp.</i>	N	1
<i>Euphorbia keithii</i>	N	3
<i>Warburgia salutaris</i>	N	3 and 7 (Medicinal)
<i>Encephalartos spp</i>	N	5
<i>Podocarpus latifolius</i>	N	7 (Economic)
<i>Harpephyllum caffrum</i>	N	4 and 5
<i>Prunus africana</i>	N	7 (medicinal)
<i>Sesbania sesban</i>	N	2
<i>Sclerocarya birrea</i>	N	7 (poverty reduction and social)

Source: Ogle, B. M. (1982)

1.4 Forest tree and other woody species which are endemic in the country.

- a) *Cassipourea swaziensis*
- b) *Eumorphia swaziensis*
- c) *Euphorbia keithii*
- d) *Protea comptonii*

1.5 Tree and woody forest species identified as being threatened.

Table 7. List of tree and other woody species considered to be threatened in all or part of their range from genetic conservation point of view.

Species	Area (ha) of species natural distribution in the country	Average number of trees per hectare	Distribution in the country: widespread (w), rare (R), or local (L)	Type of threat (code)	Threat category	High	Medium /Low
<i>Cyathea capensis</i>	Data not available	Data not available	R	15 (over-harvesting)	√		
<i>Encephalartos spp.</i>	Data not available	Data not available	W	15 (over-harvesting)	√		
<i>Protea comptonii</i>	Data not available	Data not available	R	3	√		
<i>Protea parvulla</i>	Data not available	Data not available	R	3	√		
<i>Prunus africana</i>	Data not available	Data not available	R	15 (over-harvesting)	√		
<i>Warburgia salutaris</i>	Data not available	Data not available	L	15 (over-harvesting)	√		

Source: Loffler and Loffler 2002 (Swaziland Tree Atlas – including selected shrubs and climbers)

1.6 There is no regular assessment of threatened species in the country. Assessment is only done when updating the country's Plant Red Data List. That is done after a long period (between 10 to 15 years). The may obstacles for this are insufficient funding and lack of trained human resource.

1.7 List of tree species for which there is insufficient information to determine whether or not they are threatened.

Tree species:

Cussonia arenicola Strey

Cussonia nicholsonii Strey

Cussonia zuluensis Strey

Euclea undulata Thumb. var. *myrtina* (Burch) Hiern

Allocassine laurifolia (Harv) N. Robson

Faurea macnaughtonii E. Phillips

Ocotea kenyensis (Chiov.) Robyns R. Wilczek

Ochna gamostigmata Du. Toit

Ochna arborea Burch.ex. DC. var. *occonnorii* (E.Phillips), Du Toit

Olea woodiana Knobl.

Ficus burtt-davyi Hutch.

Cassipourea swaziensis Compton

1.8 There is no system in the country for documenting forest reproductive material. The country need to be assisted in terms of capacity building since there suitably qualified people to work on forest reproductive material.

1.9 Current state of forest reproductive material (native and exotic) identifications (seed sources, proveness zones) and utilization (including vegetative propagated material) in the country.

Table 8a

Data is not available because the country has not done any documentation of forest reproductive material. The country has not started on producing seed for any forest and other woody species.

Table 8b

Data is not available. However, it must be mentioned that there is quite a number of seedlings that are planted in nurseries and these also include seeds that are collected from forest species. Identification of the reproductive material used has not been done adequately. There is minimum identification that is done due to lack of trained personnel. The National Tree Seed Centre which should be responsible for such activity was not operating due to unavailability of trained personnel.

1.10 Data not available. Swaziland has not started on characterization of forest or other woody species.

Characterization is on crop plants. There is a need for expanding the scope of the National Gene Bank so that forest species could be included in the programme. This should also include training of personnel to work on characterisation of forest tree and other woody species.

1.11 Yes the country does collect information on forest genetic resources as part of national forest surveys. The kind of information includes:

- Distribution of plant species
- Conservation status of each species
- Abundance of each species
- Uses of each species.

