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The Federal Democratic Republic of Ethiopia
ENVIRONMENTAL PROTECTION AUTHORITY

Joelle Chassard

Manager, Carbon Finance Unit
Environment Department
Sustainable Development Vice Presidency
The World Bank
1818 H Street, NW
Washington DC, 20433, USA

Dear Madam Chassard,

Subject:- Request to participate in the World Bank's Forest Carbon Partnership Facility

The Environmental Protection Authority, in its capacity to coordinate all Multilateral Environmental Agreements to which Ethiopia is a party and as the Designated National Authority for the Kyoto Protocol, is pleased to formally submit the attached R- PIN for the consideration of The Bank. We trust that Ethiopia will be able to participate in the World Bank's Initiative of Forest Carbon Partnership Facility, benefit from the REDD readiness phase and thus contribute to the global effort to deal with the adverse impacts of climate change.



Sincerely yours,

[Signature]
Dessaiegne Mesfin
Deputy Director General

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The Forest Carbon Partnership Facility (FCPF) Readiness Plan Idea Note (R-PIN) Template

March 8, 2008

Guidelines:

1. The purpose of this document is to: a) request an overview of your country's interest in the FCPF program, and b) provide an overview of land use patterns, causes of deforestation, stakeholder consultation process, and potential institutional arrangements in addressing REDD (Reducing Emissions from Deforestation and Forest degradation). This R-PIN will be used as a basis for the selection of countries into the FCPF by the Participants Committee. Information about the FCPF is available at: www.carbonfinance.org/fcpf
2. Please keep the length of your response under 20 pages. You may consider using the optional Annex 1 Questionnaire (at the end of this template) to help organize some answers or provide other information.
3. You may also attach at most 15 additional pages of technical material (e.g., maps, data tables, etc.), but this is optional. If additional information is required, the FCPF will request it.
4. The text can be prepared in Word or other software and then pasted into this format.
5. For the purpose of this template, "Deforestation" is defined as the change in land cover status from forest to non-forest (i.e., when harvest or the gradual degrading of forest land reduces tree cover per hectare below your country's definition of "forest." "Forest degradation" is the reduction of tree cover and forest biomass per hectare, via selective harvest, fuel wood cutting or other practices, but where the land still meets your country's definition of "forest" land.
6. When complete, please forward the R-PIN to: 1) the Director of World Bank programs in your country; and 2) Werner Kornexl (wkornexl@worldbank.org) and Kenneth Andrasko (kandrasko@worldbank.org) of the FCPF team.

Country submitting the R-PIN: Ethiopia

Date submitted:

1. General description:

a) Name of submitting person or institution: **Ababu Anage- Environmental Protection Authority**

Title: **Head Ecosystem Department**

Contact information: **Address:**

Telephone: **25116464569**

Fax: **25116464876/82**

E-mail: **eco.co@ethionet.et**

Website, if any:

Affiliation and contact information of Government focal point for the FCPF (if known):

The Federal Environmental Protection Authority which is the Designated National Authority (DNA) for the Kyoto protocol will serve as focal institution for FCPF. The REDD program in Ethiopia will be managed by the Ministry of Agriculture and Rural Development in collaboration with other Sectoral Agencies at the Federal and Regional levels including the organized Local Communities and Civil societies working in the forestry sector. EPA will coordinate all the relevant stakeholders working in the implementation of the REDD program in Ethiopia. The roles and responsibilities of the involved institutions will be worked out.

b) List authors of and contributors to the R-PIN, and their organizations:

- Mr Desalegn Mesfin Deputy Director General of EPA,
 - Mr. Ababu Anage Forester and Head of Ecosystem Department-EPA,
 - Mr. Keflu Segu Forester, Ministry of Agriculture and Rural Development, Natural Resource Sector
 - Mr. Degelo Sendabo Ethiopian Mapping Agency
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c) Who was consulted in the process of R-PIN preparation, and their affiliation?

- **Ministry of Agriculture and Rural Development**-Responsible for the conservation, utilization and development of forest resources of the country The Main stay of the economy of Ethiopia is rain fed agriculture which is very sensitive to climate change hazards
- **Ministry of Water Resources**-- vegetation/forest resources increment to improve the ground water resources potential for various uses such as small and large scale irrigation development, for sustainable use and management of River Basins in the country forest resources have got paramount importance, etc and these activities are sensitive to climate change impacts. The Ministry is one of the main responsible institutions for managing the impacts of flood which is one of the impacts of climate change in the country.
- **Ethiopian Mapping Authority** -Production of resource maps of the country including forest

resources

- **Ethiopian Wild life and Natural History Society**-Local NGO being involved in forest development
- **Lem Ethiopia**—One of the active NGOs involved in the forest development and conservation by organizing the local communities
- **World Food Program**- One of the biggest international NGO and forest resources conservation and development is the major focus areas of the organization
- **Farm Africa-SOS Sahel Ethiopia-Bale-Eco Region Sustainable Program (BESMP)**—The organization has prepared REDD Project Idea Note on the project entitled Bale Mountain Ecoregion Emission Reduction Assts: A large scale community based Carbon Finance Project for the voluntary carbon market reducing emissions from the forest degradation and deforestation. The carbon buyers have shown interest and they are willing to finance the preparation of PDD.

2. Which institutions are responsible in your country for:

a) forest monitoring and forest inventories:

Bureaus of Agriculture and Rural Development in each of the National Regional States/City Administrations are responsible for forest resources monitoring and inventory. The Ministry of Agriculture and Rural Development is responsible for providing technical support for the Regions

Environmental Protection Authority

The Environmental Protection Authority, among others, has the following mandates.

- Liaise with competent agencies in the field of environmental protection and rehabilitation and support them in capacity development
- Establish a system for environmental impact assessment of public and private projects, as well as social and economic development policies, strategies, laws, and programs.
- In cooperation with competent agencies, carry out studies to combat desertification and/or mitigate the effects of drought and prepare corrective measures and create favorable conditions for their implementation
- In consultation with the competent agencies, formulate, or initiate and coordinate the formulation of policies, strategies, laws and programs to implement international environmental agreements to which Ethiopia is a party: and upon approval, ensure their implementation
- In consultation with competent agencies, propose incentives or disincentives to discourage practices that may hamper the sustainable use of natural resources or the prevention of environmental degradation or pollution
- In consultation with competent agencies, establish an environmental information system that promotes efficiency in environmental data collection, management and use
- Prepare and avail to the government as well as the public a periodic report on the state of the environment Report of the country

Ethiopian Wild life Conservation and Development Authority is responsible for the management and conservation of Protected areas falling between two Regional States and providing technical support for Agencies responsible for the conservation and management of protected areas in National Regional States;

Institute of Biodiversity Conservation of Ethiopia is responsible for the conservation of biodiversity resources of the country using insitu and exsitu conservation measures. The IBC among others has got forest resources gene bank which has been established by the assistance of GTZ. The Forestry Gene Bank is mainly focusing on the exsitu conservation of endangered and indigenous tree species;

Forestry Research Center in the Institute of Agricultural Research and it is responsible for undertaking forestry research in different parts of the country. The Regional Agricultural Research Centers are also involved in forestry research activities in their respective Regions.

b) Forest law enforcement:

The Constitution (Art.51 (5) authorizes the Federal Government to ‘-----enact laws for the conservation of land and other natural resources-----’ and Art.52 (5)(d) which authorizes the Regional States’-----administer land and other natural resources in accordance with the federal laws-----’(Annonymus,1995).

