

# ETHIOPIA

## Third National Report

### Acronyms

- A-AARNET – ASARECA-Animal Agriculture Research Network
- ASARECA – Association for Strengthening Agricultural Research in Eastern and Central Africa
- BOZONET – Botanical and Zoological Network of Eastern Africa
- BYDV - Barley Yellow Dwarf Virus
- CBD – Convention on Biological Diversity
- CBO- Community Based Organization
- CDE - Centre for Development and Environment
- CIAT –Centro International de Agricultura Tropical
- CoCE – Conservation and Use of the Wild Population of *Coffea Arabica*
- CIP IV - Coffee Improvement Programme IV
- CSE – Conservation Strategy of Ethiopia
- DLCO-EA – Desert Locust Control-Eastern Africa
- EAPGREN – Eastern African Plant Genetic Resource Network
- EAFRINET – East African Regional Taxonomic Network
- EIAR – Ethiopian Institute of Agriculture Research
- EPA – Environmental Protection Authority
- ESTA – Ethiopian Science and Technology Agency
- FAnGR – Farm Animal Genetic Resources
- FAO – Food and Agriculture Organization of the United Nations
- GEF – Global Environment Facility
- GRPI - Genetic Resources Policy Initiative
- GTZ – German Technical Cooperation
- IBC – Institute of Biodiversity Conservation
- ICARDA – International Centre for Agricultural Research in Dry Areas
- ICRAF – International Centre for Research in Agroforestry
- ICRISAT – International Crop Research Institute for Semi-Arid Tropics
- IGAD – Intergovernmental Authority for Development
- IITA - International Institute for Tropical Agriculture
- ILRI – International Livestock Research Institute
- IPGRI – International Plant Genetic Resources Institute
- ISD – Institute for Sustainable Development
- IUCN – World Conservation Union
- LOHH - Land Owning Households
- MDG – Millennium Development Goal
- MoFED – Ministry of Finance and Economic Development
- MoARD – Ministry of Agriculture and Rural Development
- MoE – Ministry of Education
- MoWR – Ministry of Water Resource

- NAP – National Action Programme
- NAPA – National Adaptation Programme of Action
- NBSAP – National Biodiversity Strategy and Action Plan
- NEPAD – New Partnership for Africa’s Development
- NGO – Non Governmental Organization
- NMSA – National Meteorological Service Authority
- UNCCD – United Nations Convention to Combat Desertification
- UNDAF – United Nations Development Assistance Framework
- UNDP – United Nations Development Programme
- UNEP – United Nations Environment Program
- UNICEF – United Nations Children’s Fund
- UNPF – United Nations Population Fund
- WFP – World Food Programme

## REPORTING PARTY

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Date of submission	

## Information on the preparation of the report

### Box I.

Please provide information on the preparation of this report, including information on stakeholders involved and material used as a basis for the report.

The practical arrangement for the drafting of the third national report was started in January 2005 but delayed because of financial uncertainties till September 2005. The responsibility for the coordination of the drafting and the preparation of the report was vested upon the Institute of Biodiversity Conservation (IBC). A national task force with ten consultants as members comprising of representatives of relevant institutions and individuals was created.

A secretary, W/rt. Fetiha Awel was also hired to support the task force. The members of the task force were Dr. Fassil Kebebew (Task force Leader), Ato Wondwossen Mekonnen, Ato Yemane Tsehaye, Dr. Kassahun Awgichew, Ato Mohammed Abdi, Dr. Gemedo Dalle, Ato Mesfin Bayou, Ato Shewaye Deribe, Ato Yigzaw Ayalew and Ato Zenebe Worldu.

This task force collected baseline data, contacted various sources of information, made interviews and provide up-to-date data on the progress of implementation of the CBD in many of its sectors in Ethiopia. In the process, the team of consultants reviewed the existing information relevant to the third national report on the implementation of the CBD at the national level. A synthesis of information on biodiversity was made from the following documents.

- National Biodiversity Strategy and Action Plan (NBSAP) document
- Stocktaking documents used for the preparation of the National Biodiversity Strategy and Action Plan
- Second National Report on the implementation of the CBD to the COP
- Terminal reports of the “Farmer-based on-farm *in situ* conservation of crop diversity in Ethiopia”
- The proceedings of the national awareness workshop on biosafety
- Animal genetic resources national report to FAO
- National report and project proposal on invasive alien species
- Draft proposal on capacity building in agricultural biotechnology for improved productivity and livelihoods in Ethiopia
- Biosafety/biotechnology policy
- Synergy document (to create synergy and implement the three conventions CBD, UNFCCC, UNCCD)
- Genetic Resources Policy Initiative (GRPI) document
- Draft project document on protected areas,
- Document on Access and Benefit Sharing (ABC) in Africa
- Document on Breeders’ Right, etc.

The synthesis also included information on activities in other sectors of the national economy that may have positive, negative or synergistic effects on biodiversity. This was followed by a series of consultations with the wider community of stakeholders before the first draft report was written up. Therefore, the preparation process involved extensive consultations with the full range of national stakeholders, including local and indigenous groups, in order to ensure that the perspectives of all national stakeholders were taken into account. Consultations with stakeholders also included the collection of other relevant documents, interviews, and focus group mini workshops.

The task force of consultants developed a draft of the third National Communication Document. This

draft was thoroughly discussed, amended, and enriched by consultants in the task force in a series of meetings. It was distributed to relevant government institutions, academia, NGOs, international and private organizations, and selected community based organizations for comments prior to a national workshop. Finally, a national workshop was held, comments were thoroughly discussed and all relevant suggestions accommodated. The stakeholders who participated in the national workshop represented the following institutions/organizations.

**Federal Institutions:**

- House of Peoples' Representatives (Parliament)
- Ministry of Agriculture and Rural Development
- Ministry of Finance and Economic Development
- Ministry of Water Resources
- Ministry of Education
- Ministry of Federal Affairs
- Ministry of Justice
- Ministry of Foreign Affairs
- Ministry of Culture and Tourism
- Institute of Biodiversity Conservation
- Environmental Protection Authority
- Ethiopian Institute of Agricultural Research
- Ethiopian Science and Technology Agency
- Ethiopian Tourism Commission

**Regional Bureaus/Institutions:**

- Regional Bureaus of Agriculture and Rural Development
- Regional Environmental and Land Administration Authorities
- Regional Natural Resource and Park Management Offices
- Addis Ababa City Administration
- Dire Dawa City Administration

**Universities:**

- Addis Ababa University
- Alemaya University
- Bahirdar University
- Debu University
- Jimma University
- Mekelle University

**NGOs**

- Agri-service

- Forum for Environment
- Oxfam-GB
- PANOS
- Pastoralist Forum
- SOS Sahel and Farm Africa
- World Vision

**International Organizations:**

- DLCO-EA – Desert Locust Control-Eastern Africa
- FAO – Food and Agriculture Organization of the United Nations
- GTZ – German Technical Cooperation
- ILRI – International Livestock Research Institute
- IUCN – World Conservation Union
- UNDP – United Nations Development Programme

**Associations:**

- Addis Ababa Chamber of Commerce
- Biological Society of Ethiopia
- Crop Protection Society of Ethiopia
- Crop Science Society of Ethiopia
- Ethiopian Agricultural Professionals Associations
- Ethiopian Chamber of Commerce
- Ethiopian Society of Animal Production
- Ethiopian Veterinarians Association
- Ethiopian Wildlife and Natural History Society
- Forestry Association
- Horticultural Society of Ethiopia
- Institute for Sustainable Development
- National Traditional Medicine Preparation and Therapy Association
- Wildlife Society of Ethiopia

Finally, the document was edited by Dr. Tewelde Birhan Gebre Egziabher and prepared in its present form.

## B. PRIORITY SETTING, TARGETS AND OBSTACLES

### Box II.

Please provide an overview of the status and trends of various components of biological diversity in your country based on the information and data available.

#### 1. Ecosystem Diversity

Ethiopia's boundaries encompass the major part of the eastern African highland massif. On the eastern and western boundaries lie the foothills of the main massif. This massif extends northwards into Eritrea. The Great Rift Valley cuts diagonally across the country from Eritrea in the North-east to Kenya, in the south creating a vast depression. The Rift Valley has thus bisected the Ethiopian highlands. Therefore, there is a great variation in altitude ranging from 116 meters below sea level to 4620 meters above sea level. Rainfall also varies widely in amount and distribution. These factors have caused Ethiopia's extraordinary range of terrestrial and aquatic ecosystems and its high rate of endemism and genetic diversity.

Ethiopia has nine vegetation-based major ecosystems. These are the Afroalpine and Sub-afroalpine ecosystem, the Dry Evergreen Montane Forest and Scrub ecosystem, the Montane Moist Forest ecosystem, the Acacia-Commiphora ecosystem, the Combretum-Terminalia ecosystem, the Lowland Tropical Forest ecosystem, the Desert and Semi-desert ecosystem, the Wetland ecosystem and the Aquatic ecosystem.

The country spans two speciation hotspots: the Horn of Africa and the Ethiopian Highlands (which is a component of the Eastern Afromontane Hotspot). In addition, the country contains outstanding physical features, including the lava lake of Erta'le, the sulphur deposits of Dallol, the spectacular Rift Valley escarpment and the Simien, Bale and Abune Yosef Mountains.

The existence of diverse ecosystems has endowed Ethiopia with a diverse biological wealth of plants, animals and microorganisms. Over the years, this wealth has been exposed to various biotic and abiotic factors that have diminished its diversity. The attention given to its conservation and sustainable use has been inadequate. Some of the major contributory factors that have accelerated the decline of biological heritages are:

- the size and pattern of the distribution of human and animal populations
- the level of resource consumption
- market factors and policies

Undervaluation of environmental resources due to the low level of awareness about the role of ecosystem health leading to a poor regard for conservation has contributed to underinvestment in biological resources management. In general, the attention given to ecosystem conservation and management in the country has been very low although now there are encouraging changes taking place.

#### 2. Plant diversity

The plant genetic resources of Ethiopia exhibit an enormous diversity. Ethiopia is one of the twelve Vavilov centres of origin and/or genetic diversity for crop plants and their wild relatives. The country's heterogeneous environmental conditions and the diverse cultural history of the people make Ethiopia an important primary gene pool centre for many cultivated species. Furthermore, many crops that were originally domesticated outside of Ethiopia exhibit a high level of secondary diversification. Most recent studies indicate that the Ethiopian flora is estimated at more than 6500 species of higher plants (i.e. flow-

ering plants, conifers and ferns) of which 10-12% are known to be endemic. There are over 300 tree species but the exact number of non-flowering species (Bryophytes, Pteridophytes and Gymnosperms) is still unknown. However, the level of genetic erosion is high and there are likely to be some species that will disappear even before they have been identified.

## 2.1 Crop Genetic Diversity

The agricultural sector employs 85% of the work force, accounts for 50% of the gross domestic product (GDP) and generates 90% of the national export earnings of Ethiopia. There are 18 major and 49 minor agro-ecological zones with diverse farming systems reflecting differing potentials and constraints. Cereal production covers about 82 % of the total cultivated land area and pulse production covers 12%.

Ethiopia is a center of origin/or diversity for wheat, barley, rape seed, safflower, coffee, finger millet, noug (*Guzotia abyssinica*), etc. Numerous useful genetic variations of global significance have been developed by the farming communities. For example, among 6689 entries of barley world collections surveyed for Barley Yellow Dwarf Virus (BYDV) resistance, only 117 showed the trait, and 113 of them came from Ethiopia, 3 had an Ethiopian parent, and 1 came from China. A survey of a large section of the barley world collection conducted in Sweden led to the discovery of two sister lines, collected in Ethiopia in 1923, both with high protein contents, and one of them also with a high lysine content. Several genes and genetic variations of global significance have also been reported from Ethiopian genetic resources, e.g., powdery mildew resistance gene in barley, stem rust resistance in durum wheat and high lysine in sorghum. National and international plant breeders use Ethiopian farmers' varieties (landraces) as a source material to incorporate desired traits from these cultivars into improved varieties. The "Whooping cough gene" taken from a sorghum variety collected from the Ethio-Sudanese border, which is usually grown by farmers for medicinal purpose as a cure for whooping cough, gives yield increases of between 20% -30%. This gene is the only one of its kind in the world collection and was found in only a small population grown for medicinal purposes.

The concern of genetic erosion has led to an effort, by the Institute of Biodiversity Conservation to collect and conserve the genetic diversity of major food crops in Ethiopia. Farmers' varieties and wild relatives of major crops have been collected from their native habitats and the seeds or vegetative materials placed in gene banks for evaluation and storage. The gene bank of the Institute has collected more than 62,000 accessions of over 110 species of plants from various agro-ecological zones. To overcome problems of reliance on *ex situ* conservation strategies, the country has also established twelve *in situ* conservation sites following an inventory and eco-geographic survey research. The *in situ* conservation sites will complement the genetic diversity conservation in the gene bank.

In spite of the aforementioned conservation efforts, however, the broad range of genetic diversity existing in Ethiopia, particularly the primitive and wild gene pools, is presently subject to serious genetic erosion and a risk of irreversible loss. According to some researchers, there has already been a 13 percent genetic losses of 13 major indigenous crops in Ethiopia. Nine species of crops (cereal, pulse and oil crops) have been reported to be in danger of total extinction from the country. The major factors causing this loss includes the displacement of the indigenous farmers' varieties by new genetically uniform crop cultivars, changes in agricultural systems or land use, destruction of habitats and ecosystem, drought and civil strife. The local varieties of barley and durum wheat are among the crops most threatened by new varieties and/or by other crop species such as teff (*Eragrostis tef*) and bread wheat, which are expanding within the cereal growing highlands largely because of a relatively greater market demand. The high input agricul-



ture based on improved varieties that is being promoted in Ethiopia for food self sufficiency is also considered an important factor that is causing loss of crop genetic diversity. Moreover, natural calamities including drought and other stresses play an important role in creating adverse growth conditions resulting in an accelerated selective elimination of genotypes in crop populations. The famine that persisted over the years in some parts of Ethiopia has also caused massive displacement of native germplasm by exotic varieties introduced in the form of food grain donated through relief agencies.

### **Forage and Pasture Genetic Resources**

Ethiopia is also known to be the center of diversity for many forage and pasture species, e.g. *Chloris* spp., *Panicum* spp., *Setaria* spp. The large numbers of indigenous grass species and the great variation within the species make the country a rich potential source of new and better tropical pasture grasses. So far, there 736 grass species from 181 genera that have been documented, of which 164 species from 68 genera are reported to be of medium to high level of importance for pasture and forage purposes.

Ethiopia is a center of diversity for many herbaceous legumes, e.g. *Trifolium* spp., *Vigna* spp., *Lablab purpurea*, *Neonotonia wightii*. A total of 358 herbaceous forage legume species from 42 genera have been documented. Reports indicate that 58 species from 31 genera are potentially important for pasture and forage.

Browse trees or shrubs are important animal feed in Ethiopia especially in the arid, semi-arid and mountainous areas, where large numbers of the country's livestock are found. About 179 browse species from 51 genera have been identified so far, of which 51 species from 31 genera have been identified as promising browse species.

Regardless of the conservation efforts undertaken by various institutions such as ILRI and IBC, the forage and pasture genetic resources are facing challenging problems. The major problems include expansion of crop cultivation that leads to shrinkage of rangelands, grazing pressure, bush encroachment, drought, rangeland degradation, deforestation, overpopulation and overstocking.

### **2.3 Horticultural Species Diversity**

There are a number of horticultural species that are found in Ethiopia because it is their center of origin or diversity. There are over 719 horticultural species of which about 118 are cultivated crops while the rest are ornamentals and naturally growing species. The naturally growing species range from wild edible fruits to roots/tubers, vegetables and spices. Of the cultivated species 28, are herbs and spices, 7 are stimulant/beverage crops including *Coffea arabica*, *Catha edulis*, 10 are roots/tubers including *Ensete ventricosum*, *Coleus edullis*, *Colocasia esculents*, *Dioscorea* spp., *Coccinia abyssinica*, etc., 32 are vegetables, and 41 are fruits.

Some of the horticultural species, both cultivated and wild, are under constant threat of genetic erosion from deforestation and habitat destruction, expansion of farm and grazing lands, and problems related to land use change. These are again mainly caused by rural poverty, population pressure, and changes in traditional agricultural production systems.

### **2.4 Medicinal plants**

Medicinal plants are important components of the vegetation in Ethiopia. About 887 species used for me-

dicinal purposes, constituting over 10 percent of the vascular species, exist in Ethiopia. The 887 medicinal plants are distributed across 114 families of which *Asteraceae* (11 %), *Fabaceae* (11%), *Lamiaceae* (5 %), *Euphorbiaceae* (4%) and *Poaceae* (4 %) are the major ones. Medicinal plants are found widely distributed in the country with greater concentration being in the south-western parts. The woodlands of Ethiopia are the sources of most medicinal plants, followed by the montane forest complex of the plateau. Other lesser important vegetation areas for medicinal plants are bushlands and rocky areas. Medicinal plants utilized in Ethiopia are harvested from the wild. Wild medicinal plant species and their associated traditional knowledge are getting eroded due to natural and man made factors.

## **2.5 Forests**

Forests provide several products (timber, fuel wood, poles, food, fodder, etc) services (soil and water conservation, micro-climate, amelioration, carbon sequestration, etc). Ethiopian forests are repositories and gene pools for several domesticated and/or wild important plants, animals, microorganisms and wild relatives of domesticated crops. The annual loss of the highland montane forest areas of Ethiopia has been estimated at between 150,000 and 200,000 ha. According to the most recent study, Ethiopian forest cover has declined to 3.56% of the total.

The forest resources are seriously threatened by deforestation (due to agricultural expansion and settlement, habitat fragmentation, and subsequent decline in regeneration, and forest fire). Absence of a forest policy and a low level of enforcement of the existing forest proclamation have also contributed to the erosion of forest resources.

The major cause of deforestation is rapid population growth, which leads to an increase in the demand for crop and free range grazing land and for fuel wood. Based on experience gained through some communities who, working with the Institute for Sustainable Development, have shown that a combination of stopping free-range grazing and the use of other ecological methods of soil fertility management can be an effective response to the problem. The programmes following from this and being implemented by various regions supported by the Environmental Protection Authority and the Ministry of Agriculture are showing promising signs of reversing this process of ecosystem degradation.

Sound policies on land use and utilization of natural resources have not been formulated and implemented. The existing proclamations have not been implemented properly and this has tolerated illegal and unwise use of forest genetic resources in the country.

The lack of adequate knowledge of the genetic diversity of most tree species as well as the insufficient information on their distribution and demographic status are among the major constraints to conservation.

## **3. Animal diversity**

### **3.1 Wild animal genetic resources**

Ethiopia has 862 species of birds (16 endemic species and two endemic genera), 277 species of mammals

(35 endemic species and six endemic genera), 201 species of reptiles (10 endemic) and 63 amphibian species (34 endemic). In the highlands alone, 193 species of mammals (of which thirty-one are endemic), 680 species of birds, 71 species of amphibians (of which 31 are endemic) and 58 species of reptiles, (of which 15 are endemic) have been documented.

Although Ethiopia has 14% of the country's area under protection, which is above the global average, and it has committed itself through its Constitution to conserve biodiversity as well as ratifying a number of international agreements on biodiversity conservation including the CBD, yet its wildlife is far from getting enough protection and more action is needed to fulfill this commitment.

As the human population has increased, so has the pressure on land and the threat to the wildlife genetic resource. The killing of animals is mostly not for subsistence, but competition for land and a consequent but negative attitude towards wildlife conservation grew as human population increased. For example Grevy's Zebra population in Ethiopia declined by 93% (from 1600 to 110) in about a 23-year period, and yet nobody eats the meat of this animal. The African wild ass, Swayne's Harte Beest, Mountain Nyalas and the Elephant have also declined tremendously (over 90% decline in some population of the elephant). Livestock and domestic dogs that accompany them have also increased the risk of disease transmission to wildlife. Hybridization of domestic dogs with the Ethiopian wolf, and Walia Ibex with domestic goats has also been a problem.

Seven mammal and two bird species have been listed by IUCN as critically endangered. Eight mammals have also been listed as endangered. According to the CITES list, a reptile, 4 birds and 8 mammals are in danger of extinction. In addition, 15 reptiles, 100 birds and 15 mammals have been listed in appendix II and trade in them is accordingly regulated as required by the provisions.

### **3.2 Domestic animal genetic resources**

Ethiopia has a large farm animal population and a high number of bee colonies. There are 40.9 million cattle, 25.5 million sheep, 23.4 million goats, 35.7 million chickens, 2.3 million camels, 1.5 million horses, 4.0 million donkeys and 0.32 million mules. There are also 4.2 million colonies of honeybees, and an annual fresh water fish production potential of 40-49 thousand tons from lakes and rivers.

Domestic animal breeds are morphologically distinct, and they have vernacular names given to them by their respective local communities. The cattle are zebu. Examples of recognized breed, good include *Boran*, *Fogera*, *Horro*, *Sheko (Gimira)*, *Abigat (Adal)*. The *Fogera* and *Horro* are known as milk producers while the *Boran*, are renowned as a beef breed. The *Nuer* breed of the tsetse fly infested southwest is believed to have a high tolerance to animal sleeping sickness. European breeds, especially Friesian and Jersey, have recently been imported and have been crossing with indigenous cattle to improve dairy production.

Almost all sheep genetic resources in Ethiopia are indigenous; many breeds have been recognized, but are less clearly differentiated than those of cattle. These sheep breeds have evolved *in situ* under a diversity of climatic, grazing, disease, and management conditions. Their economic usefulness is low because of marketing difficulties. But this is being improved. The Ethiopian Institute of Agricultural Research (EIAR) and the International Livestock Research Institute (ILRI) have done some preliminary breed characteriza-

tion on Ethiopian sheep. The main "improved" breeds have been Awassi and Corriedale but little success has been achieved in introducing these to the smallholder sector.

The genetic makeup of the country's goats is largely unknown. Early work on goat characterization has identified some breeds as specific to some places e.g. the short haired goat of the Afar Region, the white and variegated goats of the Hararge Highlands, the Bati goat in Wello valued for its skin, and the Arsi goat in the Arsi highlands and other breeds in, the western lowlands. More recently, a comprehensive survey of goat populations that included physical inspection and handling of more than 14,000 animals has been carried out. In this study, a number of qualitative and quantitative variables were used to characterize goats into four major categories and 14 distinct breeds. The geographical distribution and population size of these breeds has also been studied. Information on the production systems, management practices, flock structure and reproductive history has also been collected.

Despite the high livestock population, high potential for honey production and the substantial fisheries potential, the economic benefit from exporting these resources has so far not been very substantial. The main constraints that have limited the development of this resource are shortage of animal feed, a weak animal health service, lack of a marketing system that addresses the special requirements of these resource and its products and inadequate genetic improvement efforts. Besides, the extended severe drought and crossbreeding of local breeds of livestock with introduced breeds are also bottlenecks to the management of the existing resources. Lack of coordinated efforts among key stakeholders in the sector to characterize, conserve and sustainably utilize the country's farm animal and fish resources are a challenge. The indiscriminate use of exotic genetic resources, which is being undertaken in the absence of a national animal breeding policy, is a major problem. The other important causes of the erosion of indigenous animal genetic resources are poverty and repeated and prolonged draughts that have become frequent presumably owing to global warming.

#### **4. Microbial Diversity**

Ethiopia is also believed to have a large microbial biodiversity. But the microbial resources have hardly been explored, let alone being collected and conserved. Amongst the few that are known are those used in the fermentation process in foods and beverages, in biological pest control, in soil fertility, in disease control, improving animal and human health, and the bioconversion of wastes into useful products.

Some research on microorganisms has been going on for the last four decades in the country. It has been mainly geared to generating data on some outstanding agricultural and health problems. Some of them were even initiated with the aim of characterizing microorganisms with an academic goal. The efforts have simply been to collect individual microorganisms from specimens and characterize them. Most of the identification studies have been undertaken with classical taxonomic methods and culture techniques with all their inherent limitations. Even these attempts have been scattered in a few higher learning and research institutes. The studies have been limited both in number and scope. Besides, most of the research has not been meant to look at the biodiversity of microorganisms.

There is no exhaustive and comprehensive description of the microbial genetic resources recorded so far in the country. However, an attempt was made to compile information on the known microbes in the stocktaking exercise during the preparation of the National Biodiversity Strategy and Action Plan (NBSAP). Accordingly, a total of 195 genera and 432 species of microorganisms have been recorded as isolated and identified. Among these, 56 genera and 127 species of bacteria, 35 genera and 45 species of fungi, 8 genera and 20 species of protozoa, 96 genera and 247 species of algae, and 27 species of viruses

have been recorded. The scarcity of information on microorganisms, therefore, shows the necessity of the study and conservation of the microbial biodiversity of Ethiopia.

Due to the insufficiency of trained manpower and the lack of any culture collection centre, conservation facilities, coordination among the pertinent institutions, and continuity in research undertakings, the majority of the isolated microorganisms have not been conserved or preserved for sustainable utilization. Besides, the value of microbial genetic resources has not been recognized to the same extent as that of plants and animals.

There is little information on natural and anthropogenic activities affecting microbial diversity in the country. However, threats associated with deforestation and land degradation can be assumed to be serious.

### Priority Setting

1. Please indicate, by marking an 'X' in the appropriate column below, the level of priority your country accords to the implementation of various articles, provisions and relevant programmes of the work of the Convention.

Article/Provision/Programme of Work	Level of Priority		
	High	Medium	Low
a) Article 5 – Cooperation		X	
b) Article 6 - General measures for conservation and sustainable use	X		
c) Article 7 - Identification and monitoring			X
d) Article 8 – <i>In-situ</i> conservation	X		
e) Article 8(h) - Alien species	X		
f) Article 8(j) - Traditional knowledge and related provisions	X		
g) Article 9 – <i>Ex-situ</i> conservation	X		
h) Article 10 – Sustainable use of components of biological diversity		X	
i) Article 11 - Incentive measures			X
j) Article 12 - Research and training		X	
k) Article 13 - Public education and awareness		X	
l) Article 14 - Impact assessment and minimizing adverse impacts		X	
m) Article 15 - Access to genetic resources	X		

n) Article 16 - Access to and transfer of technology		X	
o) Article 17 - Exchange of information		X	
p) Article 18 – Scientific and technical cooperation		X	
q) Article 19 - Handling of biotechnology and distribution of its benefits			X
r) Article 20 - Financial resources		X	
s) Article 21 - Financial mechanism		X	
t) Agricultural biodiversity	X		
u) Forest biodiversity		X	
v) Inland water biodiversity			X
w) Marine and coastal biodiversity			
x) Dryland and subhumid land biodiversity		X	
y) Mountain biodiversity		X	

## Challenges and Obstacles to Implementation

2. Please use the scale indicated below to reflect the level of challenges faced by your country in implementing the provisions of the Articles of the Convention (5, 6,7, 8, 8h, 8j, 9, 10, 11,12, 13, 14, 15,16, 17, 18, 19 and 20)																		
3 = High Challenge									1 = Low Challenge									
2 = Medium Challenge									0 = Challenge has been successfully overcome									
N/A = Not applicable																		
Challenges	Articles																	
	5	6	7	8	8h	8j	9	10	11	12	13	14	15	16	17	18	19	20
a) Lack of political will and support	1	0	2	3	3	1	0	3	3	2	3	2	3	2	1	1	3	0
b) Limited public participation and stakeholder involvement	2	0	3	2	3	3	0	1	3	3	3	3	3	3	3	3	3	3
c) Lack of mainstreaming and integration of biodiversity issues into other sectors	2	0	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3
d) Lack of precautionary and proactive measures	1	0	3	2	3	0	2	3	3	2	3	3	3	3	3	3	3	3
e) Inadequate capacity to act, caused by institutional weakness	3	2	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	0
f) Lack of transfer of technology and expertise	0	0	2	1	3	0	1	0	0	3	0	3	0	0	2	1	3	0
g) Loss of traditional knowledge	1	2	3	3	3	2	3	3	1	3	3	3	3	3	3	3	3	0

h) Lack of adequate scientific research capacities to support all the objectives	0	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0
i) Lack of accessible knowledge and information	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2
j) Lack of public education and awareness at all levels	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
k) Existing scientific and traditional knowledge not fully utilized	0	0	2	2	3	1	2	3	3	3	3	3	3	3	3	3	3	0
l) Loss of biodiversity and the corresponding goods and services it provides not properly understood and documented	0	0	1	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3
m) Lack of financial, human, technical resources	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
n) Lack of economic incentive measures	1	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0
o) Lack of benefit-sharing	3	0	0	3	3	3	3	3	3	0	0	0	3	0	0	3	0	0
p) Lack of synergies at national and international levels	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0
q) Lack of horizontal cooperation among stakeholders	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0
r) Lack of effective partnerships	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0
s) Lack of engagement of scientific community	1	1	2	2	3	3	2	3	2	2	2	3	3	3	3	3	3	0
t) Lack of appropriate policies and laws	2	0	0	3	3	3	3	3	3	0	3	3	2	3	3	1	3	0
u) Poverty	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
v) Population pressure	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3



w) Unsustainable consumption and production patterns	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0
x) Lack of capacities for local communities	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0
y) Lack of knowledge and practice of ecosystem-based approaches to management	0	0	3	3	3	3	0	3	0	3	3	3	3	3	3	3	3	0
z) Weak law enforcement capacity	3	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0
aa) Natural disasters and environmental change	1	0	3	3	3	3	3	3	0	0	0	3	0	0	0	0	0	0
bb) Others (please specify)																		

### 2010 Target

The Conference of the Parties, in decision VII/30, annex II, decided to establish a provisional framework for goals and targets in order to clarify the 2010 global target adopted by decision VI/26, help assess the progress towards the target, and promote coherence among the programmes of work of the Convention. Parties and Governments are invited to develop their own targets with this flexible framework. Please provide relevant information by responding to the questions and requests contained in the following tables.

#### Box III.

<b>Goal 1</b>	<b>Promote the conservation of the biological diversity of ecosystems, habitats and biomes.</b>
<b>Target 1.1</b>	<b>At least ten percent of each of the world's ecological regions effectively conserved</b>
D) National target: Has a national target been established corresponding to the global target above?	
a) No	
b) Yes, the same as the global target	
c) Yes, one or more specific national targets have been established	X
Please provide details below.	
The NBSAP has addressed this issue of targets in its strategic priorities (e.g. 1. Representative examples of Ethiopia's remaining ecosystems are conserved, and 2. By 2020, all remaining natural ecosystems outside of the protected areas are managed for sustainable use) and in several specific targets (e.g. Objective 3.2 indicates a plan for mobilizing funding/resources/project design/development and implementation for a set of pilot projects to develop sustainable management systems for both intact and degraded natural ecosystems outside of protected areas. The NBSAP also proposes to build upon indigenous knowledge and traditional systems the need for a comprehensive protected area network to conserve ecosystems and species.	

In addition, this target has also been addressed in the National Capacity Needs Self-Assessment Program (e.g. Goal: - Rehabilitating affected ecosystems & using them sustainably; Sub targets: - Biodiversity hotspots rehabilitated and sustainably used; Forest cover increased to fulfill demands for fuel wood, fodder and construction; Sites identified, rehabilitated and managed as protected areas; Further decline of aesthetic, socio-economic and ecological attributes and values of lakes halted and their productive capacity enhanced; Wetlands restored and wisely used and thus contributing in reducing poverty etc.) and in the Millennium Development Goals Needs Assessment document of Ethiopia (e.g. Target: - Strengthen existing wildlife protected area and wildlife farms and ranches at eleven districts in the country by 2015) etc.

II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here and give further details in the box(es).

Programme of work	Yes	No	Details
a) Agricultural		X	
b) Inland water	X		<ul style="list-style-type: none"> <li>Ethiopia has 11 major river basins, <b>many</b> freshwater lakes, and 9 saline lakes, as well as many swamps. It has substantial inland water resources. In order to make use of these resources, the government has developed an Integrated Water Resource Master Plan for each of 5 of the major river basins and the Master Plan has taken biodiversity into consideration.</li> <li>A project entitled '<i>Conservation and Sustainable Use of Biodiversity in the Rift Valley Lakes</i>' has developed a strategy and action plan in order to enhance biodiversity development, conservation and sustainable utilization. It has two major components:               <ol style="list-style-type: none"> <li>Strengthening the system of conservation areas.</li> <li>Combining the goals of biodiversity development, conservation and production, and promoting the multiple uses of biodiversity.</li> </ol> </li> </ul>
c) Marine and coastal		N/A	
d) Dry and subhumid land	X		<ul style="list-style-type: none"> <li>Technologies and techniques developed to alleviate range-land degradation, enhance an appropriate animal health delivery system and water harvesting and utilization systems</li> </ul>
e) Forest	X		<ul style="list-style-type: none"> <li>The extent and spatial distribution of the natural forests surveyed and mapped.</li> </ul>
f) Mountain	X		<ul style="list-style-type: none"> <li>The conservation of the Bale and Simien Mountains National Parks continued</li> </ul>
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan		X	

c) Yes, into sectoral strategies, plans and programmes	X
Please provide details below.	
The National Biodiversity Strategy and Action Plan, has two specific objectives on Protected Areas: (1) reclassification plan is completed for the development of a protected areas network that contains viable and representative examples of the full range of ecosystems and (2) Effective management of the protected areas network is achieved through public/private/NGO/CBO partnerships.	
IV) Please provide information on current status and trends in relation to this target.	
Though the protected areas of Ethiopia constitute 14% of the land area, the montane forest ecosystems are not represented	
V) Please provide information on indicators used in relation to this target.	
Under the Conservation of Protected Areas, the Ethiopian National Biodiversity Strategy and Action Plan has identified the following indicators: (1) Forest/Ecosystem cover map published, (2) Gap analysis published, (3) List of candidate sites prepared, (4) Reports on field verification, biodiversity surveys and stakeholder meetings produced, (5) Reclassification plan published, (6) Review/lessons learned and best practices published, (7) Ten year network management plan published.	
VI) Please provide information on challenges in implementation of this target.	
<ul style="list-style-type: none"> <li>• Inadequate enforcement of the existing wildlife legislation.</li> <li>• Human population increase near protected areas and other wildlife habitats has forced the people to move to wild animal habitats, thus causing loss of breeding, feeding and resting ground and a shrinkage of wildlife habitats.</li> <li>• Forest and woodland areas of many protected areas are being used for fire-wood and building material sources for adjacent settlers.</li> <li>• Inadequate budget</li> <li>• Low level of Institutional capacity</li> </ul>	
VII) Please provide any other relevant information.	

**Box IV.**

Target 1.2	Areas of particular importance to biodiversity protected
D) National target: Has a national target been established corresponding to the global target above?	
a) No	
b) Yes, the same as the global target	
c) Yes, one or more specific national targets have been established	X
Please provide details below.	
The Bale mountain has been identified as an important biodiversity hotspot. A management plan is being developed for the Bale Mountain National Park through the Conservation and Sustainable Utilization of Medicinal Plants project and the Oromia Regional State Natural Resources Protection Sector.	
The plan will:	
<ul style="list-style-type: none"> <li>• Promote and strengthen wildlife based tourism or ecotourism/nature tourism at ten sites within the Park</li> <li>• Establish of two transboundary protected areas</li> <li>• Develop protected area management plans for five sites</li> <li>• Develop infrastructure for the existing protected areas at eleven sites</li> </ul>	

II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
Programme of work	Yes	No	Details
a) Agricultural	X		<i>Ex situ</i> and <i>in situ</i> conservation of various agricultural crops by IBC
b) Inland water	X		Improve the protection of Abijata-shala National Park. Utilize more fish resources sustainably
c) Marine and coastal		N/A	
d) Dry and subhumid land	X		Strengthen the protection of the existing National Parks and other protected areas
e) Forest	X		The Ethiopian forests and woodlands are depositories and gene pools for several domesticated and/or important wild plants and wild relatives of domesticated plants. For example Coffee ( <i>Coffea arabica</i> ) is found in the wild in the moist evergreen montane forests of the south and southwest of the country where forest coffee conservation has seen initiated
f) Mountain	X		See Box IV, Target 1.2 (I)
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan			
c) Yes, into sectoral strategies, plans and programmes		X	
Please provide details below.			
See Box IV Target 1.2, (I) above			
IV) Please provide information on current status and trends in relation to this target.			
In Ethiopia 14% of the country's area is under protection, but only 2.7% gets effective protection. Even this is under serious human pressure and suffers the risk of degradation.			
V) Please provide information on indicators used in relation to this target.			
<ul style="list-style-type: none"> <li>• Good management, number and level of qualification of the wildlife conservation staff.</li> <li>• The habitat condition and animal population size in protected areas.</li> </ul>			
VI) Please provide information on challenges in implementation of this target.			
The existing trained human resource is inadequate. Unchecked human population increase.			
VII) Please provide any other relevant information.			
In Ethiopia of 14% of the country's area is within protected areas. Not all the protected areas are adequately managed.			

**Box V.**

<b>Goal 2</b>	<b>Promote the conservation of species diversity</b>		
<b>Target 2.1</b>	<b>Restore, maintain, or reduce the decline of populations of species of selected taxonomic groups</b>		
D) National target: Has a national target been established corresponding to the global target above?			
a) No			
b) Yes, the same as the global target			X
c) Yes, one or more specific national targets have been established			X
Please provide details below.			
The Ethiopian <i>in situ</i> crop conservation programme that has been seen as a complementary exercise to the <i>ex situ</i> conservation activities is serving as a source of genetic diversity for restoration and re-introduction of landraces/farmers' varieties into farming communities which has lost them.			
II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
<b>Programme of work</b>	<b>Yes</b>	<b>No</b>	<b>Details</b>
a) Agricultural	X		Restoration of locally extinct farmers' varieties/landraces of crop genetic resources by linking the national <i>ex situ</i> gene bank to community gene banks established in some 12 districts in the country.
b) Inland water	X		See Box IV, Target 1.2 (II)
c) Marine and coastal		N/A	
d) Dry and subhumid land	X		See Box IV, Target 1.2 (II)
e) Forest	X		Restoration work of the seven most threatened woody species underway.
f) Mountain	X		See Box IV, Target 1.2 (I)
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan			X
c) Yes, into sectoral strategies, plans and programmes			X
Please provide details below.			
The Ethiopian <i>in situ</i> crop conservation programme that has been seen as complementary to the <i>ex situ</i> conservation programme is serving as a source of genetic diversity for the restoration of displaced landraces/farmers' varieties back to farming communities. The Institute of Biodiversity Conservation has a mandate to identify areas of high conservation concern. Relevant departments within the Institute (IBC) have incorporated the aforementioned Target in their programmes and strategies.			

IV) Please provide information on current status and trends in relation to this target.

The Ethiopian *in situ* crop conservation programme that complements the *ex situ* conservation is serving as a source of increasing genetic diversity through restoration into farming systems of landraces/farmers' varieties that they had lost and thus strengthening the informal seed supply systems. It also improves access of farmers to the gene bank through the restoration activities.

The Forest Genetic Resources conservation Department of the Institute of Biodiversity Conservation in collaboration with GTZ has started reintroducing the seven most threatened woody species (*Hagenia abyssinica*, *Afrocarpus falcatus*, *Monus mesozygia*, *Cordia Africana*, *Bridelia micrantha*, *Gardenia termifolia*, *Baphia abyssinica*) into their natural habitats.

A private investment enterprise, African Parks Ethiopia Ltd, is also working on the re-introduction of the Rhinoceros and Elephant into the Nech Saar National Park, from which these species had disappeared.

V) Please provide information on indicators used in relation to this target.

- Locally extinct farmers' varieties of crops restored into the farming communities that used to grow them
- The seven threatened woody species resorted into their original forests
- The Rhinoceros and the Elephant reintroduced into the Nech Saar National Park

VI) Please provide information on challenges in implementation of this target.

Rural credit programmes are usually tied to high chemical fertilizer input demanding seeds which constrain farmers from returning to their adapted genetic resources to sustain their agricultural systems. Besides, drought relief hand-outs often only contain seeds of modern varieties of bread wheat, which farmers plant and this makes it very difficult for them to maintain the agricultural biodiversity of their local crops once the drought that had made them destitute has passed.

VII) Please provide any other relevant information.

Study and development of nature conservation in the Simen Mountains in Northern Ethiopia has been supported by the Centre for Development and Environment (CDE) over the past 30 years. A comprehensive baseline study was carried out in 1994 and 2004. The main issues studied in 2004 were (a) monitoring changes in the condition of the Simen Mountains with regard to both biophysical and human aspects, including the Walia Ibex population (1994 – 2004) and demographic, economic, and ecological changes in selected villages (1994 – 2004); and (b) in-depth studies in specific fields, such as an analysis of actual and potential habitats for endangered species, distribution and behaviour of Walia Ibex, forest management, the role of livestock in livelihood strategies and land use systems, the adoption of soil and water conservation, techniques and the role of decentralization in sustainable resource management.

**Box VI.**

Target 2.2	Status of threatened species improved		
D) National target: Has a national target been established corresponding to the global target above?			
a) No			
b) Yes, the same as the global target			
c) Yes, one or more specific national targets have been established			X
Please provide details below.			
<p>According to the Forestry Conservation, Development and Utilization Proclamation No. 94/1994 of Ethiopia, no person shall utilize or harvest <i>Hagenia abyssinica</i>, <i>Cordia africana</i>, <i>Afrocarpus falcatus</i> and <i>Juniperus procera</i>. Similarly, one of the objectives of the National Policy on Biodiversity Conservation and Research is to ensure that the Ethiopian plant, animal and microbial genetic resources and essential ecosystems as a whole are conserved, developed, managed and sustainably utilized. Besides, the Forest Genetic Resources Conservation Strategy of Ethiopia has provisions that aim at the conservation of priority vegetation types and species. Based on the inventory conducted in 34 natural high forests, the most threatened woody species have been identified and the Institute of Biodiversity Conservation, in collaboration with the GTZ-Forest genetic Resources Conservation Project, has started conserving the top seven most threatened species using both in-situ and ex-situ methods.</p>			
II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
Programme of work	Yes	No	Details
a) Agricultural	X		Restoration of farmers' varieties of various major food crops at the on-farm <i>in situ</i> conservation sites has been undertaken by IBC
b) Inland water	X		See Box III, Goal 1 Target 1.1 (II)
c) Marine and coastal		N/A	
d) Dry and subhumid land	X		See Box III, Goal 1 Target 1.1 (II)
e) Forest	X		Re-introduction of the most threatened woody species has been undertaken by IBC
f) Mountain	X		See Box III, Goal 1 Target 1.1 (II)
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan			
c) Yes, into sectoral strategies, plans and programmes			X
Please provide details below.			
<p>No specific national targets established but the national MDG has as its targets strengthening existing wildlife protected areas which accommodates the protection and improvement of habitats of threatened species of wildlife.</p>			

IV) Please provide information on current status and trends in relation to this target.
Most of the protected areas that harbour threatened species are at a serious level of degradation.
V) Please provide information on indicators used in relation to this target.
Increase the number of sites to be protected. Improvement of the management of the protected areas.
VI) Please provide information on challenges in implementation of this target.
VII) Please provide any other relevant information.
In 1996, the Ethiopian wolf was assessed as Critically Endangered. The species is still considered threatened, but its situation has improve. It is now only Endangered according to the IUCN 2004 assessment.

**Box VII.**

<b>Goal 3</b>	<b>Promote the conservation of genetic diversity</b>		
<b>Target 3.1</b>	<b>Genetic diversity of crops, livestock, and of harvested species of trees, fish and wildlife and other valuable species conserved, and associated indigenous and local knowledge maintained</b>		
D) National target: Has a national target been established corresponding to the global target above?			
a) No			
b) Yes, the same as the global target			
c) Yes, one or more specific national targets have been established		X	
Please provide details below.			
The NBSAP integrates biodiversity conservation into agricultural, wildlife and forestry policies at National and Regional (i.e. regions within the country) levels, and guides to develop draft agricultural, forestry, and wildlife policies as deemed necessary. It also tries to ensure that reforms in the forestry sector are integrated with reforms in the wildlife sector and the new forestry laws are also framed fully within the context of the CBD and other International Conventions such as CITIES. It tries to produce coherence in laws/programmes that impact on biodiversity.			
II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
<b>Programme of work</b>	<b>Yes</b>	<b>No</b>	<b>Details</b>
a) Agricultural	X		<ul style="list-style-type: none"> <li>To establish 9 field gene banks and 9 seed gene banks (1 gene bank per Region); the gene banks will hold some duplicates of the accessions of the national gene bank so that all accessions will be conserved in more than one place</li> <li>Establishment of 20 <i>in situ</i> conservation sites and associated <i>ex situ</i> community gene banks</li> <li>Training of a total of 2,000 conservator farmers on how to manage and curate the community gene banks</li> <li>Establishment of a well equipped laboratory for the identification, classification and characterization for <i>ex situ</i> conservation of farm animal genetic resources</li> <li>Local community knowledge, skills and practices</li> </ul>



			integrated into conservation research, planning and management
b) Inland water	X		<ul style="list-style-type: none"> <li>• The 30 major lakes that are found in different ecological zones of the country properly protected and utilized, and the life forms in them sustainably used</li> <li>• The 11 river basins found in the country properly protected and utilized, and the life forms in them sustainably used</li> <li>• The 70 wetlands found in the country properly protected and utilized, and the life forms in them sustainably used</li> </ul>
c) Marine and coastal		N/A	
d) Dry and subhumid land	X		<ul style="list-style-type: none"> <li>• Livestock disease prevention and control particularly control of trans-boundary and major infectious diseases such as trypanosomiasis transmitted by the tsetse fly and making a large area of land disease free implemented</li> <li>• Quarantine stations and livestock exit posts established/strengthened</li> <li>• Clinical animal health services strengthened</li> <li>• Water points for pastoral areas improved and pastoral communities trained in genetic resources management</li> <li>• Water harvesting for 7,700,000 Non Pastoral (NP) and Land Owning Households (LOHH) promoted and strengthened</li> <li>• Pond/cistern construction (27% of NP &amp; LOHH) promoted and strengthened</li> </ul>
e) Forest	X		<ul style="list-style-type: none"> <li>• Survey and mapping of spatial distribution of natural forest lands in 6,162,000 ha of land finalized</li> <li>• Re-forestation in 17,105,760 ha of land promoted and strengthened</li> </ul>
f) Mountain	X		<ul style="list-style-type: none"> <li>• Wildlife-based tourism or eco-tourism promoted and strengthened</li> <li>• Ecosystem approach of biodiversity conservation promoted</li> </ul>
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan			X
c) Yes, into sectoral strategies, plans and programmes			
Please provide details below.			
As given in Box V under Goal 2, Target 2.1			
IV) Please provide information on current status and trends in relation to this target.			
As given in Box V under Goal 2, Target 2.1			
V) Please provide information on indicators used in relation to this target.			
As given in Box V under Goal 2, Target 2.1			
VI) Please provide information on challenges in implementation of this target.			

As given in Box V under Goal 2, Target 2.1

VII) Please provide any other relevant information.

As given in Box V under Goal 2, Target 2.1

**Box VIII.**

<b>Goal 4</b>	<b>Promote sustainable use and consumption.</b>	
<b>Target 4.1</b>	<b>Biodiversity-based products derived from sources that are sustainably managed, and production areas managed consistent with the conservation of biodiversity</b>	
D) National target: Has a national target been established corresponding to the global target above?		
a) No		
b) Yes, the same as the global target		
c) Yes, one or more specific national targets have been established		X
Please provide details below.		
<p>A “Participatory Forest Management Project” is being implemented in a part of the southwestern montane evergreen priority rainforest areas of Ethiopia with an overall goal of achieving the sustainable management of forests in and around the project area, and with the participation of the local communities.</p> <p>Another project entitled Coffee Improvement Project IV (CIP IV) is also being carried out with an overall objective of improving the standards of living of the local communities in the coffee growing areas of the country. Having regard to the CBD, the Forest Coffee Conservation Component of this project has the objectives to:</p> <ul style="list-style-type: none"> <li>• Conserve the genetic diversity of forest coffee in particular and the associated flora, fauna and micro-organisms in general, in about 44, 100 ha of coffee-based forest ecosystems by employing an <i>in situ</i> conservation approach.</li> <li>• Conserve the germplasm of forest coffee <i>ex situ</i> by establishing complimentary field gene-banks in order to sustainably develop improved varieties through research for high yield, better quality, resistance to pests and diseases as well as abiotic stresses, etc.</li> <li>• Contribute to the development of the local communities through the provision of socio-economic services as incentives so as to promote the envisaged conservation activities successfully.</li> <li>• Enhance the capacity of local institutions (stakeholders) that will be involved in the implementation of the Project</li> </ul> <p>A Non-Timber Forest Products (NTFPs) Project is also being implemented with an overall aim of enhancing sustainable forest-based livelihoods through the use of non-timber forest products, such as honey, coffee, spices, and bamboo. The specific objectives include achieving increased local institutional capacities for improved, production, of non-timber forest products and sustainable forest management, as well as promoting the sustainable use of and trade in non-timber forest products as part of a sustainable management strategy. The Project seeks to apply the knowledge gained to the development of measures related to the conservation, production, processing and marketing of non-timber forest products. This will help reduce rural poverty and ultimately lead to improved and sustainable forest management in the area.</p> <p>Especially in the highlands and drier parts of Ethiopia, groves around church and monasteries are the</p>		

last repository of the once widespread native trees in the areas. They contain many plant species (trees, shrubs and some non-timber forest products. Some of them are endemics that are of great economic and ecological importance. Such areas are fully managed, administered, and utilized by the clergy and are generally regarded as sacred by the local communities and government institutions. In general the clergy have a good knowledge of conservation and sustainable uses of these local plant resources.