1.12 There are no specific conservation strategies/programmes. Where there is conservation *in-situ* it is in declared conservation parks. Initially, the target for these declared conservation parks was conservation of wild animals. Plant species were conserved while conserving the wild animal species. There are now six (6) conservation areas that are targeting both plant and wild animal species. Although there are no specific strategies/programmes in place, threatened plant species have been made a priority in terms of conservation in these conservation areas.

CHAPTER 2: The State of *in-situ* Genetic Conservation

2.1 Yes, an analysis had been conducted in all of the country to evaluate genetic conservation of forest tree and other woody plant species. This has done by designation of areas in different genecological zones of the country and by viable population sizes.

2.2 The proportion of all native tree and woody forest species conserved *in situ* in the country is twenty-six (26) percent. There is no conservation programme in the country, but fifteen (15) percent of the threatened tree and woody species are conserved in the declared conservation areas.

2.3 Table 10. Target forest species included within in-situ conservation Programmes/Units

Species (scientific name)	Purpose for establishing conservation unit	Number of populations or stands conserved	Total area
<i>Prunus africana</i>	Species threatened	One population	Data not available
<i>Warburgia salutaris</i>	Species threatened	3 populations	Data not available
<i>Cyathea capensis</i>	Threatened	Data not available	
<i>Protea comptonii</i>	Species threatened	6 Stands	Data not available
<i>Encephalartos paucidentatus</i>	Species threatened	Data not available	Data not available
<i>Ficus sasibarica</i>	Species threatened	One stand	Data not available
<i>Celtis gomphophylla</i>	Species threatened	One population	Data not available
<i>Encephalartos laevifolius</i>	Species threatened	One population	Data not available
<i>Encephalartos umbeluziensis</i>	Species threatened	Data not available	Data not available

Source: Braun, K. P. & Dlamini, G. M. (1993)

2.4 Main constraints to improving *in-situ* genetic conservation programmes in the country.

- (i) Lack of government resources both human and financial
- (ii) Lack of information/inadequate knowledge
- (iii) Least in government priorities (lack of political will)
- (iv) Unsustainable exploitation of genetic resources by people living near by conservation areas and people from far away places
- (v) Invasive alien plant species
- (vi) Wild fires destroying indigenous forests
- (vii) Population growth and land development
- (viii) Habitat fragmentation

2.5 Country's priorities for future *in-situ* conservation actions

- (i) Capacity building
- (ii) Awareness campaigns to minimise over-exploitation of forest genetic resources
- (iii) Research

- (iv) Designation of additional areas for conservation (Protected Areas)
- (v) Provide funding and source donor assistance
- (vi) Design management plans, implement them and monitor their effectiveness
- (vii) Updating and reviewing existing legislation and formulate regulations for the same legislation
- (viii) Full participation in SARFOGEN and Forestry Invasive Species Network
- (ix) Ensure enforcement and stricter penalties

2.6 Conservation *in situ* is primarily within existing nature reserves. These are:

- Malolotja Nature Reserve (1820 ha)
- Mantenga Nature Conservation Area (690 ha)
- Mlawula Nature Reserve (16 500 ha)
- Private nature reserves and game sanctuaries
- Phophonyane Conservancy (485 ha)
- Mlilwane Wildlife Sanctuary – Data not available
- Hlane Big Game Parks (Royal Game Park) – Data not available
- Community conservation areas: Shewula and Mahamba Gorge
- Mkhaya Big Game Parks – Data not available

2.7 Agro-forestry programme has just started in the year 2011, Swaziland was still developing the programme and work has not yet started on conservation *circa situ*. The programme is in its first year from the nurseries to farmers' fields. However, the following tree species have already been identified and will be conserved *circa situ*:

- *Faideherbia albida*
- *Calliandra calothyrsus*
- *Cajanus cajan*
- *Sesbania sesban*

Chapter 3: The State of *ex-situ* Genetic Conservation

3.1 Target species included in *ex-situ* conservation programmes/units in the country.

- No programme at the present moment and no target species.

