

ERITREA'S REPORT ON FOREST ECOSYSTEM

Details on the origin of this report

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This report was prepared primarily in consultation with the Ministry of Agriculture, mainly because forestry conservation and its sustainable use is under the jurisdiction of the Ministry of Agriculture. The University of Asmara, including the College of Agriculture and Aquatic Sciences, has also been consulted, which is also involved in forestry research activities, including taxonomic classification. Some important Zobas (administrative regions of the country), like the Zoba Gash Barka, which has rich riverine forests have also been consulted.

Decision IV/7 on Forest biological Diversity

1. What is the relative priority afforded to implementation of this decision by your Country?					
a) High	√	b) Medium		c) Low	
2. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	
				d) Severely limiting	√

3. Has your country assessed the status and trends of its forest biological diversity and identified options for its conservation and sustainable use? (Decision IV/7, paragraph 12)	
a) No	
b) assessment underway (please give details below)	√
c) assessment completed (please give details below)	√
d) not relevant	

If a developing country Party or a Party with economy in transition-

4. Has your country requested assistance through the financial mechanism for projects that promote the implementation of the focused work programme on forest biological diversity? (Decision IV/7, paragraph 7)	
a) no	√
b) yes (please give details below)	

Programme element 1: Holistic and inter-sectoral ecosystem approaches that integrate the conservation and sustainable use of biological diversity, taking account of social and cultural and economic considerations

5. Has your country identified methodologies for enhancing the integration of forest biological diversity conservation and sustainable use into a holistic approach to sustainable forest management at the national level? (Work programme, paragraph 13)	
a) no	
b) yes- limited extent (please give details below)	√
c) yes – significant extent (please give details below)	
d) not applicable	
6. Has your country developed methodologies to advance the integration of traditional forest-related knowledge into sustainable forest management, in accordance with Article 8 (j)? (Work programme, paragraph 14)	
a) no	
b) yes-limited extent (please give details below)	√
c) yes- significant extent (please give details below)	
d) not applicable	

7. Has your country promoted cooperation on the conservation and sustainable use of forest biological resources at all levels in accordance with Articles 5 and 16 of the Convention? (Work programme, paragraph 15)	
a) no	√
b) yes- limited extent (please give details below)	
c) yes- significant extent (please give details below)	
d) not applicable	
8. Has your country promoted the sharing of relevant technical and scientific information on networks at all levels of protected forest areas and networking modalities in all types of forest ecosystems? (Work programme, paragraph 17)	
a) no	√
b) yes- limited extent (please give details below)	
c) yes- significant extent (please give details below)	
d) not applicable	

Programme element 2: Comprehensive analysis of the ways in which human activities, in particular forest-management practices, influence biological diversity and assessment of ways to minimize or mitigate negative influences

9. Has your country promoted activities for an enhanced understanding of positive and negative human influences on forest ecosystems by land-use managers, policy makers, scientists and other relevant stakeholders (Work programme, paragraph 29)	
a) minimal activity	
b) yes- limited extent (please give details below)	
c) yes- significant extent (please give details below)	√
d) not relevant	
10. Has your country promoted activities to assemble management experiences and Scientific, indigenous and local information at the national and local levels to provide for the sharing of approaches and tools that lead to improved forest practices with regard to forest biological diversity? (Work programme, paragraph 30)	
a) minimal activity	√
b) yes- limited extent (please give details below)	
c) yes- significant extent (please give details below)	
d) not relevant	
11. Has your country promoted activities with the aim of providing options to minimize or mitigate negative and to promote positive human influences on forest biological diversity? (work programme, paragraph 31)	
a) minimal activity	
b) yes- limited extent (please give details below)	
c) yes- significant extent (please give details below)	√
d) not relevant	

12. Has your country promoted activities to minimize the impact of harmful alien species on forest biological diversity? (Work programme, paragraph 32)	
a) minimal activity	
b) yes – limited extent (please give details below)	√
c) yes- significant extent (please give details below)	
d) not relevant	
13. Has your country identified means and mechanisms to improve the identification and prioritisation of research activities related to influences of human activities, in particular forest management practices, on forest biological diversity? (Work programme, paragraph 33)	
a) minimal activity	
b) yes- limited extent (please give details below)	√
c) yes- significant extent (please give details below)	
d) not relevant	
14. Does your country hold research results and syntheses of reports of relevant scientific and traditional knowledge on key forest biological diversity issues and, if so, have these been disseminated as widely as possible? (work programme, paragraph 34)	
a) not relevant	
b) some relevant material, but not widely disseminated	√
c) significant material that could be more widely disseminated (please give details below)	
d) yes- already widely disseminated (please give details below)	
15. Has your country prepared case-studies on assessing impacts of fires and alien species on forest biological diversity and their influences on the management of forest ecosystems and savannahs? (work programme, paragraph 35)	
a) no- please indicate below whether this is due to a lack of available case-studies or for other reasons	
b) yes- please give below any views you may have on the usefulness of the preparation of case-studies for developing a better biological understanding of the problem and/or better management responses.	√