The Ministry of Agriculture and Rural development is involved in the formulation of forest resources relevant policies and laws and provision of technical support for their enforcement while the Bureau of Agriculture and Rural Development are responsible for the enforcement of forest laws.

The Federal Environmental Protection Authority

The FEPA/REPAs is mandated to over see the enforcement of environmental protection relevant laws and legislations. To this effect, the Authority has issued Environmental Policy and Laws.Sectoral and cross sect oral agencies can formulate their respective laws which are not contradictory to Federal law and policy. Monitoring and follow up on the implementation of sect oral programs and laws in an environmentally sound manner falls under the jurisdiction of EPA

C) Forestry and forest conservation:

Bureaus of Agriculture and Rural Development in each of the National Regional States/City Administrations are responsible for forestry and forest conservation. The Ministry of Agriculture and Rural Development is responsible for providing technical support for the Regions and the EPA/REPAs using the Environmental Impact Assessment and other environmental tools ensure the environmental sustainability of the forestry and forest conservation programs, especially when large scale afforestation/reforestation programs are being developed.

D) coordination across forest and agriculture sectors, and rural development: The Ministry of Agriculture and Rural Development has the major responsibility of coordination across forest and

agriculture sectors, and rural development in the process of which and inconformity with its mandates the Environmental Protection Authority has also got its own roles to play, for example by formulating and enforcing the Environmental Impact Assessment guidelines which helps to ensure the sustainability of agriculture and rural development, piloting and implementing community based projects for environmental protection and livelihood improvement through community empowerment, scaling up of best practices, promotion of environmental education and awareness at all levels, disseminating environmental information and networking,etc

3. Current country situation (consider the use of Annex 1 to help answer these questions):

A) Where do forest deforestation and forest degradation occur in your country, and how extensive are they? (i.e., location, type of forest ecosystem and number of hectares deforested per year, differences across land tenure (e.g., national forest land, private land, community forest, etc.):

In May 1986 the International Development Association (IDA) approved a credit to Ethiopia of US\$62 million equivalent (Cr.1704-ET) to help finance an energy project known as Energy I. The Project included support for several energy sub sectors - electric power, petroleum and the traditional energy sub sector. The Woody Biomass Inventory and Strategic Planning Project was a component of this sub-sector. As per the WBISPP, the forest resources of the country are divided into Natural Forest, Wood lands and Shrub lands.

Natural High Forest

Based on crown cover the natural High forest resources are divided into :Closed Crown cover of the upper strata exceed 80 percent, Dense Crown Cover of the upper strata is between 50-80 percent Open crown cover of the upper stratum is between 20 to 50 percent. The total area under natural high forest is estimated to be 4.07million hectares or 3.56 percent of the area of the country and some 95 percent of the forest area is located in three Regions: Oromiya, SNNPRS and Gambela Regions.

Wood lands

Woodlands are defined as “a continuous stand of trees with a crown density of between 20 - 80%. Mature trees are usually single storied, although there may be layered under-stories of immature trees, and of bushes, shrubs and grasses/forbs. Maximum height of the canopy is generally not more than 20 meters, although emergent may exceed this. Open woodlands have between 150 and 400 stems per hectare, whilst dense woodland has more than 400 stems per hectare.(WBISPP,2004).

The total area of woodland in Ethiopia is 29.24million hectares and that of shrub land to be 26.40million hectares covering 25.5 percent. The three Regions with the largest area of woodlands in order are Somalia (45%), Oromia(34%), and Benshangul(8%)

Shrub lands

Shrub lands are defined as “a continuous stand of shrubs with a crown density of between 20 -100 %. There may be scattered individual trees with a crown cover of less than 20% or scattered clumps (i.e. less than 0.5 hectare) of trees (as modifiers).” Dense shrub lands have more than 1,000 stems per hectare, whilst open shrub land has between 999 and 400 shrub stems per hectare. Scattered trees within the shrub layer are classified according to three categories of stem density: densely scattered between 80 and 149 stems per hectare, moderately scattered trees between 40 and 79 stems per hectare, and sparsely scattered less than 39 stems per hectare.

The total area of scrublands in Ethiopia is 26.4million hectares. Covering 23.1 percent of the country. The three Regions with the largest area of Shrub land are in order Oromia Region (29%), Somalia (20 %) and Amhara (16%).

Highland Bamboo (*Arundinaria alpina*)

"Study on Sustainable Bamboo Management" (LUSO CONSULT GmbH, 1997) estimated the area of Highland Bamboo as 129,626ha.

Lowland Bamboo (*Oxytenanthera abyssinica*)

The WBISSPP, 2004 has mapped 494,546hectares of Lowland Bamboo, all of it in Beneshangul-Gumuz Region; although small patches mixed in with woodland occur in Amhara, Oromiya and Tigray Regions.

Plantations

Forest Plantation programs have been initiated on a large scale in selected regional forest priority areas to rehabilitate formerly forested areas and produce industrial and construction wood. They are mainly of exotic tree species with Eucalyptus covering the largest area of hardwood plantations. The total area of planted forests is estimated at 216,000 ha and comprises industrial, fuel wood and communal plantations (EEO, 2006) Management of these plantations has been poor so is productivity.

About 68% of plantations comprise industrial and peri-urban plantations. Due to lack of information estimates of land area covered by farm forestry where tree growing is integrated within farming systems together with crops and pasture not estimated.

Forest and wood lands are used for various purposes in Ethiopia. About 96 percent of fuel consumption in Ethiopia comes from biomass fuel mainly from woody biomass. Wood is also used as pole and industrial wood where demand is expanding with increased with population. Other uses include incense, myrrh and gums as forest products, grazing for livestock especially during dry season, medicinal plants, sanctuary for wildlife, protection of soil from water and wind erosion improvement in agricultural productivity through

farm forestry, integration of ecosystems and water regimes, and foraging for honey bees. Some important species like korerima (*Aframomum korerima*) and (wild) coffee are also produced from forests.

Data compiled from various government documents in 1989 indicates that 2.2 percent of the total labor force was employed by the forestry sub-sector and that 28 percent of the labor force employed in agriculture was employed by the forestry sector.(State of the Environment Report,2003)

WBISPP (2004b) did an analysis in districts where there was high natural forests to arrive at conservative estimates of rates of deforestation caused by increasing population and its need for agricultural land in the three main forested regions. The results show that approximately 1.33 million hectares of natural forests are forecasted to be destroyed between 1990 and 2020; this loss accounts for about one third of the forest resources in the country. WBISPP (2004b) estimates the destruction of natural forest for agricultural expansion only at about 59,000ha.per annum.On the other hand, EFAP (1994a) put the estimates of deforestation at 150,000-200000hectare.