3.2 Main constraints to improving *ex-situ* conservation in the country.

- (i) Lack of resources (financial)
- (ii) Lack of infrastructure and modern equipment/storage facilities
- (iii) Lack of trained personnel
- (iv) Least in priority listing (lack of political will)
- (v) Tree Seed Centre not functioning

3.3 Priorities for future *ex-situ* conservation actions (research, capacity building) in the country.

- (i) Capacity building
- (ii) Improving the existing National Gene Bank and expand its scope to include indigenous plants like trees, shrubs, herbs and grasses
- (iii) Research
- (iv) Establish a national Botanic Garden, standard Herbarium and upgrade the existing national arboretum
- (v) Formulate action plans and ensure implementation of these plans

3.4 The country is lacking in *ex-situ* conservation.

There are no botanic gardens and arboreta in Swaziland. There is only one arboretum owned by the Government and it is very small in size. Government embarked on a project to establish a botanic garden, but the project was left at the initial stages due to insufficient funding. Land had been secured and a dam was built to supply water to the botanic garden. Some equipment including a tractor was procured for the garden. The government of Swaziland still want to continue with the project should funds become available.

CHAPTER 4: The State of Use and Sustainable Management of Forest Genetic Resources

4.1 The country is not involved in any programme where seed is transferred internationally. There was a seed exchange programme in the early 1990s through the Southern African Development Community Tree Seed Programme which faced out in 1997. Seed of *Sclerocarya birrea* (Marula) were exchanged amongst the SADC Countries where Marula occurs and there hasn't been seed exchange since then. Seed used is only collected from the wild species except for commercial tree species such as pines, eucalyptus and wattle seed is procured from outside the country. The amount of seed collected is only for use within the country. The country is faced with problems of shortage of facilities. The available Tree Seed Centre is not well equipped and the country needs capacity building. While on the other hand plantations do import seed but the data is not available.

4.2 There are no species which are presently subject to tree improvement programmes. However there are species that were prioritised for research with the aim of improving them. This programme never took off due to lack of funding and capacity. These are:

Combretum zeyheri
Englerophytum magalismsontanum
Eucephalartos spp.
Pterocarpus angolensis
Sclerocarya birrea
Syzygium cordatum
Vangueria infausta

4.3

Table 13. Forest improvement programmes

Species (Scientific name)	Native(N) Or Exotic (E)	Improvement programme objective					
		Timber	Pulp Wood	Energy	Mp	NWFP	Other
<i>Combretum zeyheri</i>	N				x		
<i>Spirostachys africana</i>	N			x			medicine
<i>Encephalartos spp.</i>	N						medicine
<i>Sclerocarya birrea</i>	N					x	
<i>Syzygium cordatum</i>	N					x	
<i>Ximenia caffra</i>	N					x	

Source: Dlamini 2000 (Gemplasm improvement in indigenous fruit trees of Swaziland)

Comment: The programme never took off because of lack of funding, capacity building and lack of infrastructure.

Main constraints to improving use and sustainable management of forest genetic resources in the country

- Over-exploitation of forest genetic resources
- Land Tenure systems used in the country
- Conflicts among communities and stakeholders
- Overgrazing
- Inadequately trained personnel
- Inadequate knowledge on forest genetic resources and there is information gap
- Poverty resulting in more pressure on forest genetic resources
- Land being converted for monocropping, development, human settlements and agricultural dams and road construction
- Outdated policies and legislations
- Climate change

Priorities for future use and sustainable management of forest genetic resources

- Formulation of management plans of existing forests that will include community forests
- Review existing policies and legislation
- Put in place plans for fire management
- Ensure enforcement and monitoring of legislation
- Developing and putting in place information system

4.4 Not applicable. There are no species which are presently subject to tree improvement in the country.

4.5 There is no information system established since there is no breeding programme developed in the country.

4.6 Not applicable. There is no improvement programme for tree species in the country. Therefore, the country can not make available quantities of improved seed, pollen, scions and/or other reproductive materials.