Programme element 3: Methodologies necessary to advance the elaboration and implementation of criteria and indicators for forest biological diversity

16. Has your country assessed experiences gained in national and regional processes, identifying common elements and gaps in existing initiatives and improving indicators for forest biological diversity? (work programme, paragraph 43)	
a) minimal activity	√
b) yes- limited assessment made (please give details below)	
c) yes – significant assessment made (please give details below)	
d) not applicable	

17. Has your country carried out taxonomic studies and inventories at the national level which provide for a basic assessment of forest biological diversity? (Work programme, paragraph 43)	
a) minimal activity	
b) yes-limited assessment made (please give details below)	√
c) yes- significant assessment made (please give details below)	
d) not relevant	

3 (both b and c). We have chosen to answer this question as follows. In one way we can say that assessment has been completed as provided under paragraph (a) of question 3 below. In other way we can also say that assessment studies on forestry conservation and sustainable use is an on going process as provided under paragraphs (b), (c), (d), (e) and (f) below and hence is subject to continuous assessment processes. Nonetheless, the Government has taken important steps towards assessing the status and trends of its forest biological diversity and hence significant progress has been made in this regard. These include:

(a) In 1997 FAO and the Government (represented by the Ministry of Agriculture), under the Technical Co-operation Program, undertook a pre-investment study for the forestry and wildlife sectors (it should be reminded that both forest conservation and development issues are under the jurisdiction of the Ministry of Agriculture). This assessment is quite comprehensive and laid down the foundation for the government's future planning and programming in the forestry and wildlife sectors. The study awaits funding but speculation is that ADB may provide some loans to implement it.

(b)The Ministry of Agriculture has prepared a document entitled *Forest Outlook*, which illustrates the vision, mission, goals and objectives, as well as short term and long term plans for forest management plans based on the principles of sustainable forest management.

(C) Moreover, in Eritrea's Biodiversity Stocktaking Assessment Report, which was published in 1997 as a result of biodiversity enabling activity, efforts have been made to assess the overall situation of forest biodiversity and options for its conservation and sustainable use have been indicated in the National Biodiversity Strategy and Action Plan.

(d)The Ministry of Agriculture has also prepared forest management plans for conserving rich forest biodiversity areas of the country but, nonetheless, also threatened by human intervention. These are:

1. The Management Plan of the Riverine Forests of the Western Lowlands
2. The Green Belt Integrated and Sustainable Forest Resource Management.

(e) An Environmental Assessment of Mangrove Areas near the Port of Massawa area had been undertaken in 1996, a collaborative work between an Oxford University Expedition team to Eritrea and the Ministry of Fisheries. The principal objectives of this study was to:

- to document the current status of the mangroves around Massawa Port area
- determine the level of human and environmental influences in the past and future
- establish a basis for future monitoring and conservation programs

In meeting these objectives the study came up with a number of recommendations.

It should be pointed out, however, that, no sustainable funding mechanism has been established to implement the above mentioned management plans. But the Government is trying to use its meagre resources to implement these plans.

(f) In a vulnerability and adaptation assessment report carried out under the enabling activity project of climate change efforts have been made to assess the current situation and the prediction of future situations under a set of climate change scenarios.

5 (b) The FAO pre-investment study mentioned under 3 (b) above has identified options and methodologies for enhancing forest biodiversity conservation and sustainable use and its integration into the national development process. This study has been done in anticipation of funding by the African Development Bank. While this is waiting for funding some practical steps are being taken at some regional levels. For example a Riverine Forest Management plan has been developed, with the assistance of DANIDA, although its implementation process has been slowed down due to some institutional, technical and financial problems. Community- based closure area system has also been widely introduced in the country, whereby efforts are being made to conserve forest biodiversity, while at the same time rural communities make use of the resources that exist in the forest ecosystem, such as use of cut and carry system, bee production, etc.

6 (b) Effort has been made in the past, as part of the biodiversity enabling activity project, to take inventory of local knowledge and practices related to biodiversity conservation and use. Moreover, during the preparation of the strategic management plan of the riverine forests, one of the rich forest biodiversity areas of the country, efforts have been made to assess the traditional forest management practices of 35 villages. Further more, it is worthwhile to mention the existing natural resource management under closure area system, estimated to be about 200,000 hac of land, which is based on experiences gained from the traditional knowledge of the local people.