II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).

Programme of work	Yes	No	Details
a) Agricultural	X		<ul style="list-style-type: none"> <li>Interventions are prioritized consistent with the food security program that is given a top priority in the government agenda. With regard to animal and fisheries resources development priority is currently given to meat production from small ruminants and chickens followed by honey and the use of animals for other purposes including dairy, draft, pack and fishery.</li> <li>It is planned increase the area under field crops to about 13 million hectares, an increase of about 50% compared to that of 2004.</li> </ul>
b) Inland water	X		<ul style="list-style-type: none"> <li>A watershed management approach will be emphasized in soil and water management activities</li> <li>It is intended to cover 27.7 million hectares of both cultivated and uncultivated land under the watershed management approach, in the MDG period</li> <li>The Water Sector Development of the Ministry of Water Resources has set a target to develop about 336,400 ha. of land for medium and large scale irrigation schemes in the years between 2005 to 2015.</li> </ul>
c) Marine and coastal		N/A	
d) Dry and subhumid land	X		<ul style="list-style-type: none"> <li>Develop at least:               <ul style="list-style-type: none"> <li>-8 crop varieties sustainable for drylands developed and being distributed to farmers</li> <li>-3 Technologies on Natural resources conservation and management</li> <li>-Identify biotic and abiotic factors responsible for rangeland degradation and develop 2 appropriate technologies to alleviate rangeland degradation</li> <li>-Develop 1 appropriate low cost water harvesting and utilization technique for human and livestock requirements</li> </ul> </li> </ul>
e) Forest	X		<ul style="list-style-type: none"> <li>The target for re-afforestation is half of the uncultivated land identified as needing treatment for erosion control. This amounts to 17,105,760 ha.</li> <li>Practice agro forestry in the cultivated areas and plant 120 million seedlings between 2005 and 2015 for the purpose</li> </ul>

f) Mountain		X	
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan		X	
c) Yes, into sectoral strategies, plans and programmes		X	
Please provide details below.			
<p>The following policies, strategies and action plans contain provisions for promoting the conservation of the biological diversity of ecosystems, habitats and biomes of Ethiopia.</p> <ul style="list-style-type: none"> <li>• The National Biodiversity Strategy and Action Plan (NBSAP)</li> <li>• The Federal Environmental Policy</li> <li>• The National Biodiversity Conservation And Research Policy of 1998</li> <li>• The Conservation Strategy of Ethiopia of 1997</li> <li>• The Regional (Local) Conservation Strategies (specific to each Regional State)</li> <li>• The Agriculture and Rural Development Strategy and Action Plan</li> <li>• The draft Agricultural Policy</li> <li>• The Forest Policy and Strategy</li> <li>• The Wildlife Development Policy</li> <li>• The Rural Land Use and Management Policy and Strategy</li> <li>• Sectoral Laws <ul style="list-style-type: none"> <li>○ The Forestry Law (1994) includes provisions aimed to ensure the conservation of existing forests and the establishment of State Forests. One of the objectives for the establishment of State Forests is to conserve forest resources within their ecosystems. The law prohibits the felling of <i>Hagenia abyssinica</i>, <i>Cordia Africana</i>, <i>Podocurrrpus gracillior</i>, <i>Juniperus procera</i>, and <i>Olea europaea ssp. cuspidata</i> from their natural habitats.</li> <li>○ The Wildlife Law recognizes three categories of Protected Areas---National Parks, Sanctuaries and Wildlife reserves, and Controlled Hunting Areas</li> </ul> </li> <li>• The Constitution of the Federal Democratic Republic of Ethiopia of 1995 states that both the government and all citizens shall have the duty to protect the country's environment</li> </ul>			
IV) Please provide information on current status and trends in relation to this target.			
<p>Currently the wildlife utilization programme in Ethiopia is mainly based on safari hunting and live wildlife trade and generates about half a million USA Dollars each year. The management is consistent with the conservation of biological diversity and with CITES.</p>			
V) Please provide information on indicators used in relation to this target.			
<ul style="list-style-type: none"> <li>• The presence of a huntable species</li> <li>• The number of a huntable species</li> </ul>			

VI) Please provide information on challenges in implementation of this target. Population pressure, without commensurate intensification of crop production rural poverty, lack of inter-sectoral coordination, limited human capacity, limited financial resources, and inadequate awareness.
VII) Please provide any other relevant information.

**Box IX.**

<b>Target 4.2</b>	<b>Unsustainable consumption, of biological resources, or that impacts upon biodiversity, reduced</b>		
D) National target: Has a national target been established corresponding to the global target above?			
a) No			
b) Yes, the same as the global target			
c) Yes, one or more specific national targets have been established			X
Please provide details below.			
The strengthening of protected areas is aimed at reducing adverse impacts on the biodiversity e.g. unsustainable consumption. In addition targets for management plan and infrastructure development will also contribute to regulating consumptive uses in Ethiopia.			
The national targets in the NBSAP and the MDG both have targets to reduce unsustainable consumption that impacts on biodiversity. In the NBSAP the objectives 10, 11, 12 on sustainable use of biological diversity refer to unsustainably consumption. The NBSAP			
<ul style="list-style-type: none"> <li>• Encourages the development of sustainable use</li> <li>• Promotes sustainable use of biodiversity based on traditional practices</li> </ul>			
II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
<b>Programme of work</b>	<b>Yes</b>	<b>No</b>	<b>Details</b>
a) Agricultural		X	
b) Inland water		X	
c) Marine and coastal		N/A	
d) Dry and subhumid land		X	
e) Forest		X	
f) Mountain		X	
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan			
c) Yes, into sectoral strategies, plans and programmes			X

Please provide details below.
<ul style="list-style-type: none"> <li>The national target the MDG is incorporated into plans of sectoral offices. They aim reduce unsustainable consumption of wildlife, a system of quotas has been assigned for safari hunters and live wildlife traders.</li> </ul>
IV) Please provide information on current status and trends in relation to this target.
In areas where safari hunting is practiced, animals are bi-annually counted and new quotas are set. To strictly observe the quotas. The offices concerned seriously follow the activities of the hunters so that they do not exceed the quotas, and they observe the restrictions based on age and sex.
V) Please provide information on indicators used in relation to this target.
VI) Please provide information on challenges in implementation of this target.
<ul style="list-style-type: none"> <li>Illegal hunting and wild animal habitat loss</li> </ul>
VII) Please provide any other relevant information.

**Box X.**

<b>Target 4.3</b>	<b>No species of wild flora or fauna endangered by international trade</b>
D) National target: Has a national target been established corresponding to the global target above?	
a) No	
b) Yes, the same as the global target	
c) Yes, one or more specific national targets have been established	X
Please provide details below.	
Although no direct targets are set, the protection of endangered species is incorporated in the plans of the Ministry of Agriculture and Rural Development through it various departments including the Wildlife Department. For the endangered species of CITES appendixes, a system of permits recommended by CITES are strictly followed. Species such as the endemic black winged lovebird, orchids, <i>Euphorbia piscidermis</i> , and <i>Stapeliads (Asclepiads)</i> are illegally collected for international trade.	

II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
Programme of work	Yes	No	Details
a) Agricultural	X		
b) Inland water	X		
c) Marine and coastal		N/A	
d) Dry and subhumid land	X		
e) Forest	X		
f) Mountain	X		
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan			
c) Yes, into sectoral strategies, plans and programmes			X
Please provide details below.			
Given in (I)			
IV) Please provide information on current status and trends in relation to this target.			
As stated above international trade cannot be a threat to the endangered wildlife species in the country except for ivory which has been found to stop.			
V) Please provide information on indicators used in relation to this target.			
Number of fauna and flora encountered in the market and at check points, at the boundaries and at the airports.			
VI) Please provide information on challenges in implementation of this target.			
<ul style="list-style-type: none"> <li>• Lack of trained human resources for controlling the illegal wild fauna and flora market</li> <li>• In the case of elephant ivory trade and transfer the activity of souvenir shops in Addis Ababa and the lack of adequate enforcement in the elephant habitats are the major challenges.</li> </ul>			
VII) Please provide any other relevant information.			
The Convention on International Trade in Endangered species of fauna and flora (CITES) is strictly observed, owing to this international trade cannot be a threat to Ethiopian fauna and flora. Currently all species in Ethiopia listed in CITES are in a good condition except for elephants which have been reduced in number a lot by poachers.			

**Box XI.**

<b>Goal 5</b>	<b>Pressures from habitat loss, land use change and degradation, and unsustainable water use, reduced.</b>		
<b>Target 5.1</b>	<b>Rate of loss and degradation of natural habitats decreased</b>		
D) National target: Has a national target been established corresponding to the global target above?			
a) No			
b) Yes, the same as the global target			
c) Yes, one or more specific national targets have been established			X
Please provide details below.			
The following targets are set to achieve both MDG 1 Target 2 and MDG 7 Target 9: watershed based soil and water conservation, re-forestation, irrigation, rainwater harvesting, environmental protection, biodiversity conservation, rural energy, feeder roads construction			
II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
<b>Programme of work</b>	<b>Yes</b>	<b>No</b>	<b>Details</b>
a) Agricultural	X		Both the Millennium Development Goals Report and the New Coalition for Food Security in Ethiopia rightly emphasized the importance of proper management and utilization of natural resources to achieve both rapid and sustainable agricultural development and environmental sustainability
b) Inland water	X		
c) Marine and coastal		N/A	
d) Dry and subhumid land	X		With regard to this, the guidance given in the Sustainable Development and Poverty Reduction Project document (pages 54 – 57), which states, “Preparing Compatible Development Packages for each Agro-ecological Zone”, is very important and a step forward in the right direction towards practicing proper land use.
e) Forest	X		The target for re-afforestation is half of the uncultivated portion identified as needing treatment against soil erosion. The area identified as such is 17,105,760 ha. At present, the country is not only food insecure, but also firewood, construction wood and fodder insecure.
f) Mountain	X		Intervention is being made to conserve the Bale and Simien Mountains
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan			X
c) Yes, into sectoral strategies, plans and programmes			X



Please provide details below.
The key documents including the Sustainable Development and Poverty Reduction Program, the Millennium Development Goals Report and the New Coalition for Food Security in Ethiopia have rightly emphasized the importance of proper management and utilization of the natural resources to achieve both rapid and sustainable agricultural and environmental sustainability.
IV) Please provide information on current status and trends in relation to this target.
Land degradation is the major environmental problem affecting the natural resources, which are the basis for achieving accelerated agricultural development and for meeting food security and other basic necessities.
V) Please provide information on indicators used in relation to this target.
The MDG Report targets 40% of the total area of the country (0.448 million sq.km or 44,800,000 ha.) as needing immediate soil and water conservation treatment. This area includes both cultivated and uncultivated land in the mixed- farming complex and in the pastoral areas.
VI) Please provide information on challenges in implementation of this target.
VII) Please provide any other relevant information.

**Box XII.**

<b>Goal 6</b>	<b>Control threats from invasive alien species.</b>		
<b>Target 6.1</b>	<b>Pathways for major potential alien invasive species controlled</b>		
D) National target: Has a national target been established corresponding to the global target above?			
a) No			X
b) Yes, the same as the global target			
c) Yes, one or more specific national targets have been established			
Please provide details below.			
II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
<b>Programme of work</b>	<b>Yes</b>	<b>No</b>	<b>Details</b>
a) Agricultural		X	
b) Inland water		X	
c) Marine and coastal		N/A	
d) Dry and subhumid land		X	
e) Forest		X	
f) Mountain		X	
III) Has the global or national target been incorporated into relevant plans, programmes and			

strategies?	
a) No	X
b) Yes, into national biodiversity strategy and action plan	
c) Yes, into sectoral strategies, plans and programmes	
Please provide details below.	
A project to study the issue and to suggest action has started	
IV) Please provide information on current status and trends in relation to this target.	
Nothing done, though the problem is serious	
V) Please provide information on indicators used in relation to this target.	
None	
VI) Please provide information on challenges in implementation of this target.	
Answering this has to await the report of the project being implemented	
VII) Please provide any other relevant information.	
Several alien invasive species have become a serious threat, especially <i>Parthenium hysterophorus</i> and <i>Prosopis juliflora</i>	

**Box XIII.**

<b>Target 6.2</b>	<b>Management plans in place for major alien species that threaten ecosystems, habitats or species</b>		
I) National target: Has a national target been established corresponding to the global target above?			
a) No	X		
b) Yes, the same as the global target			
c) Yes, one or more specific national targets have been established			
Please provide details below.			
II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
Programme of work	Yes	No	Details
a) Agricultural		X	
b) Inland water		X	
c) Marine and coastal		N/A	
d) Dry and subhumid land		X	
e) Forest		X	
f) Mountain		X	

III) Has the global or national target been incorporated into relevant plans, programmes and strategies?	
a) No	X
b) Yes, into national biodiversity strategy and action plan	
c) Yes, into sectoral strategies, plans and programmes	
Please provide details below.	
IV) Please provide information on current status and trends in relation to this target. Not yet evaluated	
V) Please provide information on indicators used in relation to this target. No indicators identifies as yet	
VI) Please provide information on challenges in implementation of this target. Challenges to be evaluated in the future	
VII) Please provide any other relevant information. Regardless of the absence of national target(s), attempts having a contribution to achieving the intended goal are being made. For example, a Non-Government Organization called FARM-Africa is implementing a project to sustainably manage pastoral lands in the Afar Regional state. This project includes a component on <i>Prosopis juliflora</i> management. Similarly, the management of <i>Prosopis juliflora</i> and <i>Parthenium hysterophorus</i> in the Upper Awash Valley is being addressed by another Non-Governmental Organization, CARE Ethiopia, in a project entitled “Awash Conservation and Development Project”. Furthermore, there are also programs and projects in the pipeline, which can contribute to mitigating barriers to IAS management in the country. The Ethiopian Agricultural Research Institute is embarking on a much bigger project to study the problem and suggest action. Capacity building, data collection and taking appropriate measures to mitigate the impacts of IAS on the environment are among the areas of intervention of the projects.	

**Box XIV.**

<b>Goal 7</b>	<b>Address challenges to biodiversity from climate change, and pollution.</b>	
<b>Target 7.1</b>	<b>Maintain and enhance resilience of the components of biodiversity to adapt to climate change</b>	
D) National target: Has a national target been established corresponding to the global target above?		
a) No		X
b) Yes, the same as the global target		
c) Yes, one or more specific national targets have been established		
Please provide details below.		
Currently the National Metrology Service Authority (NMSA) is implementing the National Adaptation Plan of Action. Seven Technical Reports are expected to be produced out of which one will focus on the synergy between climate change and biodiversity. In the reports, recommendations and strategies on the issue will be formulated. Impacts of climate change on biodiversity in Ethiopia will also be discussed.		

II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
Programme of work	Yes	No	Details
a) Agricultural		X	
b) Inland water		X	
c) Marine and coastal		N/A	
d) Dry and subhumid land		X	
e) Forest		X	
f) Mountain		X	
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			X
b) Yes, into national biodiversity strategy and action plan			
c) Yes, into sectoral strategies, plans and programmes			
Please provide details below.			
IV) Please provide information on current status and trends in relation to this target.			
Not yet possible to give			
V) Please provide information on indicators used in relation to this target.			
None set yet			
VI) Please provide information on challenges in implementation of this target.			
Not yet evaluated			
VII) Please provide any other relevant information.			
Nothing to give yet			

**Box XV.**

<b>Target 7.2</b>	<b>Reduce pollution and its impacts on biodiversity</b>
D) National target: Has a national target been established corresponding to the global target above?	
a) No	
b) Yes, the same as the global target	
c) Yes, one or more specific national targets have been established	X
Please provide details below.	
Pollution reduction and biodiversity issues have been well treated in the National Environmental Policy of Ethiopia. Policy instruments, standards, strategies and regulations have been formulated in the Pollution Control Proclamation, and in the Environmental Impact Assessment Proclamation (and industrial environmental assessment strategy). The national capacity self assessment report has been drafted by EPA and it deals with all international environmental conventions. It has indicated strategies	

and set targets on pollution control.

II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).

Programme of work	Yes	No	Details
a) Agricultural		X	
b) Inland water		X	
c) Marine and coastal		N/A	
d) Dry and subhumid land		X	
e) Forest		X	
f) Mountain		X	

III) Has the global or national target been incorporated into relevant plans, programmes and strategies?

a) No	
b) Yes, into national biodiversity strategy and action plan	
c) Yes, into sectoral strategies, plans and programmes	X

Please provide details below.

Polluting enterprises are having environmental audit being carried out on them and are being given deadlines to stop polluting

IV) Please provide information on current status and trends in relation to this target.

The worst polluters are tanneries

V) Please provide information on indicators used in relation to this target.

Stopping discharging pollutants into bodies of water above the allowed standards set by the Environmental Protection Authority

VI) Please provide information on challenges in implementation of this target.

Shortage of trained human resources and low levels of financial resources

VII) Please provide any other relevant information.

#### Box XVI.

<b>Goal 8</b>	<b>Maintain capacity of ecosystems to deliver goods and services and support livelihoods.</b>	
<b>Target 8.1</b>	<b>Capacity of ecosystems to deliver goods and services maintained</b>	
D) National target: Has a national target been established corresponding to the global target above?		
a) No		X
b) Yes, the same as the global target		
c) Yes, one or more specific national targets have been established		
Please provide details below.		

II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
Programme of work	Yes	No	Details
a) Agricultural		X	
b) Inland water		X	
c) Marine and coastal		N/A	
d) Dry and subhumid land		X	
e) Forest		X	
f) Mountain		X	
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan			
c) Yes, into sectoral strategies, plans and programmes			X
Please provide details below.			
IV) Please provide information on current status and trends in relation to this target.			
All regions (parts) of the country are carrying out pilot projects to stop free-range grazing so that the vegetation cover and biodiversity can re-establish			
V) Please provide information on indicators used in relation to this target.			
Areas of land freed from free-range grazing and covered by natural vegetation			
VI) Please provide information on challenges in implementation of this target.			
Convincing farming and herding communities to change their traditional ways of providing grazing for their animals by cutting and carrying feed is not easy			
VII) Please provide any other relevant information.			
Where it has been possible to convince rural communities to stop free-range grazing, the once bare land gets covered by natural vegetation in most places after only 2 rainy seasons			

**Box XVII.**

Target 8.2	Biological resources that support sustainable livelihoods, local food security and health care, especially of poor people maintained	
D) National target: Has a national target been established corresponding to the global target above?		
a) No		
b) Yes, the same as the global target		X
c) Yes, one or more specific national targets have been established		
Please provide details below.		
The promotion of the proper management, utilization and conservation of wildlife resources and the strengthening of wildlife based tourism or ecotourism/nature tourism are planned		
II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been		

established, please indicate here, and give further details in the box(es).			
Programme of work	Yes	No	Details
a) Agricultural	X		<p>The Ethiopian Institute of Agricultural research has about 40 functioning research centers established in various agro ecologies of the country along with hundreds of research scientists and technicians. To date it has released or recommended for release over 400 technologies and management practices for use in crop and Ivestock farming as well as in forestry, and has published a large number of research documents.</p> <p>Targets are set in relation to research undertakings in various disciplines in the MDG Report document of the Ministry of Agriculture and Rural Development</p>
b) Inland water	X		The Ministry of Water Resources developed a Water Resources Management Policy in 1999 to enhance and promote national efforts towards the efficient, equitable and optimal utilization of the available Water Resources of the country for sustainable and significant socio-economic development.
c) Marine and coastal		N/A	
d) Dry and subhumid land	X		In Dry land and Pastoral areas, more effort will be exerted in dealing with range improvement, agricultural production and with solving productivity constraining factors during the MDG period
e) Forest	X		Re-forestation and agro-forestry are essential practices for reversing forest and land degradation. The target for re-forestation is half of the uncultivated portion identified as needing physical and biological treatment to prevent soil erosion, which amounts to 17,105,760 ha. Farm forestry helps to reduce on-farm soil erosion in addition to the production of lumber, fuel-wood, fruits and/or fodder. Thus, planting about 1.8 billion seedlings of suitable species, including fruit trees, in and around 7,072,218 ha of farmlands in the years 2005 to 2015 is set as a target for the MDG.
f) Mountain	X		Most Ethiopians live on land above 2000 meters in altitude, and the details given in a, b, d, and e, apply to mountains as well

III) Has the global or national target been incorporated into relevant plans, programmes and strategies?	
a) No	
b) Yes, into national biodiversity strategy and action plan	X
c) Yes, into sectoral strategies, plans and programmes	X
Please provide details below.	
The NBSAP document has mainstreamed and incorporated management practices in several sectors.	
IV) Please provide information on current status and trends in relation to this target.	
Samples collected from 146 species of crops have been properly conserved <i>ex situ</i> . As a complementary activity, <i>in situ</i> conservation work has also been exercised in some 12 districts. About 400 farmers' varieties comprising 22 crops have been conserved at the 12 <i>in situ</i> conservation sites.	
V) Please provide information on indicators used in relation to this target.	
The cultivation of farmers' varieties of cereals, oil crops, vegetables, pulses, fruits, nuts and coffee increased;	
VI) Please provide information on challenges in implementation of this target.	
Since gene banks cannot store all plant biodiversity that exists in the country and gene bank storage is relatively expensive and risky, the country should encourage and support conservation through sustainable use in farmers' field i.e. through <i>in situ</i> conservation activities. The lack of promotion and policy support for the farmers' varieties is also a bottleneck. Poor research activities and a weak market in the indigenous breeds of animal genetic resources has discouraging farmers from maintaining their adapted breeds.	
VII) Please provide any other relevant information.	
Research is developing crop varieties for the various agro-ecologies through the improvement of the existing and the introduction of new diversity in crop genetic resources and through aiming at increasing productivity and quality of produce. In addition to developing crop varieties with their management practices, there is value addition of the primary product through processing. Varieties of crops, which have high levels of micronutrients and which solve malnutrition, are being developed.	

**Box XVIII.**

<b>Goal 9</b>	<b>Maintain socio-cultural diversity of indigenous and local communities.</b>	
<b>Target 9.1</b>	<b>Protect traditional knowledge, innovations and practices</b>	
D) National target: Has a national target been established corresponding to the global target above?		
a) No		
b) Yes, the same as the global target		X
c) Yes, one or more specific national targets have been established		
Please provide details below.		
Ethiopia's National Biodiversity Strategy and Action Plan (NBSAP) has addressed what are considered as critical issues globally. One of the critical issues in the list is 'knowledge system and biodiversity', which in fact embraced traditional knowledge, innovations and practices. Similarly, the NBSAP has also covered the thematic areas formulated by the Conference of Parties (COP) to the Convention on Biological Diversity (CBD) that are very helpful for the preparation of biodiversity strategy and action plan. From among these recognized thematic areas, traditional knowledge is one. Ethiopia's NBSAP has indicated the actions required to document and protect traditional knowledge, innovations and practices.		



A law was passed in 2006 for the recognition and protection of Community Rights to their knowledge, innovations and practices

II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).

Programme of work	Yes	No	Details
a) Agricultural	X		Same as global targets
b) Inland water	X		Same as global targets
c) Marine and coastal		N/A	
d) Dry and subhumid land	X		Same as global targets
e) Forest	X		Same as global targets
f) Mountain	X		Same as global targets

III) Has the global or national target been incorporated into relevant plans, programmes and strategies?

a) No	
b) Yes, into national biodiversity strategy and action plan	X
c) Yes, into sectoral strategies, plans and programmes	

Please provide details below.

The National Biodiversity Strategy and Action Plan (NBSAP) has already been endorsed by the Ethiopian government, and is being printed for subsequent implementation by all the stakeholders in the 11 administrative regions of the country.

IV) Please provide information on current status and trends in relation to this target.

The local communities who own the knowledge, innovations and practices are on the whole, unaware of the need for protection because they do not know of the laws that protect private intellectual property rights

V) Please provide information on indicators used in relation to this target.

VI) Please provide information on challenges in implementation of this target.

The main challenges are in informing local communities of the nature of private intellectual property protection systems and their impacts on their own community rights, and in having these Community Rights protections obtaining recognition internationally, especially by the World Trade Organization.

VII) Please provide any other relevant information.

**Box XIX.**

<b>Target 9.2</b>	<b>Protect the rights of indigenous and local communities over their traditional knowledge, innovations and practices, including their rights to benefit sharing</b>		
D) National target: Has a national target been established corresponding to the global target above?			
a) No			
b) Yes, the same as the global target		X	
c) Yes, one or more specific national targets have been established			
Please provide details below.			
A Community Rights law has been passed. The NBSAP has set a target to establish/strengthen public institutions that address intellectual property concerns within a period of 3 to 7 years.			
II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
Programme of work	Yes	No	Details
a) Agricultural	X		Local Communities to enforce the rights granted them by the law
b) Inland water	X		Local Communities to enforce the rights granted them by the law
c) Marine and coastal		N/A	
d) Dry and subhumid land	X		Local Communities to enforce the rights granted them by the law
e) Forest	X		Local Communities to enforce the rights granted them by the law
f) Mountain	X		Local Communities to enforce the rights granted them by the law
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan		X	
c) Yes, into sectoral strategies, plans and programmes		X	
Please provide details below.			
See above (I)			
IV) Please provide information on current IV status and trends in relation to this target.			
The Access to Genetic Resources and Community Knowledge, and Community Rights Proclamation (No. 482/2006) states that 1) Access to community knowledge shall be subject to prior informed consent of the concerned local community; and 2) The state and the concerned local community shall obtain fair and equitable share from benefits arising out of the utilization of community knowledge accessed.			
V) Please provide information on indicators used in relation to this target.			
Local communities supported to enforce their Community Rights that has been given them by law			

VI) Please provide information on challenges in implementation of this target.

Low level of awareness and technical capacity on the subject among the key relevant stakeholders, limited access to relevant information and experience, especially the local communities themselves, inadequate coordination and synergy among relevant national institutions are the major constraints in the implementation of the target.

VII) Please provide any other relevant information.

Of relevance to this action, the Ethiopian Intellectual Property Office (EIPO) was established in 2003 having the major objective to study, analyze and recommend intellectual property policies and laws; promote public awareness; on intellectual property and facilitate the adequate protection and utilization of intellectual property, and the exploitation of technologies contained in patent documents. In particular, EIPO has the powers to issue patent certificate, issue compulsory license, implement the laws on intellectual property rights, i.e., including Community Rights, select and disseminate information; on technologies; undertake studies on intellectual property matters, develop policy and legislative proposal pertaining to intellectual property, and implement international agreements on intellectual property rights to which Ethiopia is a party.

Nevertheless, EIPO has not been given a specific mandate as relates to traditional knowledge, innovations and practices, and its mandates relate to conventional forms of private intellectual property rights. The Access to Genetic Resources and Community Knowledge, and Community Rights Proclamation (No. 482/2006), however, states that no person shall access genetic resources or Community Knowledge unless in possession of written permit granted by the Institute of Biodiversity Conservation (IBC) based on prior informed consent.

**Box XX.**

<b>Goal 10</b>	<b>Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources.</b>	
<b>Target 10.1</b>	<b>All transfers of genetic resources are in line with the Convention on Biological Diversity, the International Treaty on Plant Genetic Resources for Food and Agriculture and other applicable agreements</b>	
D) National target: Has a national target been established corresponding to the global target above?		
a) No		
b) Yes, the same as the global target		X
c) Yes, one or more specific national targets have been established		
Please provide details below.		
Pertaining to access and benefit sharing the NBSAP sets for the following action plans: -		
<ul style="list-style-type: none"> <li>• Collect base line data on current practices of access to genetic resources;</li> <li>• Prepare existing legal/institutional profile</li> </ul>		

II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
Programme of work	Yes	No	Details
a) Agricultural		X	
b) Inland water		X	
c) Marine and coastal		N/A	
d) Dry and subhumid land		X	
e) Forest		X	
f) Mountain		X	
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan			X
c) Yes, into sectoral strategies, plans and programmes			
Please provide details below.			
See above (I)			
IV) Please provide information on current status and trends in relation to this target.			
<p>Base line data on current practices of access to genetic resources has not been collected and existing legal/institutional profile has not been prepared. However, a legislation that regulate access to genetic resources and benefit sharing, and provides for community rights has been enacted. The Institute of Biodiversity Conservation is planning to develop the specific regulations required to implement the legislation. The regulations planned to be developed are;</p> <ul style="list-style-type: none"> <li>• Regulation on writing an application for access and benefit-sharing;</li> <li>• Regulation on the procedure of access to genetic resource under the multilateral system of the International Treaty on Plant Genetic Resources for Food and Agriculture; and</li> <li>• Regulation on the use of money obtained from access to genetic resources for the conservation of biodiversity and promoting community knowledge as well as for benefiting local communities.</li> </ul>			
V) Please provide information on indicators used in relation to this target.			
<p>The indicators used in relation to this target are:-</p> <ul style="list-style-type: none"> <li>• Baseline data on current practices of access to genetic resources and benefit-sharing collected;</li> </ul>			
VI) Please provide information on challenges in implementation of this target.			
<p>Low level of awareness and technical capacity on the subject among the key relevant stakeholders, limited access to relevant information and experience, lake of coordination and synergy among relevant national institutions are the major constraints in the implementation of the target.</p>			
VII) Please provide any other relevant information.			

**Box XXI.**

<b>Target 10.2</b>	<b>Benefits arising from the commercial and other utilization of genetic resources shared with the countries providing such resources</b>		
D) National target: Has a national target been established corresponding to the global target above?			
a) No			
b) Yes, the same as the global target			
c) Yes, one or more specific national targets have been established			X
Please provide details below.			
The NBSAP has addressed this target in Objective 6 (an effective legal framework for the implementation of CBD, related conventions, and national policies is developed)			
II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
<b>Programme of work</b>	<b>Yes</b>	<b>No</b>	<b>Details</b>
a) Agricultural		X	
b) Inland water		X	
c) Marine and coastal		N/A	
d) Dry and subhumid land		X	
e) Forest		X	
f) Mountain		X	
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan			X
c) Yes, into sectoral strategies, plans and programmes			
Please provide details below.			
See above (I)			
IV) Please provide information on current status and trends in relation to this target. Legislation that regulates access to genetic resources and benefit sharing, and provides for community rights has been enacted. The Institute of Biodiversity Conservation is planning to develop the specific regulations required to implement the legislation.			
V) Please provide information on indicators used in relation to this target. Biodiversity access legislation and regulations that guide benefit-sharing enacted.			
VI) Please provide information on challenges in implementation of this target.			
VII) Please provide any other relevant information.			

**Box XXII.**

<b>Goal 11</b>	<b>Parties have improved financial, human, scientific, technical and</b>
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	<b>technological capacity to implement the Convention.</b>		
<b>Target 11.1</b>	<b>New and additional financial resources are transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with Article 20</b>		
D) National target: Has a national target been established corresponding to the global target above?			
a) No			
b) Yes, the same as the global target			
c) Yes, one or more specific national targets have been established			
Please provide details below.			
II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
<b>Programme of work</b>	<b>Yes</b>	<b>No</b>	<b>Details</b>
a) Agricultural			
b) Inland water			
c) Marine and coastal			
d) Dry and subhumid land			
e) Forest			
f) Mountain			
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan			
c) Yes, into sectoral strategies, plans and programmes			
Please provide details below.			
See above (I)			
IV) Please provide information on current status and trends in relation to this target.			
V) Please provide information on indicators used in relation to this target.			
VI) Please provide information on challenges in implementation of this target.			
VII) Please provide any other relevant information.			

**Box XXIII.**

<b>Target 11.2</b>	<b>Technology is transferred to developing country Parties, to allow for the</b>
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effective implementation of their commitments under the Convention, in accordance with its Article 20, paragraph 4			
D) National target: Has a national target been established corresponding to the global target above?			
a) No			
b) Yes, the same as the global target			
c) Yes, one or more specific national targets have been established			
Please provide details below.			
II) National targets for specific programmes of work: If such national target(s) ha(s)(ve) been established, please indicate here, and give further details in the box(es).			
Programme of work	Yes	No	Details
a) Agricultural			
b) Inland water			
c) Marine and coastal			
d) Dry and subhumid land			
e) Forest			
f) Mountain			
III) Has the global or national target been incorporated into relevant plans, programmes and strategies?			
a) No			
b) Yes, into national biodiversity strategy and action plan			
c) Yes, into sectoral strategies, plans and programmes			
Please provide details below.			
IV) Please provide information on current status and trends in relation to this target.			
V) Please provide information on indicators used in relation to this target.			
VI) Please provide information on challenges in implementation of this target.			
VII) Please provide any other relevant information.			

## Global Strategy for Plant Conservation (GSPC)

The Conference of the Parties, in decision VI/9, annex, adopted the Global Strategy for Plant Conservation. Parties and Governments are invited to develop their own targets with this flexible framework. The Conference of the Parties considered the Strategy as a pilot approach for the use of outcome oriented targets under the Convention. In decision VII/10, the Conference of the Parties decided to integrate the targets into the reporting framework for the Third National Reports. Please provide relevant information by responding to the questions and requests contained in the following tables.

### Box XXIV.

<b>Target 1. A widely accessible working list of known plant species, as a step towards a complete world flora.</b>	
I) Has your country established national target corresponding to the above global target?	
a) Yes	X
b) No	
Please specify	
The National Herbarium of the Addis Ababa University has been publishing eight volume of the Flora of Ethiopia and Eritrea. The total number of vascular plant species that have been treated in the already published five volumes is over 4000. The remaining volumes, including the conifers and ferns are expected to add some 2500 more plant species. Of these, about 10% (i.e., 600 species) are known to be endemic to the Flora area. The National Herbarium now holds over 72000 specimens covering most parts of Flora area constituting nearly 80% of the flora of higher plants.	
II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?	
a) Yes	X
b) No	
Please specify	
The NBSAP has incorporated some lists of the above plant species for conservation and sustainable use within the respective disciplines such as field crops, horticulture, forage and pasture, forestry, and medicinal plants	
III) Current status (please indicate current status related to this target)	
The NBSAP objective has set certain targets for establishing institutional responsibilities for collection and maintenance of biodiversity data including flora. The National Herbarium is in the process of completing the publication of the remaining 3 volumes of the Flora.	
IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)	
The NBSAP has only recently been completed and so no implementation has taken place. Publishing the Flora of Ethiopia and Eritrea is continuing.	
V) Progress made towards target (please specify indicators used to monitor progress towards the target)	
The NBSAP has only recently been completed and so no implementation has taken place. Five volumes of the Flora already published.	



<b>VI) Constraints to achieving progress towards the target</b>
Weak of inter-sectoral coordination, limited human capacity, limited financial resources, inadequate policy enforcement
<b>VII) Any other relevant information</b>
One of the main targets of the Ethiopian Flora project initiated in 1980 was to write up a Flora of Ethiopia within the shortest time possible. Accordingly, the compilation of a working checklist of the plant resources of the country has been finalized through this project. So far, five volumes of books containing the taxonomic identification, description and distribution of the country's resources of higher plants have been published.
In addition, lists of some plant species (e.g. field crops, horticultural plants, forage and pasture plants, forest trees, and medicinal plants) have been prepared in the stocktaking exercise during the preparation of the NBSAP.
The Ethiopia Flora Project has been complemented by an ongoing compilation, review and assessment of the threatened endemic flowering plants (the Red List Initiative for Plants of Ethiopia and Eritrea, which, to date, includes 196 species listed as Critically Endangered and a further 135 species as Endangered, which has added over 300 taxa to the IUCN Red List for Plants). The results of this work are being taken forward to identify Key Biodiversity Areas in the country; these results have obvious and important implications for the gap analysis.
On the other hand, the NBSAP objective has set certain targets for determining institutional responsibilities for collection and maintenance of biodiversity data including the flora.

**Box XXV.**

<b>Target 2. A preliminary assessment of the conservation status of all known plant species, at national, regional and international levels.</b>	
<b>I) Has your country established national target corresponding to the above global target?</b>	
a) Yes	X
b) No	
Please specify	
The NBSAP Objective 8.6 sets a target to create a National Red List of threatened species in Ethiopia.	
<b>II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?</b>	
a) Yes	X
b) No	
Please specify	
The target has been incorporated into the NBSAP as mentioned in (I) above.	
<b>III) Current status (please indicate current status related to this target)</b>	
The NBSAP has been endorsed by the government and is being printed for use and implementation.	
<b>IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)</b>	
The NBSAP has been endorsed by the government and is being printed for use and implementation.	

V) Progress made towards target (please specify indicators used to monitor progress towards the target)
VI) Constraints to achieving progress towards the target
VII) Any other relevant information Some projects have been carried out to assess and conserve food and non-food plant species. For example, the “Participatory Forest Management Project”, which is being implemented in parts of the southwestern montane evergreen priority rainforest areas of Ethiopia with an overall goal of realization of sustainable management of forests in and around the project area.

**Box XXVI.**

<b>Target 3. Development of models with protocols for plant conservation and sustainable use, based on research and practical experience.</b>	
D) Has your country established national target corresponding to the above global target?	
a) Yes	
b) No	X
Please specify	
II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?	
a) Yes	
b) No	
Please specify	
III) Current status (please indicate current status related to this target)	
IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)	
V) Progress made towards target (please specify indicators used to monitor progress towards the target)	
VI) Constraints to achieving progress towards the target	
VII) Any other relevant information	

**Box XXVII.**

<b>Target 4. At least ten percent of each of the world's ecological regions effectively conserved.</b>	
D) Has your country established national target corresponding to the above global target?	
a) Yes	X
b) No	
Please specify	
<p>The NBSAP has effectively addressed this target in its strategic priorities (e.g. 1. Representative examples of Ethiopia's remaining ecosystems are conserved, and 2. By 2020, all remaining natural ecosystems outside of the protected areas are under sustainable use management) and under several specific targets (e.g. Objective 3.2 indicates a plan of mobilizing funding/resources/project design/development and implementation for a set of pilot projects to develop sustainable management systems for both intact and degraded natural ecosystems outside of protected areas. The plan also intends to build upon indigenous knowledge and traditional systems the need for a comprehensive protected areas network to conserve the diversity of ecosystems and species.</p> <p>This target has also been addressed in the National Capacity Needs Self-Assessment Project (e.g. Goal: - Rehabilitating affected ecosystems and using them sustainably; Sub targets: - Biodiversity hotspots rehabilitated and sustainably used; Forest cover increased to fulfill demands for fuel wood, fodder and construction; Sites identified, rehabilitated and managed as protected areas), The Millennium Development Goals (MDGs) Needs Assessment (MDGNA) document of Ethiopia has also complemented these (e.g. Target: - Strengthen existing wildlife protected areas and wildlife farms and ranches at eleven district in the country by 2015) etc.</p>	
II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?	
a) Yes	X
b) No	
Please specify	
The target has been incorporated into the NBSAP, National Capacity Self Assessment Project (NCSAP), and MDGNA as mentioned in (I) above.	
III) Current status (please indicate current status related to this target)	
The NBSAP has been endorsed by the government and is being printed for use and implementation. The MDGNA has also been endorsed by the government. The National Capacity Self Assessment Project has been finalized.	
IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)	
See (III)	
V) Progress made towards target (please specify indicators used to monitor progress towards the target)	
See (III)	
VI) Constraints to achieving progress towards the target	
VII) Any other relevant information	

**Box XXVIII.**

<b>Target 5. Protection of fifty percent of the most important areas for plant diversity assured.</b>	
I) Has your country established national target corresponding to the above global target?	
a) Yes	X
b) No	
Please specify	
See under Target 4 (I)	
II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?	
a) Yes	
b) No	
Please specify	
III) Current status (please indicate current status related to this target)	
IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)	
V) Progress made towards target (please specify indicators used to monitor progress towards the target)	
VI) Constraints to achieving progress towards the target	
VII) Any other relevant information	

**Box XXI X.**

<b>Target 6. At least thirty percent of production lands managed consistent with the conservation of plant diversity.</b>	
I) Has your country established national target corresponding to the above global target?	
a) Yes	X
b) No	
Please specify	
Organically produced agricultural products and food stuffs are globally increasing and thereby a new market for the country's organically produced agricultural products is being created. Attempts have been made to promote Ethiopian organic agricultural products in the relevant international markets. The organic products include coffee. Organic production combined with stopping free-rang grazing is protecting biodiversity.	
II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?	
a) Yes	X
b) No	
Please specify	

The NBSAP of Ethiopia has integrated the conservation and sustainable use of biological diversity into relevant sectoral and cross-sectoral plans and programmes, which include organic production.

III) Current status (please indicate current status related to this target)

See (I) and (II)

IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)

See (I) and (II)

V) Progress made towards target (please specify indicators used to monitor progress towards the target)

See (I) and (II)

VI) Constraints to achieving progress towards the target

VII) Any other relevant information

**Box XXX.**

**Target 7. Sixty percent of the world's threatened species conserved *In-situ*.**

I) Has your country established national target corresponding to the above global target?

a) Yes

X

b) No

Please specify

Natural forests for priority indigenous tree species conserved

II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?

a) Yes

X

b) No

Please specify

The above target has been incorporated in the five year strategic plan of the Institute of Biodiversity Conservation

III) Current status (please indicate current status related to this target)

The Institute of Biodiversity Conservation in collaboration with the GTZ-Forest Genetic Resources Conservation Project has identified the most threatened woody species of the high forest. Accordingly, five *in situ* sites have been established: 2 for *Hagenia abyssinica* (in Kefa zone, Bonga), 1 for *Afrocarpus falcatus* (in Jimma zone), 1 for *Ficus ovata* and *Afrocarpus falcatus* (near Langano lake in west Arsi zone) and 1 for *Pouteria adolfi-friedrici* (in Tiro Botar Bacho, Jima zone)

IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)

V) Progress made towards target (please specify indicators used to monitor progress towards the target)

VI) Constraints to achieving progress towards the target

VII) Any other relevant information

The Institute of Biodiversity Conservation (IBC) in collaboration with the GTZ-Forest Genetic Resources Conservation Project has identified the most threatened woody species of the high forest in the south west of Ethiopia. Accordingly, five *in-situ* sites have been established; two for *Hagenia abyssinica* (Kefa zone, Bonga), one for *Afrocarpus falcatus* (Jima zone), one for *Ficus ovata* (Tiro Botar, Bacho, Jima zone).

**Box XXXI.**

<b>Target 8. Sixty percent of threatened plant species in accessible <i>Ex-situ</i> collections, preferably in the country of origin, and 10 percent of them included in recovery and restoration programmes.</b>	
I) Has your country established national target corresponding to the above global target?	
a) Yes	
b) No	X
Please specify	
II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?	
a) Yes	
b) No	X
Please specify	
III) Current status (please indicate current status related to this target)	
IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)	
V) Progress made towards target (please specify indicators used to monitor progress towards the target)	
VI) Constraints to achieving progress towards the target	
VII) Any other relevant information	

**Box XXXII.**

<b>Target 9. Seventy percent of the genetic diversity of crops and other major socio-economically valuable plant species conserved, and associated indigenous and local knowledge maintained.</b>	
I) Has your country established national target corresponding to the above global target?	
a) Yes	X
b) No	

Please specify	
The Strategic Planning and Management (SPM) document of the Institute of Biodiversity Conservation has set a clear 3 years (2007-2010) time-frame that will focus on identification, classification and conservation of the biodiversity and the associated indigenous knowledge of country.	
II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?	
a) Yes	X
b) No	
Please specify	
The SPM document has identified specific strategies and, based on this, a 3-year programme has been formulated	
III) Current status (please indicate current status related to this target)	
See (I)	
IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)	
The major activities:	
<ul style="list-style-type: none"> <li>• Collection of field crop, forage, horticulture, forest and medicinal plant species and conserving them <i>ex situ</i> and <i>in situ</i></li> <li>• Exploration and documentation of animal genetic resources</li> <li>• Exploration and collection of microbial genetic resources</li> <li>• Documentation of the associated indigenous knowledge</li> </ul>	
V) Progress made towards target (please specify indicators used to monitor progress towards the target)	
Indicators such as the number of plant species to be collected, sites to be explored and identified	
VI) Constraints to achieving progress towards the target	
VII) Any other relevant information	
<p>The country is carrying out crop genetic resources conservation by complementing <i>ex situ</i> with <i>in situ</i> conservation strategies. So far, samples from 146 species are conserved <i>ex situ</i>. Furthermore, through a novel approach of establishing community gene banks, so far <i>in situ</i> conservation programmes are being implemented in 12 districts in the country. Besides the crop conservation efforts, the associated indigenous knowledge is also being documented from the <i>in situ</i> conservation sites.</p> <p>Similarly, the Forest Coffee Conservation Component of the Coffee Improvement Project IV (CIP IV), which is being carried out with an overall objective to Conserve the genetic diversity of forest coffee and the associated flora, fauna and micro-organisms, the Non-Timber Forest Products (NTFPs) Project which is being carried out with an overall aim of enhancing sustainable forest-based livelihoods through the use of such products as honey, coffee, spices, and bamboo, and the Conservation and Sustainable Use of Medicinal Plants Project which is being carried out with an overall objective of conserving and transforming the use of traditional medicinal plants, are assisting in the <i>in situ</i> conservation of genetic resources.</p>	

**Box XXXIII. .**

<b>Target 10. Management plans in place for at least 100 major alien species that threaten plants, plant communities and associated habitats and ecosystems.</b>	
I) Has your country established national target corresponding to the above global target?	
a) Yes	
b) No	X
Please specify	
II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?	
a) Yes	
b) No	X
Please specify	
III) Current status (please indicate current status related to this target)	
IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)	
V) Progress made towards target (please specify indicators used to monitor progress towards the target)	
VI) Constraints to achieving progress towards the target	
VII) Any other relevant information	
Regardless of the absence of national targets, attempts are being made that will help achieve the target. For example, FARM-Africa is implementing a project to sustainably manage pastoral lands in the Afar Regional state. This project includes a component on managing the invasive alien species <i>Prosopis juliflora</i> . Similarly, the management of <i>Prosopis juliflora</i> and <i>Parthenium hysterophorus</i> is being addressed by a CARE Ethiopia project entitled “Awash Conservation and Development Project”. Furthermore, there is also a project being developed by the Ethiopian Institute of Agricultural Research which can contribute to mitigating barriers to invasive alien species management in the country.	

**Box XXXIV.**

<b>Target 11. No species of wild flora endangered by international trade.</b>	
I) Has your country established national target corresponding to the above global target?	
a) Yes	X
b) No	
Please specify	
As a party to the Convention on International Trade in Endangered species of Wild Fauna and Flora (CITES), Ethiopia implements the Convention effectively, though protecting elephants is proving difficult.	
II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?	
a) Yes	X



b) No	
Please specify	
It implements CITES well	
III) Current status (please indicate current status related to this target)	
See (I)	
IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)	
The control of trade in endangered species is effective; it is habitat destruction that poses a great risk to endangered species	
V) Progress made towards target (please specify indicators used to monitor progress towards the target)	
The target is being met since trade is prohibited and the prohibition is enforced effectively by customs officials. Some elephant tuskers, however, probably cross the porous borders to some neighboring countries.	
VI) Constraints to achieving progress towards the target	
None except some of the borders which are porous because they are used by transhumant and pastoralists.	
VII) Any other relevant information	
Nevertheless, it is believed that some orchids and succulents are threatened by illegal collection, though these have not been entered into the CITES lists.	

**Box XXXV.**

<b>Target 12. Thirty percent of plant-based products derived from sources that are sustainably managed.</b>	
I) Has your country established national target corresponding to the above global target?	
a) Yes	
b) No	X
Please specify	
II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?	
a) Yes	
b) No	X
Please specify	
III) Current status (please indicate current status related to this target)	
IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)	
V) Progress made towards target (please specify indicators used to monitor progress towards the target)	

VI) Constraints to achieving progress towards the target
VII) Any other relevant information The forests, woodlands and cultivated lands provide as much as 75 to 90 percent of Ethiopian rural population's requirements for traditional medicine for their primary health care. There are a large number of non-wood forest products including ginger, kororima, etc., the production and consumption of which is not documented. With the exception of the Illubabor and Kefa areas, woodlands and shrublands occur at the lower altitudes, with potential incense, myrrh and gum production. The areas where incense, myrrh or gum is, or could be, produced account for about half of the national land surface. However, the resource base is vastly under-exploited but under heavy pressure from crop cultivation, free range grazing as well deforestation for fuel wood and charcoal.

**Box XXXVI.**

<b>Target 13. The decline of plant resources, and associated indigenous and local knowledge, innovations and practices that support sustainable livelihoods, local food security and health care, halted.</b>	
I) Has your country established national target corresponding to the above global target?	
a) Yes	X
b) No	
Please specify	
The NBSAP has set a target to establish/strengthen public institutions that address intellectual property concerns within a period of 3 to 7 years. In 2006, a law was passed recognizing the rights of local communities to their knowledge, innovations and practices	
II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?	
a) Yes	X
b) No	
Please specify	
See (I)	
III) Current status (please indicate current status related to this target)	
IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)	
See (I)	
V) Progress made towards target (please specify indicators used to monitor progress towards the target)	
VI) Constraints to achieving progress towards the target	

**VII) Any other relevant information**

To prevent the increasing fear of loss of indigenous knowledge and innovations, Ethiopia has developed legislation on community rights to protect the rights of local communities to their knowledge, innovations and practices. Recognizing the rights of local communities allows them to be compensated for their efforts through fair shares of the profits new natural products bring as they are marketed. If, therefore, they receive material benefits in exchange for their stewardship and for their knowledge, innovations and practices the decline would be halted. Now that local communities possess formal ownership rights, they should be able to negotiate rules of access and use, fees, and royalties with interested outsiders.