Chapter 5: The State of National Programmes, Research, Education, Training and Legislation

5.1 Yes the country does have a national forest programme although it is still not yet fully implemented. Plans are still underway to fully implement the programme. The national forest programme does include forest genetic resources. There are specific actions that are mentioned.

5.2 Table 17. Institutions involved with conservation and use of forest genetic resources

Name of Institution	Type of Institution	Activities or Programmes	Contact Information
University of Swaziland	Academic	Propagation of indigenous medicinal plants	University of Swaziland – Private Bag 4 Kwaluseni Phone + 26825184011
Malolotja Nature Reserve	Conservancy	Conservation	Swaziland National Trust Commission Lobamba Phone + 268 24161478 + 26824161516
Phophonyane Lodge and Nature Reserve	Conservancy	Conservation	Phone + 268 24371319
Mlawula Nature Reserve	Conservancy	Conservation	Swaziland National Trust Commission Lobamba Phone +268 2416 1478 + 268 2416 1516

5.3 The country has not established any national coordination mechanism to include different institutions or a national programme for forest genetic resources

5.4 Not applicable

5.5 Yes. The trends have changed in the past 10 years. They have become stronger. Programme funding is stable.

Research, Education and Training

5.6 No budget for forest genetic resource research in the country. The country was still behind in terms of forest genetic research and assistance is required to help start on research and capacity building.

5.7 At Bachelors' level

In a course on agro-forestry – University of Swaziland

At Masters level

In courses that include Biological Resources Management, African Ecology, and Biodiversity Conservation and Management.

The country's main university has just started the PhD programmes and it has not gone to a position where PhD degrees are offered in the field covering forest genetic resources.

The main obstacles to providing the required education and training needs for forest genetic resources are:

- Lack of funding to send people for training to countries where there are institutions offering full courses on forest genetic resources.
- Forest genetic resources research is not well placed in government priority list.
- Lack of well trained government personnel to take a lead in improving knowledge of forest genetic resources in the country.
- Lack of infrastructure and modern equipment.
- Lack of institutional coordination and collaboration.
- Too scientific information and it is complicated for ordinary people.
- Lack of research.

5.8 Country's needs and priorities for research, education and training to support the conservation and sustainable use of forest genetic resources.

Needs for research

- a) Capacity building.
- b) Prioritise research on Forest Genetic Resources.
- c) Forest Genetic Resources should be included in the country's annual budget specifically for research.
- d) Employ experienced researchers from the region and internationally to establish research programmes on forest genetic resources.
- e) Collaborate with other research institutions regionally and internationally.

Priorities for research

- a) Capacity building to strengthen the national Tree Seed Centre and to introduce forest research.
- b) Introduction of a full forestry teaching programme at the University of Swaziland.
- c) Establishment of a botanic garden that will also serve as a centre for forest genetic resources and research.
- d) Funding to support training of personnel of forest genetic resources research.
- e) Sensitize the importance of research to the government and all stakeholders.
- f) Provide funding for research.
- g) Promote and encourage networking among researchers within the country, regionally and internationally.

National Legislation

5.9 The legislation or regulations that are relevant to forest genetic resources are:

The Flora Protection Act, No.5 of 2001

The Private Forest Act, No.3 of 1951

The Plant Control Act, No.8 of 1981

The Forest Preservation Act, No. 14 of 1907

The Environment Management Act, No.5 of 2002

The Control of Tree Planting Act, No.7 of 1972

5.10 The country has not yet established a legal framework for forest genetic resources strategies, plans and programmes. The National Forest Bill currently being piloted is the beginning where it states the direction to be taken to manage forest genetic resources. Strategies, plans and programmes will be considered based on the National Forest Bill once it has been enacted into law.