The woodlands and shrub lands are being depleted by the spread of small-scale farming and commercial agriculture, the growing livestock population and by the demand for firewood and charcoal .Estimates of woodland and shrub land area for the period 2000-2025 in the western lowlands show that land clearing for agriculture due to increasing population and shifting cultivation is estimated to lead to a continuous decline in shrub and wood land with the picture being more serious when only the potentially arable land is considered for the projections(WBISPP,2004b)

B) Are there any estimates of greenhouse or carbon dioxide emissions from deforestation and forest degradation in your country? If so, please summarize:

As per the Initial Communication of Ethiopia for the UNFCCC, which has been prepared in 1994, the removal (uptake) of CO₂ by Ethiopian forests decreased by about 27% while CO₂ emissions increased by 240% in the period 1990-1995.The net CO₂ uptake by Ethiopian forests decreased by 67% in the same period.Currently, the LUCF sector is a significant sink of CO₂ in Ethiopia rather than a source of emissions to atmosphere. However, this sink capacity is decreasing rapidly.

C) Please describe what data are available for estimating deforestation and/or forest degradation. Are data published? Describe the major types of data, including by deforestation and forest degradation causes and regions if possible (e.g., area covered, resolution of maps or remote sensing data, date, etc.)

- Southwest Ethiopia Forest Inventory Project, A Reconnaissance Inventory of Forest in Southwest Ethiopia, D.R. Chaffey, Land Resources Development Centre, England: Project Report 31 1979 (Revised 1982).
- Current Land Cover Map of the country- (1:250,000), UTM Projection-LAT/LONG

- CESEN land Use Land Cover Map -1:1,000,000
- Chaffy South West Ethiopia 1;250,000 Projection UTM
- Agro Ecological Map 1:2,000,000
- National Forest Priority Areas Map 1;250,000 UTM projection
- National Parks Map 1;250,000 UTM projection
- Growing Stock Map 1: 1000000
- Agro Ecological Map !: 2,000,000

D) What are the main causes of deforestation and/or forest degradation?

- **Unsustainable utilization of the forest resources**

Deforestation in Ethiopia is a result of periods during which volumes harvested have exceeded incremental yields. This has led to the mining of forest assets and caused negative impacts on the economic growth of the country.

Based on assumed per capita consumption requirements in 1992 total requirements for wood products have been estimated to be 47.5 million m³ of wood, of which fuel wood demand is 45 million m³. Ethiopian Forestry Action Plan ,1994 has estimated an incremental yield of 14.4 million m³. If harvesting were limited to this sustainable supply, the same study has indicated that some 1.2 million m³ wood be used for construction wood, about 0.2 million m³s for industrial wood and 0.6 million m³s for fodder which leave 12.5 million m³s for fuel wood which indicates that the fuel demand is three and half times greater than sustainable supply which aggravates further deforestation of the forest resources. The current fuel wood deficit of 32.5 million m³ s is made up mainly by continuous cutting of natural forests, thinning of trees on wood lands, and illegal cutting from plantations.

Logging which was carried out in natural forests without any control and management plan and the narrow range of selection of tree species have all contributed to the fast depletion of the forest ecosystem. Very few species with a high market value were mainly utilized namely, *Podocarpus gracilior* and *Juniperus procera*.

- **Agricultural expansion**

Due to the decline of agricultural land productivity coupled with population pressure high forest and wood lands resources are cleared in search of additional farm lands. As discussed in section three of this document 59,000 ha of high natural forest resources are cleared annually from the three Regional States. Socio economic development activities such as coffee and tea plantation being implemented have necessitated the conversion of forest land into other land uses.

- **Weak institutional arrangement**

The existence of weak capacity of institutions at Federal and Regional levels has been negatively affecting the forest conservation and development activities in the country and accelerate the rate of

deforestation

- **Forest fire**

The occurrence fire during fire season and the absence of precautionary measures like construction of fire brake and fire lines has caused for the loss of large areas of natural forest areas and loss of property.

E) What are the key issues in the area of forest law enforcement and forest sector governance (e.g., concession policies and enforcement, land tenure, forest policies, capacity to enforce laws, etc.?)

The key issues in the area of forest law enforcement and forest sector governance are

- 1) Inadequate capacity to ensure involvement of local community living adjacent to the forest in the conservation and management of the forest resources.
- 2) Inadequate Involvement of the private sector in the forest resources management \
- 3) Most forest resources, especially the natural forests do not have management plans which show the boundary of the forest other silvicultural practices in the forest, etc and because of that they are suffering from encroachment and open access problems;
- 4) Capacity of the concerned institutions to enforce forest and other environmental protection laws both at the Federal and Regional Levels is also weak;
- 5) The expansion of development activities such as tea and coffee plantation without considering the sustainable management and conservation of forest resources;
- 6) Forest fire

4) What data are available on forest dwellers in lands potentially targeted for REDD activities (including indigenous peoples and other forest dwellers)? (e.g., number, land tenure or land classification, role in forest management, etc.):

WBISSPP 2004 has incorporated socio economic information in its study which is relevant for the promotion of Sustainable Forest Management in the country. Moreover, in the forest areas where Participatory Forest Management approach has been employed the issue of forest dwellers has well taken care. After selecting potential forest areas, the next activity is identifying primary stakeholders to participate in the program. The stake holders may include a community, a public entity or a group that is more related to the forest and depends on it for livelihood, has some customary rights of forest use that has gained social recognition and willing to assume some task and responsibility for a given forest management unit in partnership with the government.

In a given forest identified for PFM, there are forest dwellers and non forest dwellers and the major

responsibility of forest conservation and the benefits go to the identified forest dwellers. Therefore, in the high forest areas of Adaba Dodolla Bonja, C.hilimo and Yabello Forest Dwellers Associations have been established. Information on the number of forest dwellers in one association, forest area holding, roles and responsibilities of the associations their rights,etc is available

5. Summarize key elements of the *current* strategy or programs that your government or other groups have put in place to address deforestation and forest degradation, if any:

- **Ethiopian Forestry Action Program,1994** has studied the forest resource base, analysis of the challenges facing planners and resource managers in the forestry sector, institutional and policy issues in forestry sector development and action program for addressing the challenges and the issues
- **Forest conservation and development proclamation no.94/1994-** is a law issued to provide for the conservation, development and utilization of forest resources. Three types of forest ownerships were identified under this proclamation, and these were State Forests, Forest of Regional States and Private Forests. This proclamation is replaced by 2007 Forest proclamation.
- **Forest Policy of 2007-** The overall objective of the policy is to conserve and develop forest resources properly so that there could be sustainable supply of forest products to the society and contribute to the development of the national economy. The policy in its specific objectives contains among others: encouraging public and private sectors to participate in forest development; improving productivity of forests ;and also improving ,replicating and distributing suitable tree species, etc
- **Forest Proclamation of 2007** recognizes two types of ownership, i.e.Private forest and State Forest. The proclamation has got provision on the promotion of private forest development, conservation and utilization which covers the promotion of forest development, conservation, promotion of forest technology, promotion of market for forest technology, promotion of market for forest products and obligations of private forest developers.