The Cultural Biodiversity Project of the Institute for Sustainable Development, that operates in 27 schools (Tigray 7, Amhara 4, Oromia 5, SPNNR 4, Addis Ababa 3, Somali 1, Afar 1, Benishangul 1, Gmabella 1) across the country, involves around 2500 students and teachers of which 875 are female. The project's approach could be used as a contribution to direct the educational system of the country to base itself on available wisdom, practices and technologies. The project creates the opportunity for girls and boys to learn from their parents, grand parents and community elders by facilitating a dialogue between them, and helping them re-integrate into their societies with the advantages of modern education.

**Box XXXVII.**

**Target 14. The importance of plant diversity and the need for its conservation incorporated into communication, educational and public-awareness programmes.**

I) Has your country established national target corresponding to the above global target?

- a) Yes
- b) No

X

Please specify

This target has been addressed by several specific objectives in the NBSAP. For example,

- Objective 15, a comprehensive strategy for public education and awareness developed
- Objective 16, awareness about the need for biodiversity conservation increased using the formal education system.
- Objective 17, use informal channels to increase awareness about biodiversity and the need for its conservation.

Before the NBSAP, the Biodiversity Conservation Strategy, the Environmental Conservation Strategy and the Biodiversity Strategy and Action Plan had also included this target as an important component.

II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?

- a) Yes
- b) No

X

Please specify

See (I)

III) Current status (please indicate current status related to this target)

IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)

V) Progress made towards target (please specify indicators used to monitor progress towards the target)
VI) Constraints to achieving progress towards the target
VII) Any other relevant information
<ul style="list-style-type: none"> <li>• Some training conducted with the help of the recently terminated GTZ funded forest genetic resources conservation project.</li> <li>• A GEF funded project called, “A Dynamic Farmer-Based Approach to the Conservation of Ethiopian Plant Genetic Resources”, was training, targeted at different levels: scientists, technical support staff, extension agents and farmers. The training include: <ul style="list-style-type: none"> <li>○ Bylaws of crop conservation association</li> <li>○ <i>In situ</i> conservation</li> <li>○ The use of traditional knowledge for <i>in situ</i> conservation</li> <li>○ Traditional diseases and pest control practices and their application for <i>in situ</i> conservation</li> <li>○ Soil and water management practices</li> <li>○ Participatory plant breeding in the enhancement of farmers’ varieties</li> <li>○ Development of local seed supply systems</li> <li>○ Application of appropriate cultural practices for <i>in sit</i> conservation</li> </ul> </li> </ul>

**Box XXXVIII.**

<b>Target 15. The number of trained people working with appropriate facilities in plant conservation increased, according to national needs, to achieve the targets of this Strategy.</b>	
I) Has your country established national target corresponding to the above global target?	
a) Yes	X
b) No	
Please specify	
<p>This target has been addressed by several specific objectives in the NBSAP. For example,</p> <ul style="list-style-type: none"> <li>• Objective 14.1, assess biodiversity related training needs</li> <li>• Objective 14.2, design opportunities for international linkages.</li> <li>• Objective 14.3, strengthen existing degree programmes in biodiversity and conservation biology.</li> <li>• Objective 14.4, created a diploma course for protected area managers</li> <li>• Objective 14.5, promote postgraduate specialization</li> <li>• Objective 14.6, initiate training programs with NGOs, both to train them and to enable them to train</li> <li>• Objective 14.7, integrate biodiversity concerns in training curricula of rural development and extension staff</li> <li>• Objective 14.8, identify the needs required in infrastructure development</li> </ul> <p>In addition, the target has also been addressed in the country’s capacity building programmes as one of elements to acquire specialists in the priority sectors. However, there is a need to set specific targets.</p>	

II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?	
a) Yes	X
b) No	
Please specify	

See above (II)
III) Current status (please indicate current status related to this target)
IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)
V) Progress made towards target (please specify indicators used to monitor progress towards the target)
VI) Constraints to achieving progress towards the target
VII) Any other relevant information
(a) There are some efforts to train specialists in areas of plant genetic resources and related field inside and out side the country. For example, one of the most important components of the institutional strengthening plan by the terminated GEF funded project, a dynamic farmer-based approach to the conservation of Ethiopian plant genetic resources, was training, targeted at different levels: scientists, technical support staff, extension agents and farmers (3 Ph.D., 1 M.Sc., 3 B.Sc. 11 diploma, 8 technician, 38 extension agents and 1025 farmers have been trained).
(b) There are no degree programmes and /or adequate curricula in wildlife management, biodiversity conservation or community based conservation of natural resource. A shortage of funding and lack of trained staff have also limited the amount of research on the identification, conservation and sustainable use of biological diversity in Ethiopia. There is very limited use of traditional knowledge in defining management programmes.

**Box XXXIX.**

<b>Target 16. Networks for plant conservation activities established or strengthened at national, regional and international levels.</b>	
I) Has your country established national target corresponding to the above global target?	
a) Yes	
b) No	X
Please specify	
II) Has your country incorporated the above global or national target into relevant plans, programmes and strategies?	
a) Yes	
b) No	X
Please specify	
III) Current status (please indicate current status related to this target)	
IV) Measures taken to achieve target (please indicate activities, legislative measures and other steps taken with a view to achieve the target)	

V) Progress made towards target (please specify indicators used to monitor progress towards the target)

VI) Constraints to achieving progress towards the target

VII) Any other relevant information

Institute of Biodiversity Conservation (IBC) in cooperation with the administrative regions and other stakeholders in the country is preserving recalcitrant species in field gene banks at different part of the country as indicated below.

- Bedesa – *Coffea arabica*
- Choche - *Coffea arabica*, root crops and spices
- Wondo-Genet – medicinal plants
- Decha and Chana – 86 different species that have high social and economical values

There are 12 Community gene banks located across the country in 6 of the different agro-ecological zones. Crop Conservation Associations (CCAs) have also been established. These CCAs have established a network for exchanging seed and information. Of the twelve Crop Conservation Associations (CCAs), four, namely, Ganta-Afe-Shum and Hawzen in Tigray, and Gimbichu (Chefe-Donsa) and Lume (Ejere) in East Shewa are officially registered and have got legal entity. The latter two in East Shewa, particularly, have gone further and opened bank accounts to administer the revolving seed system of the CCA. All the necessary organizational set-ups within the CCAs are in place to adequately discharge their responsibilities and duties. In this process, the local farming communities and their farmers' varieties are linked with the existing more formal genetic resources initiative of the IBC.

Seed is the most basic input into an agricultural production system. Lack of locally adapted seed particularly in drought-prone and food insecure communities is crucial especially as production is only subsistence. The seed supply system developed by the Crop Conservation Associations has provided the opportunity for farmers to take seed loans from the community gene banks with minimum interest rate (of 10-25%). Seed shortage for planting has been alleviated through this system.

In collaboration with the Oromia Regional Government, the IBC has established an *in situ* conservation of medicinal plants at the Bale Highland National Park. This initiative is funded through the World Bank loan and complementary fund from the Global Environment Facility (GEF). Through the Coffee Improvement Project IV, funded by the European Union (EU), the IBC has taken the Forest Coffee Conservation component. The sites of the *in situ* conservation of forest coffee are found in Oromia and Southern Nations, Nationalities and Peoples Regional States.

Ethiopia has designated considerable areas of its land for protection and established a protected areas network. The national parks are Bale, Semen, Abijata Lakes, Awash, Gambella, Mago, Nechisar, Omo and Yangudi Rassa. Sanctuaries include Babilie (for Elephants), Senkelle (for Swayne's Hartbesst) and Yabello. Wildlife reserves include Alledeghi, Awash West, Chew Bahir, Gewanw, Mille Sardo, Shire and Tana; while controlled hunting areas include Afdem Gewane, Akobo, Awash West, Borona, Dabus Valley, Erer Gota, Jikau, Lower Wabe Shebelle, Maze, Mizan Tefferi, Murle, Omo West, Segen and Tado.

The country has also established joint research activities with some international organizations including International Centre for Agricultural Research in Dry Areas (ICARDA), International Crop Re-

search Institute for Semi Arid Tropics (ICRISAT), International Plant Genetic Resources Institute (IPGRI), International Livestock Research Institute (ILRI), and International Institute for Tropical Agriculture (IITA). The areas of co-operation include evaluation of genetic material, collaborative research, experience sharing, information exchange, etc.

Ethiopia has become a member country in the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA). ASARECA has a wing for genetic resources known as Eastern Africa Plant Genetic Resources Network (EAPGREN). Ethiopia is a member of this network and participates in all initiatives of plant genetic resources in the sub region. This includes a regional strategy formulation and implementation for *ex situ* conservation of crop genetic diversity in Eastern Africa with support from the Global Crop Diversity Trust being sought.

#### Box XL.

Please elaborate below on the implementation of this strategy specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

**Generally, no target has been set in relation to the global strategy for plant conservation on national level. But some accomplished/existing/planned projects/programmes in one way or the other address the target.**

#### **a) Outcomes (to mention some)**

- Five volumes of books containing the lists of the country's floral resources categorized in families and species have been published, and additional one is in press
- A Red List produced and attached to the volumes
- Assessment of the threatened endemic flowering plants has been carried out. Accordingly, the Red List Initiative for Plants of Ethiopia and Eritrea, which, to date, includes 196 species listed as Critically Endangered and a further 135 species as Endangered, and which has added over 300 taxa to the IUCN Red List for Plants (IUCN, 2002)

#### **b) Contribution to the achievement of the goals of the Strategic Plan of the Convention**

- This is, in our view, best answered together with c)

#### **c) Contribution to progress towards the 2010 targets**

- The 2010 targets implement the goals of the strategic plan of the Convention up to 2010. The main thrust of these targets is biodiversity conservation. The national network that is evolving as described in Box XXXIX is meant to help do this.

#### **d) Progress in implementing national biodiversity strategies and action plans**

- The NBSAP has been endorsed by the government and is in press for use and implementation. The number of other activities described in Box II and under have anticipated the NBSAP and formed a good basis for its more focused implementation

#### **f) Constraints encountered in implementation**

- Inadequacy of intersectoral coordination
- Limited trained human capacity
- Limited financial resources, incomplete policy enforcement and some inconsistencies in

### Ecosystem Approach

The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Application of the ecosystem approach will help to reach a balance of the three objectives of the Convention. At its second meeting, the Conference of the Parties has affirmed that the ecosystem approach is the primary framework for action under the Convention (decision II/8). The Conference of the Parties, at its fifth meeting, endorsed the description of the ecosystem approach and operational guidance and recommended the application of the principles and other guidance on the ecosystem approach. The seventh meeting of the Conference of the Parties agreed that the priority at this time should be facilitating implementation of the ecosystem approach. Please provide relevant information by responding to the following questions.

<b>3. ?<sup>1</sup></b> Is your country applying the ecosystem approach, taking into account the principles and guidance contained in the annex to decision V/6? (decision V/6)	
a) No	
b) No, but application is under consideration	
c) Yes, some aspects are being applied	X
d) Yes, substantially implemented	

<b>4. ?</b> Is your country developing practical expressions of the ecosystem approach for national policies and legislation and for implementation activities, with adaptation to local, national, and regional conditions? (decision V/6)	
a) No	
b) No, but development is under consideration	
c) Yes, practical expressions have been developed for applying some principles of the ecosystem approach	
d) Yes, practical expressions have been developed for applying most principles of the ecosystem approach	X

<sup>1</sup> Please note that all the questions marked with ? have been previously covered in the second national reports and some thematic reports.



<b>5. Is your country strengthening capacities for the application of the ecosystem approach, and providing technical and financial support for capacity-building to apply the ecosystem approach? (decision V/6)</b>	
a) No	
b) Yes, within the country	X
c) Yes, including providing support to other Parties	

<b>6. ? Has your country promoted regional cooperation in applying the ecosystem approach across national borders? (decision V/6)</b>	
a) No	
b) Yes, informal cooperation (please provide details below)	
c) Yes, formal cooperation (please provide details below)	X

Further comments on regional cooperation in applying the ecosystem approach across national borders. Ethiopia is undertaking a bilateral co-operation activity with the government of the Sudan that extended the Sudanese Protected Area of Dindir into Ethiopia and includes the Ethiopian Alaatish area. An Arid Land Development Management Plan between Ethiopia and Djibouti is in place.

The Nile Basin Initiative, launched in February 1999, is a regional partnership within which countries of the Nile basin have united in common pursuit of the long-term development and management of Nile waters. All ten Nile basin countries i.e., Burundi, Democratic Republic of Congo (DRC), Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda have expressed a serious concern about the need to work together to protect and sustainably use the Nile Basin and to fight poverty. The Initiative has been developing an agreed riparian basin-wide framework and is guided by the countries' Shared Vision *"to achieve sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources."*

<b>7. Is your country facilitating the exchange of experiences, capacity building, technology transfer and awareness raising to assist with the implementation of the ecosystem approach? (decisions VI/12 and VII/11)</b>	
a) No	
b) No, some programmes are under development	
c) Yes, some programmes are being implemented (please provide details below)	X
d) Yes, comprehensive programmes are being implemented (please provide details below)	
Further comments on facilitating the exchange of experiences, capacity building, technology transfer and awareness raising to assist with the implementation of the ecosystem approach.	
This is being done with the Nile Basin countries (see 6) through the Nile Basin Initiative	

<b>8. Is your country creating an enabling environment for the implementation of the ecosystem approach, including through development of appropriate institutional frameworks? (decision VII/11)</b>	
a) No	
b) No, but relevant policies and programmes are under development	
c) Yes, some policies and programmes are in place (please provide details below)	X
d) Yes, comprehensive policies and programmes are in place (please provide details below)	
<b>Further comments on the creation of an enabling environment for the implementation of the ecosystem approach.</b>	
<p>The Ecosystem Approach as a concept and strategy to implement the objectives of the Convention on Biological Diversity has not yet been well promoted at the grass roots level throughout the country, though based on the experience gained by the Institute for Sustainable Development, this is changing fast. This is happening relatively easily because many of the sectoral policies and strategies of government institutions, such as the Environmental Protection Authority (EPA), Institute of Biodiversity Conservation (IBC) and the Department of Wildlife Conservation (previously Ethiopian Wildlife Conservation Organization- EWCO) under the Ministry of Agriculture and Rural Development are based on ecological principles. The National Conservation Strategy of the Country thus addressed the Ecosystem Approach in sustainable use and conservation even if it does not use the term “Ecosystem Approach”. The policies and strategies states, among other things:</p> <ul style="list-style-type: none"> <li>• Promoting the involvement of local communities inside and outside protected areas in the planning and management of such areas</li> <li>• Ensuring the conservation of biological diversity outside protected area systems has to be integrated into strategic land use plans, local level plans and sustainable agricultural and pastoral production strategies</li> <li>• Representation of as wide a range of ecosystem types and habitats as possible in protected areas, and where appropriate, linkage of the protected areas by corridors of suitable habitats along which species can migrate</li> <li>• Ensuring pricing policies and instruments supportive of the conservation of biological diversity</li> <li>• Ensuring that park, forest and wildlife conservation and management programmes which conserve biological diversity on behalf of the country allow for a major part of any economic benefits deriving therefrom to be channelled to local communities affected by such programmes</li> <li>• Public awareness raising on the sustainable use of biodiversity in its broad sense</li> </ul> <p>Institutions such as the Environmental Protection Authority and the Institute of Biodiversity Conservation have established Departments that are mandated to monitor and evaluate the overall impact of human activities on the health of the environment and to promote the principles of the Ecosystem Approach among stakeholders. Efforts are also being made by a member of other governmental institutions, non-governmental organizations and local communities that have positive contributions in the management of the ecosystems. These institutions have been involved in assessing the state of some ecosystems, and developing manuals, guidelines and pamphlets that focus on the conservation and utilization of ecosystems. However, these efforts are still inadequate to reverse land degradation and halt loss of biodiversity. There is a very serious problem of shortage in skilled human resources in the area of Ecosystem Approach.</p>	

### **C. ARTICLES OF THE CONVENTION**

## Article 5 – Cooperation

<b>9. 2</b> Is your country actively cooperating with other Parties in respect of areas beyond national jurisdiction for the conservation and sustainable use of biological diversity?	
a) No	
b) Yes, bilateral cooperation (please give details below)	X
c) Yes, multilateral cooperation (please give details below)	X
d) Yes, regional and/or subregional cooperation (please give details below)	X
e) Yes, other forms of cooperation (please give details below)	X
Further comments on cooperation with other Parties in respect of areas beyond national jurisdiction for the conservation and sustainable use of biodiversity.	
<p><b>Bilateral cooperation</b></p> <p>An Arid Land Development Management Plan between Ethiopia and Djibouti is in place. Other agreements of bilateral cooperation exist with the German Government through the German Technical Cooperation (GTZ) that has helped establish a forest gene bank as a component of the crop gene bank of Ethiopia. The sustainable natural resources management (SUN) project also funded by GTZ, aims at improving food security of rural households in the Amhara, Oromia and Tigray regions. It aims to bring about livelihood improvement through natural resources utilization with an effective participatory natural resources management.</p> <p>Ethiopia and the University of Bonn entitled Conservation and use of the wild populations of <i>Coffea arabica</i> in the montane rainforests of Ethiopia. The funding organizations of this project is BMBF, through BioTEAM. The project is based on the conservation of the traditional use of the montane rain forests as the natural habitat for maintaining coffee diversity and for producing coffee.</p> <p>Ethiopia has also signed a bilateral agreement with the French GEF to implement a project entitled ‘Ethiopian Home Gardens: Potentiation of Practices and Produce’. The project aims at establishing an institutional, legal and promotional structure for geographical indications and <i>in situ</i> conservation. The project realizes the economic potential of biodiversity, for the benefit of local communities, which are the fundamental <i>in situ</i> conservation actors.</p> <p>A “Participatory Forest Management Project” is being implemented in parts of the southwestern montane evergreen priority rainforest areas of Ethiopia. It is a bilateral initiative between the governments of Ethiopia and Japan. The Project is financed through the Japan International Cooperation Agency (JICA) and locally coordinated by the Agriculture and Rural Development Bureau of the Oromiya Regional State. The overall goal of the Project is the realization of sustainable management of forests in and around the project area, which can be achieved through the participation of local people.</p> <p>Recently the Gulalie Botanical Garden project in Addis Ababa has started as a bilateral cooperation funded by the Dutch.</p>	
<p><b>Multilateral cooperation</b></p> <p>Ethiopia has been implementing a project entitled “Conservation and sustainable utilization of medic-</p>	

nal plants in Ethiopia”, a multilateral programme assisted by a soft loan from the World Bank and a grant from the GEF. The overall objective of the project is to initiate support for the conservation, management and sustainable utilization of medicinal plants for human and livestock healthcare in Ethiopia. Another World Bank GEF PDF-B project deals with Sustainable Land Management. Likewise another GEF supported project is the ‘Wildlife Protected areas System’. The Ethiopian Wildlife Conservation Organization implements this project. The goal of this wildlife project is to improve the conservation and management of Ethiopia's Protected Areas (PAs), by strengthening national and regional management capacity and coordination, and by developing and implementing a protected areas system plan, as well as management plans for individual Protected Areas. To support the long-term implementation of the Protected Areas System Plan and the individual management plans, a detailed sector plan is in preparation. This includes the examination of financing mechanisms and the potential for tourism development, so as to determine the best approaches for securing a sustainable funding base for the protected areas.

Preparation of the NBSAP was carried out under an agreement between the Government of Ethiopia and the United Nations Development Programme (UNDP) funded by the Global Environment Facility (GEF) Trust Fund. The Environment and Sustainable Dryland Management Programme in Ethiopia (ESDM) is also funded by the GEF/UNDP. The long-term goal of this Programme is to contribute to the overall development of the country, in the context of the Strategic Poverty Reduction Programme and the Millennium Development Goals, while developing a partnership and cooperation with all other development partners supporting the effective management and sustainable use of drylands in Ethiopia.

Land degradation in arid, semi-arid, and dry sub-humid areas, leading to desertification is one of the most serious environmental challenges facing Ethiopia today. In order to combat desertification and mitigate the effects of drought, a National Action Programme (NAP) for Ethiopia has been developed with support from the UNDP.

The UNDP Community Based Dryland Management Programme project complements the Environment and Sustainable Dryland Management Programme and the NAP to combat desertification at the local community level, by disseminating and replicating best practices in terms of sound and sustainable resource management and utilization, and by strengthening local community management of natural resources.

The GEF through the UNDP has assisted in National Capacity Needs Self Assessment for the implementation of environmental conventions.

The country has established joint research activities with some international organizations including the International Centre for Agricultural Research in Dry Areas (ICARDA), the International Crop Research Institute for Semi-Arid Tropics (ICRISAT), the International Plant Genetic Resources Institute (IPGRI), the International Livestock Research Institute (ILRI), and the International Institute for Tropical Agriculture (IITA). The areas of cooperation include the evaluation of genetic resources, collaborative research, experience sharing, information exchange, etc.

With funding support from FAO, Ethiopia prepared a report on the Status of Animal genetic Resources in Ethiopia. The report, among others, describes the country's major animal production systems and related animal genetic resources, their diversity, utilization and relative importance, and provides an

overview of the conservation of animal genetic resources. FAO is also supporting the implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) in Ethiopia.

The FAO/Norway-Seed Security Project in Harar aims at strengthening community based seed system. The project's pilot phase is testing a model for a Cooperative Community Based Seed Enterprise.

A WFP programme called "Managing Environmental Resources to Enable Transitions to more sustainable livelihoods" (MERET) uses food-for-work in environmental and livelihood investments to support 750,000 beneficiaries, making it possible for poor families to gain and preserve assets, and enabling households that depend on degraded natural resources for their food security to make a shift to more sustainable livelihoods. The long-term objective is for rural communities and households in food insecure areas, particularly those headed by women, to improve their livelihood and become food secure.

Ethiopia accessed the convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1989. There has been a close cooperation between Ethiopia and CITES. Recently, an exemplary event has taken place in Ethiopia, i.e. Ethiopian CITES and wildlife Law Enforcement Training workshop was conducted.

Ethiopia has been implementing a Project entitled Coffee Improvement Project IV (CIP IV), which is a multilateral program between the European Union and the Federal Democratic Republic of Ethiopia. The overall objective of the five-year project is to improve the standards of living of the communities in the coffee growing areas of the country. The six proposed activities to achieve the stated objective are: Coffee Research, Conservation of Forest (Wild) Coffee Genetic Resources, Development of Coffee Nurseries, Coffee Extension, Coffee Marketing, and Programme Management and Coordination.

A Non-Timber Forest Products (NTFPs) Project is also being implemented as a multilateral programme between the government of Ethiopia and European Union, and the Embassies of Norway and Canada. This four-year Project has a "Research and Development" orientation, combining integrated technical inputs with local capacity building through participatory and gender sensitive strategy. The overall aim is to enhance sustainable, forest-based, livelihoods through the use of non-timber forest products such as honey, coffee, spices, and bamboo. It has two specific objectives: to increase local institutional capacities for the improved production of non-timber forest products and sustainable forest management, and to promote the sustainable use and trading of non-timber forest products as part of a sustainable management strategy for forest and land resources. This is expected to help reduce rural poverty and ultimately lead to improved and sustainable forest management in the area.

### **Regional and/or sub regional cooperation**

The New Partnership for Africa's Development (NEPAD) environment action plan covers sectors such as combating land degradation, drought and desertification; wetlands; invasive alien species; marine and coastal resources; cross-border conservation of natural resources; climate change; pollution; forest and plant genetic resources; freshwater; capacity building; and technology transfer. Ethiopia implements the NEPAD environment action plan initiative.

The Lusaka Agreement arose from the realization that there is poaching and illegal trade in wild fauna and flora from African biological diversity of a level prejudicial to sustainable development. The Lusaka Agreement provides for practical, day-to-day measures designed to achieve the objectives of the

African Convention on the Conservation of Nature and Natural Resources. Ethiopia implements these two agreements.

Ethiopia has become a member country in the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA). ASARECA caters for the needs, interests and expectations of the relevant stakeholders (national agricultural research scientists, non-governmental organization, farmers and the public) in the member states (Burundi, Democratic Republic of Congo, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania and Uganda). ASARECA has two parts the Eastern Africa Plant Genetic Resources Network (EAPGREN) and the ASARECA Animal Agriculture Research Network (A-AARNET) in which Ethiopia is actively participating. Ethiopia is also participating in the Botanical and Zoological Networks of Eastern Africa (BOZONET).

Ethiopia is the source of Transboundary Rivers shared with all its neighboring countries. The most important of these rivers is the Nile, which is the longest river in the world, 6,850 km, with its basin covering more than three million km<sup>2</sup> and its waters shared by ten riparian states. Ethiopia contributes 86% of the total flow of the Nile, and actively participates in the Nile Basin Initiative (NBI). The Eastern Nile Basin Subsidiary Action Programme (ENSAP) is run through a cooperation among the three Eastern Nile countries: Ethiopia, Sudan and Egypt. It provides a strategic framework for environmentally sustainable development of the Nile River Basin and supports basin wide environmental action linked to transboundary issues in the context of the Nile Basin Initiative Strategic Action Programme.

A project entitled 'Enhance Biodiversity Conservation in Important Bird Areas of Ethiopia', which is funded by GEF and implemented by the Ethiopian Wildlife Conservation Organization/Ethiopian Wildlife and Natural History Society/Birdlife International is aimed at preserving globally and nationally important bird areas found in Ethiopia. Bird life has been found to be an excellent indicator of the status of the ecosystems, and this project is, therefore, focused on the conservation of Important Bird Areas (IBAs), through an ecosystem protection approach.

IUCN (East African Regional Office) has developed a program entitled East African Regional Wetlands Conservation and Support Programme. The objective of this program is to strengthen wetland conservation and wise use in four African countries, namely, Ethiopia, Kenya, Tanzania and Uganda.

Removing Barriers in Alien Invasive Plant Management in Africa project aims at removing barriers to the management of Invasive Alien Species through the effective implementation of the CBD Article 8(h) in 4 pilot countries (Ethiopia, Ghana, Uganda, Zambia), using the ecosystem approach.

### **Other forms of cooperation**

The second country cooperation (2002-2006) has been developed in collaboration between the Ethiopian Ministry of Finance and Economic Development and the United Nations Children's Fund (UNICEF). It is synchronized with the programming cycles of UNICEF, the United Nations Population Fund (UNPF) and the World Food Programme (WFP). The overall goal of the programme is to improve the livelihood security of the poor through a sustainable environmental management by integrating environmental concerns into all development endeavors.

The Murulle Foundation has been working to conserve cultural and natural resources in Ethiopia for the last five years. Conservation activities have included studying the effects of grazing on savannah ecosystems in the Omo Valley and documenting forest diversity and structure in the Odo Bulu mountains.

The Ethiopian Institute of Agricultural research is working very closely with the International Agricultural research Centers (IARCs) such as ILRI, CIAT, ICARDA, ICRAF, IWMI, IUFRO, IPGRI and ICRISAT as well as regional research organizations and networks such as ASARECA/A-ARNET, AFORNET, TOFNET, AFRENA, AFREA, etc. and advanced research institutes and universities including those in Bangor (UK), Oregon (USA), Wageningen (Netherlands), etc. and bilateral organizations like CIRAD. This is done to strengthen the capacity building efforts to do basic and strategic research as well as exchange of germplasm and information.

The Desert Locust Control Organization (DLCO) undertakes early warning initiatives and control activities against locust in Africa. The head office is in Addis Ababa, and Ethiopia supports this organization.

The United Nations Development Assistance Framework (UNDAF) affords a mechanism for the various UN agencies to join their capacities and resources for integrated and enhanced impacts. It deals with better community management of natural resources including participatory community-based watershed management, irrigation (including in refugee-impacted and resettlement areas) to enhance rural income, agro-biodiversity and the supply of fuel wood, fodder and construction materials through the conservation and sustainable utilization at the grassroots level. The UN agencies that are involved are FAO, WFP, UNDP, UNHCR and IFAD

**10. Is your country working with other Parties to develop regional, subregional or bioregional mechanisms and networks to support implementation of the Convention? (decision VI/27 A)**

a) No	
b) No, but consultations are under way	
c) Yes, some mechanisms and networks have been established (please provide details below)	X
d) Yes, existing mechanisms have been strengthened (please provide details below)	

**Further comments on development of regional, subregional or bioregional mechanisms and networks to support implementation of the Convention.**

Ethiopia is a member of a number of regional/subregional networks such as Botanical and Zoological Taxonomic Networks in Eastern Africa (BOZONET), Eastern African Environmental Network (EAEN), Eastern African Network of BIONET-International (EAFRINET), BIO-EARN, etc.

EAFRINET (the Eastern African regional arm of BIONET) is an ongoing attempt at networking on taxonomy in the region, but focuses on invertebrates and other pests to agriculture. EAFRINET is a network of applied Agricultural Research Institutions, and is meant to be a permanent institutional mechanism.

Ethiopia participates in the ASARECA's networks', EAPGREN and A-AARNET. EAPGREN tries to establish strong linkages and create synergies among countries in the sub-region. A-AARNET's vision is "enhanced food security and human welfare of the people of Eastern and Central Africa (ECA) through a sustainable increase in the productivity of animal agricultural systems". Its mission is to facilitate and strengthen collaborative research to increase the availability and utilization of technologies, knowledge and information that will sustainably improve the productivity, competitiveness and revenue from animal agriculture particularly for the poor livestock keepers. The A-AARNET's objective is increased economic growth and improved livelihoods in Eastern and Central Africa while enhancing

the quality of the environment. Its purpose is enhanced productivity and competitiveness of animal agricultural systems and value added products in Eastern and Central Africa.

To identify, characterize, conserve and sustainably use Farm Animal genetic Resources of Eastern African countries, a Regional Focal Point was established in 2005 with a partial support from FAO. It is based in Nairobi, Kenya with Ethiopia, Kenya, Uganda and Tanzania as member of the Steering Committee.

**11.** Is your country taking steps to harmonize national policies and programmes, with a view to optimizing policy coherence, synergies and efficiency in the implementation of various multilateral environment agreements (MEAs) and relevant regional initiatives at the national level? (decision VI/20)

a) No	
b) No, but steps are under consideration	
c) Yes, some steps are being taken (please specify below)	
d) Yes, comprehensive steps are being taken (please specify below)	X

Further comments on the harmonization of policies and programmes at the national level.

National strategies to create synergy and implement international environmental conventions are in place. The Institute of Biodiversity Conservation (IBC), the Environment Protection Authority (EPA) and the National Metrological Service Agency (NMSA) through a GEF funded project secured by UNEP have been working together on the synergistic implementation of the three conventions - CBD, CCD and CCC. Two documents on the mechanism of synergy creation and the capacity required respectively have already been prepared. The Sustainable Land Management Forum under the Ministry of Agriculture and Rural Development also promotes synergies among the CBD, CCD and CCC. Another GEF supported project, also secured by UNEP, is nearing completion to identify capacity needs and synergies for the implementation of all the multilateral environmental agreements to which Ethiopia is a party.



**Box XLI.**

Please elaborate below on the implementation of this strategy specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

**a) Outcomes and impacts of actions taken;**

- Forest *ex situ* cold storage and necessary laboratory facilities installed
- Sustainable utilization of biodiversity resources and community based conservation activities for improved livelihood implemented in Oromia, Amhara and Tigray regions
- Agroecologically based conservation and management initiated
- Participatory forest management re-established in parts of the country
- Valuation and appellation of forest coffee and medicinal plants initiated
- Linkages between biodiversity, food security and poverty alleviation understood well

**b) Contribution to the achievement of the goals of the Strategic Plan of the Convention;**

- Financial and technical assistances acquired to implement the convention
- Within country and regional/sub-regional collaborations among stakeholders have inspired synergy in the implementation of the Convention
- A comprehensive National Biodiversity Strategy and Action Plan (NBSAP) prepared to implement the Convention
- Organic product certification of Ethiopian coffee and market promotion of Ethiopian organic coffee established, supported by the Rainforest Alliance and Oxfam UK

**c) Contribution to progress towards the 2010 target;**

- Conservation of biological diversity by local communities revitalized
- Root causes of loss of biodiversity in the country identified
- Environmental services and economic analysis of biodiversity studied and options for action identified

**d) Progress in implementing national biodiversity strategies and action plans;**

- The NBSAP emphasises the CBD as the first international convention which acknowledges a state's sovereign rights over the genetic resources within its jurisdiction and the resulting authority to regulate and control access to these resources
- It also underlines the fact that the degree and extent to which the state could exercise this right are determined by Proclamation No. 482/2006 (Access to Genetic Resources and Community Knowledge, and Community Rights Proclamation).

**e) Contribution to the achievement of the Millennium Development Goals;**

- Thousands of households have become food secure
- Many ecosystems in the highlands have gone far in rehabilitation
- Development of partnership and cooperation with biodiversity and environment support groups has been achieved

**f) Constraints encountered in implementation;**

- Challenge of implementation of synergy and linkage initiatives

## Article 6 - General measures for conservation and sustainable use

<b>12.</b> Has your country put in place effective national strategies, plans and programmes to provide a national framework for implementing the three objectives of the Convention? (Goal 3.1 of the Strategic Plan)	
a) No	
b) No, but relevant strategies, plans and programmes are under development	
c) Yes, some strategies, plans and programmes are in place (please provide details below)	X
d) Yes, comprehensive strategies, plans and programmes are in place (please provide details below)	
Further comments on the strategies, plans and programmes for implementing the three objectives of the Convention.	
<p>Ethiopia established 30 years ago an institution that has been undertaking the conservation and sustainable utilization of the country's biological resources ever since. Some proclamations have also been in place to establish protected areas. The country encourages the involvement of the private sector to actively participate in wildlife development, conservation and utilization. The Conservation Strategy of Ethiopia (CSE) is now in place and the NBSAP has been prepared.</p> <p>One of the areas of agricultural research strategy is the conservation, development and utilization of agriculture related natural resources. The objectives of the strategy in this area are the collection of information on and generation of new technologies that help the conservation, development and sustainable utilization of agriculture related natural resources. Specific strategies are framed to realize this objective. Biodiversity and environment are among the sectors and programs that are given priority in the National Science and Technology Policy.</p> <p>The National Biodiversity Strategy and Action Plan (NBSAP) provides a brief assessment of the status and trend of the nation's biodiversity, outlines strategic goals and objectives and identifies a plan of action that outlines coordination arrangements and implementation measures.</p> <p>The goal of the Ethiopian Biodiversity Strategy and Action Plan has been formulated as <i>“Effective systems are established that ensure the conservation and sustainable use of Ethiopia's biodiversity that provide for the equitable sharing of the costs and benefits arising therefrom, and that contribute to the well-being and security of the nation.”</i> Ethiopia's biodiversity conservation priorities are found in the four Strategic Objectives:</p> <ol style="list-style-type: none"> <li>1. Representative examples of Ethiopia's remaining ecosystems are conserved through a network of effectively managed protected areas.</li> <li>2. By 2020, all remaining natural ecosystems outside of the protected areas are under sustainable use management.</li> <li>3. The costs and benefits on biodiversity conservation are equitably shared through a range of public, private, community/CBO and NGO partnerships for protected area management and for sustainable use and marketing of biodiversity.</li> <li>4. The rich agro-biodiversity of Ethiopia is effectively conserved through a mix of <i>in situ</i> and <i>ex situ</i> programs.</li> </ol> <p>The action plan calls on the Federal Government of Ethiopia to find ways and means to achieve the fol-</p>	

lowing: a) develop an effectively managed protected areas network that covers the full range of ecosystems; b) bring the natural areas outside of the protected areas network under sustainable use; c) strengthen the policy framework for biodiversity conservation; d) develop effective legislation for biodiversity conservation; e) build capacity in research and training; undertake public education and awareness raising; g) develop environmental impact assessment in support of biodiversity conservation; h) develop policies and laws to regulate access to genetic resources and to ensure the equitable sharing of benefits; i) ensure effective exchange of information; j) develop the financial resources needed; k) build biotechnology capacity and enhance technology transfer.

A law on access to genetic resources and on the sharing of benefits that accrue from the access, as well as on the rights of local communities (Proclamation No 482/2006) has been passed

**13. ?** Has your country set measurable targets within its national strategies and action plans? (decisions II/7 and III/9)

a) No	
b) No, measurable targets are still in early stages of development	
c) No, but measurable targets are in advanced stages of development	
d) Yes, relevant targets are in place (please provide details below)	X
e) Yes, reports on implementation of relevant targets available (please provide details below)	

Further comments on targets set within national biodiversity strategies and action plans.

In the document of the National Biodiversity Strategy and action Plan (NBSAP), timeframes and performance indicator bind targets.

**14.** Has your country identified priority actions in its national biodiversity strategy and action plan? (decision VI/27 A)

a) No	
b) No, but priority actions are being identified	
c) Yes, priority actions identified (please provide details below)	X

Further comments on priority actions identified in the national biodiversity strategy and action plan.

The Strategic Objectives of the NBSAP are followed by a much longer list of Specific Objectives. Each Specific Objective will be achieved through a set of individual Actions. The Plan provides an implementation schedule of actions to be implemented. A timeframe and a performance indicator are defined for each Action and institutional responsibilities pointed out.

**15.** Has your country integrated the conservation and sustainable use of biodiversity as well as benefit sharing into relevant sectoral or cross-sectoral plans, programmes and policies? (decision VI/27 A)

a) No	
b) Yes, in some sectors (please provide details below)	X
c) Yes, in major sectors (please provide details below)	
d) Yes, in all sectors (please provide details below)	

Further information on integration of the conservation and sustainable use of biodiversity and benefit-sharing into relevant sectoral or cross-sectoral plans, programmes and policies.

Conservation and sustainable use of biodiversity and benefit-sharing is well integrated in most forest-based projects such as the Coffee Improvement Project IV (CIP IV), the Non-Timber Forest Products

(NTFPs) Project, and the Participatory Forest Management Project. In all cases there is one overriding need, which is that the conservation projects have the wholehearted support of the local people. The forests are owned by the Regional Governments, but local communities around the forests are the *de facto* owners and users of non-timber products. Local people are made aware that the forests are their own resources and if they do not protect them then others will come in and destroy them. The local communities are permitted to harvest wild coffee, and spices, other edible and medicinal plants, collect honey and fallen firewood, allowed some limited degree of game meat hunting, etc. They are encouraged to benefit while conserving them in perpetuity.

The Shashemene Forest project, which follows participatory forest management, integrates conservation and development. The activities include production of lumber, transmission poles, construction posts, fuel wood and slabs that generate income for the local communities as well.

The Participatory Forest Management Programme (PFMP), which is a joint initiative of FARM-Africa and SOS Shael Ethiopia, focuses on the development of community and government forest management partnership. Through this initiative, local communities in Bonga and Chilimo have started taking responsibilities for their forest areas. At present, they are protecting and sustainably utilising the forest resources based on their own management plans.

Recently a new cooperation has been initiated with the foundation called African Parks, which is established with the objective of assisting governments in Africa through public-private partnerships to provide professional management and innovative finance for protected areas, to the benefit of local communities. A case in point in Ethiopia is the Netchsar Park managed by this Foundation where the local communities enjoy job opportunities, and are also encouraged to establish their own parks at the buffer areas, which will eventually consumptively or non-consumptively be used by the local communities themselves.

Various sectoral and cross-sectoral national policies on the conservation and sustainable use of biodiversity have been developed and put in place in the country. Biodiversity conservation was dealt in the environment policy that was developed and adopted in 1997. Section 3.2 of the environment policy stipulates that local communities have the responsibility for the conservation and sustainable use of biodiversity and the right to the sharing of benefits arising from the use thereof. The National Biodiversity Conservation and Research policy of Ethiopia that was approved in April 1998 was also initiated to provide guidance for the effective conservation and sustainable utilization of the country's biodiversity. The overall objective of the biodiversity policy is to ensure effective conservation, enrich the country's genetic resources through introduction, repatriation and restoration. It integrates the conservation of biodiversity with sectoral and cross-sectoral strategies and programmes as well as the development and sustainable utilization of biodiversity. It ensures that local communities shall share from the benefit accrued from the utilization of biodiversity and their traditional knowledge.

The Boran Cattle Conservation Project in Borana (southern Ethiopia) attempts to protect and sustainable manage the threatened and dwindling Boran breed of cattle. Similarly the Fogera Cattle Conservation and Production Project in northern Ethiopia has been conserving the Fogera Breed and engaged in the production and dissemination of male animals of this breed to the farmers in the area.

The National Adaptation Programme of Action (NAPA) Project is under development. This project will assist in mitigating and adapting climate change's negative impacts. Likewise the NMHS PDF-B project works on coping mechanisms of drought through in land management.

16. Are migratory species and their habitats addressed by your country's national biodiversity strategy or action plan (NBSAP)? (decision VI/20)	
a) Yes	X
b) No	
D) If YES, please briefly describe the extent to which it addresses	
(a) Conservation, sustainable use and/or restoration of migratory species	<ul style="list-style-type: none"> <li>• Inland water ecosystem, which includes wetland systems in the Ethiopia Highlands and the Great Rift Valley system are important bird areas for resident species and stopover habitats for migratory species.</li> <li>• The NBSAP plans to prepare an updated forest cover map of Ethiopia including inland water ecosystems and non-agricultural areas.</li> <li>• Various efforts are being made to efficiently manage migratory bird habitats:-</li> <li>• A project has been formulated to properly manage the Ada Berga flood plain, which is the only breeding site known for the migratory white-winged fluff tail (African Endemic Bird)</li> <li>• Two site action plans (for Lakes Ziway and Awassa) and two management plans (for Cheffa wetland and Abaya-Chamo Lakes system) have been prepared.</li> <li>• The Abijata-Shalla Lakes National Park has been selected as the first Ramsar site for Ethiopia, which, however, is not yet a party.</li> <li>• The Ramsar Information Sheet and map of the site have been prepared. In addition, preliminary steps have been taken for the preparation of the site management plan.</li> </ul>
(b) Conservation, sustainable use and/or restoration of migratory species' habitats, including protected areas	<ul style="list-style-type: none"> <li>• The NBSAP calls for developing new management partnerships, test them in the field and improve them through monitoring and evaluation.</li> <li>• The plan also attempts to complete the establishment of effective protected area management partnerships/ systems for the entire protected areas network.</li> </ul>
(c) Minimizing or eliminating barriers or obstacles to migration	<ul style="list-style-type: none"> <li>• The NBSAP proposes sustainable funding mechanisms for natural resources management whereby part of the revenues from the natural resources will be reinvested in conservation</li> </ul>

	management through which wetland systems in the Ethiopian Highlands and the Great Rift Valley system that are important bird areas and stopover habitats for migratory species will be protected and rehabilitated.
(d) Research and monitoring for migratory species	<ul style="list-style-type: none"> <li>The research component in the NBSAP includes conservation biology, among others, that covers the conservation management of migratory wild animals.</li> </ul>
(e) Transboundary movement	<ul style="list-style-type: none"> <li>The NBSAP envisages revisiting the existing transboundary wildlife agreements with the ultimate goal of establishing parks for wildlife protection, controlling invasive alien species and benefit sharing with neighbouring stakeholder countries</li> </ul>
<b>II) If NO, please briefly indicate below</b>	
(a) The extent to which your country addresses migratory species at national level	
(b) Cooperation with other Range States since 2000	

### **Biodiversity and Climate Change**

<b>17. Has your country implemented projects aimed at mitigating and adapting to climate change that incorporate biodiversity conservation and sustainable use? (decision VII/15)</b>	
a) No	
b) No, but some projects or programs are under development	X
c) Yes, some projects have been implemented (please provide details below)	
Further comments on the projects aimed at mitigating and adapting to climate change that incorporate biodiversity conservation and sustainable use.	
The National Meteorological Service Agency of Ethiopia, in collaboration with other stakeholders, has developed a project proposal entitled `National Adaptation Programme of Action project (NAPA project)`. This project includes, among others, identifying adaptation strategies to the protection of biodiversity.	

**18.** Has your country facilitated coordination to ensure that climate change mitigation and adaptation projects are in line with commitments made under the United Nations Framework Convention on Climate Change and the United Nations Convention to Combat Desertification? (decision VII/15)

a) No	
b) No, but relevant mechanisms are under development	
c) Yes, relevant mechanisms are in place (please provide details below)	X

Further comments on the coordination to ensure that climate change mitigation and adaptation projects are in line with commitments made under the UNFCCC and the UNCCD.

Since climate change is a cross-sectoral issue, various stakeholders have participated in the development of the NAPA project. Similarly, the implementation is expected to be carried out synergistically involving all relevant sectors.

**Box XLII.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

**a) Outcomes and impacts of actions taken;**

- Priorities have been set in the NBSAP to conserve the ten major ecosystems. A mix of *in situ* and *ex situ* conservation are being pursued
- Conservation, development, production and utilization have been integrated in forest management at the local community level

**b) Contribution to the achievement of the goals of the Strategic Plan of the Convention;**

- National Biodiversity Strategy and Action Plan (NBSAP) prepared to effectively implement the convention

**c) Contribution to progress towards the 2010 target;**

- The country's rich agrobiodiversity is being properly conserved; attempts to conserve wild plants and animals are also serious, though more difficult

**d) Progress in implementing national biodiversity strategies and action plans;**

- The NBSAP has been endorsed by the Government, and is in print for distribution and implementation

**e) Contribution to the achievement of the Millennium Development Goals;**

- The several of land degradation and the re-establishment of plant and animal communities together with improvement in soil fertility is conserving biodiversity and reducing rural poverty.

**f) Constraints encountered in implementation;**

- Mandate overlap of different stakeholder institutions

### Article 7 - Identification and monitoring

<b>19. ?</b> On Article 7(a), does your country have an ongoing programme to identify components of biological diversity at the genetic, species, ecosystem level?	
a) No	
b) Yes, selected/partial programmes at the genetic, species and/or ecosystem level only (please specify and provide details below)	X
c) Yes, complete programmes at ecosystem level and selected/partial inventories at the genetic and/or species level (please specify and provide details below)	
Further comments on ongoing programmes to identify components of biodiversity at the genetic, species and ecosystem level.	
<p>The on-going EU financed Forest Coffee Conservation Component of CIP IV involves activities that deal with studies on the floristic composition and characterization of species within the forest ecosystem.</p> <p>Crop genetic resources that originated (were domesticated) in Ethiopia and/or those that exhibit high diversity are being characterized using morphological, biochemical and molecular markers. <i>In situ</i> characterization of collections of farmers' varieties of barley, wheat, sorghum, finger millet and enset has also taken place in all the 12 <i>in situ</i> conservation sites. The main objective of the <i>in situ</i> characterization of farmers' varieties is to document and register those that are found in a given site and to use the data as a benchmark for assessing the level of genetic erosion. So far 44 farmers' varieties of barley, 37 of finger millet, 27 of wheat, 66 of sorghum and 65 of enset have been documented.</p>	

<b>20. ?</b> On Article 7(b), which components of biological diversity identified in accordance with Annex I of the Convention, have ongoing, systematic monitoring programmes?	
a) at ecosystem level (please provide percentage based on area covered)	X
b) at species level (please provide number of species per taxonomic group and percentage of total known number of species in each group)	X
c) at genetic level (please indicate number and focus of monitoring programmes )	
Further comments on ongoing monitoring programmes at the genetic, species and ecosystem level.	
<p>Ecosystems and habitats containing high diversity, large numbers of endemic species or threatened species or wilderness required by migratory species of social economic, cultural and scientific importance or which are representative or unique associated with key evolutionary or other biological processes; representatives of such area in Ethiopia are:-</p> <ol style="list-style-type: none"> <li>1. The Simien Mountains National Park which harbors a considerable number of plant and animal species that are endemic such as Gelada baboons and Walia Ibex, has an ongoing systematic monitoring programmes. It is being carried out by the Ethiopian government and the Austrian Development Cooperation. Swiss Government support has also been important in the past</li> <li>2. Another important area that has been given attention is the Bale Mountains National Park and its surrounding forests due to its high biodiversity resources. The Bale Mountains harbor the most intact remnant of Afro-Alpine ecosystem in the African continent, (17.5% of all Afro alpine areas on the</li> </ol>	



continent). There are 1321 species of flowering plants, 163 of which are Eastern African highland endemics, including 27 endemic to Ethiopia. The mountains also contain more than half the global population of both Mountain Nyala and Ethiopia Wolf. Of the other mammals that have been recorded in the Bale Mountains, 26% are Ethiopian endemics. There are also endemic amphibians and reptiles. The mountain system is also one of the areas that the European migratory birds frequent during the northern winter. The conservation programme implemented by the Ethiopia Wolf Conservation Programme has increased the awareness on the population in the area and the Ethiopia wolf which was on the verge of extinction has been saved successfully

**21. ?** On Article 7(c), does your country have ongoing, systematic monitoring programmes on any of the following key threats to biodiversity?

a) No	
b) Yes, invasive alien species (please provide details below)	X
c) Yes, climate change (please provide details below)	X
d) Yes, pollution/eutrophication (please provide details below)	X
e) Yes, land use change/land degradation (please provide details below)	X
f) Yes, overexploitation or unsustainable use (please provide details below)	X

Further comments on monitoring programmes on key threats to biodiversity.

There is some monitoring (but not always systematic) on the types and extent of invasive alien species, climate change, pollution of rivers, land use changes, and over exploitation of biodiversity. This monitoring is conducted in uncoordinated way by various governmental and non-governmental bodies with differing objectives (Environmental, biodiversity, research, agriculture etc). However established monitoring programmes are limited to national parks. However, a systematic assessment of the woody biomass of the country has been completed.

**22. ?** On Article 7 (d), does your country have a mechanism to maintain and organize data derived from inventories and monitoring programmes and coordinate information collection and management at the national level?

a) No	
b) No, but some mechanisms or systems are being considered	
c) Yes, some mechanisms or systems are being established	X
d) Yes, some mechanisms or systems are in place (please provide details below)	
e) Yes, a relatively complete system is in place (please provide details below)	

Further information on the coordination of data and information collection and management.