5.11 Table 18. Needs for developing forest genetic resources legislation

Needs	Priority Level			
	Not applicable	Low	Moderate	High
Improve forest genetic resources legislation			×	
Improve reporting requirements				×
Consider sanction for non compliance			×	
Create forest genetic resources targeted regulations				×
Improve effectiveness of forest genetic resources regulations				×
Enhance cooperation between forest genetic resources national authorities			×	
Create a permanent National Commission for conservation and management of forest genetic resources		×		
Other (please specify)				

Public Awareness:

5.12 Initiatives necessary for greater visibility for forest genetic resources in the country.

- Create radio programmes.
- Give talks in schools both primary and secondary school and tertiary institutions.
- Distribute pamphlets, brochures and fact sheets..
- Community meetings.
- Workshops for community leaders, law enforcement agents, government authorities.

5.13 The country has not developed any specific awareness programme for forest genetic resources. Currently, awareness is done through community meetings, over the radio and stakeholders’ meetings when funds do permit for such meetings.

5.14

Table 19. Awareness raising needs

Needs	Priority Level			
	Not applicable	Low	Moderate	High
Prepare targeted forest genetic resources information				×
Prepare targeted forest genetic resources communication strategy				×
Improve access to forest genetic resources information				×
Enhance forest genetic resources training and education			×	
Improve understanding of benefits and values of forest genetic resources				×

CHAPTER 6: The State of Regional and International Agreements and Collaboration

International Agreements

6.1 Swaziland is a signatory to a number of regional and international conventions, protocols and agreements such as the United Nations (UN) Convention on Biological Diversity, the UN Convention to Combat Desertification, the RAMSAR Convention for the Protection of Wetlands of International Importance, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the UN Framework Convention on Climate Change, the convention concerning the protection of World Cultural and Natural Heritages, GATT/WTO (General Agreement of Tariffs and Trade/World Trade Organisation) the Rio declaration of Non-legally binding forest principles, and the Agenda 21 adopted at the United Nations Conference on Environment and Development (UNCED), the Southern African Development Community Protocol on Forestry, Southern African Development Protocol on Wildlife, Southern African Protocol on Fisheries and the Southern Protocol on Trade.

The country established the Swaziland Environment Authority a national body responsible for overseeing environmental protection. There are several legal instruments that were also put in place as a result of the international and regional agreements and collaboration in which the country is a signatory to. There is the Environment Management Act of 2002 which is to provide and promote the enhancement, protection and conservation of the environment, sustainable management of natural resources and matters incidental to. There is also the Flora Protection Act, 2001 which seeks to protect indigenous flora and it lists 206 protected plant species. The country also enacted the Plant Control Act of 1981 for the purpose of controlling the movement and growing of plants. The government of Swaziland is also visiting other legislations and is formulating new legislation like the National Forest Bill which will address issues that were addressed by the Private Forest Act of 1951, The Forest Preservation Act of 1907, the Wattle Bark Control Act of 1960, the Tree Planting Control Act of 1972 and the Grass Fires Act of 1955. There is also the National Biosafety Bill which when enacted into law will control the introduction and movement of Genetically Modified Organisms (GMOs). The Government also enacted the Swaziland Environmental Authority Act of 2002 and Regulations. The Act stipulates that prior to commencement of major development projects an Environmental Impact Assessment (EIA) should be carried out and proper mitigation measures should be guaranteed. The Act further calls for special attention to be given to plants of high conservation status in the EIA studies.