Private individuals, associations, governmental and non governmental organizations and business organizations who want to develop forest shall have the right to obtain rural land in areas designated for forest development in accordance with regional land administration and utilization laws. Areas in productive state forests that could be developed on concession shall be identified and may be given out for man made forest development. Any person who develops forest on his land holding or in a state forest area given to him on concession shall be given assurance to his ownership of the forest. The rights of forest owners to use forestland and to transfer their holding rights shall be exercised in accordance with rural land administration and utilization laws. The proclamation have the following important provisions which are important for the implementation of REDD in the country; Forest development, conservation and utilization plans shall be

formulated to allow the participation of local communities in the development and conservation and also in the sharing of benefits from the development of state forests; the local community may utilize forest products from state forest to the extent necessary for satisfying their ordinary domestic needs in accordance with directives to be issued by the appropriate regional body and in conformity with the management plan developed for the forest; the harvesting of forest products, grass and fruit as well as the keeping of beehives in state forests may be permitted based on the objective realities of the locality; the local community may be permitted to keep bee hives and produce species, forest coffee ,forage and the likes in protected forest by providing them forest development and conservation training and technical support;

- **National Forest Program**

The Government of Ethiopia has signed project document with FAO of National Forest Program Facility for the development and implementation of National Forest Program in 2008. The purpose of the project is to contribute towards increasing the contribution of the forestry sector to attaining MDG and bring about sustainable economic development in Ethiopia. The Facility will help build national capacity to share relevant information among foresters, to help formulate un updated NFP and to lay foundation for its implementation, to enable the country to actively participate in the international forestry processes and to help integrate its international commitment into its NFP.

- **Participatory Forest Management**

Participatory Forest Management has been started in Ethiopia 10 years ago. Since then the program is under implementation in Chilimo, Bonga, Adaba Dodolla and Yabello High Forest Priority Areas. The program is supported by Farm Africa and GTZ and being implemented by the Oromia and Southern Nations Nationalities and Peoples Regional States Bureau of Agriculture and Rural Development (Proceedings of a policy workshop to increase forest cover in Ethiopia,2007).

- **Eastern Africa Bamboo Project**

With the help of international Network on Bamboo and Rattan (INBAR) and common Fund for Communities (CFC), Eastern Africa Bamboo project is being established. The long term objective of the project is to promote the development of sustainable production and use of bamboo products in Eastern African countries with focus on the promotion of markets.

- **Non Timber Forest Products Research and Development Project.**

The Project is primarily funded by the European Union from the Tropical Forests budget Line. It has also received funding from CIDA, and NORAD in Ethiopia. IDA is supporting the development and initial implementation of a gender sensitive approach to NTFP development and forest management.NORAD is supporting different community-based activities which are seeking to develop local capacity and skills for improved NTFP production in ways which help enhance the role of these products in improving food security

and livelihoods.

a) What government, stakeholder or other process was used to arrive at the current strategy or programs?

The five year plan of the Government known as Plan for Accelerated Sustainable Development to End Poverty preparation process has helped the development of forestry related programs to be initiated. Moreover, the Sustainable Land Management Program of the Terrafric has got paramount importance for designing forestry related programs and projects.

b) What major programs or policies are in place at the national, and the state or other sub national level?

- **Environmental Policy of Ethiopia**

The Environmental policy which was issued on April 1997 has got ten sectoral and 10 cross sectoral policies. One of the sectoral policies is on forest, woodlands and tree resources under which the policy addresses issues such as complementary roles of communities, private entrepreneurs and the state in forestry development; integration of forestry development with land, water, energy resources, ecosystem and genetic resources development in addition to crop and livestock production. Selection of suitable tree species for afforestation/reforestation with particular emphasis to indigenous tree species is one important statement included in the policy.

- **Plan for Accelerated Sustainable Development to End Poverty(2005/2006-2009/2010)**

The five year plan of the government contains various provisions which are relevant for forest resources conservation and development including surveying and mapping of 1.44 million ha of natural forest resources to better understand the extent and spatial distribution of dense forests as well as to determine their capacity and implement a sustainable management plan.

- **Agricultural and Rural Development Policies and Strategies (March 2002)**

In the context of combating deforestation and degradation 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.

- **Environmental Impact Assessment Proclamation(299/2002)**

Proclamation No.299/2002, enacted in 2002, empowered the Environmental Protection Authority (EPA) to

prepare procedure, regulations, guidelines and standards to effectively implement and enforce EIA proclamation. Environmental guidelines are among the tools for facilitating the inclusion of environmental issues and principles of sustainable development into development proposals. To guide mainstreaming of the principles of sustainability into sectoral projects, sectoral environmental impact assessment guidelines such as guidelines on agriculture, forestry, transport, industry, tannery and settlements have been prepared. In addition to these, a general guideline for facilitating EIA in all sectors has been prepared.

➤ **Voluntary Resettlement Program**

Ethiopia faces both chronic and transitory food insecurity problems. The main factors contributing to food insecurity are: land degradation, drought, high population pressure, low-input subsistence agriculture, small farm size and landlessness. Millions of farmers have faced serious food security problems within the past three to four decades because of reduced or complete failure of agricultural production as a result of the aforementioned constraints.

The objective of the program is to resettle up to 440,000 chronically food insecure households from areas which are environmentally degraded, moisture deficit and with relatively high population pressure to productive areas of the country thereby enable them attain food security by the end of the year 2006. Guidelines for the protection of the environment in the resettlement areas have been prepared so as to minimize the environmental impacts.

➤ **Nile Basin Initiative (NBI)**

The main objective of the program is to provide strategic environmental framework for the management of the trans-boundary waters and environmental challenges in the Nile River Basin. Specifically, the programme will: (i) improve the understanding of the relationship of water resources development and environment, (ii) provide forum to discuss development paths for the Nile with a wide range of stakeholders, (iii) enhance basin-wide cooperation and environmental awareness, and (iv) enhance environmental management capacities of the basin-wide institutions. The Nile Trans-boundary Environmental Action Program (NTEAP) is one of the eight programs under the NBI shared vision program. The NTEAP has six components: (i) institutional strengthening to facilitate regional cooperation (ii) community-level land, forest and water conservation (iii) environmental education & awareness (iv) wetlands and biodiversity conservation (v) water quality monitoring and (vi) monitoring & evaluation.

6. What is the current thinking on what would be needed to reduce deforestation and forest degradation in your country? (e.g., potential programs, policies, capacity building, etc., at national or sub national level):

- Private, individuals, associations, governmental and non governmental organizations who want to develop forest shall have the right to obtain rural land in areas designated for forest development;
- Areas in productive state forests that could be developed on concession shall be identified and may be given out for man made forest development;
- Any person who develops forest on his land holding or in a state forest area given to him on concession shall be given assurance to his ownership of the forest;
- Private forest and State Forest types have been recognized by law;
- A seed supply system shall be established to supply seeds of indigenous or exotic tree species that are suitable to the different ecosystems;
- Training and education shall be provided on modern forest management skills to all those engaged in forest development so that forest resources is properly developed ,conserved and utilized;
- The forest technology package to be distributed to farmers, semi-pastoralists and the private sector shall focus on maximizing income and ensuring food security within a short period of time;
- Forest products shall be used for trade and industrial development based on forest management plans;
- A system shall be established for the conservation of tree resources having market demand, with a view to increasing their sustainable production and productivity;
- Forests shall be protected from forest fire, unauthorized settlement, deforestation, undertaking of mining activities and other similar dangers;
- Conditions shall be facilitated where by inhabitants within the state forest shall continue living in the forest, while participating in the development and conservation of the forest , in a manner that shall not obstruct forest development or based on a study and in consultation with the appropriate body, they shall evacuate the forest and settle in other areas suitable for living;
- Protected natural forests and forest lands shall be demarcated and conserved for the purpose of environmental protection and conservation of history ,culture and biodiversity as well as for the purpose of field education

a) How would those programs address the main causes of deforestation?