Occasional inventories and monitoring are carried out and the information gathered is properly documented. An inventory of the Fogera Cattle Breed has been undertaken on a regular basis. Reports on the Status of Plant and Animal genetic Resources in Ethiopia were prepared as part of the Country's commitment and contribution to the FAO's State of the World's Plant Genetic Resources and Animal Genetic Resources. The reports have shown the diversity of Plant and Animal Genetic Resources for food and agriculture. The Addis Ababa University has published the identity and distribution of higher plants in Ethiopia.

23. ? Does your country use indicators for national-level monitoring of biodiversity? (decision III/10)	
a) No	X
b) No, but identification of potential indicators is under way (please describe)	
c) Yes, some indicators identified and in use (please describe and, if available, provide website address, where data are summarized and presented)	
d) Yes, a relatively complete set of indicators identified and in use (please describe and, if available, provide website address, where data are summarized and presented)	
Further comments on the indicators identified and in use.	

**Box XLIII.**

<p>Please elaborate below on the implementation of this article and associated decisions specifically focusing on:</p> <ol style="list-style-type: none"> <li>outcomes and impacts of actions taken;</li> <li>contribution to the achievement of the goals of the Strategic Plan of the Convention;</li> <li>contribution to progress towards the 2010 target;</li> <li>progress in implementing national biodiversity strategies and action plans;</li> <li>contribution to the achievement of the Millennium Development Goals;</li> <li>constraints encountered in implementation.</li> </ol>
<p><b>a) Outcomes and impacts of actions taken</b></p> <ul style="list-style-type: none"> <li>A National Strategy for Taxonomic Capacity Building on Small-Bodied Organisms prepared</li> <li>Project proposals on nine organism groups prepared for seeking funding</li> <li>Microorganisms have received attention</li> <li>A Botanical and Zoological Taxonomic Networks in Eastern Africa (BOZONET) formulated</li> <li>The four countries in the BOZONET prepared a joint project proposal</li> <li>Training and research programmes put in place for taxonomists at the Addis Ababa University, Biology Department</li> <li>Eight volumes of the Ethiopian Flora published</li> <li>Digitalizing all type specimens of African origin initiated</li> <li>Taxonomic identification service given to users of plant species</li> </ul> <p><b>b) Contribution to the achievement of the goals of the Strategic Plan of the Convention</b></p> <ul style="list-style-type: none"> <li>Networking at sub-regional level initiated</li> <li>Collaboration at regional and international level initiated</li> </ul> <p><b>c) Contribution to progress towards the 2010 target</b></p> <ul style="list-style-type: none"> <li>Attempt to reduce the decline of populations of species of selected taxonomic groups initiated</li> </ul> <p><b>d) Progress in implementing national biodiversity strategies and action plans</b></p> <ul style="list-style-type: none"> <li>The NBSAP stipulates that conservation is underpinned by identification (taxonomy)</li> </ul> <p><b>e) Contribution to the achievement of the Millennium Development Goals</b></p> <ul style="list-style-type: none"> <li>Significant role in averting loss of environmental resources</li> </ul>

**f) Constraints encountered in implementation**

The ability to identify is fundamental to survival. Taxonomy underpins all other biological sciences, including agriculture, forestry, fisheries, breeding and genetics, bioprospecting and biotechnology, ecology and conservation.

### Decisions on Taxonomy

<b>24. ?</b> Has your country developed a plan to implement the suggested actions as annexed to decision IV/1? (decision IV/1)	
a) No	
b) No, but a plan is under development	
c) Yes, a plan is in place (please provide details below)	X
d) Yes, reports on implementation available (please provide details below)	
<b>Further information on a plan to implement the suggested actions as annexed to decision IV/1.</b>	
<p>Ethiopia has already put in place a National Strategy for Taxonomic Capacity Building on Small-Bodied Organisms. This national strategy document contains chapters on viruses, bacteria, protozoa, fungi, lichens, algae, nematodes, small invertebrates (free-living), and insects'; and within each groups of organisms, information such as resource base, importance and major gaps and constraints, conservation and research status, strategy elements and priority organisms have been specified.</p> <p>Ethiopia along with Kenya, Tanzania and Uganda has formulated a taxonomic network, BOZONET. The Objective of BOZONET is to support these countries to remove barriers to the flow of relevant taxonomic information from networked centers of expertise, to assist the end-users for the conservation and sustainable use of biodiversity, through processes of inventory, description, monitoring and dissemination. A project under the title 'Botanical and Zoological Taxonomic Networks in Eastern Africa (BOZONET): Linking conservation to taxonomy' has been submitted to the GEF for funding.</p>	

<b>25. ?</b> Is your country investing on a long-term basis in the development of appropriate infrastructure for your national taxonomic collections? (decision IV/1)	
a) No	
b) Yes (please provide details below)	X
<b>Further information on investment on a long-term basis in the development of appropriate infrastructure for your national taxonomic collections.</b>	
<p>The NBSAP specifies time frame for action as ten to fifteen years, and in particular articulates the following major tasks to be accomplished.</p> <ul style="list-style-type: none"> <li>• Strengthen the capacity of the existing National Herbarium and the Natural History Museum (Addis Ababa University) (flora and fauna)</li> <li>• Promote the establishment of herbaria and zoological museums in all universities and relevant institutions</li> <li>• Promote taxonomic activities including integrating taxonomic capacity building activities into thematic and cross-cutting programmes</li> </ul> <p>National botanical gardens at Shashamane in Oromia region Gulelie in Addis Ababa has been established.</p>	

<b>26. ?</b> Does your country provide training programmes in taxonomy and work to increase its capacity of taxonomic research? (decision IV/1)	
a) No	
b) Yes (please provide details below)	X

Further information on training programmes in taxonomy and efforts to increase the capacity of taxonomic research.

There have been training and research programmes for taxonomists at the Biology Department of the Addis Ababa University, for many years now, reinforcing the Flora Project by producing accounts for the Flora of Ethiopia and Eritrea as part of their responsibilities.

**27. 2** Has your country taken steps to ensure that institutions responsible for biological diversity inventories and taxonomic activities are financially and administratively stable? (decision IV/1)

a) No	X
b) No, but steps are being considered	
c) Yes, for some institutions	
d) Yes, for all major institutions	

**28.\* 2** Is your country collaborating with the existing regional, sub-regional and global initiatives, partnerships and institutions in carrying out the programme of work, including assessing regional taxonomic needs and identifying regional-level priorities? (decision VI/8)

a) No	
b) No, but collaborative programmes are under development	
c) Yes, some collaborative programmes are being implemented (please provide details about collaborative programmes, including results of regional needs assessments)	X
d) Yes, comprehensive collaborative programmes are being implemented (please provide details about collaborative programmes, including results of regional needs assessment and priority identification)	

Further information on the collaboration your country is carrying out to implement the programme of work for the GTI, including regional needs assessment and priority identification.

Ethiopia is a member of the Coordinating Committee EAFRINET Loop (the East African regional arm of BIONET), and as part of its involvement in the loop it has produced a strategy document for taxonomic capacity building on small-bodied organisms that has created a forum for communication and exchange of information among institutions within member countries. For example, the Ambo Plant Protection Centre at the Ethiopian Institute of Agricultural Research (EIAR) has been interacting with EAFRINET member countries. EAFRINET is an ongoing attempt at networking on taxonomy in the region, but focuses on invertebrates and other pests to agriculture. EAFRINET has its main focus on the applied Agricultural Research Institutions, and is meant to be a permanent institutional mechanism for their networking.

As indicated earlier, Ethiopia is a member and active participant in BOZONET. As one possibility for

<sup>2</sup> The questions marked with \* in this section on Taxonomy are similar to some questions contained in the format for a report on the implementation of the programme of work on the Global Taxonomy Initiative. Those countries that have submitted such a report do not need to answer these questions unless they have updated information to provide.

developing a sustainable networking base under BOZONET is to help build a strong and broad-based EAFRINET, there has been a joint project proposal prepared and submitted by the four participating countries to GEF.

**29. \*** Has your country made an assessment of taxonomic needs and capacities at the national level for the implementation of the Convention? (annex to decision VI/8)

a) No	X
b) Yes, basic assessment made (please provide below a list of needs and capacities identified)	
c) Yes, thorough assessment made (please provide below a list of needs and capacities identified)	
Further comments on national assessment of taxonomic needs and capacities.	

**30. \*** Is your country working on regional or global capacity building to support access to, and generation of, taxonomic information in collaboration with other Parties? (annex to decision VI/8)

a) No	
b) Yes, relevant programmes are under development	
c) Yes, some activities are being undertaken for this purpose (please provide details below)	X
d) Yes, many activities are being undertaken for this purpose (please provide details below)	
Further comments on regional or global capacity-building to support access to, and generation of, taxonomic information in collaboration with other Parties.	
The National Herbarium at the Addis Ababa University involved in the African Types Initiative to digitalize all type specimens of African origin in collaboration with over thirty regional and international herbaria.	

**31. \*** Has your country developed taxonomic support for the implementation of the programmes of work under the Convention as called upon in decision VI/8? (annex to decision VI/8)

a) No	
b) Yes, for forest biodiversity (please provide details below)	X
c) Yes, for marine and coastal biodiversity (please provide details below)	N/A
d) Yes, for dry and sub-humid lands (please provide details below)	X
e) Yes, for inland waters biodiversity (please provide details below)	
f) Yes, for mountain biodiversity (please provide details below)	X
g) Yes, for protected areas (please provide details below)	X

h) Yes, for agricultural biodiversity (please provide details below)	X
i) Yes, for island biodiversity (please provide details below)	N/A
Further comments on the development of taxonomic support for the implementation of the programmes of work under the Convention.	
<p>The ecosystem classification in Ethiopia is based on vegetation type. Therefore, the major species components of each ecosystem have been taxonomically identified since the Ethiopian Flora is now well known. In addition, the woody species of the majority of the forests have been inventoried and taxonomically identified. The classification and identification of 6500 species of higher plants found in the country by the Ethiopian Flora Project, which is a success story in taxonomic endeavour achieved by the country.</p> <p>The Bale National Park, which is a mountain biodiversity area, is now considered as one of the world's biodiversity hotspots. The species diversity is very high and there are over 30 endemic species. This surfaced after the taxonomic investigation of the Flora Project.</p> <p>Ethiopia's protected areas are divided into two, namely, Principal Wildlife Conservation Areas, which include all national parks and wildlife sanctuaries where wildlife is protected, and Secondary Wildlife Conservation Areas, which include all wildlife reserves and controlled hunting areas. Since the establishment of these conservation areas, a considerable success has been gained in the preservation of some species of animals, which were at the verge of extinction. Detailed information on Principal Wildlife Conservation Areas (which include name, area, ecosystem category, total species of mammals and birds, major wild animal species conserved, and other unique species), Secondary Wildlife Conservation Areas (which include name, area, region, ecosystem, and major animal species conserved), controlled hunting areas (which include name, area, region, ecosystem, and major animal species conserved), and faunal distribution on some of the National Forest Priority areas (which include name, region, and major animal species conserved) are available. This shows the extent to which Ethiopia has tried to comply with the Convention on Biological Diversity.</p> <p>Inventory of biological resources in inland water bodies in the Rift Valley wetlands was also made through the Rift Valley Lakes project funded by GEF/UNDP.</p> <p>With regards to agrobiodiversity, Ethiopia has been supporting taxonomic activities with the objective of identifying the very high crop species and genetic diversity found in the country. This attempt has been proceeding, for example, in four of the world's widely grown food crops (wheat, barley, sorghum, peas), in three of the world's most important industrial crops (linseed, castor, and cotton), in the world's most important cash crop (coffee), in a number of food crops of regional or local importance (finger millet, cowpeas, lentil, etc), in a number of groups of forage plants of world importance (clovers, lucerns, oats, etc.), in highly localized field crops (such as noug (<i>Guizotia abyssinica</i>), tef (<i>Eragrostis tef</i>), and Ethiopian mustard (<i>Brassica carinata</i>)), in root and tuber crops, which are native to Ethiopia, (anchote (<i>Coccinia abyssinica</i>), enset (<i>Ensete ventricosum</i>), yams (<i>Dioscorea</i> spp.), and "Oromo dinich" (<i>Coleus edulis</i>)), in spices (korarima (<i>Aframomum korarima</i>), chilies (<i>Capsicum</i> spp.), shallot (<i>Allium</i> spp.), long pepper (<i>Piper longum</i>), black cumin (<i>Nigella sativa</i>), white cumin/bishop's weed (<i>Carum copticum</i>), coriander (<i>Coriandrum sativum</i>), thyme (<i>Thymus vulgaris</i>) and fenugreek (<i>Trigonella foenum-graecum</i>)), in a number of herbaceous legumes (such as the genera <i>Trifolium</i>, <i>Vigna</i>, <i>Lablab</i>) and domestic mammalian species (include cattle, sheep, goats, camels, donkeys, horses, dogs and cats, chicken and stinging and stingless honey bees).</p>	

<b>32. * Has your country developed taxonomic support for the implementation of the cross-cutting issues under the Convention as called upon in decision VI/8?</b>	
a) No	
b) Yes, for access and benefit-sharing (please provide details below)	X
c) Yes, for Article 8(j) (please provide details below)	X
d) Yes, for the ecosystem approach (please provide details below)	
e) Yes, for impact assessment, monitoring and indicators (please provide details below)	
f) Yes, for invasive alien species (please provide details below)	X
g) Yes, for others (please provide details below)	
Further comments on the development of taxonomic support for the implementation of the cross-cutting issues under the Convention.	
In accordance with access and benefit sharing of Article 15 and community rights of Article 8(j) of the CBD, the Proclamation to Provide for Community Rights and Access to Genetic Resources and Community Knowledge has been made and this is acquiring support from all angles including taxonomic support as deemed necessary to regulate the access to genetic resources and community knowledge and to provide for the rights local communities have over their genetic resources and community knowledge.	

**Article 8 - *In-situ* conservation**  
**[excluding paragraphs (a) to (e), (h) and (j)]**


<b>33. ? On Article 8(i), has your country endeavored to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and sustainable use of its components?</b>	
a) No	
b) No, but potential measures are being identified	
c) Yes, some measures undertaken (please provide details below)	X
d) Yes, comprehensive measures undertaken (please provide details below)	
Further comments on the measures taken to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and sustainable use of its components.	
The GEF/UNDP funded dynamic on-farm crop diversity management programme and the on-farm crop management initiatives Seeds of survival (SoS) programme supported by the Unitarian Service Committee (USC) of Canada, helped in conserving and restoration of crop genetic resources and creating awareness about the value of genetic diversity. The strategies of the programmes were to initiate on-farm crop conservation and simultaneously seek ways to increase productivity through enhancing farmers' access to crop diversity. The conservation strategy was backed-up by the establishment of Community Gene Banks so as to ensure a sustainable supply of planting materials for the farmers and satisfy farmers' needs by creating access to crop genetic diversity as well as facilitating market access for their produce.	
Currently an add-on project, "Agro-Biodiversity Conservation", is underway. The project has been initiated to support the <i>in situ</i> conservation efforts of the country and to strengthen the market and non-market incentive mechanism so as to promote the conservation and sustainable utilization of the genetic resources.	



The FAO/Norway-Seed Security Project, currently in a pilot-phase has been design (second phase) to work on a community-based and managed seed system by establishing a Cooperative Community Based Seed Enterprise (CCBSE) in Hararghe (Oromiya region). The objective of the project is increasing the chance and likelihood for achieving a sustainable impact on the improvement of seed security at the community level. The project’s general objective is to contribute to the efforts of the government of Ethiopia to improve and sustain seed security, leading to a decrease in reliance on seed/food external relief interventions and to strengthen the farmers’ seed supply system.

The National conservation Strategy emphasizes that all natural resources are use in a sustainable way for the benefit of present and future generations. It calls for a continued attention in the conservation and protection of natural resources as well as on finding means to address any conflicts between conservation and use in order to mitigate their negative impacts to biodiversity. Accordingly, some projects such as the following involve concepts of participatory or local community-based approaches to the conservation and sustainable use of biological recourses. For example, the “Participatory Forest Management Project” is being implemented in parts of the southwestern montane evergreen priority rainforest areas of Ethiopia with the overall goal of realization of sustainable management of forests in and around the project area, which can be achieved through the participation of local people. The Forest Coffee Conservation Component of Coffee Improvement Project IV (CIP IV) is also being carried out with an overall aim to contribute to the development of the local communities through the provision of socioeconomic services as incentives so as to promote the envisaged conservation activities successfully. It also considers the enhancement of the capacity of local institutions (stakeholders) that will be involved in the implementation of the Project. The Non-Timber Forest Products (NTFPs) Project is also being implemented with an overall aim of enhancing sustainable forest-based livelihoods through the use of such products as honey, coffee, spices, and bamboo.

The push to stop free-range grazing and to ecologically manage the environment to improve soil fertility and raise agricultural production among local communities, which was pioneered by the Institute for Sustainable Development and the Bureau of Agriculture in the Tigray Region, is expanding fast throughout the agricultural highlands. As a result, biodiversity is increasing at the same time as biomass for use by the local communities and their domestic animals.

**34. ** On Article 8(k), has your country developed or maintained the necessary legislation and/or other regulatory provisions for the protection of threatened species and populations?

a) No	
b) No, but legislation is being developed	
c) Yes, legislation or other measures are in place (please provide details below)	X

Further information on the legislation and/or regulations for the protection of threatened species and populations.

Ethiopia has ratified the Convention on International Trade on Endangered Species. Furthermore, the forestry and fisheries legislations of Ethiopia contain provisions aimed at ensuring the conservation of threatened species. The Forestry Proclamation of Ethiopia provides for the protection of threatened species. It prohibits threatened species from being felled in state or protected forests. Some of the endangered plant species in the country are given below.

**Some Endangered Plant Species of Ethiopia**

Species	Family	Habit	Vegetation type/Ecosystem
<i>Acacia prasinata</i>	Fabaceae	Tree	Acacia woodland
<i>Acacia pseudonigrescence</i>	Fabaceae	Tree	Acacia-Comiphora woodland
<i>Aeschynomene ruspoliana</i>	Fabaceae	Shrub	Acacia-Comiphora woodland
<i>Boswellia ogadensis</i>	Burseraceae	Tree	Acacia-Comiphora woodland
<i>Commiphora monoica</i>	Burseraceae	Tree	Acacia-Comiphora woodland
<i>Crotalaria awasensis</i>	Fabaceae	Shrub	Acacia-Comiphora woodland
<i>Crotalaria boudettii</i>	Fabaceae	Shrub	Acacia-Comiphora woodland
<i>Crotalaria fallax</i>	Fabaceae	Herb	Acacia-Comiphora woodland
<i>Crotalaria heterotricha</i>	Fabaceae	Shrub	Acacia-Comiphora woodland
<i>Crotalaria hypargyria</i>	Fabaceae	Shrub	Acacia-Comiphora woodland
<i>Crotalaria jijigensis</i>	Fabaceae	Shrub	Acacia-Comiphora woodland
<i>Crotalaria ruspoliana</i>	Fabaceae	Shrub	Acacia-Comiphora woodland
<i>Crotalaria trifoliota</i>	Fabaceae	Shrub	Acacia-Comiphora woodland
<i>Cyphostemma burgeri</i>	Vitaceae	Herb	Acacia-Comiphora woodland
<i>Eriosema tuberosum</i>	Fabaceae	Epiphyte	Acacia-Comiphora woodland
<i>Erythrococca uniflora</i>	Euphorbiaceae	shrub	Acacia-Comiphora woodland
<i>Erythrophysa septentrionalis</i>	Sapindaceae	Shrub/Tree	Acacia-Comiphora woodland
<i>Euphorbia baleensis</i>	Euphorbiaceae	Shrub	Acacia-Comiphora woodland
<i>Euphorbia betulicortex</i>	Euphorbiaceae	Tree	Acacia-Comiphora woodland
<i>Euphorbia bittataensis</i>	Euphorbiaceae	Shrub	Acacia-Comiphora woodland
<i>Euphorbia burgeri</i>	Euphorbiaceae	Shrub	Acacia-Comiphora woodland
<i>Euphorbia cryptocaulis</i>	Euphorbiaceae	Geophyte	Acacia-Comiphora woodland
<i>Euphorbia daletiensis</i>	Euphorbiaceae	Shrub	Acacia-Comiphora woodland
<i>Euphorbia ellenbecki</i>	Euphorbiaceae	Shrub	Acacia-Comiphora woodland
<i>Euphorbia fissispina</i>	Euphorbiaceae	Shrub	Acacia-Comiphora woodland
<i>Euphorbia furcatifolia</i>	Euphorbiaceae	Safrutescent	Acacia-Comiphora woodland
<i>Euphorbia gymnocalycioides</i>	Euphorbiaceae	Herb	Acacia-Comiphora woodland

The proclamation also imposes obligation on private forest owners to observe the directives issued by the government pertaining to the conservation of endangered tree and other species. To this effect, the proclamation empowers the Ministry of Agriculture and Rural Development to issue directives necessary to ensure the conservation of threatened species as the need arises.

The Fisheries Development and Utilization Proclamation of 2003 also provides for a legal mechanism relevant to the protection of threatened fish species. The proclamation aims, *inter alia*, to conserve fish biodiversity and to prevent and control the over-exploitation of fisheries resource in the country. To this end, it subjects any activity of commercial fishing in the country to a requirement of fishing permit which shall be issued in accordance with the regulations to be enacted on the utilization and sustainable development of fisheries. It further provides that the regulations to be enacted on the utilization and development of fisheries shall clearly specify, *inter alia* the protected fishery areas, annual fish catch, fishing seasons, prohibited activities, community participation, environmental impact assessment, and the procedure for issuing, renewal and suspension of fishing permits. The proclamation defines protected fishery area as a geographical area of any water body fully or partially demarcated where, except for research, fishing is prohibited.

However, although these legislations are in place, their enforcement is often lax. Therefore, the practical measures taken to protect endangered species have not been sufficient. This is largely owing to capacity limitations.

Ethiopia joined CITES in 1989 based on the Council of State Decree no. 14/1989, a Decree to ratify the convention on International Trade in Endangered Species Fauna and Flora. The decree empowers the Ministry of Agriculture and Rural Development to undertake all acts necessary for the implementation of the convention.

There is now a Wildlife Development, Conservation and Utilization Proclamation in the process of being passed as law. It provides that conservation areas that are inhabited by the country's endemic and endangered species shall be administered under the direct authority of the Federal Government. This shows that the government has given the highest consideration for the protection of biodiversity.

**35. ?** On Article 8(1), does your country regulate or manage processes and categories of activities identified under Article 7 as having significant adverse effects on biological diversity?

a) No	
b) No, but relevant processes and categories of activities being identified	
c) Yes, to a limited extent (please provide details below)	X
d) Yes, to a significant extent (please provide details below)	

Further comments on the regulation or management of the processes and categories of activities identified by Article 7 as having significant adverse effects on biodiversity.

Institutional measure has been taken to regulate and manage processes that affect the conservation and sustainable use of biodiversity. The Institute of Biodiversity Conservation has been given the responsibility, *inter alia*, to identify processes that promote or threaten the existence of biodiversity and to formulate and propose policy ideas to concerned authorities animal to promote the processes that favour biodiversity conservation and to discontinue the processes that exacerbate biodiversity loss.

**Box XLIV.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation

**a) Outcomes and impacts of actions taken;**

- Exemplary on-farm conservation and sustainable use of farmers' varieties of major food crops established
- Root causes of losses of biodiversity identified

**b) Contribution to the achievement of the goals of the Strategic Plan of the Convention;**

- Involvement of local communities in *in-situ* conservation enhanced

- c) Contribution to progress towards the 2010 target;**
- Conservation of farmers' varieties of major food crops and increased agricultural production integrated and sustainably managed
- d) Progress in implementing national biodiversity strategies and action plans;**
- Attempt made to strike a balance between conservation measures within Protected Areas and measures for sustainable use of natural areas outside of PAs in the countryside at large
- e) Contribution to the achievement of the Millennium Development Goals;**
- Sustainable development which protects biodiversity while eliminating poverty being undertaken
- f) Constraints encountered in implementation.**
- Slow mainstreaming of biodiversity policies at national regional and local institutions
  - Challenges of capacity limitations in moving from the planning stage to the implementation stage of *in situ* conservation
  - Though legislations are in place, enforcing them proves to be difficult, again owing to capacity limitations

### Programme of Work on Protected Areas (Article 8 (a) to (e))

<b>36. Has your country established suitable time bound and measurable national-level protected areas targets and indicators? (decision VII/28)</b>	
a) No (please specify reasons)	
b) No, but relevant work is under way	
c) Yes, some targets and indicators established (please provide details below)	X
d) Yes, comprehensive targets and indicators established (please provide details below)	
Further comments on targets and indicators for protected areas.	
<p>The Millennium Development Goals Needs Assessment of Ethiopia has targeted the present major protected area of the country to be increased to eleven by 2015. The sub-sector is considered in the MDG as one of non - traditional food security problem alleviation systems. Along with increasing the number of protected areas, intervention on other wildlife components such as the establishment of wildlife ranches, live wild animal export promotion, promotion of wildlife based-tourism, establishment of trans-boundary protected areas, community conservation areas, infrastructure development, high level training and public conservation education and awareness creation interventions have been targeted to be implemented by 2015.</p>	

**37. Has your country taken action to establish or expand protected areas in any large or relatively unfragmented natural area or areas under high threat, including securing threatened species? (decision VII/28)**

a) No	
b) No, but relevant programmes are under development	
c) Yes, limited actions taken (please provide details below)	X
d) Yes, significant actions taken (please provide details below)	

**Further comments on actions taken to establish or expand protected areas.**

Ethiopia has demarcated 14% of its surface as protected areas, and the focus at present is to properly protect the existing protected areas, which are threatened by degradation. Many of the protected areas are affected by several man-made factors such as overgrazing by domestic stock, human settlement, cultivation, poaching, bush fire and natural calamities such as drought. The Federal and Regional governmental offices and, environmental NGOs are helping local communities to reverse the current degradation trends in protected areas. Some examples of such efforts are:

- Revitalizing the Maze wildlife reserve (habitat of the Swayne's Harte Beast) in the Southern part of the Country
- Establishing the new Chebera Chorchora wildlife reserve in the Southern part of the country
- Nominating the Abijate-Shalla National park as the first Ramsar site for Ethiopia.

**38. Has your country taken any action to address the under representation of marine and inland water ecosystems in the existing national or regional systems of protected areas? (decision VII/28)**

a) No	
b) Not applicable	
c) No, but relevant actions are being considered	
d) Yes, limited actions taken (please provide details below)	X
e) Yes, significant actions taken (please provide details below)	

**Further comments on actions taken to address the under representation of marine and inland water ecosystems in the existing national or regional systems of protected areas.**

At present, the Land Use Policy of Ethiopia considers wildlife conservation as one form of land use in contrast with earlier views held in which whenever the government needed to utilize protected areas for other purposes, it automatically violated their protection.

**39. Has your country identified and implemented practical steps for improving the integration of protected areas into broader land and seascapes, including policy, planning and other measures? (decision VII/28)**

a) No	
b) No, but some programmes are under development	
c) Yes, some steps identified and implemented (please provide details below)	X
d) Yes, many steps identified and implemented (please provide details below)	

Further comments on practical steps for improving integration of protected areas into broader land and seascapes, including policy, planning and other measures.

Protected areas are integrated in the new Land Use Policy of the country, which, in the future, can put protected areas in perspective in the process of the preparation of plans. In addition, the integration of the local communities near or adjacent to the protected areas in the management of those areas is also envisaged in the new policy adopted. Community forest management and integrated river catchments management are also considered as integral parts of protected area management.

**40.** Is your country applying environmental impact assessment guidelines to projects or plans for evaluating effects on protected areas? (decision VII/28)

a) No	
b) No, but relevant EIA guidelines are under development	
c) Yes, EIA guidelines are applied to some projects or plans (please provide details below)	
d) Yes, EIA guidelines are applied to all relevant projects or plans (please provide details below)	X

Further comments on application of environmental impact assessment guidelines to projects or plans for evaluating effects on protected areas.

The importance of EIA is indicated in the new Wild Life Policy and Legislation, which is in the final process of promulgation. Using EIA guidelines, the Environmental Protection Authority at the Federal level and counterpart environmental agencies at Regional levels evaluate the potential impacts of roads, water resources developments agricultural and industrial projects and protected areas in the country. The country has an EIA law and sectoral guidelines on irrigation, road, mining, agriculture transport and industrial sectors and guidelines on additional sectors are under preparation.

**41.** Has your country identified legislative and institutional gaps and barriers that impede effective establishment and management of protected areas? (decision VII/28)

a) No	
b) No, but relevant work is under way	
c) Yes, some gaps and barriers identified (please provide details below))	X
d) Yes, many gaps and barriers identified (please provide details below)	

Further comments on identification of legislative and institutional gaps and barriers that impede effective establishment and management of protected areas.

An assessment of genetic resources policy, legal and institutional gaps and barriers have been carried out under the Genetic Resources Policy Initiative Project. Protected areas have been dealt with as one of the components. Absence of legal and institutional mechanisms for community participation in the establishment and management of protected areas and their sharing of the benefits arising therefrom has been identified as one of the major gaps and barriers. Accordingly, the following gaps and barriers are some among others

- Capacity limitation to enforce the existing policies and laws on land tenure, resource access rights, etc.
- Absence of linkages between law enforcement and protected area authorities.
- Limited biological expertise to manage wildlife especially to monitor, evaluate and carry proper

wildlife utilization activities such as census, quota setting, trophy handling and measurement etc.

**42. Has your country undertaken national protected-area capacity needs assessments and established capacity building programmes? (decision VII/28)**

a) No	
b) No, but assessments are under way	X
c) Yes, a basic assessment undertaken and some programmes established (please provide details below)	
d) Yes, a thorough assessment undertaken and comprehensive programmes established (please provide details below)	

Further comments on protected-area capacity needs assessment and establishment of capacity building programmes.

The Environmental Protection Authority is currently engaged in a National Capacity Needs Self Assessment to identify, prioritize and tackle capacity constraints that hinder environmental protection activities in various sectors, including in biodiversity. One of the sectors given due consideration in this programme is assessing capacity need for protected areas in order to manage them sustainably.

**43. Is your country implementing country-level sustainable financing plans that support national systems of protected areas? (decision VII/28)**

a) No	
b) No, but relevant plan is under development	
c) Yes, relevant plan is in place (please provide details below)	X
d) Yes, relevant plan is being implemented (please provide details below)	

Further comments on implementation of country-level sustainable financing plans that support national systems of protected areas.

The government allocates budgets for protected area based on its capacity. In addition, whenever funds are obtained from external sources, additional activities not covered by the government budget are implemented.

**44. Is your country implementing appropriate methods, standards, criteria and indicators for evaluating the effectiveness of protected areas management and governance? (decision VII/28)**

a) No	
b) No, but relevant methods, standards, criteria and indicators are under development	X
c) Yes, some national methods, standards, criteria and indicators developed and in use (please provide details below)	
d) Yes, some national methods, standards, criteria and indicators developed and in use and some international methods, standards, criteria and indicators in use (please provide details below)	

Further comments on methods, standards, criteria and indicators for evaluating the effectiveness of protected areas management and governance.

The country is developing methods of improving the whole management of protected areas of the country.

**Box XLV.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

**a) Outcomes and impacts of actions taken**

- Interest of the Federal and Regional Governments has improved to establish new protected areas
- Inland waters, which were mainly considered only of drinking and irrigation value, are now seen as important also for wildlife and useful for other purposes such as education and ecotourism
- Sustaining wildlife resource is now accepted as an appropriate land use activity in the country.
- Legislation for evaluating the environmental impact of projects in protected areas now enables finding of preventing negative impacts
- Improvement and inclusion of biodiversity conservation in curricula of schools and colleges is helping improve awareness and capacity
- The usefulness of country financing for sustainable plans is understood and this ensures the future of protected areas

**b) Contribution to the achievement of the goals of the Strategic Plan of the Convention**

- Although meager, availability of finance to implement the three objectives of the Convention is assured through government budget

**c) Contribution to progress towards the 2010 target**

- Areas of particular interest to biodiversity are being protected

**d) Progress in implementing national biodiversity strategies and action plans**

A total of 193,600 Km<sup>2</sup> of land has been put aside as Protected Area

**e) Contribution to the achievement of the Millennium Development Goals**

- Implementation of the proposed Targets such as strengthening existing protected areas, wildlife farms and ranches conserve biodiversity while alleviating poverty

**f) Constraints encountered in implementation**

- Inadequate budget
- Shortage of trained human resources



### Article 8(h) - Alien species

<b>45.</b> Has your country identified alien species introduced into its territory and established a system for tracking the introduction of alien species?	
a) No	
b) Yes, some alien species identified but a tracking system not yet established	X
c) Yes, some alien species identified and tracking system in place	
d) Yes, alien species of major concern identified and tracking system in place	

<b>46. ?</b> Has your country assessed the risks posed to ecosystems, habitats or species by the introduction of these alien species?	
a) No	
b) Yes, but only for some alien species of concern (please provide details below)	X
c) Yes, for most alien species (please provide details below)	

Further information on the assessment of the risks posed to ecosystems, habitats or species by the introduction of these alien species.

Invasive Alien Species (IAS) has been one of the emerging problems facing Ethiopia. This has already been identified by the Environmental Policy of Ethiopia (EPE) and Ethiopia's Biodiversity Strategy and Action Plan (BSAP) as one of the major threats to its biodiversity and economic well-being. Various institutions including the Ethiopian Institute of Agricultural Research, the Environmental Protection Authority and higher learning institutions have assessed the risks of major IAS both jointly and severally. Assessment results indicate *Prosopis juliflora* is a biodiversity and socioeconomic threat in the Rift Valley pasture lands. On the other hand, *Parthenium hysterophorus*, *Eichhornia crassipes* and *Lantana camara* are threatening ecosystems. *Parthenium hysterophorus* is invading agricultural lands, pastures and home yards almost all over the country. It is affecting human health (allergic reaction), biodiversity and economic activities (agriculture) mainly in the eastern parts of the country. *Eichhornia crassipes* and *Lantana camara* are threatening aquatic and woodland biodiversity respectively. The former is causing problems in Qoqa and Aba Samuel hydroelectric dams and the latter is affecting bush lands and woodlands in many areas in the country, especially in the eastern and southern mid-attitude areas. Around Dire Dawa, Harar and Somali, animals feed on *Lantana camara* due to lack of grass, causing skin lesions and liver disease on cattle with mortality rate of upto 70% during the dry season.

The recently formulated regional joint project (Ethiopia, Uganda, Zambia, Ghana), removing Barriers to Invasive Plant Management in Africa' has highlighted the problem related to invasive alien species and calls for the adoption of national measures and standards to deal with the problem.

47. ? Has your country undertaken measures to prevent the introduction of, control or eradicate, those alien species which threaten ecosystems, habitats or species?

a) No	
b) No, but potential measures are under consideration	
c) Yes, some measures are in place (please provide details below)	X
d) Yes, comprehensive measures are in place (please provide details below)	

Further information on the measures to prevent the introduction of, control or eradicate those alien species that threaten ecosystems, habitats or species.

**Prevention**

- Prevention of the introduction of IAS is practiced to some extent in the country through its plant quarantine department. The focus is primarily on the prevention of agricultural pests, and basic risk analyses. However, capacity is limited, including in the assessment of environmental risks, which is now included in the International Standards for Phytosanitary Measures No.11 on Pest Risk Analysis for Quarantine Pests.

**Detection**

- Ethiopia has no mechanism for monitoring and detecting invasive species except in agriculture, and has no rapid response plans to allow for the eradication of new invasions.

**Control**

- Control programmes in Ethiopia have followed the usual piecemeal approach. It has not been coordinated across sectors, and has focused mainly on attempting to address the major invaders. The emphasis is on tackling problems that threaten agriculture and human activity. This happens owing to insufficient resources, capacity or information availability to address the threats to natural ecosystems. For example, mechanical control and prescribed burning have been employed for *P.juliflora*. And, the combination of both methods with proper management has shown encouraging results in the control of this species. A similar method of mechanical control of *Parthenium hysterophorus*, predominantly through uprooting campaigns just before flowering, and the clearing of water hyacinth (*Eichhornia crassipes*) from inland water bodies and irrigation canals, through mass mobilizing has also been practiced and has been reasonably effective. On the other hand, Ethiopia has never introduced the available biological control agents despite evidence that they have been effective and safe in other countries in Africa and beyond.
- Many invasive species have been introduced because of anticipated benefits, and this can present a conflict when control is proposed. *Prosopis juliflora* has been and is still promoted as a beneficial tree and was introduced to Ethiopia in the 1970's. While it provides benefits to some, it is now highly invasive. It currently covers thousands of hectares in the Middle and Upper Awash Valley areas and in Eastern Harerge with damaging impacts on local biodiversity and with the potential for much further spread. Approaches for addressing such conflicting perceptions and objectives, including a regulatory framework and scientific methods for evaluating costs and benefits, are generally absent.

48. ? In dealing with the issue of invasive species, has your country developed, or involved itself in, mechanisms for international cooperation, including the exchange of best practices? (decision V/8)

a) No	
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b) Yes, bilateral cooperation	
c) Yes, regional and/or subregional cooperation	X
d) Yes, multilateral cooperation	

**49. ?** Is your country using the ecosystem approach and precautionary and bio-geographical approaches as appropriate in its work on alien invasive species? (decision V/8)

a) No	X
b) Yes (please provide details below)	

Further comments on the use of the ecosystem approach and precautionary and bio-geographical approaches in work on alien invasive species.

The use of ecosystem approach has almost been neglected in many activities of invasive species control. Awareness on ecosystem approach is very low among policy makers, institutions, professionals, and the community as well. Besides, ecosystem approach to control invasive species has not been institutionalised in the country. Thus, the approach so far has been based primarily on the presence of species.

**50.** Has your country identified national needs and priorities for the implementation of the Guiding Principles? (decision VI/23)

a) No	
b) No, but needs and priorities are being identified	
c) Yes, national needs and priorities have been identified (please provide below a list of needs and priorities identified)	X

Further comments on the identification of national needs and priorities for the implementation of the Guiding Principles.

National needs and priorities have been identified during the PDF-A, and PDF-B phases of developing a project entitled 'Regional (Ethiopia, Uganda, Zambia, Ghana): Removing Barriers to Invasive Plant Management in Africa'. The project document was submitted to the GEF in September 2005 by UNEP. A joint regional strategy was planned but a management plan is yet to be developed. The major needs and priorities are focusing on strengthening the policy and institutional environment, giving appropriate information on risks, impacts and management of invasive alien species; implementation of strategies for the prevention and management of priority invasive alien species, and building the capacity for multi-sectoral prevention and management of invasive alien species.

<b>51. Has your country created mechanisms to coordinate national programmes for applying the Guiding Principles? (decision VI/23)</b>	
a) No	X
b) No, but mechanisms are under development	
c) Yes, mechanisms are in place (please provide details below)	
Further comments on the mechanisms created to coordinate national programmes for implementing the Guiding Principles.	
The popularization work for the domestication of the guiding principle has not been effective so far. However, the Institute of Biodiversity Conservation has been working on the popularization of the guiding principles to some extent despite the lack of awareness and commitment at the top level.	

<b>52. Has your country reviewed relevant policies, legislation and institutions in the light of the Guiding Principles, and adjusted or developed policies, legislation and institutions? (decision VI/23)</b>	
a) No	
b) No, but review under way	X
c) Yes, review completed and adjustment proposed (please provide details below)	
d) Yes, adjustment and development ongoing	
e) Yes, some adjustments and development completed (please provide details below)	
Further information on the review, adjustment or development of policies, legislation and institutions in light of the Guiding Principles.	
During the aforementioned project development phases the barriers to addressing; invasive alien species issues in Ethiopia were identified and analyzed. One of these was the existence of a weak policy and institutional environment. Accordingly, gaps, overlaps and inconsistencies in existing policies, regulations, strategies and institutional arrangements concerning invasive alien species have been identified. Ethiopia gives more prominence to invasive alien species issues in its NBSAP than in its National Environmental Policy. Ethiopia has no institution with overall responsibility for the coordination of action on invasive alien species issues.	

<b>53. Is your country enhancing cooperation between various sectors in order to improve prevention, early detection, eradication and/or control of invasive alien species? (decision VI/23)</b>	
a) No	
b) No, but potential coordination mechanisms are under consideration	X
c) Yes, mechanisms are in place (please provide details below)	
Further comments on cooperation between various sectors.	
There is no institutional coordination mechanism for ensuring that invasive alien species issues are addressed with the necessary broad, multi-sectoral coordination required by the ecosystem approach. But attempts at such a coordination are now starting.	

<b>54.</b> Is your country collaborating with trading partners and neighboring countries to address threats of invasive alien species to biodiversity in ecosystems that cross international boundaries? (decision VI/23)	
a) No	X
b) Yes, relevant collaborative programmes are under development	
c) Yes, relevant programmes are in place (please specify below the measures taken for this purpose)	
Further comments on collaboration with trading partners and neighboring countries.	

<b>55.</b> Is your country developing capacity to use risk assessment to address threats of invasive alien species to biodiversity and incorporate such methodologies in environmental impact assessment (EIA) and strategic environmental assessment (SEA)? (decision VI/23)	
a) No	
b) No, but programmes for this purpose are under development	X
c) Yes, some activities for developing capacity in this field are being undertaken (please provide details below)	
d) Yes, comprehensive activities are being undertaken (please provide details below)	
Further information on capacity development to address threats of invasive alien species.	
<p>The Ethiopian Society of Weed Science has tried to identify and assess the threat of major invader species that were introduced either intentionally for certain purposes (e.g. <i>Prosopis juliflora</i> as an agro-forestry species along the Rift Valley and <i>Lantana camara</i> as an ornamental species) or accidentally along with aid foods, planting materials, and farm implements (e.g. <i>Parthenium hysterophorus</i>, <i>Eichhornia crassipes</i>, etc.), and to develop a national strategy and action plan for their prevention and control. This would be implemented by establishing sectoral/regional stakeholders and building their capacity through the regional project on <i>Removing Barriers to Invasive Plant Management in Africa</i>.</p> <p>In addition, one of the areas of focus of the National Capacity Needs Self Assessment Project (NCSAP) is identifying capacity constraints that hinder efficient EIA and Strategic Environmental Assessment.</p>	

<b>56.</b> Has your country developed financial measures and other policies and tools to promote activities to reduce the threats of invasive species? (decision VI/23)	
a) No	
b) No, but relevant measures and policies are under development	
c) Yes, some measures, policies and tools are in place (please provide details below)	X
d) Yes, comprehensive measures and tools are in place (please provide details below)	
Further comments on the development of financial measures and other policies and tools for the promotion of activities to reduce the threats of invasive species.	
A draft Invasive Species Strategy and Action Plan (ISSAP), which includes a review of other policies, plans, laws, and regulations, is under preparation to guide further activities. The institutional arrangement for managing invasive alien species is also being reviewed and a coordination mechanism is being developed to involve the government, the private sectors and local communities. A key activity of the on-going preparation of the ISSAP is to develop and implement financial mechanisms to ensure the sustainability of invasive alien species management, particularly those aspects that generate revenue from the private sector and reduce reliance on government funding. The programme is envisaged to start by being co-financed through local governments and international donor organizations.	

**Box XLVI.**

<p>Please elaborate below on the implementation of this article and associated decisions specifically focusing on:</p> <ol style="list-style-type: none"> <li>outcomes and impacts of actions taken;</li> <li>contribution to the achievement of the goals of the Strategic Plan of the Convention;</li> <li>contribution to progress towards the 2010 target;</li> <li>progress in implementing national biodiversity strategies and action plans;</li> <li>contribution to the achievement of the Millennium Development Goals;</li> <li>constraints encountered in implementation.</li> </ol>
<p><b>a) Outcomes and impacts of actions taken</b></p> <ul style="list-style-type: none"> <li>Invasive alien species have now been identified and prioritized as a major problem. The geographical distribution of the identified priority invasive plants has been determined.</li> <li>The currently available information on invasive alien species has been collected and collated.</li> <li>The majority of the stakeholders that have interest in alien invasive species have been identified.</li> <li>An inventory has been made of relevant regional and national projects that address invasive alien species.</li> </ul> <p><b>b) Contribution to the achievement of the goals of the Strategic Plan of the Convention</b></p> <ul style="list-style-type: none"> <li>Technical and scientific cooperation have been initiated for removing barriers to alien invasive plant species management</li> </ul> <p><b>c) Contribution to progress towards the 2010 target</b></p> <ul style="list-style-type: none"> <li>The major invasive alien species that threaten ecosystems, habitats or species have been identified. This has a contribution for the preparation of a management plan for those identified invasive species</li> </ul> <p><b>d) Progress in implementing national biodiversity strategies and action plans</b></p> <ul style="list-style-type: none"> <li>The prominent invasive alien species that cause damage across the country, e.g. <i>Parthenium</i></li> </ul>

- hysterophorus, Prosopis juliflora, Eichornia crassipes and Lantana camara* have been identified
- *Prosopis juliflora* has been identified as a major problem in semi-arid rangelands.
- e) Contribution to the achievement of the Millennium Development Goals**
- Process of mitigating invasive alien species that cause loss of environmental resources and exacerbate poverty has been initiated
- f) Constraints encountered in implementation**
- Lack of a database on invasive alien species and their impacts that could be problems in Ethiopia
  - Insufficient resources, capacity, and information available
  - Long process of project approval and soliciting funding
  - Lack of established policies and legislation on introduction, controlling and eradicating invasive alien species

### Article 8(j) - Traditional knowledge and related provisions

#### GURTS

<b>57.</b> Has your country created and developed capacity-building programmes to involve and enable smallholder farmers, indigenous and local communities, and other relevant stakeholders to effectively participate in decision-making processes related to genetic use restriction technologies?	
a) No	X
b) No, but some programmes are under development	
c) Yes, some programmes are in place (please provide details below)	
d) Yes, comprehensive programmes are in place (please provide details below)	
Further comments on capacity-building programmes to involve and enable smallholder farmers, indigenous and local communities and other relevant stakeholders to effectively participate in decision-making processes related to GURTs.	

#### Status and Trends

<b>58.</b> Has your country supported indigenous and local communities in undertaking field studies to determine the status, trends and threats related to the knowledge, innovations and practices of indigenous and local communities? (decision VII/16)	
a) No	
b) No, but support to relevant studies is being considered	
c) Yes (please provide information on the studies undertaken)	X
Further information on the studies undertaken to determine the status, trends and threats related to the knowledge, innovations and practices of indigenous and local communities, and priority actions identified.	
The Participatory Forest Management Programme (PFMP), which is a joint initiative of FARM-Africa and SOS Sahel Ethiopia, has been trying to ensure environmental sustainability through revitalizing traditional institutions as new forest management institutions. In Borana, for example, the traditional <i>Gadda</i> system has been working with FARM-Africa and SOS Sahel Ethiopia to form a new community based forest management system. The system is well established and goes from the peasant association (PA) level, locally known as <i>Jaarsa Maddaa Ka Finna Badda</i> , all the way to the zonal Participatory Forest Management assembly known as <i>Gummi Finna Badda</i> .	

Based on the experience gained by the Institute for Sustainable Development and the Bureau of Agriculture and Rural Development of Tigray, reversing land degradation and loss of biodiversity through the implementation of environmental management bylaws developed by the local communities themselves is now expanding fast in the agricultural highlands of Ethiopia through a cooperative initiative by the Institute for Sustainable Development and the Environmental Protection Authority.

Strengthening Seed Systems at the Local Level is a project implemented by MoARD, FAO and NORAD, and operates around Babile and Harar (Eastern Ethiopia) focusing on local knowledge and community genebanks.

### Akwé:Kon Guidelines

**59.** Has your country initiated a legal and institutional review of matters related to cultural, environmental and social impact assessment, with a view to incorporating the Akwé:Kon Guidelines into national legislation, policies, and procedures?

a) No	
b) No, but review is under way	X
c) Yes, a review undertaken (please provide details on the review)	

Further information on the review.

The Afars has always sustained their production system through the indigenous institutions *Medaa* and *Adaa*. The *Medaa* is the highest decision-making body encompassing issues such as conflict resolution, natural resource management, mutual assistance (*Titihatia*), external relations and managing emergency situations (usually drought). *Adaa* is the cultural mechanism that implements the rules set by the *Medaa*.

Borana people are divided into two major groups, *Saboo* and *Goona*. The *Geda* system administers the two groups and the *Abba Geda* (chief) is elected every 8 years. Under the *Abba Geda* there are different councilors (*Hayyuus*) and village leaders (*Abba Ollas*). Some of the councilors are *Hayyuu garbaa* for rituals; *Buusa Gonofa* for social security; *Hayyuu yuuba* for managing disputes and marriage; and *Abba-Hirega* for water management. Grazing lands, water resources and mobility in normal or in periods of disaster are governed by the *Geda* system.

These systems, for example, are recognized and respected by the Government.

**60.** Has your country used the Akwé:Kon Guidelines in any project proposed to take place on sacred sites and/or land and waters traditionally occupied by indigenous and local communities? (decision VII/16)

a) No	
b) No, but a review of the Akwé:Kon guidelines is under way	
c) Yes, to some extent (please provide details below)	X
d) Yes, to a significant extent (please provide details below)	

Further information on the projects where the Akwé:Kon Guidelines are applied.

There is a cultural ritual ceremony known as *Iretcha* celebrated every year towards the end of September by the Oromo people at Debre-Zeit town on Lake Hora in Central Ethiopia. *Iretcha* is basically celebrated to express the intimate relation of the people with, and also to show respect to biodiversity resources obtained through, God. The ceremony is symbolized by flowers and grasses, and teaches to care for generations of all biological resources including human beings through protecting



biodiversity. This sacred ceremonial place was given to investors for development activities, but later on reversed and this complies with provisions of the the Akwé:Kon Guidelines.