INTERNATIONAL COLLABORATION

6.2 Swaziland is working on a number of activities through international collaboration. The government, through the Ministry of Tourism and Environmental Affairs is currently working with the Food and Agriculture Organisation of the United Nations (FAO) to formulate a Technical Cooperation Programme (TCP) Project proposal for Community-based Fire Management (CBFIM) in Swaziland. Swaziland is also working in collaboration with the Republic of South Africa and Mozambique in the Transfrontier Conservation Areas (TFCAs). The country is working on projects under the Global Environment Facility (GEF – 4 and 5 Projects). Both projects are aimed at addressing biodiversity issues (of which forests are part of) to combating land degradation and addressing climate change issues. GEF – 4 Project is already on the ground while GEF – 5 Project is at a proposal stage. Swaziland through the University of Swaziland (UNISWA MESA CHAIR) is in collaboration with the SADC countries in implementing the SADC Regional Environmental Education Programme (SADC REEP). The programme is aimed at sharing methods and practices of mainstreaming environment and sustainability in and across critical economic and livelihood sectors in the SADC region.

6.3 Not applicable

The country still has to improve on capacity building and then start on programmes on research and plant breeding.

6.4 The country's needs and priorities for future international collaboration

Table 21. Awareness raising needs/Needs for international collaboration and networking

Needs	Level of priority			
	Not applicable	Low	Medium	High
Understanding the state of diversity				×
Enhancing in-situ management and conservation			×	
Enhancing ex-situ management and conservation				×
Enhancing use of forest genetic			×	
Enhancing research				×
Enhancing information management and early warning systems for forest genetic resources				×
Enhancing public awareness			×	
Strengthening the National Gene Bank and the National Tree Seed Centre				×

CHAPTER 7: Access to Forest Genetic Resources and Sharing of Benefit Arising out of their Use

Access to forest genetic resources:

7.1 The regulations are not quite clear. Access is according to land tenure system. On Swazi Nation Land (SNL) access is free. Regulations are placed on certain species which are culturally important (e.g *Combretum zyheri*, *Dichrostachys cinerea* var. *nyassana*, *Breonadia salicina*, *Faurea rochetiana* and *Warburgia salutaris*) Access to forest genetic resources on protected reserves is regulated and is allowed on certain times of the year. The amount to be taken from the protected reserves is also regulated.

On Title Deed Land (TDL) access is totally prohibited. Forest genetic resources are controlled by the owners of the land. In order for the people to access the forests in the Title Deed land they seek permission from the owner of the land.

7.2 Yes. The Flora Protection Act, No5, 2001 prohibits the harvesting and movement of protected flora within the country and out of the country. It also prohibits any sale of indigenous plant species. The Act requires people to obtain a permit to remove or cut trees from a forest or from any land.

7.3 The Flora Protection Act No 5, 2001 needs to be reviewed and amended where possible. The Act also lack clear regulations. They need to be formulated in accordance with the present situation.

Sharing of benefits arising out of the use of forest genetic resources:

7.4 The country has not established any mechanism for recognising intellectual property rights related to forest genetic resources. This is another area where Swaziland needs expert assistance and finances.

7.5 There are no mechanisms of sharing benefits arising out of the use of forest genetic resources established in Swaziland. However, the National Forest Bill which is awaiting parliament endorsement does have a section clearly describing how benefits arising out of the use of forest genetic resources will be shared. The present regulations states that the communities within and around a resource should be considered first in terms of benefitting from a resource and proceeds from the resource should improve the standard of living of those communities.

CHAPTER 8: CONTRIBUTION OF FOREST GENETIC RESOURCES TO FOOD SECURITY AND POVERTY REDUCTION

Table 22. Tree and other woody species that is important in the country for food security or livelihoods.

Species (scientific name)	Native (N) or Exotic (E)	Use for food security	Use for poverty reduction
<i>Acacia mearnsii</i>	E		√
<i>Acacia nigrescenes</i>	N		√
<i>Berchamia zeyheri</i>	N		√
<i>Brachylaena discolor</i>	N		√
<i>Combretum imberbe</i>	N		√
<i>Englerophytum magalismontanum</i>	N		√
<i>Eucalyptus spp.</i>	N	√	√
<i>Ficus sycomorus subsp. sycomorus</i>	N	√	
<i>Ficus sur</i>	N	√	
<i>Jacaranda mimosifolia</i>	E		√
<i>Pordocarpus latifolius</i>	N		√
<i>Pterocarpus angolensis</i>	N		√
<i>Sclerocarya birrea</i>	N	√	√
<i>Vangueria infausta</i>	N	√	
<i>Ximenia caffra</i>	N	√	