As it was discussed in the previous sections, the main causes of deforestation in the country are the need for more agricultural lands and fuel wood scavenging and most of the programs discussed above have got the objectives of improving agricultural productivity , relaxing the pressure on the forest resources, fulfilling the demand for forest products at house hold level using alternatives to forest products and most importantly eradicating poverty which is one of the root cause environmental degradation including forest

resources degradation. Hence the programs have got paramount importance for combating deforestation and forest degradation

b) Would any cross-sect oral programs or policies also play a role in your REDD strategy (e.g., rural development policies, transportation or land use planning programs, etc.)?

Various sect oral and cross Policies and programs will complement and support the development of REDD strategy

- The food security recognized that soil, water, and vegetation are the main asset base of both the farming community and economy of the country, without which the achievement of food security is unlikely. Water and natural resource conservation based agricultural development is also considered as a centerpiece of the strategy.
- The energy policy and strategy (1994), puts emphasis on hydropower to increase the electricity supply and to take advantage of geothermal, solar, wind, and other renewable energy sources, whenever appropriate. A significant concern with hydroelectric developments in Ethiopia is the erosion problem. Enormous quantities of silt are transported downstream especially during the rainy season reducing the holding capacity of the dams. Watershed management is part of the energy policy and strategy.
- **Rural Land Administration and land use proclamation**

The proclamation was issued on 15 th of July, 2005. The most relevant provision regarding the government's effort to increase forest cover is contained in article 13 sub article 6 which reads as 'land use planning and proper use of sloppy, gully and wetlands'. Sub article 6 states that 'rural lands ,the slope of which is more than 60%, shall not be used for farming and free grazing ;they shall be used for development of trees, perennial plants and forage production'.

Other Policy measures which are relevant for forest conservation and development include: Policy on Biodiversity Conservation and Research (issued on April, 1998), Water Resources Management Policy (1999.) Environnemental Impact Assesment Proclamation No. 299/2002, .Environnemental Organs Establishment Proclamation (295/2002).

- **Agricultural Sector Support Program**

The Program is financed by AfDB and executed by Regional Bureaus of Agriculture and Rural Development. Mountain development and low land ecosystem management components of the program are the most important for the forestry sector. The mountain development component comprises soil and water conservation and tree planting activities. Low land ecosystem management component focuses among others on tree planting and income diversification.

➤ **Productive Safety Net Program**

The Program is financed by the World Bank and the Bureau of Food Security under the Ministry of Agriculture and Rural Development is the responsible organ that administers productive Safety Net Program. The focus is to bring food insecure communities to food sufficiency through asset building (For example: soil and water conservation, tree planting-fruit, forage, etc) .The program is under implementation in food insecure woredas.

➤ **Sustainable Land Management Program**

The SLM project which will be financed by the GEF/World bank has got the development objective of reducing land degradation in agricultural landscapes and improve the agricultural productivity of smallholder farmers. The project is also in line with the global environment objective which is also to reduce land degradation, leading to the protection and/or restoration of ecosystem functions and diversity in agricultural landscapes. The overall objective is to improve the livelihood of land users and communities through the implementation of SLM activities in the framework of community based watershed development plans..

The project would be implemented in 35 watersheds in six Regional States, namely, Amhara, Oromiya, Tigray, SNNP, Beneshangul Gumuz, and Gambela . These watersheds, with an average size of about 8,500 ha, comprise 15 to 20 sub-watersheds. The project is expected to cover a total area of about 250,000 ha, benefiting about 500,000 people.

The selected watersheds are a subset of a much larger plan of MoARD to support sustainable land management program in 177 priority watersheds across the country by soliciting financial and technical supports from all the relevant donor agencies. The proposed watersheds were selected by the MoARD in consultation with the Regional States and Woredas.

➤ **Managing Environmental Resources to Enable Transition to More Sustainable Livelihood(MERET) project**

The Program is assisted by the World Food Program and executed in Moisture Deficit Areas. Multi purpose tree species such as fruit trees are being planted around homesteads and on farm lands. Apple trees planting are being carried out with successful results.

➤ **Ethiopian Sustainable Land Management Investment Framework**

Ethiopia has prepared Sustainable Land Management Investment Framework under the auspices of the Terr africa Program. The overall development objective of the ESIF is to address the link between poverty,

vulnerability and land degradation at the rural community level, through the promotion of SLM practices that contribute to improving the livelihoods and economic well-being of the country's farmers, herders and forest resource users. The environmental objective of the program is overcome the causes, and mitigate the negative impacts of land degradation on the structure and functional integrity of the country's ecosystems through addressing the bottlenecks and barriers to scaling up successful SLM technologies and approaches. Multi lateral and Bilateral Donor Agencies including the World Bank will be involved for the implementation of the Program. Donor Conference is scheduled to take place on October, 2008.

➤ **Natural Resource Accounting**

The main economic value assigned to forests is the value of the timber produced. Because of this reason, the contribution of forests to the national economy is undervalued. EDRI and CEEPA are jointly working to undertake natural resource accounting in the country.

c) Have you considered the potential relationship between your potential REDD strategies and your country's broader development agenda in the forest and other relevant sectors? (e.g., agriculture, water, energy, transportation). If you have not considered this yet, you may want to identify it as an objective for your REDD planning process.

Reduction of Emission from Deforestation and Degradation is a new concept and it is not mentioned in the various Sustainable Development Plan documents of the country including Plan for Accelerated Sustainable Development to End Poverty (PASDEP) and Environmental Policy of Ethiopia (EPE) and Conservation Strategy of Ethiopia. However, since the country is following Federal form of Government forest Conservation and Development is promoted in a decentralized manner and through active participation of the local community which is relevant for the implementation of REDD in Ethiopia.

The EPE has got very pertinent provisions which are relevant for REDD strategies and these are:

- To recognize that the continued use of biomass for energy production makes no net contribution to atmospheric pollution as long as at least equal amounts of biomass are produced annually to compensate this and to maximize the standing biomass in the country through a combination of reforestation, agro forestry, the rehabilitation of degraded areas, a general revegetation of the land and the control of free range grazing in the highlands and to seek financial support for this from industrialized countries for offsetting their carbon dioxide emission;
- To promote a climate monitoring programme as the country is highly sensitive to climatic variability;
- To recognize that even at an insignificant level of contribution to atmospheric greenhouse gases, a firm and visible commitment to the principle of containing climate change is essential and to take the appropriate control measures for a moral position from which to deal with the rest of the world in a

struggle to bring about its containment by those countries which produce large quantities of greenhouse gases;

- To recognize that Ethiopia's environmental and long-term economic interests and its energy prospect coincide with the need to minimize atmospheric inputs of greenhouse gases as it has a large potential for harnessing hydro-, geothermal and solar energy, none of which produce pollutant gases in significant amounts and to develop its energy sector accordingly;
- To adhere to the principle that "sustainable forest management" is achieved when social acceptability and economic viability have been achieved and the volume of wood harvested in a given period is about equal to the net growth that the forest is capable of generating;
- To find substitutes for construction and fuel wood whenever capabilities and other conditions allow, in order reducing pressure on forests.
- To pursue agricultural and other policies and programmes that will reduce pressure on fragile woodland resources and ecosystems;
- To promote changes in agricultural and natural resource management systems which will limit the need for free grazing of animals in protected forest areas;
- To recognize that natural ecosystems, particularly wetlands and upstream forests, are fundamental in regulating water quality and quantity and to integrate their rehabilitation and protection into the conservation, development and management of water resources;
- To subject all major water conservation, development and management projects to the environmental impact assessment process and to include the costs and benefits of protecting watershed forests, wetlands and other relevant key ecosystems in the economic analysis of such water projects;