### Capacity Building and Participation of Indigenous and Local Communities

**61.** Has your country undertaken any measures to enhance and strengthen the capacity of indigenous and local communities to be effectively involved in decision-making related to the use of their traditional knowledge, innovations and practices relevant to the conservation and sustainable use of biodiversity? (decision V/16)

a) No	
b) No, but some programmes being developed	
c) Yes, some measures taken (please provide details below)	X
d) Yes, comprehensive measures taken (please provide details below)	

Further information on the measures to enhance and strengthen the capacity of indigenous and local communities.

The Ethiopian Constitution recognizes the need to devolve state authority to local communities. The devolution process, including that of budgetary allocation and fiscal responsibility, has now been implemented to the district level. Rural districts are delimited to become culturally (ethnically) homogeneous. Therefore, Ethiopia has taken all the measures it can to enhance the capacity of its local (all are indigenous) communities. This has made it easy to implement projects aimed at local (indigenous) communities. The country has passed a law recognizing the rights of local communities to their innovations and practices.

One of the underlining principles of the ‘Dynamic Farmer-Based Approach to the Conservation of Ethiopia’s Plant Genetic Resources’ project while establishing the on-farm *in situ* conservation sites across the country and signing agreement with thousands of partner conservator farmers was obligatory use and application of the respective local communities’ traditional knowledge, innovations and practices relevant to the conservation and sustainable use of biodiversity. In all the trainings delivered to the partner farmers through this project, the trainings’ components were geared for the farmers to distinctively realize their role and their traditional systems in conservation and sustainable use of biodiversity. In addition, their capacities were strengthened through the establishment of Crop Conservation Associations; and upon termination of the project, the on-farm sites were handed over to be run by and administered at the discretions of the local communities.

The Ethiopian National Traditional Healers Association has been one of the major stakeholders of the ‘Conservation and Sustainable Use of Medicinal Plants project in Ethiopia’. The Association is represented in the technical committee, which is the major decision making body. To broaden their experience and vision, members of the Association were provided with opportunities of visiting other countries such as India.

**62.** Has your country developed appropriate mechanisms, guidelines, legislation or other initiatives to foster and promote the effective participation of indigenous and local communities in decision making, policy planning and development and implementation of the conservation and sustainable use of biodiversity at international, regional, subregional, national and local levels? (decision V/16)

a) No	
b) No, but relevant mechanisms, guidelines and legislation are under development	
c) Yes, some mechanisms, guidelines and legislation are in place (please provide details below)	X

**Further information on the mechanisms, guidelines and legislation developed.**

The 1995 Constitution of Ethiopia is the basic and supreme legal framework of the country in all fields of activities. The Constitution provides that the government and all Ethiopian citizens have the duty to protect the country's natural resources; that development programs and projects shall not be undertaken in a way that will damage the environment; and that the public have the right to be consulted and express their views in the planning and implementation of environmental policies and projects that affect them. As biodiversity is an element of natural resources, it could be said that the constitution has laid down the basic legal framework for the participation of communities in decision and policy making and in the planning and implementation of projects related to the conservation and sustainable use of biodiversity.

In line with the Constitution, the Environmental Policy of Ethiopia (1998) provides for involving local communities in the planning and management of protected areas in their surroundings, giving the lion's share of the income accrued from the conservation of biodiversity to those local communities; and for the development of laws that protect national interest and community rights. Similarly, the National Biodiversity Conservation and Research Policy of Ethiopia (1998) encourages the participation of the public in the conservation, development and sustainable utilization of biodiversity and allows sharing to communities the benefit obtained from the utilization of biodiversity and their traditional knowledge. The Environmental Impact Assessment Proclamation of 2002 provides for the participation of the public in environmental impact assessment through commenting on environmental impact assessment reports. The proclamation to "Regulate Access to Genetic Resources and Traditional Knowledge, and Provide for Community Rights" also provides for the participation of communities in giving prior informed consent for access to community knowledge leaving aside the detail rules for such participation to be specified by specific rules in the future to this effect.

Generally speaking, the basic policy and legal frameworks for participation of communities in the conservation and sustainable utilization of biodiversity in particular and natural resources in general have been laid down.

<b>63.</b> Has your country developed mechanisms for promoting the full and effective participation of indigenous and local communities with specific provisions for the full, active and effective participation of women in all elements of the programme of work? (decision V/16, annex)	
a) No	
b) No, but relevant mechanisms are being developed	
c) Yes, mechanisms are in place (please provide details below)	X
Further comments on the mechanisms for promoting the full and effective participation of women of indigenous and local communities in all elements of the programme of work.	
The Constitution and all the laws of Ethiopia give both men and women the same rights. However, their implementation is limited in many parts of the country owing to cultures that treat men as superior.	

### Support to implementation

<b>64.</b> Has your country established national, sub-regional and/or regional indigenous and local community biodiversity advisory committees?	
a) No	X
b) No, but relevant work is under way	
c) Yes	

<b>65.</b> Has your country assisted indigenous and local community organizations to hold regional meetings to discuss the outcomes of the decisions of the Conference of the Parties and to prepare for meetings under the Convention?	
a) No	X
b) Yes (please provide details about the outcome of meetings)	
Further information on the outcome of regional meetings. See questionnaire number 61 and 62	

<b>66.</b> Has your country supported, financially and otherwise, indigenous and local communities in formulating their own community development and biodiversity conservation plans that will enable such communities to adopt a culturally appropriate strategic, integrated and phased approach to their development needs in line with community goals and objectives?	
a) No	
b) Yes, to some extent (please provide details below)	
c) Yes, to a significant extent (please provide details below)	X
Further information on the support provided. See Questionnaire No. 61 and 62	

**Box XLVII.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

**a) Outcomes and impacts of actions taken**

- The rights of local (indigenous) communities legally recognized
- Recognition and respect to indigenous/traditional/local knowledge, practices and systems increased
- Efforts to collect and document indigenous/traditional/local knowledge, practices and systems by different stakeholder institutions increased
- CBOs such as the National Traditional Healers Association strengthened

**b) Contribution to the achievement of the goals of the Strategic Plan of the Convention**

- Involvement of traditional systems (e.g., *Geda* in Oromia, and *Medaa* and *Adaa* in Afar) CBOs (e.g., Healers Association) and local communities in national biodiversity management made possible

**c) Contribution to progress towards the 2010 target**

- Protection of indigenous/traditional/local knowledge, practices and systems initiated

**d) Progress in implementing national biodiversity strategies and action plans**

- Significance of local community knowledge of natural ecosystems and wild as well as domesticated taxa is widespread
- Permissive systems for research and information gathering on community knowledge created.


**e) Contribution to the achievement of the Millennium Development Goals**

- Significant role played by indigenous/traditional/local knowledge, practices and systems in the overall development of the country and the strategic poverty reduction programme

**f) Constraints encountered in implementation**

- Capacity limitation in helping local communities benefit from modern scientific progress in addition to their own innovations and practices

**Article 9 - *Ex-situ* conservation**

67.  On Article 9(a) and (b), has your country adopted measures for the *ex-situ* conservation of components of biological diversity native to your country and originating outside your country?

a) No	
b) No, but potential measures are under review	
c) Yes, some measures are in place (please provide details below)	X
d) Yes, comprehensive measures are in place (please provide details below)	

Further information on the measures adopted for the *ex-situ* conservation of components of biodiversity native to your country and originating outside your country.

Ethiopia established a gene bank in 1976 for the *ex situ* conservation of crop germplasm. The gene bank of the Institute of Biodiversity Conservation holds about 62,000 accessions of some 104 plant species obtained through collection, repatriation and donation. In the past, conservation efforts had

focused on plant genetic resources and priority was given to field crops. Since 1998 the Institute was given a wider mandate of conservation and sustainable utilization of all forms of biological resources including plant, animal and microbial genetic resources. Currently, a new and additional forest gene bank has been constructed and the cold room and laboratory equipments have been installed. Besides, four field gene banks and two botanical gardens have been established in different parts of the country.

Field gene banks, botanical gardens and duplicate gene banks along with Cryo-preservation centers are being established in various localities to supplement the *in situ* conservation sites.

The four *ex situ* sites have been established in Goba Woreda (for *Juniperus procera* and *Olea europaea* subsp. *cuspidata*), in Lephis, Arsi Nagelle Woreda (for *Juniperus procera*, *Prunus africana*, *Afrocarpus falcatus*, *Hagenia abyssinica*, and *Cordia africana*), Farta Woreda, Debre Tabor (for *Olea europaea* subsp. *cuspidata*, *Cordia africana* and others) and Mandura Woreda (for *Oxythenantera abyssinica*-lowland bamboo) conservation. So far 19,440 seedlings of these species have been planted in these *ex-situ* conservation sites.

One botanical garden is being established on Entoto Mountain in Addis Ababa and the other in Shashemenne town. In addition, two field gene banks of medicinal plants are being established in Bale Zone through a project entitled "Conservation and Sustainable Use of Medicinal Plants Project".

**68. ?** On Article 9(c), has your country adopted measures for the reintroduction of threatened species into their natural habitats under appropriate conditions?

a) No	
b) No, but potential measures are under review	
c) Yes, some measures are in place (please provide details below)	X
d) Yes, comprehensive measures are in place (please provide details below)	

Further comments on the measures for the reintroduction of threatened species into their natural habitats under appropriate conditions.

The Forest Genetic Resources Conservation Department of the Institute of Biodiversity the GTZ supported Forest Genetic Resources Conservation Project has reintroduced the following seven most threatened woody species into their natural habitats(*Juniperus procera* ,*Olea europaea* subsp. *cuspidata*, *Prunus africana*, *Afrocarpus falcatus*, *Hagenia abyssinica*, *Cordia africana* and *Oxythenantera abyssinica*).

A private investment enterprise [African Parks (Ethiopia) Ltd.], which has taken over the management of the Nech Saar National park is planning to reintroduce Rhinoceros and Elephants which have been extinct from the area.

**69. ?** On Article 9(d), has your country taken measures to regulate and manage the collection of biological resources from natural habitats for *ex-situ* conservation purposes so as not to threaten ecosystems and *in-situ* populations of species?

a) No	
b) No, but potential measures are under review	X
c) Yes, some measures are in place (please provide details below)	
d) Yes, comprehensive measures are in place (please provide details below)	

Further information on the measures to regulate and manage the collection of biological resources from natural habitats for *ex-situ* conservation purposes so as not to threaten ecosystems and *in-situ* populations of species.

The Ethiopian Heritage Trust is planting indigenous tree species on the Entoto Mountain in Addis Ababa using seedlings produced in green houses from young twigs of parent plants through the application of tissue culture at the Biology Department, the University of Addis Ababa. The Bureaus of Agriculture of the various Regional States are also propagating native tree seedling for planting in reforestation.

#### **Box XLVIII.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

#### **a) Outcomes & impacts**

- About 62,000 accessions of some 104 plant species conserved *ex-situ* in the gene bank at the Institute of Biodiversity Conservation. Besides, some field gene banks have been established for recalcitrant coffee and for most threatened species.
- The attitude farmers have towards conserving indigenous biodiversity has improved
- Institutional collaboration in biodiversity conservation and awareness raising has been enhanced

#### **b) contribution to the achievement of the goals of the Strategic Plan of the Convention;**

- Relevant measures are in progress so as to prevent the fast loss of biological diversity in various ecosystems. These measures play key roles in contributing to goals 3 and 4 of the strategic plan of the Convention.

#### **c) Contribution to progress towards the 2010 target**

- The *ex-situ* conservation activities in cold rooms, field gene banks, botanical gardens etc contribute to the conservation of species and genetic diversity of the country. And this has clear linkage with numbers 2.1, 2.2 and 3.1 of the 2010 targets

#### **d) Progress in implementing national biodiversity strategies and action plans**

- The NBSAP has been endorsed by the government, and is in press for distribution and implementation.


#### **e) Contribution to the achievement of the Millennium Development Goals**

- Contributes to goal 7 of the MDG

#### **f) Constraints**

- Inadequate capacity -financial, material and human resources
- Encroachment of people into *ex situ* collection sites
- Weak enforcement of laws, rules and regulations

### **Article 10 - Sustainable use of components of biological diversity**

**70.**  On Article 10(a), has your country integrated consideration of the conservation and sustainable use of biological resources into national decision-making?

a) No	
b) No, but steps are being taken	
c) Yes, in some relevant sectors (please provide details below)	X
d) Yes, in most relevant sectors (please provide details below)	
Further information on integrating consideration of conservation and sustainable use of biological resources into national decision-making.	
<p>The Environmental Policy and Biodiversity Policy of Ethiopia provide for the integration of biodiversity conservation and sustainable use concerns into decision making in other relevant sectors. The Fishery Proclamation also provides for the taking into account of the conservation and sustainable use of fishery resources when granting fishing permits.</p> <p>However, considerations of biodiversity concerns are not sufficiently integrated into the decision making in other sectors such as investment, trade, and resettlement.</p> <p>The National Biodiversity Strategy Action Plan. (BSAP) stresses the need for protected areas to allow the conservation of resources, their sustainable use and equitable sharing of benefits therefrom. More recently and importantly, the government has taken a major step to provide further policy and legislative base for protected areas in the country with the adoption of the "Wildlife Development Protection and Utilization Policy and Strategy" and the passing of the "Proclamation to Provide for the Development, Conservation and Utilization of Wildlife". These instruments allow institutional change within the sector, and specify partnership approaches ranging from the central and regional government levels to the private sector and local communities around protected area. The new Ethiopian land use policy recognizes that wildlife habitat is to be an integral part of the country's land use. A World Bank Project, "Cultural Heritage Project" has been launched by the Tourism Commission of Ethiopia. This project focuses on using biological resources to produce handicrafts. The project will contribute to the conservation and maintenance of indigenous biodiversity.</p>	

<b>71. ?</b> On Article 10(b), has your country adopted measures relating to the use of biological resources that avoid or minimize adverse impacts on biological diversity?	
a) No	
b) No, but potential measures are under review	
c) Yes, some measures are in place (please provide details below)	X
d) Yes, comprehensive measures are in place (please provide details below)	
Further information on the measures adopted relating to the use of biological resources that avoid or minimize adverse impacts on biological diversity.	
<p>Some measures have been taken to integrate the use of biological resources that avoid or minimize adverse impacts on biological diversify. For example, Ethiopia established a crocodile <i>ex-situ</i> conservation at Arbaminch in Lakes Chamo and Abaya in 1989. This has contributed to the maintenance of the population of crocodiles <i>in-situ</i>, at the same time as generating a considerable income in foreign currency.</p> <p>Although not very successful, an ostrich farm has also been established to reduce pressure on ostriches in the wild from people disturbing their breeding by collecting the eggs that have a high demand in cities for ornamental purposes. Recently there have also been individuals who are interested to start reptile-breeding businesses, which the Wildlife Conservation Department found acceptable, as this will</p>	

halt the export of endangered reptiles, which are in high demand.

In an attempt to minimize pressure or adverse impacts, the Forest Coffee Conservation Component of CIP IV has adopted a Revolving Fund Mechanism to assist local communities that may be affected by the establishment of conservation areas. Local people are also permitted to harvest wild coffee, collect wild honey and fallen firewood, and collect edible fruits and medicinal plants.

In different parts of the country peri-urban fuel wood plantation projects are going on. The implementation of these projects reduces the pressure on woody species diversity found in the remaining natural forests of the country. There is a GTZ supported Energy Saving wood stove Project, which works on reducing the amount of biomass energy consumption through introducing energy saving wood stove designs.

The stopping of free range grazing is helping to rehabilitate the natural vegetation while at the same time increasing animal feed and wood production.

**72. ?** On Article 10(c), has your country put in place measures that protect and encourage customary use of biological resources that is compatible with conservation or sustainable use requirements?

a) No	
b) No, but potential measures are under review	
c) Yes, some measures are in place (please provide details below)	
d) Yes, comprehensive measures are in place (please provide details below)	X

Further information on the measures that protect and encourage customary use of biological resources that is compatible with conservation or sustainable use requirements.

The legislation on access to genetic resources and community knowledge recognizes and promotes the customary use of biological resources by Ethiopian local communities. It provides for the rights of Ethiopian local communities to use biological resources in accordance with their customary practices. It further provides that no legal restriction shall be imposed on the customary use of biological resources by local communities. In line with this, the access and benefit-sharing agreements concluded so far by the country are framed in such a way that they shall not affect the customary use of the genetic resource in question by local communities.

The Fisheries Development and Utilization Proclamation of 2003 also protects and encourages the traditional customary use of fisheries resources by local communities. To this effect, it exempts activities of traditional fishing by local communities from the requirement of fishing permit.



**73. ?** On Article 10(d), has your country put in place measures that help local populations develop and implement remedial action in degraded areas where biological diversity has been reduced?

a) No	
b) No, but potential measures are under review	
c) Yes, some measures are in place (please provide details below)	X
d) Yes, comprehensive measures are in place (please provide details below)	

Further information on the measures that help local populations develop and implement remedial action in degraded areas where biodiversity has been reduced.

Area closure and the discontinuation of free range grazing are being promoted to rehabilitate degraded areas. Accordingly, degraded areas are being enclosed, managed and utilized by local communities upon rehabilitation. This is happening extensively in the Amhara and Tigray Regional State. The rural land proclamation of the Oromiya Regional State provides for the granting of degraded lands to communities to rehabilitate them. However, the proclamation envisages the development of systems whereby degraded lands will be given to local communities.

Measures are also being initiated that help local populations develop remedial solution in degraded areas where biological diversity has been reduced, especially for wildlife resources.

- Improved and updated forest and wildlife policy, legislation and regulations are in place, which enable the country to take stricter measures on causes of forest and wildlife degradation such as deforestation and poaching, illegal wildlife trade and habitat destruction.
- The government is trying to make most forest and wildlife management community based since it has been acknowledged that communities near forest and wildlife protected area are the most important stakeholders and whatever benefits accrue should also be shared with them. The community forest management programme in Bale Mountains National Park is a good example.
- The government is trying to distribute cheap and energy efficient stoves to farmers near degraded forests so as to reduce demand on firewood.

**74. ?** Has your country identified indicators and incentive measures for sectors relevant to the conservation and sustainable use of biodiversity? (decision V/24)

a) No	
b) No, but assessment of potential indicators and incentive measures is under way	X
c) Yes, indicators and incentive measures identified (please describe below)	

Further comments on the identification of indicators and incentive measures for sectors relevant to the conservation and sustainable use of biodiversity.

A new project proposal, the Sustainable Development of Protected Areas Systems of Ethiopia, which has been presented to the GEF for support has identified the following main indicators:

- A 7% increase in frequency of monitoring of protected areas
- The protected areas system will ensure adequate (= 7%) representation of all ecosystems in the country by the year 2015

**75. ?** Has your country implemented sustainable use practices, programmes and policies for the sustainable use of biological diversity, especially in pursuit of poverty alleviation? (decision V/24)

a) No	
b) No, but potential practices, programmes and policies are under review	
c) Yes, some policies and programmes are in place (please provide details below)	X
d) Yes, comprehensive policies and programmes are in place (please provide details below)	

Further information on sustainable use programmes and policies.

Various development policies, strategies and programmes of the country recognize the significance of biological resources in ensuring food security and alleviating poverty. For instance, the role of environmental sustainability, including biological diversity, has been given due emphasis in the national development plan, "A Plan for Accelerated and Sustainable Development to End Poverty"(PASDEP). The Environmental Policy and the Biodiversity Policy of Ethiopia provide for the sustainable use of biological diversity. The Environment Policy, for example, aims to ensure that essential ecological processes and life support systems are sustained, biological diversity is preserved and renewable natural resources are used in such a way that their regenerative and productive capabilities are maintained and where possible enhanced so that the satisfaction of the needs of future generations is not compromised.

The Fisheries Development and Utilization Proclamation of 2003 provides for the sustainable use of fisheries to contribute to food security. In this regard, it aims, *inter alia*, to increase the supply of safe and good quality fish and ensure a sustainable contribution of the fisheries towards food security. To this effect, it subjects activities of commercial fishing to the requirement of fishing permit.

The Millennium Development Goal (MDG) of Ethiopia, which emanated from the international community's commitment and which is meant to reduce poverty has as its target the integration of the principles of sustainable development into the country's policies and programmes to reverse the loss of environmental resources. In line with this, one of the interventions proposed in the MDG is the development of the wildlife resources sector. It is stated in the project, "the country needs to include non-traditional was of achieving food security by developing its wild life resources".

**76. ?** Has your country developed or explored mechanisms to involve the private sector in initiatives on the sustainable use of biodiversity? (decision V/24)

a) No	
b) No, but mechanisms are under development	
c) Yes, mechanisms are in place (please describe below)	X

Further comments on the development of mechanisms to involve the private sector in initiatives on the sustainable use of biodiversity.

The Constitution and policies on the environment and on biodiversity state the need for the involvement of the private sector in a way that supports sustainable use of natural resources, particularly biological resources.

The new wildlife policy of the country encourages the private sector and individuals to invest in conservation, ecotourism, sport hunting and live wild life trade for the sustainable use of the forests and

wildlife in the country. The African Parks, an international company has been given the Nech Sar Park to manage.

Moreover, the country encourages and supports the Oromia organic coffee and spice producing cooperatives and Tigray private honey producers.

**77. Has your country initiated a process to apply the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity? (decision VII/12)**

a) No	
b) No, but the principles and guidelines are under review	
c) Yes, a process is being planned	
d) Yes, a process has been initiated (please provide detailed information)	X

Further information on the process to apply the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity.

The fourteen practical principles are in one way or another being considered and implemented in day to day activities of institutions, that deal with biodiversity, particularly IBC, EPA and MoARD. An impact assessment system (law and guidelines) is in place and is enforced to protect biological resources. Local communities are being helped to reverse land degradation and to use biological resources sustainably. There are also several NGOs that promote the application of the principles. But there is no process initiated specifically for the application of the Addis Ababa Principles and Guidelines.

**78. Has your country taken any initiative or action to develop and transfer technologies and provide financial resources to assist in the application of the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity? (decision VII/12)**

a) No	
b) No, but relevant programmes are under development	
c) Yes, some technologies developed and transferred and limited financial resources provided (please provide details below)	X
d) Yes, many technologies developed and transferred and significant financial resources provided (please provide details below)	

Further comments on the development and transfer of technologies and provision of financial resources to assist in the application of the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity.

The household based making of compost is being aggressively promoted so as to minimize the use of agrochemicals with its accompanying reduction of biodiversity, especially of the soil. This is being coupled with the discontinuation of free range grazing, which increases biomass and consequent compost production. This requires only labour and saves the small holder farmers from financial expenditure. They are therefore, happily accepting the technology and the changes in management.

## Biodiversity and Tourism

<b>79. ?</b> Has your country established mechanisms to assess, monitor and measure the impact of tourism on biodiversity?	
a) No	
b) No, but mechanisms are under development	
c) Yes, mechanisms are in place (please specify below)	X
d) Yes, existing mechanisms are under review	
Further comments on the establishment of mechanisms to assess, monitor and measure the impact of tourism on biodiversity.	
Ethiopia has put in place the institutional framework to monitor the impact of tourism on biodiversity. The Institute of Biodiversity Conservation has been given the responsibility to follow up and identify processes that have adverse effects on biodiversity and initiate policy measures to regulate such processes, and upon approval follow-up the implementation of such policies.	
In addition, the Environmental Impact Assessment procedures are being implemented on all forms of projects including tourism.	

<b>80. ?</b> Has your country provided educational and training programmes to the tourism operators so as to increase their awareness of the impacts of tourism on biodiversity and upgrade the technical capacity at the local level to minimize the impacts? (decision V/25)	
a) No	
b) No, but programmes are under development	X
c) Yes, programmes are in place (please describe below)	
Further comments on educational and training programmes provided to tourism operators.	
The country considers tourism as a main means of revenue generation, especially of the most needed foreign currency and as one of the important sectors that can contribute to the alleviation poverty. As a result every effort is being made to improve the sector. Currently there are a considerable number of junior colleges which train people as tour operators and tour guides. Seminars and workshops on tourism are often conducted by the Ethiopian Tourism Commission for tour operators on the benefits and problems of tourism.	

<b>81.</b> Does your country provide indigenous and local communities with capacity-building and financial resources to support their participation in tourism policy-making, development planning, product development and management? (decision VII/14)	
a) No	
b) No, but relevant programmes are being considered	
c) Yes, some programmes are in place (please provide details below)	X
d) Yes, comprehensive programmes are in place (please provide details below)	
Further comments in the capacity-building and financial resources provided to indigenous and local communities to support their participation in tourism policy-making, development planning, product development and management.	
The Berga wetland is a breeding site for the rare and endangered bird, White-winged Flufftail ( <i>Sarothura ayresi</i> ). The local communities living around the wetland are involved actively in activities enhancing the protection of the bird, i.e. in planning, management and equitable sharing of benefits.	

This activity is spearheaded by the Ethiopian Wildlife and Natural History Society (EWNHS). The local administration works in partnership with the EWNHS and provides support. There are many other examples similar to this.

**82.** Has your country integrated the Guidelines on Biodiversity and Tourism Development in the development or review of national strategies and plans for tourism development, national biodiversity strategies and actions plans, and other related sectoral strategies? (decision VII/14)

a) No, but the guidelines are under review	
b) No, but a plan is under consideration to integrate some principles of the guidelines into relevant strategies	
c) Yes, a few principles of the guidelines are integrated into some sectoral plans and NBSAPs (please specify which principle and sector)	X
d) Yes, many principles of the guidelines are integrated into some sectoral plans and NBSAPs (please specify which principle and sector)	

Further information on the sectors where the principles of the Guidelines on Biodiversity and Tourism Development are integrated.

The concept of sustainable tourism is incorporated in the tourism sector in the NBSAP and in other national development plans. The Ethiopian Tourism Commission is responsible for developing and enhancing sustainable tourism. It initiates tourism policies and laws, publicize resources of touristic attractions, and compiles and disseminates information on sustainable tourism.

The NBSAP stresses the need for protected areas to allow the conservation and sustainable use of natural resources and the equitable sharing of benefits that accrue therefrom. The government has taken a major step to provide further policy and legislative base for protected areas in the country with the adoption of the "Wildlife Development Protection and Utilization Policy and Strategy". In Article 2, subheading 2.2, it is stated that eco-tourism development will be implemented in protected areas without causing damage to the environment. The "Proclamation to Provide for the Development, Conservation and Utilization of Wildlife" which is in a process of adoption, allows institutional change within the sector. It provides for a partnership approach with the private sector at the levels of the central and regional governments as well as the local communities around protected area.

#### **Box XLIX.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

#### **a) Outcomes and impacts of actions taken**

- Stakeholders are aware that biodiversity conservation must be taken into consideration in any decision-making
- On the whole, institutions in the country and the general public take care as much as possible that

their activities should not adversely affect the wellbeing of biodiversity

- People have continued to protect and use their traditional varieties
- Regeneration of plants, recovery of wildlife and soil rehabilitation are taking place in many degraded areas
- Legislation and regulation to implement incentive measures are in place for the conservation of biodiversity for future use
- Resource conservation and utilization, which was in the past believed to be only the government's task, is now beginning to involve the public, and especially the rich are trying to invest in the sector
- Increase in the number of visitors and in tourism catering organizations in the country is taking place

**b) Contribution to the achievement of the goals of the Strategic Plan of the Convention**

- The efforts so far made contribute to goals 3 and 4 of the strategic plan of the CBD

**c) Contribution to progress towards the 2010 target**

- Strengthening of sustainable use of biological diversity and consequent poverty alleviation contributes to the 2010 goals and targets

**d) Progress in implementing national biodiversity strategies and action plans**

**e) Contribution to the achievement of the Millennium Development Goals**

- Biodiversity conservation in general and protected area conservation in particular, play a very important role in achieving the Millennium Development Goals. They both sustain biodiversity and reduce poverty

**f) Constraints encountered in implementation**

- Incomplete co-ordination of activities among stakeholders
- Inadequate implementation of legislation
- Limitation of capacity at all levels.

### Article 11 - Incentive measures

<b>83. ?</b> Has your country established programmes to identify and adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity?	
a) No	
b) No, but relevant programmes are under development	
c) Yes, some programmes are in place (please provide details below)	X
d) Yes, comprehensive programmes are in place (please provide details below)	
Further comments on the programmes to identify and adopt incentives for the conservation and sustainable use of biodiversity.	
<p>The country is considering the establishment of programmes that act as an incentive. At present politicians, economists, conservationists etc, are very much aware that it is impossible to conserve natural resources without incentives at all levels, especially people near conservation areas are seen as needing incentives. Participatory and benefit sharing programmes that are implemented or used to be implemented by Care Ethiopia around Awash National Park give assistance to pastoralists by providing health care for both humans and livestock, drinking water and education.</p> <p>Similar incentives are also given by WWF assisted programme in the Bale Mountains National Park and the surrounding areas. In the Semien Mountains National Park, a project supported by the Austrian Government involves the people in the area in various activities such as being tour guides, letting horses to tourists, training as game scouts and in providing other employment opportunities to the local community members.</p> <p>Hunting safaris in Bale, in the Southern Ethiopia Regions and in the Afar Region also provide employment to the local people in the areas.</p> <p>The decision by the government to allocate 85% of the revenue obtained through hunting to the regions and particularly to people near the hunting areas is a good incentive.</p> <p>Farmers' varieties sold for seed purposes, as compared to grain for food, fetch prices higher by 25-100% depending on the season and the locality. Community Gene Banks (CGBs) play an important role in the farmers' varieties seed supply system and in stabilizing the seed market, as well as in keeping farmers in <i>in situ</i> on-farm conservation programmes.</p> <p>There already is an exemplary success of smallholder farmers organic coffee production by the Oromia Organic Coffee Farmers Cooperative Union (OOCGCU). This experience is extending to farmers at Eastern Shewa to produce organic durum wheat and supply the nearby milling industries. These show that there is considerable potential for organic production of a variety of other crops including oilseeds and pulses. A link has been developed between Ejere and Cheffe-Donsa farmers in Adaa, south of Addis Ababa, to grow durum wheat varieties organically for the flour milling companies serving the confectionery industries. The milling companies used to import the wheat variety but are now contracting out farmers to supply the grain, with an estimated annual demand of 75,000 quintals (7,500 tons).</p> <p>However, conservation is not the moral obligation of the farming communities. For crop genetic resources to be conserved and sustainably utilized, farmers in any area must have economic or cultural</p>	

incentives to continue growing those varieties. Despite the large volume (more than 90%) of informal seed supply systems and their contribution to overall crop production and food security, the seed producers do not receive any incentive.

**84. ?** Has your country developed the mechanisms or approaches to ensure adequate incorporation of both market and non-market values of biological diversity into relevant plans, policies and programmes and other relevant areas? (decisions III/18 and IV/10)

a) No	
b) No, but relevant mechanisms are under development	
c) Yes, mechanisms are in place (please provide details below)	X
d) Yes, review of impact of mechanisms available (please provide details below)	

Further comments on the mechanism or approaches to incorporate market and non-market values of biodiversity into relevant plans, policies and programmes.

The new wildlife policy of the country in place states as its objective that biodiversity is beneficial for earning cash income but it also has environmental value that maintains forests, water and the soil. Forests can give non-timber products if properly managed and harvested. Irrespective of its market value, biodiversity is essential for sustaining human life.

**85. ?** Has your country developed training and capacity-building programmes to implement incentive measures and promote private-sector initiatives? (decision III/18)

a) No	X
b) No, but relevant programmes are under development	
c) Yes, some programmes are in place	
d) Yes, many programmes are in place	

**86.** Does your country take into consideration the proposals for the design and implementation of incentive measures as contained in Annex I to decision VI/15 when designing and implementing incentive measures for the conservation and sustainable use of biodiversity? (decision VI/15)

a) No	X
b) Yes (please provide details below)	

Further information on the proposals considered when designing and implementing the incentive measures for the conservation and sustainable use of biodiversity.

**87.** Has your country made any progress in removing or mitigating policies or practices that generate perverse incentives for the conservation and sustainable use of biological diversity? (decision VII/18)

a) No	X
b) No, but identification of such policies and practices is under way	
c) Yes, relevant policies and practices identified but not entirely removed or mitigated (please provide details below)	
d) Yes, relevant policies and practices identified and removed or mitigated (please provide details below)	



Further information on perverse incentives identified and/or removed or mitigated.

There are no perverse incentives in place. In fact, the incentive is largely what the biodiversity itself yields, and there is virtually no cash payment involved in way of incentives

**Box L.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- (a) outcomes and impacts of actions taken;
- (b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- (c) contribution to progress towards the 2010 target;
- (d) progress in implementing national biodiversity strategies and action plans;
- (e) contribution to the achievement of the Millennium Development Goals;
- (f) constraints encountered in implementation.

**a) Outcomes and Impacts of actions taken**

- The public at present is relatively more aware of biodiversity conservation issues than before
- The country is participating and implementing some education related to the convention and the officials engaged in the work are contributing to the national, regional and international activities on the issue
- Most of our media promote biodiversity related issues relatively well, this can be observed in the articles and columns some of them devote to the sector

**b) contribution to the achievement of the goals of the Strategic Plan of the Convention**

- Achieve Goal 4: parties have better understanding and participation in biodiversity conservation and sustainable use

**c) contribution to progress towards the 2010 target**

- Sustainable use of biodiversity is promoted

**d) progress in implementing national biodiversity strategies and action plans**

**e) contribution to the achievement of the Millennium Development Goals**

- The sustainable use of biodiversity is promoted, and this also fights poverty

**f) constraints**

- The country is too poor to provide cash incentives

**Article 12 - Research and training**

88. ? On Article 12(a), has your country established programmes for scientific and technical education and training in measures for the identification, conservation and sustainable use of biological diversity and its components?

a) No	
b) No, but programmes are under development	
c) Yes, programmes are in place (please provide details below)	X

Further information on the programmes for scientific and technical education and training in the measures for identification, conservation and sustainable use of biodiversity.

The Forestry College of the Dehub University and the Biology Departments of the various universities have been giving some training students on biodiversity conservation and management at Diploma, B. Sc., M. Sc and Ph.D. levels.

**89.** On Article 12(b), does your country promote and encourage research which contributes to the conservation and sustainable use of biological diversity?

a) No

b) Yes (please provide details below)

X

Further information on the research which contributes to the conservation and sustainable use of biodiversity.

The higher learning institutions, the agricultural research stations and the International Livestock Research Institute carry out research that may contribute to the conservation and sustainable utilization of biological resources.

**90.** On Article 12(c), does your country promote and cooperate in the use of scientific advances in biological diversity research in developing methods for conservation and sustainable use of biological resources?

a) No

b) Yes (please provide details below)

X

Further information on the use of scientific advances in biodiversity research in developing methods for conservation and sustainable use of biodiversity.

Ethiopia has been promoting and cooperating in the use of scientific advances in biodiversity research directly through its own institutions and by collaborating with national and international institutions.

Promoting regional and international cooperation in biodiversity conservation, development and sustainable utilization is one of the objectives of the Ethiopian National Policy on Biodiversity Conservation and Research. For instance the country is linked up with the ASARECA member countries.

#### Box LI.

Please elaborate below on the implementation of this article specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

#### a) Outcomes and impacts of actions taken

- National capacity in biodiversity conservation enhanced
- Biodiversity information compilation enhanced
- Plant identification service given by the National Herbarium at AAU
- Strong cooperation is created among East African countries(Ethiopia, Kenya, Tanzania and Uganda)
- Professional societies like the Biological Society and biodiversity affiliated organizations have enhanced information exchange
- Propagation of indigenous and recalcitrant tree species has become possible because of research

#### b) Contribution to the achievement of the goals of the Strategic Plan of the Convention

- contributed particularly to the achievement of goal 2

#### c) Contribution to progress towards the 2010 target

- contributed to targets 11.1 and 11.2
- d) Progress in implementing national biodiversity strategies and action plans**
- The need for the study and management of the interactions between people and biological resources in both social and biological sciences for conservation clearly identified
- e) Contribution to the achievement of the Millennium Development Goals**
- Attempts in place to ensure the sustainability of the environment and poverty reduction being supported by research contribution to goals 7 and 8
- f) Constraints encountered in implementation**
- Financial constraints
  - inadequate scientific capacity

### Article 13 - Public education and awareness

<b>91.</b> Is your country implementing a communication, education and public awareness strategy and promoting public participation in support of the Convention? (Goal 4.1 of the Strategic Plan)	
a) No	
b) No, but a CEPA strategy is under development	
c) Yes, a CEPA strategy developed and public participation promoted to a limited extent (please provide details below)	
d) Yes, a CEPA strategy developed and public participation promoted to a significant extent (please provide details below)	X
Further comments on the implementation of a CEPA strategy and the promotion of public participation in support of the Convention.	
<p>The Federal Environmental Protection Authority and the Ethiopian Wildlife and Natural History Society are involved in public awareness and education activities. The EPA conducts CEPA through its Environmental Education Department. The Wildlife Conservation Department of the Ministry of Agriculture and Rural Development allocates a budget to carry out CEPA in various important areas of the country, especially in areas where forest and wildlife are threatened by felling, hunting or smuggling out of the country, e.g. in Moyale, Bole Airport. Last year, about 60 people comprising individuals from the police, customs, and Regional forest and wildlife experts were trained on how to combat illegal wildlife smuggling. School and higher education curricula contain a lot of information on biodiversity. The main focus of school environment clubs, which are found in many schools, is biodiversity conservation and sustainable use. Land degradation is being combated through rural local communities by discontinuing free-range grazing and protecting biodiversity.</p>	

<b>92. Is your country undertaking any activities to facilitate the implementation of the programme of work on Communication, Education and Public Awareness as contained in the annex to decision VI/19? (decision VI/19)</b>	
a) No	
b) No, but some programmes are under development	
c) Yes, some activities are being undertaken (please provide details below)	X
d) Yes, many activities are being undertaken (please provide details below)	
<b>Further comments on the activities to facilitate the implementation of the programme of work on CEPA.</b>	
The government has given a high priority to the implementation of this article and made resources available. Both governmental and non-governmental organizations are involved in the implementation of the programme of work on Communication, Education and Public Awareness,. Nevertheless, the celebration of ‘Biodiversity, Environment and Tree planting Day’ in the country every year is one of the activities that help in awareness raising of the general public. In addition, the mass media in the country (both local and national Radio, Television and the Press) are playing their part in promoting public awareness on biodiversity for conservation. For example, a non-governmental organization called Panos, Forum for Environment, the Ethiopian Wildlife Natural History Society and the Institute for Sustainable Development and movement for Ecological Learning and Community Action (MELCA) Mahiber are among the NGOs that promote CEPA in the revival and enhancement of traditional ecological knowledge	

<b>93. Is your country strongly and effectively promoting biodiversity-related issues through the press, the various media and public relations and communications networks at national level? (decision VI/19)</b>	
a) No	
b) No, but some programmes are under development	
c) Yes, to a limited extent (please provide details below)	X
d) Yes, to a significant extent (please provide details below)	
<b>Further comments on the promotion of biodiversity-related issues through the press, the various media and public relations and communications networks at national level.</b>	
In addition to the efforts of the EPA and the Institute of Biodiversity Conservation, using the mass media, the Ministry of Agriculture and Rural Development (MoARD) invites experts from relevant institutions and arranges panel discussion forums to share their experiences with the public on different environmental issues and programmes. The mass media, e.g. Walta Information Center the Ethiopian News Agency as well as radio stations and the Ethiopian Television prepare special environmental programmes by inviting environmentalists and experienced people to share their experiences with the public. The newspapers also often carry articles on biodiversity. Many NGOs and associations are also engaged in the area of environmental awareness creation, e.g. Christian Relief Development Association, Institute for Sustainable Development, Ethiopian Wildlife and Natural History Society and Panos Ethiopia are quite active in using print medias to disseminate awareness programmes.	

<b>94. Does your country promote the communication, education and public awareness of biodiversity at the local level? (decision VI/19)</b>	
a) No	
b) Yes (please provide details below)	X
Further information on the efforts to promote the communication, education and public awareness of biodiversity at the local level.	
Seed Questionnaire No. 91 – 94	

<b>95. Is your country supporting national, regional and international activities prioritized by the Global Initiative on Education and Public Awareness? (decision VI/19)</b>	
a) No	X
b) No, but some programmes are under development	
c) Yes, some activities supported (please provide details below)	
d) Yes, many activities supported (please provide details below)	
Further comments on the support of national, regional and international activities prioritized by the Global Initiative on Education and Public Awareness.	

<b>96. Has your country developed adequate capacity to deliver initiatives on communication, education and public awareness?</b>	
a) No	X
b) No, but some programmes are under development	
c) Yes, some programmes are being implemented (please provide details below)	
d) Yes, comprehensive programmes are being implemented (please provide details below)	
Further comments on the development of adequate capacity to deliver initiatives on communication, education and public awareness.	

<b>97. Does your country promote cooperation and exchange programmes for biodiversity education and awareness at the national, regional and international levels? (decisions IV /10 and VI/19)</b>	
a) No	
b) Yes (please provide details below)	X
Further comments on the promotion of cooperation and exchange programmes for biodiversity education and awareness, at the national, regional and international levels.	
The Environmental Protection Authority, Institute of Biodiversity Conservation, Ethiopian Institute of Agricultural Research, and higher learning institutions provide various programmes of Trainings, Education and Awareness at the national level (especially during World Environment Day, Tree Planting Day, Desertification Day). In cooperation with the Intergovernmental Authority on Development (IGAD) and UNEP, some activities are going on though these do not meet the need. The Nile Transboundary Environmental Action Project, of which Ethiopia is a member also focuses on institutional strengthening to facilitate Regional Cooperation including on biodiversity education and awareness. It aims at enabling improved transboundary cooperation on environmental management among the Nile Basin countries through improved communication, knowledge exchange and enhanced tools for environmental management.	

<b>98. Is your country undertaking some CEPA activities for implementation of cross-cutting issues and thematic programmes of work adopted under the Convention?</b>	
a) No (please specify reasons below)	
b) Yes, some activities undertaken for some issues and thematic areas (please provide details below)	X
c) Yes, many activities undertaken for most issues and thematic areas (please provide details below)	
d) Yes, comprehensive activities undertaken for all issues and thematic areas (please provide details below)	
Further comments on the CEPA activities for implementation of cross-cutting issues and thematic programmes of work adopted under the Convention.	
Governmental institutions such as the EPA, MoARD and NGOs such as the ISD carry out CEPA activities in areas of rehabilitation of degraded areas, public participation and soil and water conservation.	

<b>99. ? Does your country support initiatives by major groups, key actors and stakeholders that integrate biological diversity conservation matters in their practice and education programmes as well as into their relevant sectoral and cross-sectoral plans, programmes and policies? (decision IV/10 and Goal 4.4 of the Strategic Plan)</b>	
a) No	
b) Yes (please provide details below)	X
Further comments on the initiatives by major groups, key actors and stakeholders that integrate biodiversity conservation in their practice and education programmes as well as their relevant sectoral and cross-sectoral plans, programmes and policies.	
Environmental (including biodiversity) issues are included in the SDPRP and the new PASDEP documents. Drylands biodiversity education programme is part of the programme of the AAU education	

programme. Environmental education programme is also incorporated in the primary education curriculum of the country.

**100.** Is your country communicating the various elements of the 2010 biodiversity target and establishing appropriate linkages to the Decade on Education for Sustainable Development in the implementation of your national CEPA programmes and activities? (decision VII/24)

a) No	X
b) No, but some programmes are under development	
c) Yes, some programmes developed and activities undertaken for this purpose (please provide details below)	
d) Yes, comprehensive programmes developed and many activities undertaken for this purpose (please provide details below)	
Further comments on the communication of the various elements of the 2010 biodiversity target and the establishment of linkages to the Decade on Education for Sustainable Development.	

**Box LII.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

**a) Outcomes and Impacts of actions taken**

- The public at present is relatively more aware of biodiversity conservation issues than before.
- The country is participating in and implementing some educational activities related to the Convention on Biological Diversity.
- The media promote biodiversity related issues well. The articles and columns some of newspapers devote to the sector show this clearly

**b) contribution to the achievement of the goals of the Strategic Plan of the Convention**

- All this contributes to goal 4 of the Strategic Plan of the Convention being achieved

**c) contribution to progress towards the 2010 target**

Awareness on the international dimensions of biodiversity issues and scientific, technical and technological capacity to implement the Convention have increased

**d) progress in implementing national biodiversity strategies and action plans**

- The government's acceptance of the NBSAP has ensured that the particular needs of biodiversity are not marginalised in the environmental focus of public education and awareness programmes

**e) contribution to the achievement of the Millennium Development Goals**

Contributes to goals 2, 7 and 8

**f) constraints**

- Capacity limitation at both the institutional structures and trained human resources availability
- Insufficiency of budgetary allocation

## Article 14 - Impact assessment and minimizing adverse impacts

<b>101.</b> On Article 14.1(a), has your country developed legislation requiring an environmental impact assessment of proposed projects likely to have adverse effects on biological diversity?	
a) No	
b) No, legislation is still in early stages of development	
c) No, but legislation is in advanced stages of development	
d) Yes, legislation is in place (please provide details below)	X
e) Yes, review of implementation available (please provide details below)	
Further information on the legislation requiring EIA of proposed projects likely to have adverse effects on biodiversity.	
<p>The Ethiopian Constitution under Article 92 sub-article 2 stipulated that "<i>The design and implementation of programmes and projects of development shall not damage or destroy the environment.</i>"</p> <p>Ethiopia has developed an umbrella policy on the environment. Environmental impact assessment is one of the cross sectoral topics in the Environmental Policy of Ethiopia. The relevant elements include among other:</p> <ul style="list-style-type: none"> <li>• "<i>To ensure that environmental impact assessments consider not only physical and biological impacts but also address social, socioeconomic, political and cultural conditions,</i>"</li> <li>• "<i>To ensure that public and private sector development programmes and projects recognize any environmental impacts early and incorporate their containment into the development design process.</i>"</li> </ul> <p>Based on the general provisions of the Constitution and on the elements of the Environmental Policy, the Environmental Impact Assessment (EIA) Proclamation was issued in the year 2002. The Environmental Impact Assessment Proclamation No 299/2002 provides for the system that the environmental effects of projects and public instruments (policies, strategies, programs, laws or international agreements) are predicted and managed in advance. It prohibits the implementation of proposed projects and the approval of proposed public instruments without undertaking environmental impact assessments. It also provides for public participation in environmental impact assessment, including through commenting on the environmental impact assessment reports. In addition, in line with the proclamation, various sectoral EIA guidelines have been and are being developed to facilitate the process of implementation. All the sectoral guidelines have sections on biodiversity.</p>	



**102.** ? On Article 14.1(b), has your country developed mechanisms to ensure that due consideration is given to the environmental consequences of national programmes and policies that are likely to have significant adverse impacts on biological diversity?

a) No	
b) No, mechanisms are still in early stages of development	
c) No, but mechanisms are in advanced stages of development	
d) Yes, mechanisms are in place (please provide details below)	X

Further comments on the mechanisms developed to ensure that due consideration is given to the environmental consequences of national programmes and policies that are likely to have significant adverse impacts on biodiversity.

The Environmental Impact Assessment (EIA) proclamation was issued in the year 2002. The Environmental Impact Assessment Proclamation No 299/2002 provides for the environmental effect of public instruments (policies, strategies, programs, laws or international agreements) to be predicted and managed in advance through carrying out EIA upon them.

**103.** ? On Article 14.1(c), is your country implementing bilateral, regional and/or multilateral agreements on activities likely to significantly affect biological diversity outside your country's jurisdiction?

a) No	
b) No, but assessment of options is in progress	
c) Yes, some completed, others in progress (please provide details below)	X
d) Yes (please provide details below)	

Further information on the bilateral, regional and/or multilateral agreements on activities likely to significantly affect biodiversity outside your country's jurisdiction.

Major agreements implemented in Ethiopia on activities likely to significantly affect biological diversity outside its jurisdiction are the Convention on International Trade on Endangered Species (CITES) and the Cartagena Protocol on Biosafety. In addition, some preliminary activities are underway to ratify the Ramsar Convention. A GEF project on the Rift Valley Lakes biodiversity conservation has been implemented in Ethiopia with the objective of promoting transboundary biodiversity conservation. The Nile Basin Initiative has biodiversity components.

**104.** ? On Article 14.1(d), has your country put mechanisms in place to prevent or minimize danger or damage originating in your territory to biological diversity in the territory of other Parties or in areas beyond the limits of national jurisdiction?

a) No	
b) No, mechanisms are still in early stages of development	
c) No, but mechanisms are in advanced stages of development	X
d) Yes, mechanisms are in place based on current scientific knowledge	

**105.** ? On Article 14.1(e), has your country established national mechanisms for emergency response to activities or events which present a grave and imminent danger to biological diversity?

a) No	
b) No, mechanisms are still in early stages of development	
c) No, but mechanisms are in advanced stages of development	
d) Yes, mechanisms are in place (please provide details below)	x

Further information on national mechanisms for emergency response to the activities or events which present a grave and imminent danger to biodiversity.

A national mechanism is in place for emergence response for some events which present grave and imminent danger to biological diversity. The Ministry of Agriculture and Rural Development (MoARD) has been given the responsibility to have forests protected from forest fires and other disasters. To this end, it has the duty to take the necessary measures by coordinating and mobilizing any government and private body and communities to extinguish forest fires. Any person who is aware of occurrence of forest fire has the duty to immediately report to the Ministry and to cooperate in extinguishing it

**106.** Is your country applying the Guidelines for Incorporating Biodiversity-related Issues into Environment-Impact-Assessment Legislation or Processes and in Strategic Impact Assessment as contained in the annex to decision VI/7 in the context of the implementation of paragraph 1 of Article 14? (decision VI/7)

a) No	
b) No, but application of the guidelines under consideration	
c) Yes, some aspects being applied (please specify below)	
d) Yes, major aspects being applied (please specify below)	X

Further comments on application of the guidelines.