Source: Ogle, B. M. (1982)

Table22. Synthesis Table for Country's Needs and Priorities for action

Subject/Theme	Constraints	Needs	Priority for actions	Regional and international collaboration/ Partners
State of knowledge on FGR	<ul style="list-style-type: none"> ● Funding ● Insufficient and outdated legislation on FGR ● Inadequate knowledge on FGR Gaps on baseline data 	<ul style="list-style-type: none"> ● Capacity building Survey/Inventory including maps for FGR ● Studies on endemics and Red List ● Action plans for implementing strategy for invasive species 	<ul style="list-style-type: none"> ● Inventory of FGR ● Information sharing and dissemination ● Funding ● Promoting and enhancing traditional knowledge ● Implementation of strategies and action plans on invasive species 	<p>Networking</p> <p>Regional database</p> <p>International cooperation</p> <p>FAO</p> <p>GEF/UNDP</p> <p>COMESA</p> <p>SADC</p> <p>CBD – Clearing House Mechanism</p>
Conservation	<ul style="list-style-type: none"> ● Lack of financial resources ● Inadequate knowledge ● Unsustainable exploitation of FGR ● Wild fires ● Habitat fragmentation ● Rapid population growth and development ● Least in government priorities ● Lack of infrastructure Lack of trained personnel 	<ul style="list-style-type: none"> ● Capacity building ● Research ● Funding ● Modern infrastructure/equipment/storage facilities (Gene bank) ● Increase protected areas ● Revive National Tree Seed Centre ● Revive Regional Tree Seed Centre ● Formulate sound management plans 	<ul style="list-style-type: none"> ● Capacity building ● Awareness campaigns to minimise over-exploitation ● Research programmes in place ● Designation of additional areas as Protected Areas ● Review and update existing legislation and formulate regulations ● Design and implement management plans and monitor their effectiveness ● Ensure enforcement and stricter penalties Funding from government and donor assistance 	<p>SADC</p> <p>IUCN</p> <p>CDBGEF/UNDP/UNEP</p> <p>SARFOGEN</p> <p>Kew Gardens</p> <p>Millennium Seed Bank</p> <p>FAO</p>

			<ul style="list-style-type: none"> ● Ensure full participation in SARFOGEN and Forestry Invasive Species Network ● Improve existing National Gene Bank ● Establish national botanic garden and improve existing arboretum ● Revive National Tree Seed Centre 	
Management and Uses	<ul style="list-style-type: none"> ● Over-exploitation of FGR ● Land Tenure Systems ● Conflict among Communities and Stakeholders ● Overgrazing ● Inadequate knowledge on FGR ● Poverty putting pressure on FGR ● Outdated policies and legislation ● Land conversion ● Inadequately trained personnel ● Climate change 	<ul style="list-style-type: none"> ● Capacity building ● Promote community initiatives ● Policies and sound legislations ● Research Institutional arrangements and collaboration ● Promote traditional ● Knowledge on FGR management and use 	<ul style="list-style-type: none"> ● Review policies and legislations ● Formulate management plans for all forests ● Plans for fire management ● Ensure enforcement and monitoring of legislation ● Developing and putting in place information systems ● Collaboration with other government ministries and agencies in assisting communities address poverty 	<p>CITES Networking EU COMESA GEF/UNDP/ UNEP</p>
Research programmes	<ul style="list-style-type: none"> ● Lack of infrastructure and modern equipment ● Lack of funding FGR not a priority to government ● Lack of research Inadequate trained personnel 	<ul style="list-style-type: none"> ● FGR included in annual budget ● Capacity building ● Prioritise research on FGR ● Collaboration with other research institutions 	<ul style="list-style-type: none"> ● Capacity building ● Establish national botanic garden ● Funding for FGR research ● Include FGR in 	<p>SADC JICA IUFRO SIDA CIFOR GEF Commonwealth Conservation</p>