Some of the relevant provisions in the PASDEP include:

- 1.44 Million ha of dense natural forest resources of the country will be surveyed and mapped;
- The high natural forest coverage of the country will increase from the existing 3.6% to 9%
- To strengthen natural resource information system data bases will be established in 550 woredas;
- Proper land use plans will be prepared by analyzing the suitability of land in 18 watersheds;
- 125 Districts will have their capacities improved and will develop and implement their respective environmental and sustainable livelihoods plans;

d) Has any technical assistance already been received, or is planned on REDD? (e.g., technical consulting, analysis of deforestation or forest degradation in country, etc.,

and by whom):

The Ethiopian Government does not receive any technical assistance for the development of National level REDD projects. However Farm Africa-SOS Sahel Ethiopia-Bale-Eco Region Sustainable Program(BESMP)— has submitted REDD Project idea note on the project entitled Bale Mountain Eco-region Emission Reduction Assets: A large scale community based Carbon Finance Project for the voluntary carbon market reducing emissions from the forest degradation and deforestation.

Moreover, there are many forestry projects in the country which we think can create favorable environment for the future REDD program implementation in Ethiopia and these include among others:

- **GTZ SUN Dodola Project in the Bale and Arsi Zones of Oromia National regional State**

The project has started as an Ethio –German bilateral cooperation in 1995 with the objective of developing a feasible forest conservation approach.WAJIB started in 2000 as the first forest cover group in the country.WAJIB is the abbreviation of Forest Dwellers Association in Afan Oromo. The project tries to conserve forest through community forest management that creates Forest Dwellers Association up to 30 House Holds in a group of about 400 hectares of forest block. The approach creates sense of ownership and responsibility in the local communities. The WAJIB approach preconditions are First, that local communities ,government and other bodies are concerned about the situation of forests.Second,unregulated access to forest resources have resulted in over exploitation and unsustainable uses of these resources.Third,willingness of local governments to hand over use rights of forest resources to local communities.

After the implementation of WAJIB approach in the area in 2000 around 77 forest WAJIB groups in 77 forest management blocks are using the forest on 35, 000 hectares in a sustainable manner. In addition, more natural regeneration of forests (up to 15.6% increment in forest cover through community management), healthy seedlings, less number of livestock in forest areas, diversification of income more legal selling of forest products ,enhancement of ecotourism and significant reduction in the number of intruders have been observed. The approach has been scaled up in other areas including PFM in the Mojo fuel wood plantaion; PFM in Belete Gera; PFM in Coffee forest area of Bonga; PFM in West Harerge and PFM in Chilalo Galema, Arsi.

7. What are your thoughts on the type of stakeholder consultation process you would use to: a) create a dialogue with stakeholders about their viewpoints, and b) evaluate the role various stakeholders can play in developing and implementing strategies or programs under FCPF support?

a) How are stakeholders normally consulted and involved in the forest sector about new programs or policies?

The newly approved forest policy and Strategy has gone under various stages of consultations. The relevant governmental and non governmental organization have been communicated the draft forest policy and strategy and they have given their inputs. The House of Representatives of the Ethiopian Parliament has also invited every interested Ethiopians to come to the parliament and provide their comments on the forest policy and Strategy before endorsement.

b) Have any stakeholder consultations on REDD or reducing deforestation been held in the past several years? If so, what groups were involved, when and where, and what were the major findings?

Like in most African countries REDD is a new concept in Ethiopia. Technical Meetings with relevant stakeholders during the preparation of the R-PIN have been conducted.

National level consultations for reducing deforestation and degradation have also being carried out in the country. These include among other:

- Conservation Strategy and Environmental Policy of Ethiopia formulation
- Plan for Accelerated Sustainable Development to Eradicate Poverty (2005/2006-2009/2010)
- National Action Plan to combat Desertification and Mitigate the Effects of Drought
- Biodiversity Conservation and Strategic Action Plan
- River Basins Master Plan Studies
- Ethiopian Forestry Action Plan
- Energy Policy,
- Water Resources Management Policy and Proclamation
- Environmental Proclamations

c) What stakeholder consultation and implementation role discussion process might be used for discussions across federal government agencies, institutes, etc.?

Stake holder consultation on REDD need to be organized for various stake holders separately. We will organize consultations for Civil Society, Relevant government Institutions, Local Authorities and

Communities. The interest of the sake holders varies as per their comparative advantages and therefore organizing separate consultations have got paramount importance. For the coordination of country wide consultation, Technical Committee will be established and members of which will be drawn from governmental, non governmental organizations and private sector. The TC will be responsible for day to day activities. To over see the over all coordination of REDD and to give guidance and direction Steering Committee will be established. The SC will be chaired by the Director General of EPA and the secretary of the SC will be Ministry of Agriculture and Rural development and heads of relevant governmental and nongovernmental organizations will be member.

d) Across state or other sub national governments or institutions?

The Local authority in each of the Districts will establish REDD specific plat form by involving all affiliated stakeholders in the districts the main function of this plat form is to give technical back stopping and monitoring. On phasing approach, Community Organizations will be established/reinforced in each of the 58 High Natural Forest Priority Areas of the country to serve as for the REDD process.

e) For other stakeholders on forest and agriculture lands and sectors, (e.g., NGOs, private sector, etc.)?

The Sustainable Land Management Plat form at the District level, Forest Dwellers Associations and Community Based Organizations for environmental Protection and improved livelihood can be used as consultative for a for the REDD process.

f) For forest-dwelling indigenous peoples and other forest dwellers?

As it has been discussed on section 7 d, the PFM approach through organizing of Forest Dwellers Association has brought encouraging results in reducing deforestation and degradation and this approach can be used as favorable ground for the promotion of REDD program in the country. Further more, the Proclamation to provide for the Development, Conservation and Utilization of Forests 2007 allows the development of forests by members of Peasant Associations or by an association organized by private individuals and investors.

8. Implementing REDD strategies:

a) What are the potential challenges to introducing effective REDD strategies or programs, and how might they be overcome? (e.g., lack of financing, lack of technical capacity, governance issues like weak law enforcement, lack of consistency between REDDS plans and other development plans or programs, etc.):

1. Institutional challenges :

- ❖ Capacity to enforce forest policy and proclamation including financial, technical and other facilities;

- ❖ Capacity to coordinate sectoral and cross sectoral programs relevant for REDD program;
- ❖ Capacity to regulate free access to forest areas identified for REDD program;
- ❖ Improve the institutional arrangement at federal, regional and district level as lack of strong institutional arrangement has resulted in encroachment and illegal settlement in forest areas, unregulated investment expansion in the forest areas, etc

These challenges may be overcome through

- ❖ Scale up the good practices of Joint Forest Management Practices in different forest areas through the active involvement of the local communities;
- ❖ Strengthen the capacity of concerned government organizations to properly enforce the Environmental Impact Assessment and forest policy and proclamations;
- ❖ The Environmental Organs establishment proclamation requires the establishment of Environmental Units in each of governmental agencies both at the Federal and Regional levels for ensuring environmental sustainability and bringing sustainable development in which coordination of REDD program can be effectively coordinated. Moreover, the coordination of REDD program can be undertaken at the Environmental Council level which is chaired by the PM or by his designee;
- ❖ Revisit and strengthen the forestry institutional arrangement at all levels;