Biodiversity related issues are incorporated into the Environmental Impact Assessment (EIA) proclamation of Ethiopia, and into sectoral guidelines of EIA, and thus is in line with decision VI/7. The EIA proclamation also includes provisions for impact assessment of policies, programmes, plans and other public instruments. In order to make the proclamation applicable above the project level i.e. to carry out Strategic Environmental Assessment (SEA), the formulation of guidelines that can be used at a strategic level is required.

**107.** On Article 14 (2), has your country put in place national legislative, administrative or policy measures regarding liability and redress for damage to biological diversity? (decision VI/11)

a) No

X

b) Yes (please specify the measures)

Further comments on national legislative, administrative or policy measures regarding liability and redress for damage to biological diversity.

In order to implement the Cartagena Protocol on Biosafety, a biosafety proclamation is under development. The draft document includes liability and redress for protection in the application of genetic engineering. The Environment Policy recognizes the "polluter pays" principle. It provides for the application of the "polluter pays" principle while endorsing the Precautionary Principle since pollution is likely to occur, to ensure that polluting enterprises and municipalities and district councils provide their own appropriate pollution control facilities and protect biodiversity.

**108.** Has your country put in place any measures to prevent damage to biological diversity?

a) No

b) No, but some measures are being developed

c) Yes, some measures are in place (please provide details below)

X

d) Yes, comprehensive measures are in place (please provide details below)

Further information on the measures in place to prevent damage to biological diversity.

The forestry proclamation of Ethiopia requires forest owners to observe and implement directives issued by the government relating to the conservation of unique habitats endangered tree species and forest communities. The forestry laws issued by regional states also provide similar obligations on forest owners and land holders.

The forestry proclamation imposes obligation on forest owners to notify the government on the occurrence of forest pests and diseases, and to protect their forests from fire and other hazards.

The Federal rural land proclamation provides that rural land shall be utilized in accordance with environmental protection laws and regional land laws enacted based on the particular conditions of the respective regions. In line with this, the Tigray Regional State land law requires rural land holders to take due care of trees in their holdings, to avoid planting prohibited species and to preserve certain tree species located in their land holdings.

**Institutional measures-**

- Ethiopia has established a Biodiversity Conservation Institute, which has a mandate to conserve biological resources.
- A biodiversity protection team has also been formed in the Environmental Protection Authority in order to address biodiversity issues in all environmental management activities

**Policy measures-**

- Ethiopia has a biodiversity policy which gives direction on conserving biological resources
- Biodiversity protection is included in cross sectoral policies such as the Environmental Policy and in the sectoral policies such as the Water Policy

- The EIA and Pollution control proclamations issued by the Federal EPA provide for protecting biodiversity

**Strategies & Programmes**

- Protection of biodiversity is among major issues in:
  - the Conservation Strategy of Ethiopia, and in the regional conservation strategies
  - the Agricultural and Rural Development strategies
  - the Poverty Reduction and Sustainable Development Programme
  - the Water Sector strategy

**Action plans -**

- Ethiopia has developed a National BSAP
- Biodiversity is covered indirectly indicated in the National action programme to combat desertification

**Projects -**

- Ethiopia is conducting a biodiversity conservation project supported by the Eastern African Regional Wetlands Conservation and Support Programme
- The development of an Invasive Alien Species Control project is also in progress.

**International Cooperation:**

- Ethiopia is a party to the Convention on Biological Diversity and to the Cartagena Protocol on Biosafety, and thus takes various measures to comply with the provisions of those international agreements

**109.** Is your country cooperating with other Parties to strengthen capacities at the national level for the prevention of damage to biodiversity, establishment and implementation of national legislative regimes, policy and administrative measures on liability and redress? (decision VI/11)

a) No	
b) No, but cooperation is under consideration	
c) No, but cooperative programmes are under development	
d) Yes, some cooperative activities being undertaken (please provide details below)	X
e) Yes, comprehensive cooperative activities being undertaken (please provide details below)	

Further comments on cooperation with other Parties to strengthen capacities for the prevention of damage to biodiversity.

To ensure cooperation among African countries, Ethiopia has played a lead role in the development of the African Model Law on biosafety. This law gives due emphasis to the importance of cooperation among African countries in implementing the Articles of the Cartagena Protocol including on liability and redress. Ethiopia is active in promoting biodiversity conservation in the Nile Basin Initiative.

### **Box LIII.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

#### **a) Outcomes and impacts of actions taken**

A common understanding has been achieved to avoid unwanted consequences of development projects on the environment, including biodiversity through the application of environmental impact assessment. All development projects and sectoral policies and laws are subject to environmental impact assessment and as a result unwanted impacts of policies, laws and project activities on biodiversity are minimized.

#### **b) Contribution to the achievement of the goals of the Strategic Plan of the Convention**

The education and awareness raising programmes contribute to goal 4 of the Strategic Plans of the Convention. The EIA system contributed to minimizing the adverse impacts of development projects on biodiversity, by encouraging the implementation of environment friendly projects and rehabilitating adversely affected areas.

#### **c) Contribution to progress towards the 2010 target**

The implementation of the EIA system has contributed to the progress towards the 2010 target, particularly by reducing the expansion of destructive development projects into sensitive biodiversity areas.

#### **d) Progress in implementing national biodiversity strategies and action plans**

The application of environmental impact assessment principles is also contributing to achieving the objectives of the NBSAP.

#### **e) Contribution to the achievement of the Millennium Development Goals**

The importance of environmental wellbeing for sustainable development has been realized. As a result, the screening of development projects is going on in order to ensure environmental sustainability. Moreover, the principles of sustainable development are integrated into the country's policies and programmes into the country's Plan for Accelerated and Sustainable Development to End Poverty (PASDEP).

#### **f) Constraints encountered in implementation**

Some decision makers and most project designers and investors lack adequate understanding about the significance of EIA.

### Article 15 - Access to genetic resources

**110.**  Has your country endeavored to facilitate access to genetic resources for environmentally sound uses by other Parties, on the basis of prior informed consent and mutually agreed terms, in accordance with paragraphs 2, 4 and 5 of Article 15?

a) No

b) Yes (please provide details below)

X

Further information on the efforts taken by your country to facilitate access to genetic resources for environmentally sound uses by other Parties, on the basis of prior informed consent and mutually agreed terms.

The Institute of Biodiversity Conservation was established in 1998 with the mandate, *inter alia*, to give permit for those who need to access the genetic resources in the country, and to issue regulation in accordance to which permit for access to genetic resources shall be granted. Accordingly, the Institute is receiving access application and granting access permits based on mutually agreed access and benefit-sharing agreements.

Legislation on access to genetic resources and associated community knowledge has been developed and issued as proclamation No. 482/ 2006. The legislation elaborates the conditions and the procedure for granting access permits to genetic resources and to associated community knowledge. An access and benefit sharing model agreement has also been developed and put to use with a view to facilitating mutually agreed terms of access and benefit sharing. Some access and benefit-sharing agreements have been negotiated and signed based on this model.

**111.**  Has your country taken measures to ensure that any scientific research based on genetic resources provided by other Parties is developed and carried out with the full participation of such Parties, in accordance with Article 15(6)?

a) No

b) No, but potential measures are under review

c) Yes, some measures are in place (please provide details below)

d) Yes, comprehensive measures are in place (please provide details below)

X

Further information on the measures to ensure that any scientific research based on genetic resources provided by other Contracting Parties is developed and carried out with the full participation of such Contracting Parties.

**112.**  Has your country taken measures to ensure the fair and equitable sharing of the results of research and development and of the benefits arising from the commercial and other use of genetic resources with any Contracting Party providing such resources, in accordance with Article 15(7)?

a) No

b) No, but potential measures are under review

c) Yes, some measures are in place (please provide details below)

d) Yes, comprehensive legislation is in place (please provide details below)

X

e) Yes, comprehensive statutory policy or subsidiary legislation are in place (please provide details below)	
f) Yes, comprehensive policy and administrative measures are in place (please provide details below)	
Further information on the type of measures taken.	
Fair and equitable sharing of the results and benefits arising from the use of genetic resources has been recognized by the national policy and legislation of Ethiopia as one of the conditions for granting access to genetic resources. In line with this, the Institute of Biodiversity Conservation is endeavoring, when negotiating access and benefit sharing agreement, to ensure that benefits arising from the use of genetic resources provided are fairly and equitably shared with the country. Recently, a new Proclamation on access and benefit sharing has been issued by the government, Ethiopia has so far not needed to seek access from another country.	

<b>113.</b> <input checked="" type="checkbox"/> In developing national measures to address access to genetic resources and benefit-sharing, has your country taken into account the multilateral system of access and benefit-sharing set out in the International Treaty on Plant Genetic Resources for Food and Agriculture?	
a) No	
b) Yes (please provide details below)	X
Further information on national measures taken which consider the multilateral system of access and benefit-sharing as set out in the International Treaty on Plant Genetic Resources for Food and Agriculture.	
Ethiopia has incorporated the multilateral system of access and benefit sharing set out in the International Treaty on Plant Genetic Resources for Food and Agriculture in to its legislation on the regulation of access to genetic resources. The legislation on access to genetic resources provides that access to plant genetic resources covered by multilateral systems shall be granted in accordance with the conditions specified in the Treaty, and a detailed regulation will be developed to this effect.	

<b>114.</b> Is your country using the Bonn Guidelines when developing and drafting legislative, administrative or policy measures on access and benefit-sharing and/or when negotiating contracts and other arrangements under mutually agreed terms for access and benefit-sharing? (decision VII/19A)	
a) No	
b) No, but steps being taken to do so (please provide details below)	
c) Yes (please provide details below)	X
Please provide details and specify successes and constraints in the implementation of the Bonn Guidelines.	
The Bonn Guidelines were used when developing the national legislation on access to genetic resources and benefit sharing and the access and benefit sharing model agreement of Ethiopia. They are also being consulted when negotiating access and benefit sharing agreements.	
The Bonn Guidelines have helped to inform decision makers on access and benefit-sharing.	
<b>115.</b> Has your country adopted national policies or measures, including legislation, which address the role of intellectual property rights in access and benefit-sharing arrangements (i.e. the issue of disclosure of origin/source/legal provenance of genetic resources in applications for intellectual property rights where the subject matter of the application concerns, or makes use of, genetic resources in its development)?	

a) No	
b) No, but potential policies or measures have been identified (please specify below)	
c) No, but relevant policies or measures are under development (please specify below)	
d) Yes, some policies or measures are in place (please specify below)	X
e) Yes, comprehensive policies or measures adopted (please specify below)	

Further information on policies or measures that address the role of IPR in access and benefit-sharing arrangements.

The role of intellectual property rights in access and benefit sharing has been recognized in the plant breeders' rights legislation of Ethiopia recently issued as Proclamation No. 481/2006. The legislation requires an applicant for plant breeders' right to present legal provenance of the genetic resource used to develop the variety in question.

**116.** Has your country been involved in capacity-building activities related to access and benefit-sharing?

a) Yes (please provide details below)	X
b) No	



Please provide further information on capacity-building activities (your involvement as donor or recipient, key actors involved, target audience, time period, goals and objectives of the capacity-building activities, main capacity-building areas covered, nature of activities). Please also specify whether these activities took into account the Action Plan on capacity-building for access and benefit-sharing adopted at COP VII and available in annex to decision VII/19F.

Ethiopia is participating as a recipient in the Genetic Resources Policy Initiative (GRPI) of IPGRI. The objective of GRPI is a project aiming to strengthen the capacity of national policy makers in southern countries to develop comprehensive genetic resource policy frameworks. GRPI supports policy capacity building and strategic participatory research in institutions engaged in the analysis and development of policies and laws that affect the conservation, use, management and control of genetic resources at national and sub-regional levels. GRPI is implemented in six pathfinder countries in the world (Nepal, Vietnam, Egypt, Ethiopia, Zambia and Peru) and three regions (Andean Community, West and Central Africa, and East Africa).

The specific objectives of GRPI are to identify the demands in the countries for research and capacity building services in the field of genetic resource policies; to act as a 'knowledge broker' linking demands with existing information resources; to identify critical gaps between demands for research and capacity building and currently available resources; to support participatory action research; to initiate and support capacity strengthening activities involving national policy makers; and to strengthen activities of regional networks active in the field.

National institutions relevant to genetic resources policy issues are the key actors in GRPI. Policy and decision makers are the major target audience of the capacity building initiative.

A Regional ABS capacity Building workshop for Eastern and Southern Africa was held in Addis Ababa (2-6 October 2005) for those working on biodiversity and associated indigenous knowledge. The workshop was sponsored by the GTZ of Germany and hosted by the Institute of Biodiversity Conservation of Ethiopia. The main objectives of the workshop were:

- To explore the implications of the existing international framework regulating ABS and experiences with bioprospecting and cases in the region for the implementation of ABS regulations at the national and local levels.
- Considering that bioprospecting is on-going in the region, to identify gaps and hindrances at the local, national and international levels to effectively regulate access to genetic resources and related traditional knowledge and to ensure the sharing of benefits.
- Recognizing the different dimensions of poverty, to analyse how benefits, which accrue from bioprospecting, alleviate the poverty of local and indigenous communities and explore which instruments and processes at the national and international level could use ABS as an instrument for poverty alleviation.
- To elaborate recommendations for policy makers, NGOs and other relevant actors in the region for the development of national and regional strategies for the creation and implementation of efficient ABS regulations, including participatory processes and institutional and regulatory requirements.
- Both the GRPI project and the GTZ supported capacity-building regional workshop have aimed at capacity building consistent with Decision VII/19F of the CoP of the CBD.

**Box LIV.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

**a) Outcomes and impacts of actions taken**

The establishment of the Institute of Biodiversity Conservation as nationally responsible, *inter alia*, for the regulation of access to genetic resource and the enactment of a legislation on access to genetic resources has created the institutional and legal framework for access to genetic resources and sharing the benefits generated from their utilization. The genetic resources in the country have now started to be accessed based on the prior informed consent of the country on mutually agreed terms of benefit sharing.

The measures taken so far in the country to implement the article on access and benefit sharing have also raised, though not to the required extent, the awareness on the subject and some users of genetic resources have started to apply for access to genetic resource based on the prior informed consent and mutually agreed terms of sharing the benefit to be generated therefrom.

**b) Contribution to the achievement of the goals of the Strategic Plan of the Convention**

- The institutional and legislative measures taken so far in Ethiopia contribute to the goals of the Strategic Plan of the Convention by creating the general framework that helps to realize access to and the fair and equitable sharing of benefits arising from the use of genetic resource.

**c) Contribution to progress towards the 2010 target**

- The institutional, policy and legal framework put in place in Ethiopia thus far greatly contributes to the progress towards the 2010 targets as relates to ensuring access to and the fair and equitable sharing of benefits arising from genetic resources in the country are accessed and used in line with the CBD and the International Treaty on Plant Genetic Resources for Food and Agriculture.

**d) Progress in implementing national biodiversity strategies and action plans**

- The legislative measures taken so far with regard to access and benefit sharing constitute progress in the implementation of the national biodiversity strategies and action plans. They partially implemented the following actions enshrined in the national biodiversity strategies and action plans as relate to access and benefit sharing.

Actions Planned	Implementation Status
Develop access and benefit sharing legislation	Legislation put in place
Comply with international conventions related to biodiversity management.	Access legislation providing for the fulfillment of international agreements put in place
Ensure that the relevant draft laws currently under review embody conservation measures including those required by the CBD and other related conventions	An Access legislation that is harmonized with international agreements put in place

**e) Contribution to the achievement of the Millennium Development Goals**

- The policy, legal and institutional measures taken so far in Ethiopia thus realize access to and a fair and equitable sharing of benefits arising from the use of genetic resource contributing to fighting poverty.

**f) Constraints encountered in implementation**

**Article 16 - Access to and transfer of technology**

<b>117. ?</b> On Article 16(1), has your country taken measures to provide or facilitate access for and transfer to other Parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment?	
a) No	
b) No, but potential measures are under review	
c) Yes, some measures are in place (please provide details below)	X
d) Yes, comprehensive measures are in place (please provide details below)	
Further information on the measures to provide or facilitate access for and transfer to other Parties of technologies that are relevant to the conservation and sustainable use of biodiversity or make use of genetic resources and do not cause significant damage to the environment.	
The technologies that Ethiopia can make available to other countries are traditional. The law on access and benefit-sharing deals not only with genetic resources, but also with traditional knowledge and technologies.	

<b>118. ?</b> On Article 16(3), has your country taken measures so that Parties which provide genetic resources are provided access to and transfer of technology which make use of those resources, on mutually agreed terms?	
a) No	
b) No, but potential measures are under review	
c) Yes, some measures are in place	
d) Yes, comprehensive legislation is in place	X
e) Yes, comprehensive statutory policy or subsidiary legislation are in place	
f) Yes, comprehensive policy and administrative arrangements are in place	
g) Not applicable	

<b>119. ?</b> On Article 16(4), has your country taken measures so that the private sector facilitates access to joint development and transfer of relevant technology for the benefit of Government institutions and the private sector of developing countries?	
a) No	
b) No, but potential measures are under review	
c) Yes, some policies and measures are in place (please provide	X

details below)	
d) Yes, comprehensive policies and measures are in place (please provide details below)	
e) Not applicable	
<b>Further information on the measures taken.</b>	
The legislation measure on Access to Genetic Resources and Community Knowledge and Community Right Proclamation is in place. Other potential measures, including policy and administrative arrangements are also in the process of formulation.	

**Box LV.**

Please elaborate below on the implementation of this article specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

**a) Outcomes and impacts of actions taken**

Policies and strategies have been developed in a participatory way to enhance efforts on environmental and biodiversity conservation and sustainable use. Policy makers, technology developers, regulatory bodies and technology users are more aware than before on the need to conserve and sustainably use biodiversity and associated knowledge, for the wellbeing of all. The Ethiopian Institute of Agricultural Research, the Institute of Biodiversity and Conservation, the Environmental Protection Authority, Ethiopian Science and Technology Agency, and others have developed strategies and conducted awareness raising activities in relation to the above.

**b) Contribution to the achievements of the goals of the Strategic Plan of the Convention;**

The development and implementation of policies and strategies relevant to the conservation and sustainable use of biodiversity and associated knowledge and environmental protection will contribute to the global efforts to meet the goals of the strategic plans of the convention.

**c) Contribution to progress towards the 2010 target;**

There will be a better understanding of the need to conserve biodiversity and the environment to sustainably use the resources for the betterment and livelihood improvement of local communities dependent on these resources and for humankind in general.

**d) Progress in implementing national biodiversity strategies and action plans ;**

The NBSAP expects traditional knowledge and technologies to be accessed and used. The law on access and benefit-sharing makes this possible.

**e) Contribution to the achievements of the Millennium Development Goals;**

When properly implemented, the policies and strategies developed will help to prevent the loss in biodiversity and environmental resources and therefore ensure environmental sustainability as well as reducing poverty.

**f) Constraints encountered in implementation**

**Programme of Work on transfer of technology and technology cooperation**

**120.** Has your country provided financial and technical support and training to assist in the implementation of the programme of work on transfer of technology and technology cooperation?

(decision VII/29)	
a) No	
b) No, but relevant programmes are under development	
c) Yes, some programmes being implemented (please provide details below)	X
d) Yes, comprehensive programmes being implemented (please provide details below)	
Further comments on the provision of financial and technical support and training to assist in the implementation of the programme of work on transfer of technology and technology cooperation.	
The Ethiopian Institute of Agricultural Research (EIAR) is working on technology generation and technology adoption to enhance the sustainable use of genetic resources.	

<b>121.</b> Is your country taking any measures to remove unnecessary impediments to funding of multi-country initiatives for technology transfer and for scientific and technical cooperation? (decision VII/29)	
a) No	X
b) No, but some measures being considered	
c) Yes, some measures are in place (please provide details below)	
d) Yes, comprehensive measures are in place (please provide details below)	
Further comments on the measures to remove unnecessary impediments to funding of multi-country initiatives for technology transfer and for scientific and technical cooperation.	
No such impediments have been identified in the country	

<b>122.</b> Has your country made any technology assessments addressing technology needs, opportunities and barriers in relevant sectors as well as related needs in capacity building? (annex to decision VII/29)	
a) No	
b) No, but assessments are under way	
c) Yes, basic assessments undertaken (please provide details below)	X
d) Yes, thorough assessments undertaken (please provide details below)	
Further comments on technology assessments addressing technology needs, opportunities and barriers in relevant sectors as well as related needs in capacity building.	
The Ethiopian Institute of Agricultural Research has produced the national policy and corresponding strategy document pertaining to agricultural biotechnology. It has a coordination office for agricultural biotechnology research and development based in Addis Ababa. Efforts were made to raise awareness on biotechnology related topics and an internet-based discussion group that involved professionals from eastern Africa countries was formed. The network was named as the African Biotechnology forum.	
Concerning IBC's capacity, the Biotechnology and Biosafety Department is in place. Much of the work being carried out to date is more or less concentrated in plant genetic resources conservation, characterization and evaluation. Biotechnology in general terms is needed for the following major component	

activities:

- a) For conservation: among others, tissue culture could be used in forestry, root and tuber crops, crops with recalcitrant seeds as well as medicinal plants.
- b) For complementing *ex situ* conservation activities by helping with regeneration of seeds maintained *ex situ*.
- c) For diversity assessment: among biotechnology tools, molecular markers would facilitate such studies substantially in identifying economically important genes. So far only physiological/morphological characteristics are used in crop genetic resource evaluation activities.
- d) For research: biotechnological tools are useful to speed up the screening of crop varieties and/or accessions. Conventional methods require longer time and, therefore, more financial resources especially when the accessions are many.
- e) For identification and classification: this is linked to biosafety issues. Biotechnology tools would be applied to check that materials are free from disease and also inspect that they are not transgenic (GMOs). The latter requires that proper facilities and technical competence be instituted.

**123.** Has your country made any assessments and risk analysis of the potential benefits, risks and associated costs with the introduction of new technologies? (annex to decision VII/29)

a) No	X
b) No, but assessments are under way	
c) Yes, some assessments undertaken (please provide details below)	
d) Yes, comprehensive assessments undertaken (please provide details below)	

Further comments on the assessments and risk analysis of the potential benefits, risks and associated costs with the introduction of new technologies.

**124.** Has your country identified and implemented any measures to develop or strengthen appropriate information systems for technology transfer and cooperation, including assessing capacity building needs? (annex to decision VII/29)

a) No	
b) No, but some programmes are under development	
c) Yes, some programmes are in place and being implemented (please provide details below)	X
d) Yes, comprehensive programmes are being implemented (please provide details below)	

Further comments on measures to develop or strengthen appropriate information systems for technology transfer and cooperation.

The Ethiopian Science and Technology Agency has organized a data base of technologies contained in patent documents and made it available to users. It is making the various sectors of technology users aware of the information so that they may benefit from the data base.

Under the leadership of the Ministry of Capacity Building, there has been a nation-wide effort to connect all the woredas (districts) in the country to each other through telephone and internet. This effort is

now bearing fruit and many districts are capable of accessing the data based and communicating with one another electronically.

**125.** Has your country taken any of the measures specified under Target 3.2 of the programme of work as a preparatory phase to the development and implementation of national institutional, administrative, legislative and policy frameworks to facilitate cooperation as well as access to and adaptation of technologies of relevance to the Convention? (annex to decision VII/29)

a) No	
b) No, but a few measures being considered	
c) Yes, some measures taken (please specify below)	X
d) Yes, many measures taken (please specify below)	

Further comments on the measures taken as a preparatory phase to the development and implementation of national institutional, administrative, legislative and policy frameworks to facilitate cooperation as well as access to and adaptation of technologies of relevance to the Convention.

The major policies relevant to genetic resources put in place, *inter alia*, are those on the environment, biodiversity and water resources. Environmental pollution control and impact assessment proclamations are the major existing environmental laws.

A proclamation to regulate access to genetic resources and associated traditional knowledge and also that provides for community rights has been recently enacted & effected.

The Institute of Biodiversity Conservation (IBC) has been involved together with other stakeholders to enhance and facilitate cooperation as well as access to and adaptation of technologies of relevant to the Convention.

**Box LVI.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

**a) Outcomes and impacts of actions taken**

- The Ethiopian Institute of Agriculture Research has embarked on technology generation and adoption activities to enhance the sustainable use of genetic resources in the country.
- The Ministry of Capacity Building is spearheading the effort to link up all or most of the districts in the country through a Woreda Net programe so that the districts could have easy access to telephone and internet which will eventually enable the exchange of information and technologies as necessary.
- The Ethiopian Institute of Agricultural Research has developed national policy and strategy document to advance agricultural biotechnology.
- A network named African Biotechnology Forum was formed to raise awareness on biotechnology related topics and enhance internet based discussion among professionals in Eastern Africa.
- The Biotechnology and Biosafety Department of IBC is currently engaged in the characterization

and evaluation of plant genetic resources and has a plan to include in its work animal and microbial genetic resources.

- The Ethiopian Science and technology Agency has organized a database of technologies contained in patent documents for users interested in the field
- Policies relevant to the conservation and sustainable use of genetic resources are in place. These include the Environmental, Biodiversity and Water Resources Policies.
- The Environmental Pollution Control and Impact Assessment proclamations are among the environmental laws issued recently.
- A proclamation to regulate access to genetic resources and associated traditional knowledge (TK) has been recently enacted.

**b) Contribution to the achievements of the goals of the Strategic Plan of the Convention;**

- The discussion among concerned professional and government bodies regarding issues of technology development and transfer has helped to raise awareness among policy makers, professional and to some extent communities on the need to conserve and sustainably use the genetic resources of the country.

**c) Contribution to progress towards the 2010 target;**

- The various relevant policies and strategies developed and the program of work concerning the transfer of technology and cooperation in the field will undoubtedly positively contribute towards achieving the 2010 target.

**d) Progress in implementing national biodiversity strategies and action plans;**

- The NBSAP has been approved by the government and is being printed for distribution and implementation

**e) Contribution to the achievements of the Millennium Development Goals;**

- The policies and strategies developed will help to stop the loss in biodiversity and environmental resources and therefore ensure environmental sustainability and poverty alleviation.

**f) Constraints encountered in implementation;**

- Law Technical capacity limitation among key relevant institutions and limited access to relevant information and experience, are the major constraints in the implementation of the program of work in technology transfer and technology cooperation.



### Article 17 - Exchange of information

<b>126. ? On Article 17(1), has your country taken measures to facilitate the exchange of information from publicly available sources with a view to assist with the implementation of the Convention and promote technical and scientific cooperation?</b>	
a) No	
b) No, but potential measures are under review	
c) Yes, some measures are in place	X
d) Yes, comprehensive measures are in place	

#### *The following question (127) is for DEVELOPED COUNTRIES*

<b>127. ? On Article 17(1), do these measures take into account the special needs of developing countries and include the categories of information listed in Article 17(2), such as technical, scientific and socio-economic research, training and surveying programmes, specialized knowledge, repatriation of information and so on?</b>	
a) No	
b) Yes, but they do not include the categories of information listed in Article 17(2), such as technical, scientific and socio-economic research, training and surveying programmes, specialized knowledge, repatriation of information and so on	
c) Yes, and they include categories of information listed in Article 17 (2), such as technical, scientific and socio-economic research, training and surveying programmes, specialized knowledge, repatriation of information and so on	

#### **Box LVII.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

#### **a) Outcomes and impacts of actions taken**

Relevant government organizations have established information centers, websites, databases and facilities e.g. the (national library) for the dissemination of information. The capacity of IBC has been increased to enable it exchange information with other users (local, national, regional and international research organizations).

Through the coordination of the Environmental Protection Authority, the Ethiopian Environment Information Network System (Ethio-ETN) initiative is also in progress. The Ethio-EIN Framework will use the Biodiversity and Bio-safety Clearing House Mechanisms as one of the major contributors of information relevant to the conservation and sustainable use of biological diversity. The Strategic Implementation Plan has already been developed in order to put the Network System in place. The Ethio-EIN initiative has a National Environment Information Portal that will be linked to the African Environment In-

formation Network (AEIN) portal. As a Pilot Case Study, Five Regions (Amhara, Tigray, Oromia, Southern Nations and Benishangul) in the country have been identified and Regional Environmental Information Portals are under establishment. These Regional Centers will serve as ‘Collection Points’ for the National Information Center. In parallel, the National Environmental Information Portal or Center is being established.

A meta-data base on environmental and natural resources is being developed under the auspices of the Ministry of Water Resources to create one central national meta-database in order to ensure consistency of data and inter-operability of subsystems. The Ethiopian Mapping Agency has also develop the National Spatial Data Infrastructure.

**b) Contribution to the achievement of the goals of the Strategic Plan of the Convention**

- Promotion of communication, awareness and public participation in the implementation of the Convention
- Effective use of Biodiversity and Bio-safety Clearing House Mechanisms in the Ethio-EIN Framework

**c) Contribution to progress towards the 2010 target**

- Through effective exchange of information, negative impacts on biodiversity will be reduced

**d) Progress in implementing National Biodiversity Strategy and Action Plan (NBSAP)**

- Exchange of information a pre-requisite for the conservation and management of biodiversity


**e) Contribution to the achievement of the Millennium Development Goal**

- Availability of information will help to reverse loss of biological diversity

**f) Constraints encountered in implementation**

- The low level of commitment shown to the activity by the concerned institutions has not encouraged the gathering, the dissemination and the exchange of relevant information among the institutions.
- Inadequacy of qualified personnel and financial resources impede the further implementation of the article.

**Article 18 - Technical and scientific cooperation**

**128.**  On Article 18(1), has your country taken measures to promote international technical and scientific cooperation in the field of conservation and sustainable use of biological diversity?

a) No	
b) No, but potential measures are under review	
c) Yes, some measures are in place (please provide details below)	X
d) Yes, comprehensive measures are in place (please provide details below)	

Further information on the measures to promote international technical and scientific cooperation.

Pertinent national institutions for conservation, sustainable use and fair and equitable sharing of the benefits are in place both at the Federal and Regional levels. These institutions are:-

- Institute of Biodiversity conservation
- Environmental Protection Authority
- Regional Environmental Institutions
- Research Organizations at Federal and Regional levels

Efforts are being made to promote international scientific and technical cooperation through the governmental institutions and some non-governmental organizations.

**129.** ? On Article 18(4), has your country encouraged and developed methods of cooperation for the development and use of technologies, including indigenous and traditional technologies, in pursuance of the objectives of this Convention?

a) No	
b) No, but relevant methods are under development	
c) Yes, methods are in place	X

**130.** ? On Article 18(5), has your country promoted the establishment of joint research programmes and joint ventures for the development of technologies relevant to the objectives of the Convention?

a) No	
b) Yes (please provide some examples below)	X

Examples for the establishment of joint research programmes and joint ventures for the development of technologies relevant to the objectives of the Convention.

Some joint research programmes are under development. A Regional Project on Removing Barriers to Invasive Alien Plant Species Management in Africa is being finalized. As the Pilot Case Study, the Programme will focus on how to reduce the negative impacts of invasive alien species on the biodiversity resources of the four countries involved in the programme. Learning from the experiences of these countries, an intervention will be designed to conserve globally significant ecosystem, species and genetic diversity in Africa by protecting it from the threat of invasive alien species. The countries involved in the Programme are: Ethiopia, Zambia, Uganda and Tanzania. These countries will share their respective experiences and disseminate their findings and practices to other African countries.

Regarding to wetlands protection and conservation in Ethiopia, in collaboration with IUCN, the Environmental Protection Authority is preparing the Management Plans of some identified wetlands in the country. Other African countries will share experiences learnt from Ethiopia. This is part of the regional programme run by IUCN in Africa.

The Research Program on Sustainable Use of Dry land Biodiversity (RPSUD) that was initiated and established in 1995 supports training and networking, and enhances institutional research capacities through the Small Research Grant (SRG). The SRG in Ethiopia started in 1997 and identified relevant technologies for appropriate intervention in dry land biodiversity conservation, development, rehabilitation and utilization to assist policy-makers, partnerships and research strategists. The SRG has provided a forum for dissemination of research information by bringing people interested together in the field of dry land areas for exploration, characterization, experiments and evaluation, and in examining social values of indigenous knowledge.

The SRG is a competitive grant scheme. In Ethiopia, over the last eight years (1997-2005), 14 projects were funded through it: - two in 1997, four in 1998, two in 2000, two in 2001 and four in 2003. Of these, the following seven have been completed.

- Globally Threatened Hardwood's *Francolin-Francolinus harwoodi*: Rangeland, Threats and Conservation measures
- Verification of Traditional Ticks and Mites Control Methods in South Omo of Ethiopia
- Floristic and Structural Analyses of Donkoro Washa Forest
- Role of Farm Forestry in Biodiversity Development

- Studies on Hinny Production from Local Jenny and Stallions
- Some Biological and Ecological Studies on *Acacia drepanolobium*
- Symbiotic Interaction of *Acacia drepanolobium* with Insects and Bacteria

Seven projects are still on-going

- A study on Ethno-veterinary practices in Eastern Shewa
- Cytogenesis of the family *Vespertiionidae* (order Clitorea)
- *In situ* conservation of sorghum germplasm in North-Eastern Ethiopia
- A study of the fish biodiversity of the Awash River basin
- A systematic inventory of Borena Ethno-zoology
- Land use / cover change and impact on biodiversity of North Wollo
- Impact of Invasive *Prosopis juliflora* and *Acacia drepanolobium* on native species diversity in dryland of Afar Regional State and Borena Zone, Oromia Regional State, Ethiopia

From the seven completed, six papers have been published. Findings from Ethno-medicine *Acaracide* for the control of ticks and mites, the control of bush encroachment in Borena using cultural practices and the reproductive information on Hinny are some of the important indicative results, which have considerable application.

Ethiopia is also participating in the ASARECA Animal Agriculture Research Network (A-AARNET) coordinated research on testing and validation of breed survey methodology, socio-economic survey and characterization of selected indigenous cattle breeds of Eastern Africa.

A project entitled Conservation and Use of Wild Populations of *Coffea arabica* in the Montane Rainforests of Ethiopia has been launched since about four years. It is a multidisciplinary research project sponsored by the German Federal Ministry for Research and Education. It is a collaborative research project among the scientists at the Center for Development Research (ZEF) of the University of Bonn, the Ethiopian Institute of Agricultural Research (EIAR), the Addis Ababa University (AAU) and the Institute of Biodiversity Conservation (IBC). The overall objective, as written in the project document, is to assess the diversity and economic value of the Ethiopian coffee gene pool and identify characteristics to be used in appellation *Coffea arabica*.

See also the further comments for questionnaire No. 86.

<b>131.</b> Has your country established links to non-governmental organizations, private sector and other institutions holding important databases or undertaking significant work on biological diversity through the CHM? (decision V/14)	
a) No	
b) No, but coordination with relevant NGOs, private sector and other institutions under way	X
c) Yes, links established with relevant NGOs, private sector and institutions	

*The following question (132) is for DEVELOPED COUNTRIES*

<b>132.</b> Has your country further developed the CHM to assist developing countries and countries with economies in transition to gain access to information in the field of scientific and technical cooperation? (decision V/14)	
a) No	
b) Yes, by using funding opportunities	
c) Yes, by means of access to, and transfer of technology	
d) Yes, by using research cooperation facilities	
e) Yes, by using repatriation of information	
f) Yes, by using training opportunities	
g) Yes, by using promotion of contacts with relevant institutions, organizations and the private sector	
h) Yes, by using other means (please specify below)	
Further comments on CHM developments to assist developing countries and countries with economies in transition to gain access to information in the field of scientific and technical cooperation.	

<b>133.</b> Has your country used CHM to make information available more useful for researchers and decision-makers? (decision V/14)	
a) No	
b) No, but relevant initiatives under consideration	X
c) Yes (please provide details below)	
Further comments on development of relevant initiatives.	
Ethiopian CHM Website : <a href="http://www.biodiv.be/ethiopia">http://www.biodiv.be/ethiopia</a> is currently underdevelopment	

<b>134.</b> Has your country developed, provided and shared services and tools to enhance and facilitate the implementation of the CHM and further improve synergies among biodiversity-related Conventions? (decision V/14)	
a) No	
b) Yes (please specify services and tools below)	X
Further comments on services and tools to enhance and facilitate the implementation of CHM and further improve synergies among biodiversity-related Conventions.	
Ethiopia has developed a strategic document for the synergistic implementation of the three RIO	

Conventions (UNCCD, CBD and UNFCCC). This document has identified common thematic areas relevant for the implementation of the three conventions. One of the thematic Areas is INFORMATION EXCHANGE. A strategy has been formulated to establish a national clearing house mechanism at the federal and other clearing house at regional levels that will be connected to a metadata base that involves various key institutions in a decentralized and yet coordinated manner. The required actions to implement the above strategy are:

- Strengthen the capacity of relevant government institutions at federal, regional and District levels to collect, analyze, disseminate and exchange information which has importance for the synergistic implementation of the three conventions;
- Establish a national clearing-house mechanism for the three conventions;
- Establish and National Environmental Information Center with a view of enhancing environmental monitoring capability and to fulfill reporting obligations; and
- Strengthen the Meta database for environmental information.

The bases for the synergistic implementation of the three RIO conventions are National Action Plan to Combat Desertification, Biodiversity Strategy and Action Plan and NAPA of the UNFCCC.

#### **Box LVIII.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

#### **a) Outcomes and impacts of actions taken**

- Institutional, policy and legislative measures for encouragement and development of methods of cooperation for the development and use of indigenous and traditional technologies are in place. These include, among others, the Biotechnology Policy and Strategy, the Genetic, Species and Ecosystem Conservation Policy Element of the Environmental Policy of Ethiopia, the Biodiversity Policy and Strategy, and the Agricultural Research Policy, as well as the Intellectual Property rights Proclamation.
- A strategic document for the synergistic implementation of the three RIO Conventions (UNCCD, CBD and UNFCCC) has been developed.
- A strategy has been formulated to establish a national clearing house mechanism connecting the federal and regional levels the metadata base that involves different key institutions which are managed in a decentralized and yet coordinated manner.

#### **b) Contribution to the achievement of the goals of the Strategic Plan of the Convention**

- When appropriate technologies and strategies are developed and used to conserve and sustainably use biodiversity, this will definitely contribute positively to the aims and goals of the CBD. Policies and strategies developed should also enhance the development and use of modern and traditional technologies to have complementarity.

#### **c) Contribution to progress towards the 2010 target**

- The policies, strategies, and the CHM will contribute to the progress towards attaining the 2010 target Of conserving species.

#### **d) Progress in implementing national biodiversity strategies and action plans**

- The NBSAP has been approved by the Government and is being printed for distribution and implementation

**e) Contribution to the achievement of the Millennium Development Goals**

The MDG goals of biodiversity conservation and poverty alleviation are being implemented through these aspects of scientific and technical cooperation

**f) Constraints encountered in implementation**

- Inadequacy of financial and trained human resources

**Article 19 - Handling of biotechnology and distribution of its benefits**

**135.** ? On Article 19(1), has your country taken measures to provide for the effective participation in biotechnological research activities by those Contracting Parties which provide the genetic resources for such research?

a) No	
b) No, but potential measures are under review	X
c) Yes, some measures are in place	
d) Yes, comprehensive legislation are in place	
e) Yes, comprehensive statutory policy and subsidiary legislation are in place	
f) Yes, comprehensive policy and administrative measures are in place	

**136.** ? On Article 19(2), has your country taken all practicable measures to promote and advance priority access by Parties, on a fair and equitable basis, to the results and benefits arising from biotechnologies based upon genetic resources provided by those Parties?

a) No	
b) No, but potential measures are under review	X
c) Yes, some measures are in place	
d) Yes, comprehensive measures are in place	

**Box LIX.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- outcomes and impacts of actions taken;
- contribution to the achievement of the goals of the Strategic Plan of the Convention;
- contribution to progress towards the 2010 target;
- progress in implementing national biodiversity strategies and action plans;
- contribution to the achievement of the Millennium Development Goals;
- constraints encountered in implementation.

**a) Outcomes and impacts of actions taken**

- National capacities, opportunities and needs in biotechnology have been identified.
- A National Biotechnology Policy, which is awaiting government approval, has been drafted
- Strategies and action plans for the different sectors of biotechnology have also been formulated.
- The biosafety law of Ethiopia has been drafted based on the African Model Law

**b) Contribution to the achievement of the goals of the Strategic Plan of the Convention**

- Ethiopia became a signatory of the Cartagena Protocol on Biosafety and finally ratified it on September 22, 2003. The country is undertaking all the activities towards developing its National Biosafety Framework (Goal 1, Objective 1.4)

**c) Contribution to progress towards the 2010 target**

- No significant contribution has been made.

**d) Progress in implementing national biodiversity strategies and action plans**

**e) Contribution to the achievement of the Millennium Development Goals**

- No significant contribution has been made.

**f) Constraints encountered in implementation**

- Policy and legislations as well as monitoring and regulatory mechanisms not yet in place
- Inadequacy of infrastructures and facilities
- Inadequacy of coordination, collaboration and networking mechanisms among researchers and users.
- Inadequate national coordination among institutions working on biotechnology.
- Inadequacy of adequately trained manpower in the field.
- Inadequate funding to undertake research and development activities in the field of biotechnology.

### Article 20 – Financial resources

**Box LX.**

Please describe for each of the following items the quantity of financial resources, both internal and external, that have been utilized, received or provided, as applicable, to implement the Convention on Biological Diversity, on an annual basis, since your country became a Party to the Convention.

a) Budgetary allocations by national and local Governments as well as different sectoral ministries	Program/Project type	National Implementing Agency/NIA/	Funding Agency	Received in USD	Utilized in USD	AS Reported by NIA	Status
	Biodiversity Conservation and Sustainable Use Regular Program	Institute of Biodiversity Conservation (IBC)	Government Capital Budget	2,949,843	1,718,519	July 1994 - June 2005	Regular Program
	Biodiversity Conservation and Sustainable Use Regular Program	IBC	Government Recurrent Budget	2977027	2581506	July 1997 - June 2005	Regular Program
	Conservation and Sustainable Use of Medicinal Plants Project	IBC	Government matching fund	638118	489025	April 16 2001 – Nov 2005	Ongoing



	*NOTE: - The budget indicated above is not inclusive all relevant governmental organizations other than IBC.																																		
a) Extra-budgetary resources (identified by donor agencies)																																			
b) Bilateral channels (identified by donor agencies)																																			
c) Regional channels (identified by donor agencies)	<table border="1"> <thead> <tr> <th>Program/Project type</th> <th>National Implementing Agency (NIA)</th> <th>Funding Agency</th> <th>Received</th> <th>Utilized</th> <th>AS Reported by NIA</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>African Government Partnerships for Sustainable Biodiversity Bird Life. (10 African Countries) as “A Project to Enhance Biodiversity Conservation in Important Bird Areas of Ethiopia” (ETH/97/G31)</td> <td>EWCO</td> <td>UNDP/GEF</td> <td>215,000</td> <td>215,000</td> <td>24 August 1999 – April 2005</td> <td>Completed</td> </tr> <tr> <td>Conservation and Sustainable Use of Biological Diversities of Rift Valley Lakes Project (Ethiopia, Kenya, Tanzania) (ETH/98/G41/A/1G/99)</td> <td>IBCR</td> <td>UNDP/UNEP</td> <td>59,270</td> <td>49,491</td> <td>10 Dec. 1998 – April 2005</td> <td>Project document preparation finalized</td> </tr> <tr> <td>Removing Barriers to Invasive Plant Management in Africa (4 countries)</td> <td>EIAR</td> <td>UNEP/GEF</td> <td>50,000</td> <td>50,000</td> <td>14th Feb. 2002 – April 2005</td> <td></td> </tr> </tbody> </table>	Program/Project type	National Implementing Agency (NIA)	Funding Agency	Received	Utilized	AS Reported by NIA	Status	African Government Partnerships for Sustainable Biodiversity Bird Life. (10 African Countries) as “A Project to Enhance Biodiversity Conservation in Important Bird Areas of Ethiopia” (ETH/97/G31)	EWCO	UNDP/GEF	215,000	215,000	24 August 1999 – April 2005	Completed	Conservation and Sustainable Use of Biological Diversities of Rift Valley Lakes Project (Ethiopia, Kenya, Tanzania) (ETH/98/G41/A/1G/99)	IBCR	UNDP/UNEP	59,270	49,491	10 Dec. 1998 – April 2005	Project document preparation finalized	Removing Barriers to Invasive Plant Management in Africa (4 countries)	EIAR	UNEP/GEF	50,000	50,000	14th Feb. 2002 – April 2005							
	Program/Project type	National Implementing Agency (NIA)	Funding Agency	Received	Utilized	AS Reported by NIA	Status																												
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Removing Barriers to Invasive Plant Management in Africa (4 countries)	EIAR	UNEP/GEF	50,000	50,000	14th Feb. 2002 – April 2005																														

d) Multilateral channels (identified by donor agencies)

Program/Project type	National Implementing Agency	Funding Agency	Received	Utilized	AS Reported by NIA	Status
Dynamic Farmer-Based Approach to the Conservation of Plant Genetic Resources (ETH/93/G31)	IBC	UNDP/GEF	2,500,000	2,500,000	1994-Dec. 2002	Completed.
Strengthening the Conservation and Management of Protected Area System of Ethiopia (ETH/00/G41/A/1/G/99/PIMS no.494)	Ethiopian Wildlife Conservation Organization Under Ministry of Agriculture & Rural Development	UNDP	317,821	--	Oct. 1, 2002	Ongoing
Ethiopia's National Biodiversity Strategy and Action Plan Preparation Project (BSAP) (ETH/99/G31/A/IG/99)	IBC	UNDP/GEF	331,930	304,118	1999 - 2004	Completed.
Enabling Activity to Facilitate Early action on the Implementation of the Stockholm Convention on Persistent Organic Pollutants (pops) in Ethiopia (GF/ETH/023)	Environmental Protection Authority/ EPA/	UNDP	496,000	144,000	15 May 2003 – April 2005	Ongoing

		GEF	62600 1	447854	April 16 2001 – Nov 2005	Ongoing
	Development of the National Biosafety Framework for Ethiopia (GF/2716-01-4319) (GF/27-16-02-4523)	EPA UNEP	179,00 0	72,000	31 Oct. 2002 – April 2005	Ongoing
	Community Based Integrated natural Resource Management: Improving Ecosystem Integrity and Rural Livelihood	Amhara Region EPLAUA	350,00 0	0	4 June 2004 – April 2005 project on 30 Dec. 2003	
e) Private sources (identified by donor agencies)						
f) Resources generated through financial instruments, such as charges for use of biodiversity						

**Box LXI.**

Please describe in detail below any major financing programmes, such as biodiversity trust funds or specific programmes that have been established in your country.

**None have been established**

**137.**  On Article 20(1), has your country provided financial support and incentives to those national activities that are intended to achieve the objectives of the Convention?

a) No	
b) Yes, incentives only (please provide a list of such incentives below)	
c) Yes, financial support only	
d) Yes, financial support and incentives (please provide details below)	X

Further comments on financial support and incentives provided.

The government of Ethiopia is providing annual regular and capital budget for implementation of biodiversity conservation activities. For example, as shown in the preceding table, the federal government allocated 4,789,050 USD regular and capital budget during the period July 1994 – June 2005. There are also incentive mechanisms which enhance soil and water conservation and afforestation within local communities through cash and/or food for work. The financial resources needed to run these activities have come from various local governments, non-governmental organizations and the local communities themselves. Land use right certification given to farmers is also another recently introduced system that can be considered as an incentive.

***The next question (138) is for DEVELOPED COUNTRIES***

**138.**  On Article 20(2), has your country provided new and additional financial resources to enable developing country Parties to meet the agreed incremental costs to them of implementing measures which fulfill the obligations of the Convention?

a) No	
b) Yes (please indicate the amount, on an annual basis, of new and additional financial resources your country has provided)	

Further comments on new and additional financial resources provided.

***The next question (139) is for DEVELOPING COUNTRIES OR COUNTRIES WITH ECONOMIES IN TRANSITION***

**139.**  On Article 20(2), has your country received new and additional financial resources to enable it to meet the agreed full incremental costs of implementing measures which fulfill the obligations of the Convention?

a) No	
b) Yes	X

<b>140.</b> <input checked="" type="checkbox"/> Has your country established a process to monitor financial support to biodiversity, including support provided by the private sector? (decision V/11)	
a) No	X
b) No, but procedures being established	
c) Yes (please provide details below)	
Further comments on processes to monitor financial support to biodiversity, including support provided by the private sector.	

<b>141.</b> <input checked="" type="checkbox"/> Has your country considered any measures like tax exemptions in national taxation systems to encourage financial support to biodiversity? (decision V/11)	
a) No	X
b) No, but exemptions are under development (please provide details below)	
c) Yes, exemptions are in place (please provide details below)	
Further comments on tax exemptions for biodiversity-related donations.	