	<ul style="list-style-type: none"> ● Information too scientific for ordinary people ● Lack of institutional coordination and collaboration ● Lack of local research 		<p>annual budget</p> <p>Promote and encourage networking among researchers</p> <ul style="list-style-type: none"> ● Sensitize the importance of research to government and stakeholders ● Incentives for researchers 	International Kew Gardens
Capacity building	<ul style="list-style-type: none"> ● Lack of funding Inadequate qualified trainers on FGR ● Lack of infrastructure ● Local universities does not provide training in forestry 	<ul style="list-style-type: none"> ● Funding for capacity building ● International collaboration ● Planning of succession ● Training of trainers 	<ul style="list-style-type: none"> ● Funding from government and international organisations ● Initiate forestry studies at in local universities ● Information dissemination 	JICA SADC SIDA GEF FAO Conservation International DANIDA CIFOR
Policies/Institutions/Legislations/Access & Benefit Sharing (ABS)	<ul style="list-style-type: none"> ●Lack of regulations/Bills ●Inadequate enforcement and monitoring ● Poor coordination of institutions ● Insufficient knowledge about the market value of FGR ●Intellectual Property Rights/Patenting ● Institutional fragmentation ● Lack of political will ● No clear cut mechanism for ABS 	<ul style="list-style-type: none"> ●Specific institutional arrangement ●Research on market value of FGR ●Integrating and Harmonising FGR in national policies, strategies and legislations 	<ul style="list-style-type: none"> ● Implementation of multilateral Agreements and International Conventions ● Updating and reviewing policies and legislations ●Ensure enforcement and penalties ●Research on FGR market value 	RIO Conventions Multilateral Agreements IUCN FAO

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ANNEX 1: THE PROCESS FOLLOWED WHEN PREPARING THE COUNTRY REPORT

It was proposed that the preparation of the report would be through stakeholder's participation. Meetings were to be held where stakeholders were going to contribute in the preparation of the report. I must be stated that this procedure was abandoned due to financial problems and time constraint. However, a task team was formed and its task was to collect all the necessary information from the stakeholders and individuals.

Activities:

1

- Presentation of workshop report and draft working proposal to Head of department.
- Identification of members of a task team
- Task team formed and held first meeting
- Discuss guidelines, constraints, options and way forward

2

- Task team review available information
- Collect data
- Compile data and incorporate new information

3

- Prepare draft report and send it to the organisations and individuals that contributed information for verification
- Incorporate comments from the organisations and individuals

4

- Draft report taken to experienced forestry experts for scrutiny
- Comments and corrections incorporated
- Report submitted to Senior Forestry Officer for final comments

5

- Report submitted to principal secretary for signature
- Report submitted to FAO Country Office

ANNEX 2: LISTS OF CONTRIBUTORS

1. Community Forest Company – Swaziland
2. C.W. Dlodlu – Ethnobotanist – University of Swaziland
3. Forestry Companies : SAPPI Usutu
 - Peak Timbers
 - Shiselweni Forest Company
4. Forestry Extension Unit- Forestry Department
5. Mr G.M. Dlamini – Former National Herbarium Curator
6. KaShewula Nature Conservancy
7. Mahamba George Conservancy
8. Malolotja Nature Reserve
9. Mlawula Nature Conservation Area
10. Plant Protection Unit – Malkerns Research Station
11. Senior Forestry Officer – Forestry Department
12. Swaziland Environment Authority
13. Swaziland National Gene Bank – Malkerns Research Station
14. Swaziland National Tree Seed Centre – Forestry Department
15. Swaziland National Herbarium – Forestry Department
16. Traditional Healers Association
17. Weed Science Unit – Malkerns Research Station
18. University of Swaziland Medicinal Plants Research Project