9 (c) During the preparatory process of Eritrea's Environmental Management Plan in 1994/1995 there was a very wide consultative process practically among the entire Eritrean population, including farmers, civil societies, youth and women associations, planners and decision makers. The degradation of forest ecosystems was one of the main themes of discussion at that time and this created a good groundwork for creating environmental awareness among the general population. In the course of developing action plans for biodiversity and desertification, similar efforts were made. Eritrean, being a new and young country, does not have well established institutions

and laws and regulations that would cater for biodiversity protection in general and forestry ecosystems in particular. Nonetheless, it is strongly believed that the environmental awareness creation activities that were carried out in the past have significantly helped to rehabilitate Eritrea's degraded environment, including conservation of remaining limited forestry resources. In this context the Government has organised students' campaign every summer to planting trees and building structures for conserving soil and water, which in a way results improving forestry ecosystems. This is with out forgetting many of the initiatives taken by rural communities at the local and regional levels being carried out to enhance and promote environmental rehabilitation of degraded environments. These efforts testify the translation of awareness into practical measures in improving degraded environments.

11 (c) The cutting of trees for firewood and the clearance of forests for agricultural activities have been the main threats to forest ecosystems. To mitigate such effects the Government has put in place rules and procedures for allowing individuals to sell firewood in the markets under licensed conditions only. At the village level cutting of live trees for construction purposes is allowed only by a village council. Charcoal making is completely forbidden in the country. The introduction of such policy measures, along with extensive afforestation programs, at the national level is believed to have brought significant changes to forestry cover in the country. Some studies have shown that about 0.8 of the land area of the country is now covered with forests, as compared to 0.4 % some 10 years back.

At the regional or local levels many encouraging activities have also been taken. For example, in one of Eritrea'e remnant forest areas, which is the northern and southern part of the Green Belt Zone, the Government has promoted conservation programs of this particular area by prohibiting any cutting of trees and killing of wild animals, as well as undertaking limited agricultural activities. This area has now been changed into thick forest, similar to those of the tropical forest, and the wildlife population is now showing good signs of increase. Similar efforts will be introduced in the southern part of the Green Belt Zone. The Green Belt Zone receives good amount of rainfall during summer and winter.

Moreover, to promote the conservation and sustainable use of riverine forests the Government has come up with a Riverine Forest Management Plan. Under this plan agricultural activities are allowed to take place at least 700 meters from the riverbank and an area having more than 25 % tree cover is not allowed to be cultivated.

12 (b) Some preliminary assessment has been made on the following alien species: *Nicotiana glauca*, *Prosopis chilensis* and *Opuntia spp*. The preliminary assessment has generally shown the threats of these alien species to some indigenous tree species. For example the expansion of *Opuntia spp* in some places is becoming a big threat to one of the main endangered tree species in Eritrea, the *Olea europaea.subsp.africana*. The assessment and management options carried out for *Prosopis chilensis* has come with some recommendations, including:

- control of the expansion of *P.chilensis* in important biodiversity areras, particularly along riverine forest areas

- Promotion of *P.chilensis* in desert areas where there is no vegetation cover at all. In such environments the tree can provide socio-economic gains to the surrounding communities while at the same time stabilising wind erosion and movement of sand dunes.
- Awareness promotion among communities, particularly the rural communities.

The threats of alien invasive species is fully recognised in the National Biodiversity and Strategy Action Plan for Eritrea and subject to the provision of technical and financial support the issues of alien invasive species could be dealt with in the future.

13 (b) Eritrea's Environmental Management Plan stipulates the list of endangered tree species in Eritrea. In the Eritrean context almost all of the endangered tree species are economically very useful to rural communities and this offers some indication as to the reason for their demise. Research efforts are now being made by the Ministry of Agriculture and other institutions to investigate management practices of some of the endangered tree species.

14 (b) In a book entitled "*Useful Trees and Shrubs in Eritrea*", prepared by the Ministry of Agriculture, a great deal of effort has been made in the identification, propagation and management for agricultural and pastoral communities. Moreover, an inventory about local knowledge and practices of local communities on the conservation and sustainable use of biodiversity, including forest biodiversity, has been undertaken by the Department of Environment, Ministry of Land Water and Environment. The former document is widely distributed while the latter document has not been published and is still being edited.

15 (b) A brief assessment was made in the past to see the scale of expansion of some alien invasive species (AIP) and their impacts on forest biodiversity, as indicated under 12 (b). With respect to forest fires, although there are occasional forest fires taking place in the country and it is believed that the damage caused by these forest fires to forest biodiversity is potentially high, no studies had been carried out in the past to see the impact.

17 (b) The following taxonomic studies and inventories have been made in the past:

- In a book titled "Useful Trees and shrubs in Eritrea" (published in 1996) considerable efforts have been made to identify many of the economically useful trees and shrubs of Eritrea.
- In Eritrea's biodiversity Stocktaking Assessment Report, published in 1999 as part of Eritrea's biodiversity enabling activity, efforts were made to assemble existing information, at the family and species level, on Eritrea's flora, including information from published sources such as Flora of Ethiopia (which now exist in four volumes) and others.
- Inventory has been made in 1998 about riverine forests and other associated biodiversity issues, including migratory species, in the western lowlands of the country.

The major handicap for assessing information on Eritrea's plant biodiversity in general and forest biodiversity in particular is the absence of a national check list for the country. The lack of botanists represents a major limiting factor which affects taxonomic classification of Eritrean flora.

End of report.