<b>142.</b> Has your country reviewed national budgets and monetary policies, including the effectiveness of official development assistance allocated to biodiversity, with particular attention paid to positive incentives and their performance as well as perverse incentives and ways and means for their removal or mitigation? (decision VI/16)	
a) No	X
b) No, but review is under way	
c) Yes (please provide results of review below)	
Further comments on review of national budgets and monetary policies, including the effectiveness of official development assistance.	
There is no monetary incentive given to any sector; therefore, the question of perverse incentives does not arise	

<b>143.</b> Is your country taking concrete actions to review and further integrate biodiversity considerations in the development and implementation of major international development initiatives, as well as in national sustainable development plans and relevant sectoral policies and plans? (decisions VI/16 and VII/21)	
a) No	
b) No, but review is under way	
c) Yes, in some initiatives and plans (please provide details below)	X
d) Yes, in major initiatives and plans (please provide details below)	
Further comments on review and integration of biodiversity considerations in relevant initiatives, policies and plans.	
The NBSAP has reviewed and tried to integrate biodiversity considerations in all sub sectors. Similarly, the Agricultural and Rural Development Policy, the Poverty Reduction Strategic Plan (PRSP) and the MDG implementation plans have reviewed and integrated biodiversity.	
<b>144.</b> Is your country enhancing the integration of biological diversity into the sectoral development and assistance programmes? (decision VII/21)	

a) No	
b) No, but relevant programmes are under development	
c) Yes, into some sectoral development and assistance programmes (please provide details below)	X
d) Yes, into major sectoral development and assistance programmes (please provide details below)	
Further comments on the integration of biodiversity into sectoral development and assistance programmes	
Workshops and technical reviews of sectoral documents have enabled the IBC and other concerned bodies to enhance the integration of policies that relate to the conservation, management, protection and sustainable utilization of biodiversity into sectoral development plans for better conservation and sustainable utilization.	

***The next question (145) is for DEVELOPED COUNTRIES***

<b>145.</b> Please indicate with an “X” in the table below in which area your country has provided financial support to developing countries and/or countries with economies in transition. Please elaborate in the space below if necessary.	
A r e a s	Support provided
a) Undertaking national or regional assessments within the framework of MEA (decision VI/8)	
b) <i>In-situ</i> conservation (decision V/16)	
c) Enhance national capacity to establish and maintain the mechanisms to protect traditional knowledge (decision VI/10)	
d) <i>Ex-situ</i> conservation (decision V/26)	
e) Implementation of the Global Strategy for Plant Conservation (decision VI/9)	
f) Implementation of the Bonn Guidelines (decision VI/24)	
g) Implementation of programme of work on agricultural biodiversity (decision V/5)	
h) Preparation of first report on the State of World’s Animal Genetic Resources (decision VI/17)	
i) Support to work of existing regional coordination mechanisms and development of regional and sub regional networks or processes (decision VI/27)	
j) Development of partnerships and other means to provide the necessary support for the implementation of the programme of work on dry and subhumid lands biological diversity (decision VII/2)	
k) Financial support for the operations of the Coordination Mechanism of the Global Taxonomy Initiative (decision VII/9)	
l) Support to the implementation of the Action Plan on Capacity Building as contained in the annex to decision VII/19 (decision VII/19)	

m) Support to the implementation of the programme of work on mountain biological diversity (decision VII/27)	
n) Support to the implementation of the programme of work on protected areas (decision VII/28)	
o) Support to the development of national indicators (decision VII/30)	
p) Others (please specify)	
Further information on financial support provided to developing countries and countries with economies in transition.	

***The next question (146) is for DEVELOPING COUNTRIES OR COUNTRIES WITH ECONOMIES IN TRANSITION***

**146.** Please indicate with an “X” in the table below in which areas your country has applied for funds from the Global Environment Facility (GEF), from developed countries and/or from other sources. The same area may have more than one source of financial support. Please elaborate in the space below if necessary.

A r e a s	Applied for funds from		
	GEF	Bilateral	Other
a) Preparation of national biodiversity strategies or action plans	X		
b) National capacity self-assessment for implementation of Convention (decision VI/27)	X		
c) Priority actions to implement the Global Taxonomy Initiative (decision V/9)			X
d) <i>In-situ</i> conservation (decision V/16)	X	X	X
e) Development of national strategies or action plans to deal with alien species (decision VI/23)	X		
f) <i>Ex-situ</i> conservation, establishment and maintenance of <i>Ex-situ</i> conservation facilities (decision V/26)	X	X	X
g) Projects that promote measures for implementing Article 13 (Education and Public Awareness) (decision VI/19)			X
h) Preparation of national reports (decisions III/9, V/19 and VI/25)	X		
i) Projects for conservation and sustainable use of inland water biological diversity (decision IV/4)	X		X
j) Activities for conservation and sustainable use of agricultural biological diversity (decision V/5)	X	X	X
k) Implementation of the Cartagena Protocol on Biosafety (decision VI/26)	X		

l) Implementation of the Global Taxonomy Initiative	X		
m) Implementation of the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity	X		
n) Others (please specify)			
<b>Further information on application for financial support.</b>			
<p>In area ‘c’, category ‘other’ refers to the National Strategy for Building Taxonomic Capacity on Small-Bodied Organisms, out of which project proposals for nine groups of organisms (viruses, bacteria, protozoa, fungi, lichens, algae, nematodes, free living small invertebrates, and insects’) as well as weeds were prepared and submitted to potential donors via the Ethiopian Institute of Agricultural Research.</p> <p>In ‘d’, categories ‘bilateral’ refers to the GTZ assistance provided through IBC to inventorize, undertake socio economic studies and subsequent selection of forest <i>in situ</i> conservation sites across the country; and the Conservation and Use of Wild Populations of <i>Coffea Arabica</i> in the montane forests of Ethiopia sponsored by the German Federal Ministry for Research and Education. The ‘other’ refers to The <i>in situ</i> Conservation of <i>Coffea Arabica</i> project in three conservation sites. The conservation includes associated spices, e.g. Korarima (<i>Aframomum korrarima</i>) and long pepper (<i>Piper longum</i>), which is funded by the European Union (EU).</p> <p>In ‘f’, category ‘bilateral’ refers to the assistance provided by GTZ in establishing a forest gene bank at IBC complete with facilities including cold storage rooms, laboratories, offices, auditorium, etc. In ‘g’ and ‘i’, category ‘other’ refers to the financial support acquired from IUCN.</p> <p>In ‘j’, categories ‘bilateral’ and ‘other’ refer to GTZ and the German Federal Ministry for Research and Education on the one hand, and European Union (EU) on the other respectively as described above.</p>			

**Box LXII.**

Please elaborate below on the implementation of this article and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

**a) Outcomes and impacts of actions taken**

- The funds received from GEF have enabled the country to implement a full project, the, Dynamic Farmer-Based Approach to the Conservation of Plant Genetic Resources (ETH/93/G31), and smaller projects, e.g. the Ethiopia’s National Biodiversity Strategy and Action Plan Preparation Project (BSAP) (ETH/99/G31/A/IG/99) and African NGo-Government partnership “Project to Enhance Biodiversity Conservation in Important Bird Areas”. Another ongoing full project in the “Conservation and Sustainable Use of Medicinal Plants Project”. A third full project, Strengthening the Conservation and Management of Protected Area System of Ethiopia (ETH/00/G41/A/1/G/99/PIMS no.494)”, has also been submitted to GEF for funding.



- b) Contribution to the achievement of the goals of the Strategic Plan of the Convention**
- Measures have been taken to strengthen both *in situ* and *ex situ* conservation; 12 modal community gene banks established and a global significant place like a Bale mountain and its biodiversity has been given a proper consideration to be conserved and sustainable utilized.
- c) Contribution to progress towards the 2010 target**
- The fund received and utilized has significantly contribution towards the promotion of the conservation of the biological diversity, ecosystems, habitats and biomes.
- d) Progress in implementing national biodiversity strategies and action plans**
- The NBSAP has been endorsed by the government, and is in press for distribution and implementation. The funds being received from the GEF and bilateral sources will help in its implementation.
- e) Contribution to the achievement of the Millennium Development Goals**
- Financial resources secured for biodiversity conservation have contribution to ensure environmental sustainability and poverty alleviation.
- f) Constraints encountered in implementation**

#### D. THEMATIC AREAS

**147.** Please use the scale indicated below to reflect the level of challenges faced by your country in implementing the thematic programmes of work of the Convention (marine and coastal biodiversity, agricultural biodiversity, forest biodiversity, inland waters biodiversity, dry and sub-humid lands and mountain biodiversity).

3 = High Challenge	1 = Low Challenge					
2 = Medium Challenge	0 = Challenge has been successfully overcome					
N/A = Not applicable						
Challenges	Programme of Work					
	Agricultural	Forest	Marine and coastal	Inland water ecosystem	Dry and subhumid lands	Mountain
(a) Lack of political will and support	3	3	N/A	3	3	3
(b) Limited public participation and stakeholder involvement	2	3	N/A	2	3	2
(c) Lack of main-streaming and integration of biodiversity issues into other sectors	3	3	N/A	3	3	3
(d) Lack of precautionary and proactive measures	3	3	N/A	3	3	3
(e) Inadequate capacity to act, caused by institutional weakness	2	3	N/A	3	3	3

(f) Lack of transfer of technology and expertise	1	1	N/A	1	1	1
(g) Loss of traditional knowledge	3	3	N/A	3	3	3
(h) Lack of adequate scientific research capacities to support all the objectives	2	2	N/A	2	2	2
(i) Lack of accessible knowledge and information	2	2	N/A	2	2	2
(j) Lack of public education and awareness at all levels	3	3	N/A	3	3	3
(k) Existing scientific and traditional knowledge not fully utilized	3	3	N/A	3	3	3
(l) Loss of biodiversity and the corresponding goods and services it provides not properly understood and documented	3	3	N/A	3	3	3
(m) Lack of financial, human, technical resources	3	3	N/A	3	3	3
(n) Lack of economic incentive measures	3	3	N/A	3	3	3
(o) Lack of benefit-sharing	3	3	N/A	3	3	3
(p) Lack of synergies at national and international levels	2	2	N/A	2	2	2
(q) Lack of horizontal cooperation among stakeholders	2	2	N/A	2	2	2
(r) Lack of effective partnerships	2	2	N/A	2	2	2
(s) Lack of engagement of scientific community	1	1	N/A	1	1	1
(t) Lack of appropriate policies and laws	2	2	N/A	2	2	2
(u) Poverty	3	3	N/A	3	3	3
(v) Population pressure	3	3	N/A	3	3	3
(w) Unsustainable consumption and production patterns	3	3	N/A	3	3	3

(x) Lack of capacities for local communities	3	3	N/A	3	3	3
(y) Lack of knowledge and practice of ecosystem-based approaches to management	2	2	N/A	2	2	2
(z) Weak law enforcement capacity	3	3	N/A	3	3	3
(aa) Natural disasters and environmental change	3	3	N/A	3	3	3
(bb) Others (please specify)						

### Inland water ecosystems

<b>148. Has your country incorporated the objectives and relevant activities of the programme of work into the following and implemented them? (decision VII/4)</b>				
<b>Strategies, policies, plans and activities</b>	<b>No</b>	<b>Yes, partially, integrated but not implemented</b>	<b>Yes, fully integrated and implemented</b>	<b>N/A</b>
a) Your biodiversity strategies and action plans		X		
b) Wetland policies and strategies	X			
c) Integrated water resources management and water efficiency plans being developed in line with paragraph 25 of the Plan of Implementation of the World Summit on Sustainable Development		X		
d) Enhanced coordination and cooperation between national actors responsible for inland water ecosystems and biological diversity		X		
<b>Further comments on incorporation of the objectives and activities of the programme of work</b>				
The objectives and relevant activities of the programme of work in relation to inland water ecosystems are incorporated into the NBSAP. On the other hand, Ethiopia lacks wetland policies. However, an institutional and legal review has been conducted through the involvement of key national stakeholders of wetland/inland water ecosystems in order to produce a workable institutional setup for efficient conservation and wise use of inland water ecosystems.				
Following the issuing of the Ethiopian Water Resources Management Policy of 1999, the Water Sector Development Programme for the period 2002 to 2016 of 2002 and the Regulation for Water Resource Utilization and Watershed Management under the Proclamation No. 115/2005 have been issued.				

<b>149. Has your country identified priorities for each activity in the programme of work, including timescales, in relation to outcome oriented targets? (decision VII/4 )</b>	
a) No	X
b) Outcome oriented targets developed but priority activities not developed	
c) Priority activities developed but not outcome oriented targets	
d) Yes, comprehensive outcome oriented targets and priority activities developed	
Further comments on the adoption of outcome oriented targets and priorities for activities, including providing a list of targets (if developed).	

<b>150. Is your country promoting synergies between this programme of work and related activities under the Ramsar Convention as well as the implementation of the Joint Work Plan (CBD-Ramsar) at the national level? (decision VII/4 )</b>	
a) Not applicable (not Party to Ramsar Convention)	X
b) No	
c) No, but potential measures were identified for synergy and joint implementation	
d) Yes, some measures taken for joint implementation (please specify below)	
e) Yes, comprehensive measures taken for joint implementation (please specify below)	
Further comments on the promotion of synergies between the programme of work and related activities under the Ramsar Convention as well as the implementation of the Joint Work Plan (CBD-Ramsar) at the national level.	

<b>151. Has your country taken steps to improve national data on: (decision VII/4 )</b>			
<b>Issues</b>	<b>Yes</b>	<b>No</b>	<b>No, but development is under way</b>
a) Goods and services provided by inland water ecosystems?	X		
b) The uses and related socioeconomic variables of such goods and services?	X		
c) Basic hydrological aspects of water supply as they relate to maintaining ecosystem function?	X		
d) Species and all taxonomic levels?	X		
e) On threats to which inland water ecosystems are subjected?	X		
Further comments on the development of data sets, in particular a list of data sets developed in case			

you have replied “YES” above.

The above response “yes” does not indicate compilation of comprehensive national data on the issues. It shows some steps taken in the country to improve data on wetland/ inland waters.

Some of these steps are:-

- Profiles of 43 wetlands including lakes have been prepared with relevant information
- Data on four lakes (collected during management/ action plan preparation), one wetland (collected during management plan preparation) and the Ramsar site (collected during filling of the Ramsar Information sheet) have been compiled. It should be pointed out that Ethiopia has as yet not become a party to the Ramsar Convention.

In addition, Universities, research institutions & NGOs have compiled considerable data out of their research and development activities on several inland water ecosystems. A book entitled “Important Bird Areas of Ethiopia” has been published with relevant data on inland water ecosystems identified as important bird areas in the country.

**152.** Has your country promoted the application of the guidelines on the rapid assessment of the biological diversity of inland water ecosystems? (decision VII/4 )

a) No, the guidelines have not been reviewed	X
b) No, the guidelines have been reviewed and found inappropriate	
c) Yes, the guidelines have been reviewed and application/promotion is pending	
d) Yes, the guidelines promoted and applied	

Further comments on the promotion and application of the guidelines on the rapid assessment of the biological diversity of inland water ecosystems.

**Box LXIII .**

Please elaborate below on the implementation of this programme of work and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

**a) Outcomes and impacts of actions taken**

There is a growing realization on the importance of inland water ecosystems as they contribute to poverty alleviation and ensuring food security, especially by helping domestic stock and wildlife to survive in drought periods. There is also a better atmosphere for cooperation among the national stakeholders with regard to inland water ecosystems management.

**b) Contributions to the achievements of the goals of the strategic plans of the convention**

Contribute to goals 3 and 4 of the Strategic Plan of the Convention - Goal 3 National biodiversity strategies and action plans and the integration of biodiversity concerns into relevant sectors serve as an effective

tive framework for the implementation of the objectives of the Convention; Goal 4: There is a better understanding of the importance of biodiversity and of the Convention, and this has led to broader engagement across society in implementation.

**c) Contribution to progress towards the 2010 target**

It contributes towards achieving almost all targets of 2010 by conserving biodiversity

**d) Progress in implementing NBSAP**

The NBSAP has been endorsed by the Government, and is in print for distribution and implementation

**e) Contribution to the achievements of the MDG**

Efforts made so far contribute to the achievement of the following MDG in the country

MDG Goal 1: Eradicate Extreme Poverty and Hunger

MDG Goal 7: Ensure Environmental Sustainability

**f) Constraints encountered in implementation**

Inadequate capacity for management

**Marine and coastal biological diversity**

**General**

**153.** Do your country's strategies and action plans include the following? Please use an 'X' to indicate your response. (decisions II/10 and IV/15)

a) Developing new marine and coastal protected areas	
b) Improving the management of existing marine and coastal protected areas	
c) Building capacity within the country for management of marine and coastal resources, including through educational programmes and targeted research initiatives (if yes, please elaborate on types of initiatives in the box below)	
d) Instituting improved integrated marine and coastal area management (including catchments management) in order to reduce sediment and nutrient loads into the marine environment	
e) Protection of areas important for reproduction, such as spawning and nursery areas	
f) Improving sewage and other waste treatment	
g) Controlling excessive fishing and destructive fishing practices	
h) Developing a comprehensive oceans policy (if yes, please indicate current stage of development in the box below)	
i) Incorporation of local and traditional knowledge into management of marine and coastal resources (if yes, please elaborate on types of management arrangements in the box below)	
j) Others (please specify below)	
k) Not applicable	X

Please elaborate on the above activities and list any other priority actions relating to conservation and sustainable use of marine and coastal biodiversity.

### Implementation of Integrated Marine and Coastal Area Management

<b>154.</b> Has your country established and/or strengthened institutional, administrative and legislative arrangements for the development of integrated management of marine and coastal ecosystems?	
a) No	
b) Early stages of development	
c) Advanced stages of development	
d) Arrangements in place (please provide details below)	
e) Not applicable	X
Further comments on the current status of implementation of integrated marine and coastal area management.	

<b>155.</b> Has your country implemented ecosystem-based management of marine and coastal resources, for example through integration of coastal management and watershed management, or through integrated multidisciplinary coastal and ocean management?	
a) No	
b) Early stages of development	
c) Advanced stages of development	
d) Arrangements in place (please provide details below)	
e) Not applicable	X
Further comments on the current status of application of the ecosystem to management of marine and coastal resources.	

### Marine and Coastal Living Resources

<b>156.</b> Has your country identified components of your marine and coastal ecosystems, which are critical for their functioning, as well as key threats to those ecosystems?	
a) No	
b) Plans for a comprehensive assessment of marine and coastal ecosystems are in place (please provide details below)	
c) A comprehensive assessment is currently in progress	
d) Critical ecosystem components have been identified, and management plans for them are being developed (please provide details below)	
e) Management plans for important components of marine and coastal ecosystems are in place (please provide details below)	
f) Not Applicable	
Further comments on the current status of assessment, monitoring and research relating to marine and coastal ecosystems, as well as key threats to them	

<b>157.</b> Is your country undertaking the following activities to implement the Convention's work plan on coral reefs? Please use an "X" to indicate your response.
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<b>A c t i v i t i e s</b>	<b>Not implemented nor a priority</b>	<b>Not implemented but a priority</b>	<b>Currently implemented</b>	<b>Not applicable</b>
a) Ecological assessment and monitoring of reefs				X
b) Socio-economic assessment and monitoring of communities and stakeholders				X
c) Management, particularly through application of integrated coastal management and marine and coastal protected areas in coral reef environments				X
d) Identification and implementation of additional and alternative measures for securing livelihoods of people who directly depend on coral reef services				X
e) Stakeholder partnerships, community participation programmes and public education campaigns				X
f) Provision of training and career opportunities for marine taxonomists and ecologists				X
g) Development of early warning systems of coral bleaching				X
h) Development of a rapid response capability to document coral bleaching and mortality				X
i) Restoration and rehabilitation of degraded coral reef habitats				X
j) Others (please specify below)				X
Please elaborate on ongoing activities.				

### **Marine and Coastal Protected Areas**

<b>158.</b> Which of the following statements can best describe the current status of marine and coastal protected areas in your country? Please use an ‘X’ to indicate your response.	
a) Marine and coastal protected areas have been declared and gazetted (please indicate below how many)	
b) Management plans for these marine and coastal protected areas have been developed with involvement of all stakeholders	
c) Effective management with enforcement and monitoring has been put in	



place	
d) A national system or network of marine and coastal protected areas is under development	
e) A national system or network of marine and coastal protected areas has been put in place	
f) The national system of marine and coastal protected areas includes areas managed for purpose of sustainable use, which may allow extractive activities	
g) The national system of marine and coastal protected areas includes areas which exclude extractive uses	
h) The national system of marine and coastal protected areas is surrounded by sustainable management practices over the wider marine and coastal environment.	
i) Other (please describe below)	
j) Not applicable	X
Further comments on the current status of marine and coastal protected areas.	

### Mariculture

<b>159.</b> Is your country applying the following techniques aimed at minimizing adverse impacts of mariculture on marine and coastal biodiversity? Please check all that apply.	
a) Application of environmental impact assessments for mariculture developments	
b) Development and application of effective site selection methods in the framework of integrated marine and coastal area management	
c) Development of effective methods for effluent and waste control	
d) Development of appropriate genetic resource management plans at the hatchery level	
e) Development of controlled hatchery and genetically sound reproduction methods in order to avoid seed collection from nature.	
f) If seed collection from nature cannot be avoided, development of environmentally sound practices for spat collecting operations, including use of selective fishing gear to avoid by-catch	
g) Use of native species and subspecies in mariculture	
h) Implementation of effective measures to prevent the inadvertent release of mariculture species and fertile polypoids.	
i) Use of proper methods of breeding and proper places of releasing in order to protect genetic diversity	
j) Minimizing the use of antibiotics through better husbandry techniques	
k) Use of selective methods in commercial fishing to avoid or minimize by-catch	
l) Considering traditional knowledge, where applicable, as a source to develop sustainable mariculture techniques	
m) Not applicable	X
Further comments on techniques that aim at minimizing adverse impacts of mariculture on marine and coastal biodiversity.	

### Alien Species and Genotypes

<b>160.</b> Has your country put in place mechanisms to control pathways of introduction of alien species in the marine and coastal environment? Please check all that apply and elaborate on types of measures in the space below.	
a) No	
b) Mechanisms to control potential invasions from ballast water have been put in place (please provide details below)	
c) Mechanisms to control potential invasions from hull fouling have been put in place (please provide details below)	
d) Mechanisms to control potential invasions from aquaculture have been put in place (please provide details below)	

e) Mechanisms to control potential invasions from accidental releases, such as aquarium releases, have been put in place (please provide details below)	
f) Not applicable	X
Further comments on the current status of activities relating to prevention of introductions of alien species in the marine and coastal environment, as well as any eradication activities.	

**Box LXIV.**

<p>Please elaborate below on the implementation of this programme of work and associated decisions specifically focusing on:</p> <ul style="list-style-type: none"> <li>a) outcomes and impacts of actions taken;</li> <li>b) contribution to the achievement of the goals of the Strategic Plan of the Convention;</li> <li>c) contribution to progress towards the 2010 target;</li> <li>d) progress in implementing national biodiversity strategies and action plans;</li> <li>e) contribution to the achievement of the Millennium Development Goals;</li> <li>f) constraints encountered in implementation.</li> </ul>
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**Agricultural biological diversity**

<b>161. ?</b> Has your country developed national strategies, programmes and plans that ensure the development and successful implementation of policies and actions that lead to the conservation and sustainable use of agrobiodiversity components? (decisions III/11 and IV/6)	
a) No	
b) No, but strategies, programmes and plans are under development	
c) Yes, some strategies, programmes and plans are in place (please provide details below)	X
d) Yes, comprehensive strategies, programmes and plans are in place (please provide details below)	
Further comments on agrobiodiversity components in national strategies, programmes and plans.	
<p>In the NBSAP Ethiopia's biodiversity conservation priorities have been stated in four Strategic Objectives and one of them states 'The rich agro-biodiversity of Ethiopia is effectively conserved through a mix of <i>in situ</i> and <i>ex situ</i> programs'. This shows the commitment of the country to the conservation and sustainable utilization of agrobiodiversity.</p> <p>The Rural Development Policy of the country partially addresses the conservation and sustainable use of the country's natural resources. For example the policy strategy underlines the need to base animal genetic resources development efforts on indigenous animals and associated indigenous knowledge.</p>	

<b>162. ?</b> Has your country identified ways and means to address the potential impacts of genetic use restriction technologies on the <i>In-situ</i> and <i>Ex-situ</i> conservation and sustainable use, including food security, of agricultural biological diversity? (decision V/5)	
a) No	
b) No, but potential measures are under review	X
c) Yes, some measures identified (please provide details below)	
d) Yes, comprehensive measures identified (please provide details below)	
Further information on ways and means to address the potential impacts of genetic use restriction technologies on the <i>In-situ</i> and <i>Ex-situ</i> conservation and sustainable use of agricultural biodiversity.	
The National Biodiversity Strategy and Action Plan give general direction and areas of focus on conservation and sustainable use of biological diversity in Ethiopia.	
The country has ratified the Cartagena Protocol on Biosafety thereby showing its commitment to the Precautionary Principle for the handling and use of living modified organisms that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health. As per the obligations enshrined under the Protocol Ethiopia has been engaged in the development of a National Biosafety Framework. The Framework basically consists of a regulatory regime, system to handle requests (administrative, risk assessment & management, decision making), follow up actions (monitoring, inspections and enforcement mechanisms) and a public awareness and participation guidelines. To implement this, Ethiopia has drafted a biosafety proclamation and is having it widely discussed by all stakeholder.	

### Annex to decision V/5 - Programme of work on agricultural biodiversity

Programme element 1 – Assessment	
<b>163.</b> Has your country undertaken specific assessments of components of agricultural biodiversity such as on plant genetic resources, animal genetic resources, pollinators, pest management and nutrient cycling?	
a) No	
(b) Yes, assessments are in progress (please specify components below)	
(c) Yes, assessments completed (please specify components and results of assessments below)	X
Further comments on specific assessments of components of agricultural biodiversity.	
The Planning Team members of the National biodiversity Strategy and Action Plan (NBSAP) project were organized into 14 sub teams and they have undertaken stocktaking and inventory of information in the areas of legal, institutional and biotechnology/biosafety issues; ecosystems; remote sensing and geographical information system; domestic, wild and aquatic animals; field crops, forage and horticultural crops; medicinal plants forest and essential oil bearing plants; microbial genetic resources (viruses, bacteria, fungi, protozoa and algae); biodiversity information system and socio-economics and indigenous knowledge. All the information gathered has been compiled, synthesized and written up. The documents have been discussed in regional workshops. The participation of local communities in the regional workshops was significant, and this has helped to accommodate the concerns of the regional governments and local communities. The 14 different chapters produced from the stocktaking and inventory of information are serving as the major basic resource for agrobiodiversity management.	

The country's Farm Animal genetic resources have been partially assessed through the Farm Animal Genetic Resources (FAnGR) country report process which was a country driven process coordinated by the FAO. The country report will provide a foundation for setting the country's priorities for maintaining and enhancing the contribution of farm animal genetic resources (FANGR) to food and agriculture. This will be achieved through the development of locally adapted animals of high productivity.

The physiographical and climatological complexity of the country is also reflected in the existence of diverse pollinators including honeybees. From a recent microsatellite and mitochondrial DNA study, the greatest genetic diversity of honeybees in the African region is reported to occur in Ethiopia which constitutes a 5<sup>th</sup> lineage of *Apis mellifera*. Five separable, morphoclusters occupying ecologically different areas were noted. *Apis mellifera jemenitica* is in the northwestern and eastern arid and semi-arid lowlands; *A.m. scutellata* in the west, south, southwest mid-altitude areas; *A.m. bandasii*, in the central moist highlands; *A.m. monticola* in the northern mountainous highlands, and *A.m. woyi-gambell* in the south western semi-arid to sub-humid lowlands. Moreover, some areas with high inter and intracolony variances were noted, suggesting introgression among these defined honeybee populations.

**164.** Is your country undertaking assessments of the interactions between agricultural practices and the conservation and sustainable use of the components of biodiversity referred to in Annex I of the Convention (e.g. ecosystems and habitats; species and communities; genomes and genes of social, scientific or economic importance)?

a) No

b) Yes, assessments are under way

c) Yes, some assessments completed (please provide details below)

d) Yes, comprehensive assessments completed (please provide details below)

X

Further comments on assessment of biodiversity components (e.g. ecosystems and habitats; species and communities; genomes and genes of social, scientific or economic importance).

Though scattered, several institutions are working on assessment of the impact of agricultural practices on the conservation and sustainable use of components of biodiversity. The EIA system predicts the environmental effects of projects and public instruments (policies, strategies, programs, laws or international agreements) and is used to manage their potential impacts in advance, including their impacts on agricultural practices.

The Ministry of Agriculture and Rural Development has been given the responsibility to protect state forests from forest fires and other disasters that would emanate from unwise agricultural practices.

The incorporation of biodiversity related issues into the Environmental Impact Assessment (EIA) proclamation of Ethiopia, and into its sectoral guidelines is in line with decision VI/7 Of the CoP of the CBD.

**165.** Has your country carried out an assessment of the knowledge, innovations and practices of farmers and indigenous and local communities in sustaining agricultural biodiversity and agro-ecosystem services for food production and food security?

a) No	
b) Yes, assessment is under way	X
c) Yes, assessment completed (please specify where information can be retrieved below)	

Further comments on assessment of the knowledge, innovations and practices of farmers and indigenous and local communities.

Ethnobiological studies are helpful in understanding the traditional farming systems, especially when conducted in collaboration with farmer conservators. Such a study made on wheat, barley and sorghum helped to understand, develop and effectively use the landraces/farmer's varieties. The main studies in this regard included compilations of checklists, linguistic analysis of vernacular names of the landraces, folklore, and other traditional systems through a systematic survey using ecological, botanical, statistical and anthropological methods. The results provided a basis for landrace selection to satisfy some defined nutritional, yield or disease resistance requirements, and for mixing landraces to meet desired adaptive complexes, yield levels or nutritional compositions.

Farmers in many parts of Ethiopia exercise selection that single out individual morphotypes that are perceived as being different from a known variety. This tradition keeps producing new farmers' varieties and increases diversity particularly in self-pollinated crops such as finger millet. Employing such selection practices, farmers in the Tigray region have developed 37 farmers' varieties of finger millet and they are named after the selector farmers (local breeders). Despite the limited area coverage of such landraces, the exercise shows the dynamic nature of the process and farmers' demand for diversity to tackle the variable soil and other environmental conditions. Several botanical forms and morphological groups of barley are found in Ethiopia. Botanical identification of types following barley variety identification keys gave 64 distinct types, while classification gave 42 morphological sub-groups under five major groups. In Enset (*Ensete ventricosum*), from a total of 142 samples of named varieties, selected and managed by farmers in the southern part of the country, and subjected to DNA finger printing, 108 (76%) were found to be authentic varieties and only 34 (24%) of the samples were reported to be duplicates. The system of selection by farmers can thus be seen as a process by which various bundles of attributes are assembled to suit specific production conditions, consumption preferences, or marketing requirements.

**166.** Has your country been monitoring an overall degradation, status quo or restoration/rehabilitation of agricultural biodiversity since 1993 when the Convention entered into force?

a) No	
b) Yes, no change found (status quo)	
c) Yes, overall degradation found (please provide details below)	X
d) Yes, overall restoration or rehabilitation observed (please provide details below)	

Further comments on observations.

Recognizing the recurrent droughts that have been affecting the country and which have resulted in the loss of agricultural biodiversity, together with other factors such as changes in cropping systems and other social and marketing factors that have resulted in rapid shifts to newer and fewer introduced varieties, an *in situ* conservation programme with a broad perspective was initiated in several key parts of the country. To overcome the vulnerability of the local seed systems and recover the crop genetic resources that have suffered erosion, a number of restoration activities have been carried out in several parts of the country. Two major activities were carried out to enhance the opportunities of farmers to contribute to the restoration of their lost varieties. One activity was to work with the farmers or farming community to introduce the most closely related material, both from the site and from closely related environments. A second activity was to conduct a careful evaluation of potentially acceptable germplasm with farmers. Adopting the above-mentioned strategy, some 100 landraces of tef and 185 of durum wheat that had been lost were restored in the Eastern Shewa Zone. An additional 115 accessions of barley and 82 of durum wheat landraces collected from the Bale zone and maintained *ex situ* were tested and evaluated in a participatory manner and distributed to farmers in the Bale zone.

### Programme element 2 - Adaptive management

**167.** Has your country identified management practices, technologies and policies that promote the positive, and mitigate the negative, impacts of agriculture on biodiversity, and enhance productivity and the capacity to sustain livelihoods?

a) No	X
b) No, but potential practices, technologies and policies being identified	
c) Yes, some practices, technologies and policies identified (please provide details below)	
d) Yes, comprehensive practices, technologies and policies identified (please provide details below)	

Further comments on identified management practices, technologies and policies.

### Programme element 3 - Capacity-building

**168.** Has your country increased the capacities of farmers, indigenous and local communities, and their organizations and other stakeholders, to manage sustainable agricultural biodiversity and to develop strategies and methodologies for *In-situ* conservation, sustainable use and management of agricultural biological diversity?

a) No

b) Yes (please specify area/component and target groups with increased capacity)

X

Further comments on increased capacities of farmers, indigenous and local communities, and their organizations and other stakeholders.

Three thousand eight hundred eighty three farmers in twelve districts/Woredas were trained in the process of the implementation of a project entitled 'A dynamic approach to the conservation of Ethiopia's plant genetic resources'. Among these 16% (or 284) trainees were women. The ratio of women trainees varied from region to region and from district to district. In addition, several development agents and extension workers were also trained. The training topics included were:

- Bylaws of the crop conservation association
- Importance of *in situ* conservation
- The use values of traditional knowledge for *in situ* conservation
- Traditional diseases and pest control practices and their application for *in situ* conservation
- Biological soil and water conservation practices
- Enhancement of farmers' varieties/participatory plant breeding
- Women's role on *in situ* conservation
- Development of local seed supply systems
- Characterization and evaluation of farmers' varieties
- Application of appropriate cultural practices for *in situ* conservation, etc.

**169.** Has your country put in place operational mechanisms for participation by a wide range of stakeholder groups to develop genuine partnerships contributing to the implementation of the programme of work on agricultural biodiversity?

a) No

b) No, but potential mechanisms being identified

c) No, but mechanisms are under development

d) Yes, mechanisms are in place

X

Further comments on operational mechanisms for participation by a wide range of stakeholder groups to develop genuine partnerships contributing to the implementation of the programme of work on agricultural biodiversity.

On the whole, farmers in Ethiopia still use their own traditional seed production systems to plant their farms. These have always been participatory in nature and they involve the whole farming community in any given area.

The activities of on-farm *in-situ* conservation are on-going processes performed jointly by farmers, the Institute of Biodiversity Conservation (IBC) scientific and field staff, the Ministry of Agriculture and Rural development including other stakeholders at the sites where the farmers' varieties/landraces are planted in



field plots for observation following traditional farming practices with no external inputs. Since a wide range of landrace materials are planted for evaluation, there is a greater chance to identify those which display the greatest potential in terms of stability, tolerance to frost, pests, diseases and/or drought, high yield, utility value, etc. Farmers on contractual basis multiply the ones that are selected for distribution as planting materials for the next season.

**170.** Has your country improved the policy environment, including benefit-sharing arrangements and incentive measures, to support local-level management of agricultural biodiversity?

a) No	
b) No, but some measures and arrangements being identified	
c) No, but measures and arrangements are under development	
d) Yes, measures and arrangements are being implemented (please specify below)	X

Further comments on the measures taken to improve the policy environment.

Based on the African Model Law, Ethiopia passed a 'Proclamation to provide for access to genetic resources and community rights'. This is consistent with, the CBD. This legislation has already shown some positive achievements on tef (*Eragrostis tef*) where Ethiopia (through the Institute of Biodiversity Conservation [IBC]) and a Netherlands' company (Health and Performance Food International bv. [HPFI]) have signed a bilateral agreement on access to, and sharing benefit from teff. A similar bilateral agreement has also been signed between Ethiopia (through IBC) and Vernique Biotech Ltd. (from U.K.) on noya (*Vernonia galemensis* ssp. *Galemensis* var. *ethopicum*). Both agreements are aimed at benefiting local communities through creating a market for their products and through giving them shares of the benefits that accrue.

#### Programme element 4 – Mainstreaming

**171.** Is your country mainstreaming or integrating national plans or strategies for the conservation and sustainable use of agricultural biodiversity in sectoral and cross-sectoral plans and programmes?

a) No	
b) No, but review is under way	
c) No, but potential frameworks and mechanisms are being identified	
d) Yes, some national plans or strategies mainstreamed and integrated into some sectoral plans and programmes (please provide details below)	X
e) Yes, some national plans or strategies mainstreamed into major sectoral plans and programmes (please provide details below)	

Further comments on mainstreaming and integrating national plans or strategies for the conservation and sustainable use of agricultural biodiversity in sectoral and cross-sectoral plans and programmes.

In the National Plan for Accelerated and Sustainable Development to End Poverty (PASDEP), biodiversity conservation and sustainable utilization is given due emphasis. It is indicated in the document that during the plan period:

- 7700 specimens will be characterized and made available for researchers and other users
- 6500 specimens of high economic value endemic on endangered varieties will be conserved
- 1 duplicate, 10 field and 15 community gene banks and 14 *in situ* conservation areas will be established

In the Conservation Strategy of Ethiopia genetic, species and ecosystems biodiversity conservation and management are treated and given a high priority.

**172.** Is your country supporting the institutional framework and policy and planning mechanisms for the mainstreaming of agricultural biodiversity in agricultural strategies and action plans, and its integration into wider strategies and action plans for biodiversity?

a) No	
b) Yes, by supporting institutions in undertaking relevant assessments	X
c) Yes, by developing policy and planning guidelines	X
d) Yes, by developing training material	
e) Yes, by supporting capacity-building at policy, technical and local levels	X
f) Yes, by promoting synergy in the implementation of agreed plans of action and between ongoing assessment and intergovernmental processes.	

Further comments on support for institutional framework and policy and planning mechanisms.

The National Policy on Biodiversity Conservation and Research states that, among others,

- The Federal and Regional Governments will ensure the integration of biodiversity conservation and sustainable use into the educational system and create awareness on biodiversity issues at the individual, family and community levels
- Community participation in the decision making process and the creation of community-based systems which recognize resource rights of the local people and enable them to get economic benefits from jointly and sustainably managed natural resources will be ensured
- The National Policy on Biodiversity Conservation and Research will be integrated with and supported by policies and strategies on the national economy, agriculture, industry, health, education, population and urbanization, energy and construction, resource management and environmental protection. The policies in these sectors shall be harmonized to enhance sustainable production systems and to encourage the sustainable development of alternative resources in order to reduce pressure on and avoid degradation of biological resources
- In order to plan, develop and reorient the various biodiversity conservation and development-related activities in the country and create an integrated national biodiversity programme, a functional national biodiversity networking will be created
- Strong national capacities and capabilities in scientific, personnel, research, infrastructure, funding, and facilities are essential to undertake active biodiversity conservation, research and development. Therefore, the Government will give high priorities for building national capacities in biodiversity conservation and development. Since the management and sustainable use of genetic resources is a multidisciplinary field requiring integrated efforts, the Government will follow up the training and organization of professionals in those areas/disciplines relevant to biodiversity conservation and development

The National Rural Development Policies and Strategies document in relation to agricultural land use stipulates that conservation and maintenance of the country's agrobiodiversity underpin the production and productivity of the agricultural sector. The document also describes the various types of agrobiodiversity required for the diversity of agroecologies in the development strategic plan.

The National Industrial Development Strategy pursues Agriculture Led Industrial Development, and describes the critical role and contribution of farmers and their agrobiodiversity in development.

**173.** In the case of centers of origin in your country, is your country promoting activities for the conservation, on farm, *In-situ*, and *Ex-situ*, of the variability of genetic resources for food and agriculture, including their wild relatives?

a) No

b) Yes (please provide details below)

X

Further comments on of the conservation of the variability of genetic resources for food and agriculture in their center of origin.

Traditional farming systems in centres of origin/diversity such as those found in Ethiopian are *de facto in situ* conservation system. This fact has only recently been recognized by scientists and policy makers but it has obviously been practiced by traditional farmers for millennia. Conservation on-farm by local farmers has been there since agriculture started. Farmers have always, and long before the modern gene banks came, been the custodian of genetic resources of both crop plants and animals. As a mechanism of supporting the farmers' effort in sustaining their genetic resources, the GEF/UNDP funded on-farm conservation programme in the country with a novel approach of establishing community gene banks, has enabled farmers to continue seed and knowledge exchange more efficiently. Support and recognition for on-farm conservation and farmer-driven breeding is growing. A range of strategies are being developed and implemented to enhance genetic materials on-farm, for and by farmers through assistance from government funded research organization (through the Ethiopian Agricultural Research Institute) and non government organizations such as the Ethiopia Organic Seed Action (EOSA)

An important step in meeting the challenges of food security in agricultural sustainability and in maintaining genetic diversity is, therefore, to forge a partnership between the formal and informal systems. One way of fostering such a partnership is by encouraging farmers and scientists to work together in participatory genetic resources conservation activities and incorporating time-tested farmers' knowledge. The Institute of Biodiversity Conservation (IBC) in collaboration with farming communities has been working in rescue collection, conservation, maintenance, enhancement and utilization of diverse crop genetic resources particularly in the central highlands of Ethiopia. The primary users of the collected genetic materials in the past were only research organizations. However, IBC has already been created as a link between the *ex situ* gene bank and farmers through the community gene banks so as to enhance the direct use of the genetic materials stored *ex situ*. For example, more than 100 accessions of wheat and barley collected from the Bale area conservation site and conserved *ex situ* were taken back (restored) to the farming community in Bale. Similar work has been done in the south Wello and Aadaa areas.

To assess the level of utilization of the genetic materials collected from different parts of the country and maintained *ex situ* by various users, particularly by researchers from the Ethiopian Agricultural Research institute, a feed back obtained from some 15 research centers is being analyzed.

**Box LXV.**

Please provide information concerning the actions taken by your country to implement the Plan of Action for the International Initiative for the Conservation and Sustainable Use of Pollinators.

There are an estimated 10 million bee colonies, out of which about 7.5 million are in hives and the remaining exist in the forests and in rock crevices. Ethiopia, having the highest number of bee colonies is the leading producer of honey and beeswax in Africa. On the world level, Ethiopia is fourth in beeswax and tenth in honey production. Honey and beeswax play a big role in the cultural and religious life of the people of the country.

The principal resource base for beekeeping has, however, risks becoming seriously degraded in the course of time. The potential of the Ethiopian landscape for honey and wax production has now, undoubtedly, been reduced by natural vegetation loss. This unfortunate development is being checked, and even reversed, in some areas by the active intervention including the planting of nectar-yielding plants, e.g. *Vernonia amygdalina*, *Salvia* spp. The large Eucalyptus plantations that have sprung up in some localities constitute a new and compensatory honey resource.

Reduction in bee colonies can have a deleterious effects on the successful growing of crops and fodder plants that require pollination by bees e.g. noug, rapeseed, flax, sunflower, clover, etc. Pollination, it should be added in this context, may naturally be ensured also by wild bees or by other insects, butterflies, other insect species, and even sunbirds. It can be assumed that the numbers of all efficient pollinators is declining together with the deterioration of the nectar resource base. Wild bees are already known to be much fewer than previously. In addition to the food resource on which they depend having become scarce, they find it increasingly more difficult to locate suitable hollows in old trees for establishing colonies, and are in many areas now confined to rock-crevices. On the other hand, the obvious increase in insect-pollinated crops does compensate for some of the loss in vegetation insofar as pollinators are concerned.

Recently, however, a great attention has been given to train extension workers and farmers in apiculture so that they acquire better beekeeping knowledge and develop skills that would enable them to improve bee culture and increase the production of honey and beeswax. The Holletta Beekeeping Station (which has been upgraded to a Bee Research and Training Center) has been responsible for beekeeping training in the country. The Agarfa Farmers Training Center is also involved in the training of farmers in beekeeping. A total 873 extension staff and over 50,000 farmers have been trained in these 2 stations over the last two decades.

Considerable effort has been made to introduce movable frame hive technology to the country for better management of bees, to boost the yield of honey both in quantity and quality and to exploit the natural plant resources that would otherwise not be economically used. The adoption of this technology has shown significant improvement in the management of hives, and in the production of honey and wax.

At the national level, the Ministry of Agriculture (MoA) is responsible for the overall development of apiculture in the country. The Holletta Bee Research and Training Center, and the Assela and Agarfa Farmers Training Centres are involved in the production of trained manpower and beekeeping extension activities. Following the establishment of the devolution of power in the new federal system of governance, the Regional Agricultural Bureaus of the respective regional states have taken over the responsibility of the development of the sector. Other institutions involved in the development programme are the Wondo Genet College of Forestry, the Ethiopia Children Amba, and development corporations such as the Coffee and Tea Development Enterprises and State Farms Corporation. Although

the Holletta Bee Research and Training Center has no mandate to conduct basic research, it is the only institution that undertakes adaptive and applied apicultural research work. The research conducted so far encompasses improving the quality of hive products, identifying honeybee races and honeybee flora, and the survey and diagnosis of honeybee diseases, pests and predators.

#### **Box LXVI.**

Please elaborate below on the implementation of this programme of work and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

#### **a) Outcomes and impacts of actions taken;**

- Sustainability mechanisms were developed for the on-farm conservation activities based on the three main incentive measures: (1) market incentive increase in demand for some farmers' varieties is acting as a (2) non-market community incentives such as local seed supply systems has been strengthened (3) policies promoting crop biodiversity conservation and utilization have been formulated
- A draft biosafety law with the objectives of protecting biological resources and the environment as well as the health and safety of the people has been developed, though not yet proclaimed
- Conservation plans and programmes have been designed in the NBSAP document
- A rural development policy and strategy, particularly on the use of indigenous animal genetic resources and the associated indigenous knowledge, has been developed
- An assessment of the farm animal genetic resources was carried out towards writing a report for FAO
- Inter and intraspecific diversity of honeybee has been assessed and documented
- An Environment Impact Assessment (EIA) proclamation helps protect biodiversity

#### **b) Contribution to the achievement of the goals of the Strategic Plan of the Convention;**

- The country has committed itself to achieving Goals of the Strategic Plan of the Convention particularly in the improvement of scientific and technological capacity in the conservation of agrobiodiversity (Goal 2) and in the integration of biodiversity concerns into relevant sectors (Goal 3) such as higher education and research

#### **c) Contribution to progress towards the 2010 target**

The main contribution of agricultural biodiversity conservation towards achieving the 2010 targets are the following areas:

- Conservation of genetic diversity Promoted and associated indigenous and local knowledge maintained (Goal 3, Target 3.1)
- Sustainable use and consumption of biological resources promoted and unsustainable consumption that impacts upon biodiversity reduced (Goal 4, Target 4.2)
- Traditional knowledge, innovations and practices maintained (Goal, Target 9.1)
- The rights of indigenous and local communities over their traditional knowledge, innovations and practices, including their rights to benefit-sharing (Goal 9, Target 9.2) legally protected

#### **d) Progress in implementing national biodiversity strategies and action plans;**

- The NBSAP document that gives a general direction and areas of focus on the conservation and

sustainable use of agricultural biodiversity of the country has been endorsed by the government, and is in press for distribution and implementation by all stakeholders

**e) Contribution to the achievement of the Millennium Development Goals;**

- In the National Plan for Accelerated and Sustainable Development to End Poverty (PASDEP), agricultural biological resources conservation and sustainable utilization are given due emphasis. It is indicated in the document that towards achieving the Millennium Development Goals, during the plan period (1) 7700 specimens will be characterized and made available for researchers and other users (2) 6500 specimens of high economic value because they are endemic or endangered species will be conserved (3) 1 duplicate, 10 field and 15 community gene banks and 14 *in situ* conservation areas will be established
- For reversing the degradation of environmental resources, which is part of MDG 7 Target 9, strategies and programmes on the proper management and utilization of the natural resources of the country has been developed. Watershed development is also one of the key approaches in directing interventions for sustainable development in Ethiopia that will contribute to the process of achieving the Millennium Development Goal 1 Target 2 and 7 Target 9.

**f) Constraints encountered in implementation**

- Limited public participation and stakeholder involvement
- Inadequacy of effective efforts in mainstreaming and integration of agrobiodiversity issues into other sectors
- Inadequate capacity to act, caused by institutional and trained human capacity weakness
- Inadequacy of scientific research capacities to support agrobiodiversity conservation and sustainable utilization
- Existing scientific and traditional knowledge not fully utilized
- Limitations in financial resources
- Lack of economic incentive measures
- Inadequacy of horizontal cooperation among stakeholders

**Forest Biological Diversity  
General**

**174.** Has your country incorporated relevant parts of the work programme into your national biodiversity strategies and action plans and national forest programmes?

a) No	
b) Yes, please describe the process used	X
c) Yes, please describe constraints/obstacles encountered in the process	
d) Yes, please describe lessons learned	
e) Yes, please describe targets for priority actions in the programme of work	

Further comments on the incorporation of relevant parts of the work programme into your NBSAP and forest programmes

Ethiopia has given due emphasis to the conservation of forest biodiversity as has been demonstrated in the National Policy on Biodiversity Conservation and Research, Ethiopian Forestry Action Programme, Forest Genetic Resources Conservation Strategy and the National Biodiversity Strategy and Action Plan

documents.

A consultative approach that incorporated relevant stakeholders including the Institute of Biodiversity Conservation, the Ethiopian Environment Protection Authority, the Natural Resources Management and Regulatory Department of the Ministry of Agriculture, the Forestry Research Directorate of the Ethiopian Institute of Agriculture Research and NGOs (e.g. SOS/Sahel and Farm Africa) was followed in developing these forest conservation programmes and action plans.

**Box LXVII.**

Please indicate what recently applied tools (policy, planning, management, assessment and measurement) and measures, if any, your country is using to implement and assess the programme of work. Please indicate what tools and measures would assist the implementation.