2. Policy and legislative Challenges

- ❖ Lack of regulation and directives for the enforcement of Policy, Strategy and Proclamation on Forest Development, Conservation and Utilization in the context of REDD;
- ❖ Lack of climate change regulatory infrastructure to foster a climate resilient development at the national level, including in the area of REDD;
- ❖ Harmonization of issued forestry relevant policies and laws such as Environment and investment;
- ❖ Uncoordinated implementation of forestry relevant Multilateral Environmental Agreements;
- ❖ Further identification and removal of barriers

These challenges may be overcome through:

- ❖ Develop and implement regulatory system that help mainstream and spearhead a climate resilient development which shall also take into account the issues involved pertaining to REDD;
- ❖ Formulate Federal Climate Change Policy and Strategy;
- ❖ Ethiopia has prepared strategy on the synergistic implementation of the three RIO Conventions and efforts of realizing the strategy is under way at lowest administrative level and there is also a

need to create a forum where the Focal institutions of Conventions can regularly meet and design joint program and share information;

3. Data base and information

- i. Absence of national information action plan;
- ii. Weak institutionalization of environmental information management in general and forestry in particular;
- iii. Inaccessibility of the already available natural resources related data/information;
- iv. Poor data quality and standardization;
- v. Low level of and awareness on the need for forestry related information;
- vi. Shortage and understaffing of trained manpower and information management facilities
- vii. Inadequacy of ICT infrastructure in most organizations,

The challenges may be overcome through

- ❖ Formulation and implementation of national information action plan;
- ❖ Build the capacity of relevant institutions through trained man power and facilities and infrastructure for forestry related data collection, processing, management and information sharing;
- ❖ Undertake awareness raising campaign on the importance of forestry related information at all levels including at decision makers level;

Sustainable Forest Management

- ❖ Poor harmonization of Investment program and forest resources conservation and development;
- ❖ Poor control of Regional States on State forests and danger of free access;
- ❖ Lack of capacity at district level to promote Sustainable Forest management;
- ❖ Undervaluation of the forestry sector to the National GDP;
- ❖ Lack of mechanism for monitoring the status of forest resources;
- ❖ Lack of Forest Management Plans for the Natural Forests
- ❖ Lack of technical and financial support for the development and implementation of SFM;
- ❖ Inadequate involvement of Local Communities in the conservation and development of forest resources;
- ❖ Lack of benefit sharing mechanism from the conservation and development of forest resources
- ❖ Poor incentive and disincentive mechanism to promote SFM

The challenges may be overcome through

- ❖ Capacitate the relevant sector bureaus to enforce the EIA tools ;
- ❖ Strengthen the forestry institution at all levels and specially at the district level;
- ❖ Under take a study on the tangible and non tangible contribution of the forestry sector for the National GDP;
- ❖ Demarcate, undertake forest inventory including socio economic survey and prepare Management Plans especially for Natural High Forest areas;
- ❖ Scale up the Joint Forest Management system in the remaining natural forest areas;
- ❖ Solicit financial and technical support from Bilateral and Multilateral donor agencies;
- ❖ Allocate substantial financial resources from the national budget for the development and implementation of SFMs
- ❖ Design and implement forest resources monitoring mechanism
- ❖ Formulate incentive and dis incentive mechanism for the promotion of SFM

b) Would performance-based payments though REDD be a major incentive for implementing a more coherent strategy to tackle deforestation? Please, explain why. (i.e., performance-based payments would occur *after* REDD activities reduce deforestation, and monitoring has occurred):

Ethiopia has got some experience by commencing the implementation of A forestation/ Reforestation project under CDM in Humbo where PIN and PDD has been prepared and the PDD has got acceptance by the operational entities. Bale Mountain Ecoregion Emission Reduction Assets: A large scale community based Carbon Finance project for the voluntary carbon market reducing emissions from the forest degradation and deforestation planned to be implemented in 500,000 ha and PIN has been prepared and two companies have accepted the PIN and they have shown interest to finance the preparation of Project Design Document (PDD). This initiative has got paramount importance for the formulation of nation wide REDD program under Forest Carbon Partnership Facility (FCPF).

As it has been discussed in the previous sections, the main reasons for the prevailing high deforestation rate in the country emanated from the need for more agricultural land due to the decline in productivity of the existing farm lands. The growing demand for fuel wood is also another major reason for deforestation and degradation of forest resources. This situation has been aggravated by population growth and poverty. These situations urgently require feasible integrated rural development approach which can disincentive the local communities from deforestation and forest resources degradation and serve as alternative income generating scheme which again creates favorable environment for the implementation of REDD in Ethiopia. To this

effect, performance based payments through REDD can be considered as additional revenue generating system for reducing deforestation and forest degradation.

9. REDD strategy monitoring and implementation:

a) How is forest cover and land use change monitored today, and by whom? (e.g., forest inventory, mapping, remote sensing analysis, etc.)

The forest cover and land use change are supposed to be monitored by the Environmental Protection Authority from the well being of the environmental resources perspective and also being the UNCCD focal point. The Bureau of Agriculture and Rural Development is also the main institution to monitor forest cover. However, due to capacity problem at all levels and weak institutional arrangement forest cover and land use change is not monitored on regular and coordinated manner. In addition to this, there is no developed mechanism for monitoring forest cover and land use change.

Some of the Forest resources inventory and mapping endeavours include:

- Woody Biomass Inventory and Strategic Plan
- The recently started initiative on African Monitoring of the Environmental resources for Sustainable Development;

b) What are the constraints of the current monitoring system? What constraints for its application to reducing deforestation and forest degradation? (e.g., system cannot detect forest degradation of forest stands, too costly, data only available for 2 years, etc.):

- ❖ There is no country wide accepted forest monitoring system in particular and environmental resources in general;
- ❖ updated forestry data which can serve as base line for monitoring;
- ❖ Weak forestry institutional arrangement at all levels;
- ❖ Lack of forestry information management system

c) How would you envision REDD activities and program performance would be monitored? (e.g., changes in forest cover or deforestation or forest degradation rates resulting from programs, using what approaches, etc.)

Participatory Forest Management practices in some parts of the country has shown encouraging results and REDD activities and program performance can be monitored at the site level by applying PFM approach in the selected forest areas for REDD implementation The major features of PFM are: CBOs established and the principles of SFM introduced; CBOs members will protect the forest from illegal cutting to reduce the current

high rate of deforestation; natural regeneration will be supported by preventing grazing for about 5 years to increase carbon stock; farmers will sustainably utilize timber for their own consumption.

At national and sub national levels there is a need to strengthen forestry and environmental institutions to render effective technical backstopping and monitoring. Strengthening relevant institutions in the areas of forestry data management and generation; monitoring mechanism development; human resource development, etc.

10. Additional benefits of potential REDD strategy:

a) Are there other non-carbon benefits that you expect to realize through implementation of the REDD strategy (e.g., social, environmental, economic, biodiversity)? What are they, where, how much?