The Forest Genetic Resources Conservation Department of the Institute of Biodiversity Conservation and the GTZ-Supported Forest Genetic Resources Conservation Project have conducted an inventory of woody plants and carried out socio-economic surveys in 34 natural forests in Ethiopia. Based on this study, most threatened woody species have been prioritized in both the Dry Afromontane and Moist Afromontane Natural Forests of the country.

Following this, both *ex-situ* and *in-situ* conservation approaches are planned to conserve these threatened forest species. Accordingly, five *in-situ* and four *ex-situ* conservation sites have been established in different parts of the country and about 19440 seedlings of the seven most threatened woody species have been planted on the *ex-situ* sites.

Furthermore, efforts have been made to raise the awareness of the local communities living surrounding these forests.

The NGOs called SOS/Sahel and Farm Africa are implementing a participatory forest management programmes with the local communities in different regions of the country. The Conservation and use of the wild populations of *Coffea arabica* in the Montane Rainforests of Ethiopia project aims to assess the diversity and the economic value of the Ethiopian coffee gene pool and to develop concepts for conservation and use of the genetic resources of *Coffea arabica* in its centre of origin and diversity in Ethiopia. The concepts are to be based on the conservation of the montane rain forests as the natural habitat of the wild coffee populations, and the forest coffee systems as the traditional use of the wild coffee populations

**Box LXVIII.**

Please indicate to what extent and how your country has involved indigenous and local communities, and respected their rights and interests, in implementing the programme of work.

In Bonga, Borana and Chilimo areas, the Participatory Forest Management Programme of Farm-Africa and SOS/Sahel Ethiopia and the Forest Coffee Conservation component of Coffee Improvement Project IV (CIP IV) are directly involving local communities and their indigenous knowledge in the conservation and utilization forest biodiversity. The objectives of the conservation and use of the wild populations of *Coffea arabica* in the montane rainforests of Ethiopia include:

- The protection of wild coffee populations in the Afromontane rainforests
- The use of wild coffee populations by the local population
- The conservation of the traditionally grown cultivars
- The local people are allowed to harvest wild coffee and non-timber forest products

Furthermore, the Institute of Biodiversity Conservation drafted a law on the access and benefit sharing of genetic resources and community rights. The draft has now been passed as a proclamation by the House of People's Representatives (the Ethiopian Parliament). This law protects the rights of local communities to their knowledge, innovations and practices. It should be noted that, in Ethiopia, all local communities are also indigenous communities.

**Box LXIX.**

Please indicate what efforts your country has made towards capacity building in human and capital resources for the implementation of the programme of work.

The Institute of Biodiversity Conservation in collaboration with the GTZ-Forest Genetic Resources Conservation Project has constructed a forest gene bank and laboratory for seed processing and germination tests. Most of the facilities are now in place. Besides, three technicians and one PhD student are currently training in forestry.

There are universities and colleges in Ethiopia that are training professionals in the field of forest biodiversity conservation such as:

- The Wondo Genet College of Forestry in Debub University
- Biology Department of the Addis Ababa University
- Alemaya University
- Mekele University

**Box LXX.**

Please indicate how your country has collaborated and cooperated (e.g., south-south, north-south, south-north, north-north) with other governments, regional or international organizations in implementing the programme of work. Please also indicate what are the constraints and/or needs identified.

Ethiopia has a strong collaboration with the GTZ and Farm-Africa-SoS/Sahel UK projects in the conservation of Forest Biodiversity. The GTZ-Supported Forest Genetic Resources Conservation Project, SUN Oromia (the Adaba-Dodola Participatory Forest Management, the Oromia Land Use and Planning) and SUN-Amhara both of which are also supported by GTZ, may be mentioned as examples of North-south cooperation on forest biodiversity conservation.

Similarly, Bonga, Borana and Chilimo projects of the Farm-Africa and SOS/Sahel UK can be mentioned as examples of North-south collaboration with local NGOs in the conservation of forest biodiversity.



## Expanded programme of work on forest biological diversity

### Programme element 1 – Conservation, sustainable use and benefit-sharing

**175.** Is your country applying the ecosystem approach to the management of all types of forests?

a) No (please provide reasons below)

b) No, but potential measures being identified (please provide details below)

X

c) Yes (please provide details below)

Comments on application of the ecosystem approach to management of forests (including effectiveness of actions taken, lessons learned, impact on forest management, constraints, needs, tools, and targets).

There are National Parks and Sanctuaries in the country where the forest biodiversity is conserved *in-situ*. The Forest Genetic Resources Conservation Department of the Institute of Biodiversity Conservation has been establishing additional representative *in-situ* sites for the conservation of forest biodiversity. These are examples of the ecosystem approach for conservation.

The *in-situ* conservation of the coffee genetic resources by the project known as conservation and use of the wild populations of *Coffea arabica* in the montane rainforests of Ethiopia is also an example of the ecosystem approach in biodiversity conservation i.e. the conservation of genetic diversity together with its ecosystem diversity.

**176.** Has your country undertaken measures to reduce the threats to, and mitigate its impacts on forest biodiversity?

Options	X	Details
a) Yes	X	Please specify below the major threats identified in relation to each objective of goal 2 and the measures undertaken to address priority actions According to the Forest Genetic Resources Conservation Strategy of Ethiopia, the major threats to diversity of forest genetic resources include deforestation and fragmentation, overexploitation, habitat alteration/forest degradation, climate change, wildfires and forest grazing.
b) No		Please provide reasons below

Further comments on measures to reduce threats to, and mitigate the impacts of threatening processes on forest biodiversity (including effectiveness of actions taken, lessons learned, impacts on forest biodiversity, constraints, needs, tools and targets).

The Ministry of Agriculture and Rural Development designated 58 National Forest Priority Areas in 1980 for protection and biological conservation.

The Wildlife Conservation Department and the Regional Bureaus of Agriculture manage the protected areas (National parks, sanctuaries, game reserves, etc) of the country. While the prime objective of the protected areas is nature conservation, a greater emphasis has been given to the protection of larger fauna. The flora and smaller fauna within these protected areas are also more or less incidentally conserved.

One of the objectives of the Bale Mountains National Park Management Plan, for example, is to conserve plants that are endemic to Ethiopia.

The Ethiopian Institute of Agricultural Research carries out research on silviculture and the management of seeds of forest trees. The outputs of these research activities can be used for the purpose of forest genetic resources conservation. The Forest Research Center and the Institute of Biodiversity Conservation have been establishing field gene banks for the conservation of the most threatened indigenous woody species. The Institute of Biodiversity conservation has also been collecting seeds of indigenous forest species and conserving them in the gene bank. The Institute maintains about 1181 accessions of *Coffea arabica* in the field gene bank in the Oromia region.

One of the constraints in the endeavor of forest genetic resources conservation in Ethiopia is the inadequacy of enforcement of laws and regulations. For example, Proclamation No. 94/1994 prohibits the felling of forest tree species such as *Hagenia abyssinica*, *Cordia africana*, *Afrocarpus falcatus* and *Juniperus procera*. However, some felling of these species is continuing due to incomplete enforcement of the law.

**177.** Is your country undertaking any measures to protect, recover and restore forest biological diversity?

Options	X	Details
a) Yes	X	<p>Please identify priority actions in relation to each objective of goal 3 and describe measures undertaken to address these priorities</p> <p>The GTZ-Supported Forest Genetic Resources Conservation Project in collaboration with the Institute of Biodiversity Conservation has identified the most threatened species in the country and they have been prioritized. Both <i>in situ</i> and <i>ex situ</i> conservation measures are being employed in conserving some of the most threatened species.</p> <p>Based on the levels of threat on them, the nine vegetation types of Ethiopia have been prioritized as follows:</p> <p>First priority (high level of threat-high priority for conservation)</p> <ol style="list-style-type: none"> <li>a. Moist ever green montane forest</li> <li>b. Dry ever green montane forest</li> <li>c. Lowland wet forest (Lowland semi-evergreen forests)</li> </ol> <p>Second priority</p> <ul style="list-style-type: none"> <li>• Acacia-Commiphora woodland</li> <li>• Acacia dominated sub-type which occurs in the Rift valley.</li> </ul> <p>Third priority</p> <ul style="list-style-type: none"> <li>• Wetlands/riparian vegetation</li> <li>• Afro-alpine and sub-afro-alpine vegetation</li> </ul>
	X	

		<p>Fourth priority</p> <ul style="list-style-type: none"> <li>• Broad-leaved deciduous woodland</li> <li>• Low-land semi-desert and desert vegetation</li> </ul> <p>Fifth priority</p> <ul style="list-style-type: none"> <li>• Evergreen scrub</li> </ul>
b) No		Please provide reasons below

Further comments on measures to protect, recover and restore forest biological diversity (including effectiveness of actions taken, lessons learned, impacts on forest biodiversity, constraints, needs, tools and targets).

1. Conservation efforts are being made using both *in situ* and *ex situ*. For example, the Institute of Biodiversity Conservation has a gene bank for the conservation of plant genetic resources of the country *ex situ*. Besides, four field gene banks have been established in different parts of the country to conserve some of the most threatened woody species *ex situ*. Similarly, four *in situ* sites have been established to conserve the forest genetic resources with emphasis on some of the most threatened woody species
2. Afforestation activities are underway in various regions of the country.
3. Awareness raising activities on the importance of forest genetic resources has been conducted for members of the parliament, students in technical and vocational education and training schools and also in high schools, as well as for the local communities surrounding the *in-situ* sites.

**178.** Is your country undertaking any measures to promote the sustainable use of forest biological diversity?

Options	X	Details
a) Yes	X	<p>Please specify priority actions in relation to each objective of goal 4 and describe measures undertaken to address these priorities</p> <p>The Non-Timber Forest Products (NTFP) Research and Development Project in the south-west Ethiopia develops ways of reducing poverty in Kefa, Bench-Maji and Sheka zones of the Southern Nations, Nationalities and Peoples Region of Ethiopia. The project focuses on the development and sustainable use of non-timber forest products, linking producers with the regional, national and international markets.</p> <p>The Participatory Forest managements projects of Farm-Africa and SOS/Sahel also encourage sustainable utilization of forest biodiversity. Local communities in Bonga, and Chilimo have started taking responsibilities of their forest areas. The GTZ-SUN Oromia project is also promoting sustainable use of forest biodiversity through the eco-tourism approaches in the Bale Zone of Oromia region.</p>
b) No		Please provide reasons below

Further comments on the promotion of the sustainable use of forest biological diversity (including effectiveness of actions taken, lessons learned, impacts on forest biodiversity, constraints, needs, tools and targets).

**179.** Is your country undertaking any measures to promote access and benefit-sharing of forest genetic resources?

Options	X	Details
a) Yes	X	Please specify priority actions in relation to each objective of goal 5 and describe measures undertaken The Access and Benefit Sharing proclamation has been passed and is in press.
b) No		Please provide reasons below

Further comments on the promotion of access and benefit-sharing of forest genetic resources. (including effectiveness of actions taken, lessons learned, impacts on forest biodiversity, constraints, needs, tools and targets)

**Programme element 2 – Institutional and socio-economic enabling environment**

**180.** Is your country undertaking any measures to enhance the institutional enabling environment for the conservation and sustainable use of forest biological diversity, including access and benefit-sharing?

Options	X	Details
a) Yes	X	Please identify priority actions in relation to each objective of Goal 1 and describe measures undertaken to address these priorities The IBC has been mandated by law to be responsible for access and benefit-sharing in Ethiopia
b) No		Please provide reasons below

Further comments on the enhancement of the institutional enabling environment for the conservation and sustainable use of forest biological diversity, including access and benefit-sharing (including effectiveness of actions taken, lessons learned, impacts on forest biodiversity, constraints, needs, tools and targets).

The Forest Research Center, Wondo Genet College of Forestry, Biology department of Addis Ababa University, Forestry Departments of federal and regional states and Technical and Vocation Education and Training colleges are institutions that are producing professionals that can contribute to the conservation and sustainable utilization of forest biological diversity.

**181.** Is your country undertaking any measures to address socio-economic failures and distortions that lead to decisions that result in loss of forest biological diversity?

Options	X	Details
a) Yes		Please identify priority actions in relation to each objective of Goal 2 and describe measures undertaken to address these priorities
b) No	X	Please provide reasons below

Further comments on review of socio-economic failures and distortions that lead to decisions that result in loss of forest biological diversity (including effectiveness of actions taken, lessons learned, impacts on forest biodiversity, constraints, needs, tools and targets).

In many parts of the country, there are failures of traditional resource management strategies. For example, it was a taboo to sell fire wood in Arsi, among the Oromo ethnic group. However, today, almost all members of the local community are selling fire wood as means of income generation leading to loss of forest biological diversity

Similarly, the Afar people had a tradition of punishing those who cut down trees and shrubs. On the contrary, today, the Afar region has become a major area where charcoal making is widely exercised.

**182.** Is your country undertaking any measures to increase public education, participation and awareness in relation to forest biological diversity?

Options	X	Details
a) Yes	X	<p>Please identify priority actions in relation to each objective of goal 3 and describe measures undertaken to address these priorities</p> <p>Awareness raising activities have been undertaken using various methods such as the mass media, workshops, local community meetings and education in the schools.</p> <p>For example, workshops that aimed at raising the awareness of local communities surrounding 34 natural forests in various parts of Ethiopia were conducted from 1999 to 2005. Some of the themes included:</p> <ol style="list-style-type: none"> <li>a. Uses of forests and the negative consequences of forest degradation</li> <li>b. Major reasons for forest resources depletion</li> <li>c. Measures to be taken to conserve forest genetic resources               <ol style="list-style-type: none"> <li>i. Role of the local community</li> <li>ii. Role of the relevant woreda (district) offices</li> <li>iii. Role of traditional and religious organizations</li> </ol> </li> </ol>
b) No		Please provide reasons below

Further comments on measures to increase public education, participation and awareness in relation to forest biological diversity (including effectiveness of actions taken, lessons learned, impacts on forest

biodiversity, constraints, needs, tools and targets).

**Programme element 3 – Knowledge, assessment and monitoring**

**183.** Is your country undertaking any measures to characterize forest ecosystems at various scales in order to improve the assessment of the status and trends of forest biological diversity?

Options	X	Details
a) Yes	X	Please identify priority actions in relation to each objective of Goal 1 and describe measures undertaken to address these priorities Inventories have been conducted in 34 natural forests which can be classified into moist montane and dry montane high forest ecosystems. Forest ecosystems have been prioritized (ranked) based on the threat imposed on them.
b) No		Please provide reasons below

Further comments on characterization of forest ecosystems at various scales (including effectiveness of actions taken, lessons learned, impacts on forest biodiversity, constraints, needs, tools and targets).

**184.** Is your country undertaking any measures to improve knowledge on, and methods for, the assessment of the status and trends of forest biological diversity?

Options	X	Details
a) Yes	X	Please identify priority actions in relation to each objective of goal 2 and describe measures undertaken to address these priorities <ul style="list-style-type: none"> <li>• Socio-economic survey have been conducted and indigenous knowledge on threat, status and conservation methods documented</li> <li>• Experiences from other country (e.g. Germany adopted)</li> </ul>
b) No		Please provide reasons below

Further comments on improvement of knowledge on and methods for the assessment of the status and trends (including effectiveness of actions taken, lessons learned, impacts on forest biodiversity, constraints, needs, tools and targets).

**185.** Is your country undertaking any measures to improve the understanding of the role of forest biodiversity and ecosystem functioning?

Options	X	Details
a) Yes	X	Please identify priority actions in relation to each objective of goal 3 and describe measures undertaken to address these priorities
b) No		Please provide reasons below

Further comments on the improvement of the understanding of the role of forest biodiversity and ecosystem functioning (including effectiveness of actions taken, lessons learned, impacts on forest biodiversity, constraints, needs, tools and targets).

Government institutions such as the IBC and EPA and NGOs have been undertaking awareness raising campaign using public media and meetings/workshops to improve the understanding of the role of forest biodiversity and ecosystem functioning. The awareness campaign includes:

- Services of forests as mainly environmental, socio-cultural, and habitats for fauna and flora
- The major environmental functions of forests are ecosystem stability, particularly at a time of climatic change, climate amelioration (shade, soil improvement, etc.), soil and water conservation, and mitigation of global warming (carbon sequestration)
- The major socio-cultural values of forests are aesthetic, ritual religious services/practices and other ceremonies.

186. Is your country undertaking any measures at national level to improve the infrastructure for data and information management for accurate assessment and monitoring of global forest biodiversity?		
Options	X	Details
a) Yes	X	Please identify priority actions in relation to each objective of goal 4 and describe measures undertaken to address these priorities <ul style="list-style-type: none"> <li>• Priority forests have been selected for forest genetic resources conservation</li> <li>• Inventory has been conducted and forest area database was developed at national level</li> <li>• Data from the inventory entered into the database</li> <li>• Priority species have been identified based on the inventory data</li> </ul>
b) No		Please provide reasons below  
Further comments on the improvement of the infrastructure for data and information management (including effectiveness of actions taken, lessons learned, impacts on forest biodiversity, constraints, needs, tools and targets).		

**Box LXXI.**

<p>Please elaborate below on the implementation of this programme of work and associated decisions specifically focusing on:</p> <ul style="list-style-type: none"> <li>a) outcomes and impacts of actions taken;</li> <li>b) contribution to the achievement of the goals of the Strategic Plan of the Convention;</li> <li>c) contribution to progress towards the 2010 target;</li> <li>d) progress in implementing national biodiversity strategies and action plans;</li> <li>e) contribution to the achievement of the Millennium Development Goals;</li> <li>f) constraints encountered in implementation.</li> </ul>
<p><b>a) Outcomes and impacts of actions taken</b></p> <ul style="list-style-type: none"> <li>• NBSAP has just been completed Conservation efforts are underway in various institutions.</li> </ul> <p><b>b) Contribution to the achievement of the goals of the Strategic Plan of the Convention</b></p> <ul style="list-style-type: none"> <li>• Address primarily goals 1, 2 and 3.</li> </ul> <p><b>c) Contribution to progress towards the 2010 Target</b></p> <ul style="list-style-type: none"> <li>• There are some relevant contributions to the 2010 Target.</li> </ul> <p><b>d) Progress in implementing national biodiversity strategies and action plans</b></p> <ul style="list-style-type: none"> <li>• NBSAP has been endorsed by Ethiopian government and in press for use and implementation</li> </ul> <p><b>e) Contribution to the achievement of the Millennium Development Goals</b></p> <p><b>f) Constraints</b></p> <ul style="list-style-type: none"> <li>• Inadequate for capacity support at all levels.</li> </ul>



### **Biological diversity of dry and sub-humid lands**

**187.** Is your country supporting scientifically, technically and financially, at the national and regional levels, the activities identified in the programme of work? (decisions V/23 and VII/2 )

(d) No

(e) Yes (please provide details below)

X

Further comments on scientific, technical and financial support, at the national and regional levels, to the activities identified in the programme of work.

Ethiopia as a party to the UNCBD has tried to comply with the decisions made by the Conference of the Parties (decisions V/23 and decisions VII/2). Since desertification is the major problem in relation to dry land biodiversity conservation in the country, the national support is mainly related to combating desertification and minimizing its adverse impacts.

#### **a/ Supports related to National Policies and Strategies**

The Sustainable Development and Poverty Reduction Strategy Programme [SDPRP]

-This program recognizes the importance of environmental protection as a prerequisite for sustainable development and treats it as a crosscutting issue. Accordingly, it points out three priority areas for action: strengthening and expanding on-going efforts to address land degradation, deforestation, overgrazing, soil erosion, loss of soil fertility and the disruption of the hydrological cycle, by giving special attention to highly degraded, drought prone and food insecure areas; strengthening regulatory and institutional capacity; and strengthening the measures currently under implementation to preserve, develop, manage and sustainably use biodiversity resources.

The Food Security Strategy (FSS) recognizes that soil, water, and vegetation are the basis of both the farming community livelihood and economic growth of the country, without which the achievement of food security is unlikely. The strategy considers the importance of the conservation, rehabilitation and restoration of natural resources, including biological diversity, as an entry point to change the existing poor livelihood situation of rural household economy.

The Agricultural and Rural Development Policy and Strategy [RADPS] Desertification and Drought are the major factors that influence dry and sub-humid land biodiversity. In the context of combating desertification and mitigating the effects of drought. The most relevant principles of this Policy and Strategy are: improving farming skills; improving the supply, replication and dissemination of technologies; ensuring access to land and tenure security; resolving problems of drought prone regions; improving the agricultural marketing systems; promoting rural finance; developing the rural energy sector and rural telecommunication infrastructure.

#### **b/ Institutional support**

##### **Governmental Institutions**

The government has established institutions engaged in activities similar to the activities mentioned in the programme of work on biological diversity of dry and sub-humid lands. The major ones are the Institute of Biodiversity Conservation, the Environmental Protection Authority, the National Meteorological Services Agency, the Environmental Agencies of the Regional States and the Ethiopian Rural Energy Development and Promotion Centre.

##### **NGOs/CBOs**

There are more than 650 registered NGOs/CBOs in Ethiopia. These NGOs and CBOs are engaged in various fields including environmental protection and natural resource management. Recently they have

established a network, called Ethiopian NGOs/CBOs Coordination Committee for Combating Desertification (ENCCD), which is the major factor in affecting dry land biodiversity.

### **c/ Financial support**

There is also financial support both from the government budget and donor assistance.

Moreover, governmental institutions like the Environmental Protection Authority and the Institute of Biodiversity Conservation carry out activities directly or indirectly addressing the above mentioned decisions of the convention. These activities are part of their annual work plan. For instance, the Federal Environmental Protection Authority in collaboration with regional states environmental protection offices implements community projects targeting on rehabilitating affected ecosystems, improving community livelihoods and improving awareness on environmental management. These projects are financed by the UNDP CCF2 Environment and Sustainable Dry Land Management Programme. The overall aim of this programme is to address national and global concerns of environmental degradation, to reduce the pressure exerted on natural resources particularly on biological diversity and to enhance the capacity of ecosystems to deliver goods and services.

Non-governmental organizations are also encouraged to be involved and they participate actively in areas related to the activities identified in the programme of work. The Dry land Coordinating Group (DCG), which is financially supported by the Norwegian Church assists stakeholders from the Federal and Regional institutions by conducting training of trainers on understanding the conditions of dry land biodiversity in the country and the method of protecting. The objective of the training of trainers is to reach the local community. The DCG has given about three rounds of training of trainers' course in different years and has also evaluated its success.

There are also other community based NGOs in the country which are working on dry and sub-humid lands of Ethiopia. These are the real partners of the communities in maintaining, protecting, and using biodiversity sustainably. These include the Institute for Sustainable Development (ISD) working mainly on the dry and sub-humid areas of Tigray and Amhara; Organization for Relief and Development of Amhara (ORDA) working in the Amhara region mainly on dry and sub-humid lands.

### **d) Research Achievements and Ongoing Activities**

#### **Dry land Forestry**

Two main approaches are being adopted in the Ethiopian Institute of Agricultural Research (EIAR) to increase tree cover in the dry lands of Ethiopia; i) sustainable management and utilization of existing woodland and tree resources, and ii) tree planting in an agroforestry system, especially using drought-tolerant multipurpose trees.

With regard to sustainable management of woodland resources, an experiment in Metema Wereda with the objective of improving natural regeneration of *Boswellia papyrifera* has been conducted for five years (1999-2004). One interesting result from this research is that root-suckers are found to be the main reproduction means of *B. papyrifera*. Here, it should be emphasized that the *Boswellia-Compretum-Oxytenanthera* woodland zone in the western and northwestern lowlands of the country is of high ecological significance because it represents the main buffer zone against the intrusion of desertification from the Sudan eastwards into Ethiopia. Therefore, more attention is required both in research and development of these woodland resources. Moreover, in an attempt to expand the tree-based system in this zone, artificial reproduction of *B. papyrifera* through branch cuttings and planting seedlings has been launched this year and the project is still ongoing. A similar project is going on also in Western Tigray

carried out by the Mekelle University.

Another experiment in the Rift Valley of Ethiopia has focused on identifying the factors that affect the regeneration of Acacia woodlands. Field surveys have been made to assess the level of damage of insects on seeds of native woodland tree species. It has been observed that more than 20% pre-dispersal predation of seeds has occurred due to bruchid beetles. After the seeds are dropped on the ground, the rate of insect and fungal attack becomes very severe. It has been suggested that the damage of insects on tree seeds has become prevalent after the degradation of the Acacia woodlands and consequent increase of temperature that generally favors insects. A quarter of a hectare of degraded land has been fenced off to assess the potential of native tree species to regenerate from the soil seed bank that has been accumulated in the ground over the years from the remnant woodland species. The project is still in progress.

### **Pastoral and Agro pastoral**

The dry land research sector of the Ethiopian Institute of Agricultural Research includes the pastoral and agro-pastoral research program, established about 4 years ago. It includes different disciplines including food and forage crops, livestock, natural resource management (rangeland management) and forestry.

**188.** Has your country integrated actions under the programme of work of dry and sub-humid lands into its national biodiversity strategies and action plans or the National Action Programme (NAP) of the UNCCD? (decisions V/23, VI/4 and VII/2)

(f) No

(g) Yes (please provide details below)

X

Further comments on actions under the programme of work of dry and sub-humid lands integrated into national biodiversity strategies and action plans or the National Action Programme (NAP) of the UNCCD.

The NAP's priority areas of the country are: promoting people's participation in sustainable development and natural resource management, improving knowledge on drought and desertification, formulating an action program for managing natural resources leading to sustainable development, improving the socio-economic environment, providing basic infrastructure that promote sustainable development, promotion of alternative livelihoods, intensification of agriculture, promotion of awareness, and organization and capacity building and empowerment of women. Moreover, it identifies the causes for climate change and biodiversity loss and ways of minimizing them and coping with their effects.

One of the strategic objectives of this document is supporting workable interventions in combating desertification and mitigating its effect in the day to day livelihoods of the affected communities. Based on the National NAP, all regional States in the country have formulated their respective Regional Action Programmes (RAP). Each RAP is, therefore, a working document in the respective region for maintaining, protecting and sustainably using the dry and sub-humid biodiversity. Pilot projects have been designed based on the RAPs and implemented, particularly under a program entitled "Environment and Sustainable Dryland Management". This Program has several target areas, among which are the following:

- Fulfilling the objectives of the Environmental Policy of the country,
- Incorporating Global environmental concerns and commitments in national development planning and policies,
- Capacity building in integrating sustainable environmental management that responds to the needs of the poor in planning and implementation,

- Improving awareness and understanding among decision-makers and the public on the linkages between environmental sustainability and human poverty and wellbeing,
- Using appropriate environmental management tools such as EIA,

Most of the pilot projects have been successful in the rehabilitation of degraded dry and sub humid areas and the conservation of biodiversity and in enhancing community awareness and improving livelihoods. The project areas are now serving as sites for exchanging best practices among community representatives and environmental managers.

### ***The Conservation of Natural Resources***

With the participation of all concerned stakeholders, various activities have been carried out throughout the country in combating desertification and mitigating the effects of drought. The major activities have been:

- Physical and biological soil conservation measures and agro-forestry practices;
- Area closure and afforestation;
- Rehabilitation of degraded patches of remnant forest areas through enrichment planting and enclosure by local communities;
- Upgrading of two control hunting areas to national parks and the establishing one new national park;
- Based on the investment policy of the country, five eco-tourism based investments have been made by private investors;

A Woody Bio-mass Inventory and Strategic Planning Project, which was designed to develop national and regional planning and monitoring capabilities, including making an inventory of woody biomass resources, and to recommend land management options, has been completed.

**189.** Has your country undertaken measures to ensure synergistic/collaborative implementation of the programme of work between the national UNCCD process and other processes under related environmental conventions? (decisions V/23, VI/4 and VII/2)

(h) No	
(i) Yes, some linkages established (please provide details below)	X
(j) Yes, extensive linkages established (please provide details below)	

Further comments on the measures to ensure the synergistic/collaborative implementation of the programme of work between the national UNCCD processes and other processes under related environmental conventions.

Ethiopia strongly believes that the synergistic implementation of the three conventions (CBD, UNFCCC and UNCCD) at all levels is crucial. Accordingly, Ethiopia has prepared a strategy document that outlines the synergistic implementation of the three conventions at national level.

The objectives of the document are:

1. To chart out the synergistic implementation of the common thematic areas of the three Conventions and avoid duplication and overlap of efforts;
2. To design feasible strategies and action plans for synergetic implementation; and

3. To propose feasible institutional arrangements for the synergetic implementation of the three conventions.

The document deals with the resource bases; major environmental problems and measures taken to alleviate the problems, analysis of the common provisions and strategies and action plans, implementation modalities, suggested institutional options for implementation, monitoring and evaluation. This strategy that integrates the three conventions for synergy is now being implemented.

### Programme Part A: Assessment

**190.** Has your country assessed and analyzed information on the state of dryland biological diversity and the pressures on it, disseminated existing knowledge and best practices, and filled knowledge gaps in order to determine adequate activities? (Decision V/23, Part A: Assessment, Operational objective, activities 1 to 6)

- |  |  |
|--|--|
| a) No  |  |
| b) No, but assessment is ongoing   |  |
| c) Yes, some assessments undertaken (please provide details below)         |  |
| d) Yes, comprehensive assessment undertaken (please provide details below) |  |

Further comments on the relevant information on assessments of the status and trends and dissemination of existing knowledge and best practices.

### Programme Part B: Targeted Actions

**191.** Has your country taken measures to promote the conservation and sustainable use of the biological diversity of dry and sub-humid lands and the fair and equitable sharing of the benefits arising out of the utilization of its genetic resources, and to combat the loss of biological diversity in dry and sub-humid lands and its socio-economic consequences? (part B of annex I of decision V/23, activities 7 to 9)

- |  |   |
|--|---|
| a) No  |   |
| b) Yes, some measures taken (please provide details below) | X |
| c) Yes, many measures taken (please provide details below) |   |

Further comments on the measures taken to promote the conservation and sustainable use of the biological diversity of dry and sub-humid lands and the fair and equitable sharing of the benefits arising out of the utilization of its genetic resources, and to combat the loss of biological diversity in dry and sub-humid lands and its socio-economic consequences.

#### **Environment Policy of Ethiopia**

The environment policy and the conservation strategy of Ethiopia stress on the importance of conservation and sustainable use of dry and sub-humid lands biodiversity. For instance, conservation and sustainable use of gum producing vegetation through the involvement of local stakeholders and strengthening of parks are among the priorities of the conservation strategy.

#### **Biodiversity conservation policy**

Ethiopia has also developed a biodiversity conservation policy that promotes biodiversity conservation and sustainable use in various ecosystems including dry and sub-humid lands/ecosystems.

#### **National Biodiversity Strategy and Action Plan (NBSAP)**

The NBSAP has been prepared in line with the biodiversity conservation policy. The NBSAP has identi-

fied threats, gaps and possible areas of intervention to the conservation and sustainable use of biodiversity in the country.

### **National Action Programme (NAP) for the implementation of UNCCD**

Combating desertification is a major aspect of conservation and sustainable use of biodiversity in dry lands. With this notion and to reduce other impacts of desertification, Ethiopia has prepared and is implementing the NAP through mainstreaming it in various programmes including poverty reduction and sustainable development.

### **CCF2 Environment and sustainable dry lands management programme**

The major aims of this programme are initiating the implementation of the environmental policy, conservation strategy and NAP especially in the dry and sub-humid areas of the country. The programme supports environmental management activities of local communities, capacity building activities of stakeholders involved in environmental management, and awareness raising and development of environmental management tools such as environmental impact assessment guidelines.

Many activities are being implemented to directly or indirectly address the problems of dry and sub-humid land biodiversity. Some of these are the Invasive Alien Species management initiative, preparation of ecosystem management plans, demarcation of parks such as Maze Park, opening of regional environmental offices, emergence of environment affiliated NGOs and beginning of dry land biodiversity studies in educational institutions, e.g. in the Mekelle University and Addis Ababa University.

The combination of these strategies, activities and capacity building programmes has made it possible to empower local communities living in dry and sub-humid areas of the country to reverse land degradation and sustainably manage their biodiversity and other natural resources for improved standards of living.

<b>192.</b> Has your country taken measures to strengthen national capacities, including local capacities, to enhance the implementation of the programme of work?	
a) No	
b) Yes, some measures taken (please provide details below)	
c) Yes, comprehensive measures taken (please provide details below)	
d) Yes, all identified capacity needs met (please provide details below)	
Further comments on measures taken to strengthen national capacities, including local capacities, to enhance the implementation of the programme of work.	

**Box LXXII.**

Please elaborate below on the implementation of this programme of work and associated decisions specifically focusing on:

- a) outcomes and impacts of actions taken;
- b) contribution to the achievement of the goals of the Strategic Plan of the Convention;
- c) contribution to progress towards the 2010 target;
- d) progress in implementing national biodiversity strategies and action plans;
- e) contribution to the achievement of the Millennium Development Goals;
- f) constraints encountered in implementation.

**a) Outcomes and impacts of actions taken**

Farming communities in dry and sub-humid areas are reversing land degradation Consequently, biodiversity is being restored and poverty is being reduced

**b) Contributions to the achievements of the goals of the strategic plans of the convention**

Contribute to goals 3 and 4 (Goal 3: National biodiversity strategies and action plans and the integration of biodiversity concerns into relevant sectors serve as an effective framework for the implementation of the objectives of the Convention; Goal 4: There is a better understanding of the importance of biodiversity and of the Convention, and this has led to broader engagement across society in implementation) of the strategic plan of the Convention

**c) Contribution to progress towards the 2010 target**

The efforts made at different decision-taking levels and especially action by local communities have significance in contributing to progress towards the 2010 target with respect to the following specific targets

Target 4. At least 10 per cent of each of the world's ecological regions effectively conserved

Target 5. Protection of 50 per cent of the most important areas for plant diversity assured

Target 6. At least 30 per cent of production lands managed consistent with the conservation of plant diversity

Target 13. The decline of plant resources, and associated indigenous and local knowledge, innovations and practices that support sustainable livelihoods, local food security and health care, halted

Target 14. The importance of plant diversity and the need for its conservation incorporated into communication, educational and public-awareness programmes

Target 15. The number of trained people working with appropriate facilities in plant conservation increased, according to national needs, to achieve the targets of this Strategy

Target 16. Networks for plant conservation activities established or strengthened at national, regional and international levels

d) Progress in implementing NBSAP

The NBSAP has been endorsed by the Government and is in print for distribution and implementation

e) Contribution to the achievements of the MDG

MDG Goal 1: Eradicate Extreme Poverty and Hunger

MDG Goal 7: Ensure Environmental Sustainability

f) Constraints encountered in implementation

Financial shortage and inadequate awareness among decision makers

### Mountain Biodiversity

#### Programme Element 1. Direct actions for conservation, sustainable use and benefit sharing

**193.** Has your country taken any measures to prevent and mitigate the negative impacts of key threats to mountain biodiversity?

a) No

b) No, but relevant measures are being considered

c) Yes, some measures taken (please provide details below)

d) Yes, many measures taken (please provide details below)

X

Further comments on the measures taken to prevent and mitigate the negative impacts of key threats to mountain biodiversity

- One of the measures Ethiopia has taken to prevent and mitigate the negative impacts of the key threats to mountain biodiversity is to establish mountain protected areas such as Simien Mountain National Park, Bale Mountain National Park, Bale Mountain Reserve and Bale Mountain Controlled Hunting Areas.
- In mountainous areas farmers are being helped to rehabilitate the degraded mountain sides and to adopt soil conserving cultivation practices.
- The newly adopted land use policy of the country prohibits the cultivation of rural lands with slopes more than 60% for farming and free range grazing. Slopes between 30% and 60% may be allowed for development of annual crops through terracing.
- Traditional conservation and land use practices are encouraged to prevent land degradation and to conserve biodiversity.
- In some cases an introduction of benefit sharing mechanisms with the communities near biodiversity rich areas has contributed to the protection of the biodiversity resource.



<b>194. Has your country taken any measures to protect, recover and restore mountain biodiversity?</b>	
a) No	
b) No, but some measures are being considered	
c) Yes, some measures taken (please provide details below)	X
d) Yes, many measures taken (please provide details below)	
Further comments on the measures taken to protect, recover and restore mountain biodiversity	
<p>There are various projects implemented to protect the most important biodiversity rich mountains of the country such as Bale Mountains, Simien Mountains, and the highlands of the central and northern Ethiopia.</p> <p>In Bale the WWF- DGIS project is active in the conservation of the Ethiopian wolf and its habitat. An Austrian assisted project in the Simien Mountains is implementing an integrated park management program to protect the endangered Walia Ibex and the local communities around the protected area participate in the management and share from the cash benefits that the Park earns.</p>	

<b>195. Has your country taken any measures to promote the sustainable use of mountain biological resources and to maintain genetic diversity in mountain ecosystems?</b>	
a) No	
b) No, but some measures are being considered	
c) Yes, some measures taken (please provide details below)	X
d) Yes, many measures taken (please provide details below)	
Further comments on the measures to promote the sustainable use of mountain biological resources and to maintain genetic diversity in mountain ecosystems	
<ul style="list-style-type: none"> <li>• The fact that protected areas in the country are also meant to generate income, communities surrounding protected areas and the government benefit when visitors of the protected area pay for the various service they get.</li> <li>• Virtually on all sides of the Bale Mountains National Park there are areas designated as controlled hunting areas. Here, mountain Nyala, Menelik's bush buck and other animals are hunted on the basis of quotas set. The government has put in place mechanisms by which income generated will be shared with the adjacent communities.</li> <li>• In the Adaba–Dodola, area communities living in the forests of the nearby Mountains are allowed to temporarily own the forest (some portion for each household) and use it to satisfy their need without compromising the forest's existence.</li> </ul>	

<b>196. Has your country taken any measures for sharing the benefits arising from the utilization of mountain genetic resources, including preservation and maintenance of traditional knowledge?</b>	
a) No	
b) No, but some measures are being considered	X
c) Yes, some measures taken (please provide details below)	
d) Yes, many measures taken (please provide details below)	
Further comments on the measures for sharing the benefits arising from the utilization of mountain genetic resources	

The National Policy on Biodiversity Conservation and Research requires that the Federal and Regional Governments shall receive and distribute revenues generated from biodiversity for the benefits of the local communities who are participating in the conservation of the biological resources, and for the cost of administering, developing and managing the biodiversity. It further states that traditional conservation and utilization systems and indigenous knowledge on biodiversity will be surveyed, assessed, documented, studied, improved and utilized. The Proclamation to Provide Community Rights, Access to Genetic Resources and Community Knowledge reflected all these issues.

**Programme Element 2. Means of implementation for conservation, sustainable use and benefit sharing**

**197.** Has your country developed any legal, policy and institutional framework for conservation and sustainable use of mountain biodiversity and for implementing this programme of work?

- |  |   |
|--|---|
| a) No  |   |
| b) No, but relevant frameworks are being developed                           |   |
| c) Yes, some frameworks are in place (please provide details below)          | X |
| d) Yes, comprehensive frameworks are in place (please provide details below) |   |

Further comments on the legal, policy and institutional frameworks for conservation and sustainable use of mountain biodiversity and for implementing the programme of work on mountain biodiversity.

The new rural land proclamation seeks to encourage peasant landholders in mountain areas to conserve and sustainably use the mountain sides. It also provides for the development of a land use plan that takes into account, *inter alia*, the plant cover thereof. The Oromiya Regional State Rural Land Proclamation provides for the rights of local communities to manage hillside areas and degraded lands. Through similar laws or administrative procedures, the other Regional States are enabling local communities to manage their land sustainably.

**198.** Has your country been involved in regional and/or transboundary cooperative agreements on mountain ecosystems for conservation and sustainable use of mountain biodiversity?

- |   |   |
|---|---|
| a) No   | X |
| b) No, but some cooperation frameworks are being considered |   |
| c) Yes (please provide details below)                       |   |

Further information on the regional and/or transboundary cooperative agreements on mountain ecosystems for conservation and sustainable use of mountain biodiversity

**Programme Element 3. Supporting actions for conservation,  
sustainable use and benefit sharing**

**199.** Has your country taken any measures for identification, monitoring and assessment of mountain biological diversity?

- |  |   |
|--|---|
| a) No  | X |
| b) No, but relevant programmes are under development                       |   |
| c) Yes, some measures are in place (please provide details below)          |   |
| d) Yes, comprehensive measures are in place (please provide details below) |   |

Further comments on the measures for identification, monitoring and assessment of mountain biodiversity

In most cases no organized regular measures are in place for identification, monitoring and assessment of mountain biodiversity except as conducted by organizations e.g. the Ministry of Agriculture and Rural Development, IBC, EPA etc. in the course of their duty. But regular monitoring and identification, especially in Simian mountains, Bale mountains, and on some mountains in Wello are conducted by NGO's e.g. "Born Free" on the Ethiopian wolf and it's habitat. It should be noted that about 80% of the Ethiopian population lives on land above 1900m in altitude, and when we talk of mountains we, therefore, mean most of the country. As such, monitoring mountains is almost the sum total of all monitoring in Ethiopia.

**200.** Has your country taken any measures for improving research, technical and scientific cooperation and capacity building for conservation and sustainable use of mountain biodiversity?

- |  |   |
|--|---|
| a) No  | X |
| b) No, but relevant programmes are under development                       |   |
| c) Yes, some measures are in place (please provide details below)          |   |
| d) Yes, comprehensive measures are in place (please provide details below) |   |

Further comments on the measures for improving research, technical and scientific cooperation and capacity building for conservation and sustainable use of mountain biodiversity

Since 1986, the government in co-operation with some NGOs has undertaken some measures to undertake research. For instance the Bale mountain research programme has been in operation assisted by Wildlife Conservation International of the New York Zoological society, the Frankfurt Zoological Society and Born Free group. Most of the universities carry out research on issues of relevance to the conservation and sustainable use of mountain biodiversity.

<b>201.</b> Has your country taken any measures to develop, promote, validate and transfer appropriate technologies for the conservation of mountain ecosystems?	
a) No	
b) No, but relevant programmes are under development	
c) Yes, some measures are in place (please provide details below)	X
d) Yes, comprehensive measures are in place (please provide details below)	
Further comments on the measures to develop, promote, validate and transfer appropriate technologies for the conservation of mountain ecosystems	
The Frankfurt Zoological Society (FZS) in collaboration with the Conservation and Sustainable Use of Medicinal Plants Project is developing a General Management Plan (GMP) for the Bale Mountain National Park, which is also applicable to other mountain ecosystems in the country. The GMP is developing a specific plan with a 10 year objective, a three year strategic implementation plan and revolving one year implementation plans.	

**Box LXXIII.**

<p>Please elaborate below on the implementation of this programme of work and associated decisions specifically focusing on:</p> <ol style="list-style-type: none"> <li>outcomes and impacts of actions taken;</li> <li>contribution to the achievement of the goals of the Strategic Plan of the Convention;</li> <li>contribution to progress towards the 2010 target;</li> <li>progress in implementing national biodiversity strategies and action plans;</li> <li>contribution to the achievement of the Millennium Development Goals;</li> <li>constraints encountered in implementation.</li> </ol>
<p><b>a) Outcomes and impacts of actions taken</b></p> <p>In Bale, The public education programme that has been implemented has made the regional government and the local communities near the National Park aware about the importance of the Park and its resource. The vaccination of domestic dogs against rabies has contributed much to the protection of the Ethiopian wolf. This program would have been difficult to implement without the full co-operation of the local communities adjacent to the Park.</p> <p>In Simien, Austrian assistance together with government budget have contributed a lot to the increase of Walia Ibex population from below 200 to its present, which is above 600 animals.</p> <p><b>b) Contribution to the achievement of the goals of the Strategic Plan of the Convention</b> Contributes to the strategic plan of the convention for the achievement of goal 3</p> <p><b>c) Contribution to progress towards the 2010 target</b></p> <ul style="list-style-type: none"> <li>Promotes the conservation of areas of particular importance to biodiversity protected</li> <li>Promotes the conservation of species diversity targets</li> </ul> <p><b>d) Progress in implementing National Biodiversity Strategies and Action Plans</b> The NBSAP has been endorsed by the Government, and is in print for implementation</p> <p><b>e) Contribution to the achievement of the Millennium Development Goals</b></p> <ul style="list-style-type: none"> <li>Strengthen existing wildlife farms and establishment of new ones</li> <li>Promote public conservation education and awareness creation</li> </ul> <p><b>f) Constraints encountered in implementation</b></p>

**E. OPERATIONS OF THE CONVENTION**

**202.** Has your country actively participated in subregional and regional activities in order to prepare for Convention meetings and enhance implementation of the Convention? (decision V/20)

(k) No

(l) Yes (please provide details below)

X

Further comments on the regional and subregional activities in which your country has been involved.

Due to severe funding constraint, there have not been as many opportunities for subregional and regional meetings and/or activities as would have been desirable. Nevertheless, African Regional meetings have always been held during meetings under the CBD, and Ethiopia has always played a very active role in them. For example, a 2-day preparatory meeting of the African Group, chaired by Ethiopia, took place at the beginning CoP-MoP/3 thanks to German funding, and at the beginning of CoP-8 meeting thanks to British funding.

In addition, very recently, the Institute for Biodiversity Conservation hosted a Regional ABS Capacity-Building Workshop for Eastern and Southern Africa from Oct. 2-6 in Addis Ababa in collaboration with and financial assistance by GTZ. In line with the recommendation of the 3<sup>rd</sup> meeting of the ABS Working Group, the regional workshop sought to exchange experiences with relevant instruments and to discuss existing national approaches and mechanisms for the implementation of the ABS requirements of the CBD and the Bonn Guidelines.

The aim of the workshop was twofold: (1) To foster an open exchange of views among stakeholders based on existing local, national and regional initiatives and experiences and (2) to create an understanding on how interdependent local, national and international regulations are for being effective in implementing the third objective of the CBD. One of the specific objectives of the workshop was to contribute to the preparation of those participants of the workshop who were to attend the next meeting of the ABS Working Group in January 2006.

The workshop brought together 50 participants that included ABS National Focal Points and representatives of Competent National Authorities for ABS, negotiators in the last meeting of the ABS Working Group, staff of national research and development institutions, NGOs from the local, national and regional levels, staff of international institutions, as well as relevant private sector representatives including farmers and breeders.

**203.** Is your country strengthening regional and subregional cooperation, enhancing integration and promoting synergies with relevant regional and subregional processes? (decision VI/27 B)

(a) No	
(b) Yes (please provide details below)	X

Further comments on regional and subregional cooperation and processes.

The NEPAD action plan covers environmental sectors including combating land degradation, drought and desertification; wetlands; invasive alien species; marine and coastal resources; cross-border conservation of natural resources; climate change; pollution; forest and plant genetic resources; freshwater; capacity building; and technology transfer. The implementation demands internalizing this action plan and active participation by African countries. Ethiopia has accepted these obligations.

The African Nature Convention provides for some environmental rights (to information, participation and access to justice) echoing Principle 10 of the Rio Declaration. It encourages cooperation among parties and requires enforcing this convention by the African countries. Ethiopia is fulfilling these provisions.

A protocol on protected areas and wild fauna and flora in the eastern African region has the objective of providing for the protection of threatened and endangered species of flora and fauna, and important natural habitats in the Eastern African Region. The protocol requires parties to protect endangered species from capture, killing, possession or sale and their habitats from destruction. It also requires the coordination of efforts for protecting migratory species and the prevention of the introduction of potentially harmful alien species. Ethiopia cooperates in fulfilling there requirements.

The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) has a wing for genetic resources known as Eastern Africa Plant Genetic Resources Network (EAPGREN). EAPGREN has three areas of focus on capacity building, research, and development of plant genetic resources (PGR) support services. The EAPGREN draft constitution is under consideration by member countries. The network will contribute to consensus building on the use of common methodologies and practices, capacity building, and enhanced exchange of information and material among the national plant genetic resources focal points in the sub region. The network is developing mutually agreeable mechanisms for access to and exchange of genetic materials in full compliance with Article 15 of the Convention on Biological Diversity. Ethiopia participates actively in the EAPGREN of the ASARECA.

***The following question (204) is for DEVELOPED COUNTRIES***

**204.** Is your country supporting the work of existing regional coordination mechanisms and the development of regional and subregional networks or processes? (decision VI/27 B)

a) No	
b) No, but programmes are under development	
c) Yes, included in existing cooperation frameworks (please provide details below)	
d) Yes, some cooperative activities ongoing (please provide details below)	

Further comments on support for the work of existing regional coordination mechanisms and the development of regional and subregional networks or processes.

<b>205.</b> Is your country working with other Parties to strengthen the existing regional and subregional mechanisms and initiatives for capacity-building? (decision VI/27 B)	
a) No	
b) Yes	X

<b>206.</b> Has your country contributed to the assessment of the regional and subregional mechanisms for implementation of the Convention? (decision VI/27 B)	
a) No	X
b) Yes (please provide details below)	
Further comments on contribution to the assessment of the regional and subregional mechanisms.	

**Box LXXIV.**

<p>Please elaborate below on the implementation of the above decisions specifically focusing on:</p> <ul style="list-style-type: none"> <li>a) outcomes and impacts of actions taken;</li> <li>b) contribution to the achievement of the goals of the Strategic Plan of the Convention;</li> <li>c) contribution to progress towards the 2010 target;</li> <li>d) progress in implementing national biodiversity strategies and action plans;</li> <li>e) contribution to the achievement of the Millennium Development Goals;</li> <li>f) constraints encountered in implementation.</li> </ul>

**F. COMMENTS ON THE FORMAT**

**Box LXXV.**

<p>Please provide below recommendations on how to improve this reporting format.</p> <ul style="list-style-type: none"> <li>• Some of the questions are repetitive</li> <li>• Many of the questions require quantitative answers, which are difficult to generate</li> <li>• The questions require more time to answer than the three months</li> </ul>
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