Social benefits

The REDD programme will be implemented using the Participatory Forest Management approach and therefore the following social benefits are expected from the implementation of the program:

- The community will have legal rights to the forest resources;
- Access to the forest products and services by the local community will be ensured in a sustainable manner;
- Employment opportunity;
- Improved health and underground water potential
- Siltation problem of the hydropower dams minimized and interruption of electric supply decrease;
- improved Micro climate ;
- Improved Supply of genetic material for agricultural products;
- Due to the decline of erosion problem fertility of the soil and productivity increase;
- Ecotourism can be promoted;
- Chance of children, especially girls to go to school improved as time spent for fetching fuel wood and water decrease;
- Work burden of women minimized as access to water and fuel wood improved;
- etc

Environmental benefits

- Impacts of climatic hazards on biodiversity resources minimized such as loss of species which are limited in certain eco zones, migration,etc;
- Better conservation of forest coffee to ensure reliable gene pool;
- Endemic Endangered and other wild life resources better conserved ;
- Important Bird Areas (IBAs) better conserved;
- Favourable condition for undertaking research and the forest serve as natural laboratory;
- Sustainable Forest Management enhanced as the forest areas for REDD will be demarcated,

inventoried and managed by well prepared management plan;

- Regeneration potential of tree species enhanced
- etc

Economic benefits

- Income diversification from non wood products increased;
- Source of raw materials for pharmaceutical industries increased and availability of medicinal plants for local communities usage improved;
- Illegal logging controlled and supply of timber for forest industries improved;
- Minimize siltation problem on hydropower dams and the associated cost of cleaning the dams;
- As the microclimate improved and the erosion problem on farm and grazing lands minimized the livestock and crop productivity increased;
- High economic value species such as *Prunus Africana* the bark of which is used for cancer treatment,etc

b) Is biodiversity conservation being monitored at present? If so, what kind, where, and how?

The Government of Ethiopia is trying to monitor the biodiversity resources of the country through the establishment of Protected Areas such as National Parks, Sanctuaries, Wild life Reserves, Controlled Hunting Areas. Currently, 9 national parks, 8 wild animal reserves, 3 wildlife sanctuaries, 18 hunting areas and 51 bird areas have been designated in different parts of the country (SOR,2003). Moreover, the Institute of Biodiversity Conservation (IBC) is conserving farmers' variety of crop species and indigenous forest species by ex situ means in the gene banks. There are also efforts of conserving genetic material in the Community Gene Banks. The National Biodiversity Strategy and Action Plan has formulated monitoring mechanism while its implementation is suffering due to various reasons.

c) Under your early ideas on introducing REDD, would biodiversity conservation also be monitored? How?

The topography and diverse climatic conditions of Ethiopia have led to the emergence of habitats that are suitable for the evolution and survival of various plant and animal species. As a result, the country is included in the list of biodiversity rich countries of the world. For instance, Ethiopia is one of the 12 Vavilov centers of crop genetic diversity.

The Ethiopian flora is estimated to contain nearly 7,000 species of higher plants, of which about 12 percent are endemic.(SOR,2003). Ethiopia is the centre of origin for various species such as Coffee, Teff, Noug (Guizotia Abyssinica), Enset (Ensete Ventricosum), etc. Ethiopia is also home for crop species that have useful genetic diversity such as Sorghum, barley, wheat,

Out of the total wild and domestic animal genetic resources, 30 mammals (12 %), 28 birds (3.2 %) 3 reptile (3.9 %), 17 amphibian (31.5 %) and 3 fish (4 %) species are found only in Ethiopia. (Ethiopian Forestry Action Program, 1993).

In order to enhance the conservation and sustainable utilization of the country's biodiversity resources, the government has ratified CBD and its Kyoto protocol and CITES. EPA is on the process of formulating a National Strategy for the implementation of the Kyoto protocol in Ethiopia. Moreover, there are efforts of conserving biodiversity resources using in situ and ex situ conservation methods. Projects and Programs targeted for conserving and monitoring of Biodiversity resources are also being implemented by Governmental and non governmental organizations.

d) Are rural livelihood benefits currently monitored? If so, what benefits, where, and how?

Central Statistic Authority of the country periodically produces survey reports covering population, health status, and education, agricultural production by types, etc.The report also contains relevant information which is useful to monitor the livelihood trend at house hold level. Community Based Environmental Protects for improved livelihood projects and programs being implemented by the GOVs and NGOVs are making analysis on the impacts of their programs and projects on the lively hoods of the local communities.Participatory Forest Management Projects under implementation by Farm Africa and GTZ are making analysis on the benefit of forest dwellers by the project.

e) Under your early ideas on introducing REDD, would rural livelihood benefits also be monitored? How?

Designing and implementing of workable methodology to monitor the rural livelihood benefits of country wide REDD program is very crucial and important. The major achievements of the REDD program in the country will be measured on the extent of benefits that it has provided for the improvement of the rural livelihood. With regard to the HOW dimension, we can build and refine on the experiences of PFM programs which are under implementation in different parts of the country.

11. What type of assistance are you likely to request from the FCPF Readiness Mechanism?

- Identify your early ideas on the technical or financial support you would request from FCPF to build capacity for addressing REDD, if you are ready to do so. (Preliminary; this also could be discussed later.)

Include an initial estimate of the amount of support for each category, if you know.

- Please refer to the Information Memorandum and other on-line information about the FCPF for more details on each category:

a) Setting up a transparent stakeholder consultation on REDD (e.g., outreach, workshops, publications, etc.):

Various governmental organizations at federal and regional levels, non governmental organizations, private sector and the local communities residing adjacent/inside the forest will participate in the REDD program. The first phase of REDD program implementation will involve among others undertaking of serious of awareness workshops and out reach programs at Federal and Regional levels. After reviewing the mandates and comparative advantages of each of the stake holders, institutions to be involved in the REDD program will be identified and their roles and responsibilities will be clearly spelt out. The over all program of REDD will be implemented in an integrated and multi sect oral approach.

b) Developing a reference case of deforestation trends: Assessment of historical emissions from deforestation and/or forest degradation, or projections into the future.

In Ethiopia, there are a lot of forestry specific studies which can be used as base line information with regard to the prevailing rate of deforestation and degradation in different forest types of the country. These base line information need to be updated and using the international best practices, assessment on historical emissions from deforestation and forest degradation and future projection should be carried out. To this effect, the required technical assistance and capacity building requirement will be identified during REDD business plan preparation.

c) Developing a national REDD Strategy: Identification of programs to reduce deforestation and design of a system for providing targeted financial incentives for REDD to land users and organizations (e.g., delivery of payments, governance issues, etc.):

In the Ethiopian context, a national REDD strategy should be developed/scaled up taking into

consideration the courageous results obtained by Participatory Forest Management in selected high forest Priority Areas. Accordingly, activities which require financial and technical supports for the development of National REDD strategy in Ethiopia are:

- Review the existing Participatory Forest Management practices under implementation by different donor agencies in the country and compile best practices and the weaknesses;
- From the existing more than 58 Forest Priority Areas, Select Forest Areas for the REDD program; undertake data updating exercise and prepare Sustainable Forest Management Plans;
- Undertake socio economic study inside and in the near by forest areas and organize Forest Dwellers Associations and work out detail plan how the community will be involved in various alternative and income diversification activities to arrest deforestation and forest resources degradation problem in the forest;
- Using the experiences else where develop detail plan on community based carbon trade and to that effect build local capacity;

d) Design of a system to monitor emissions and emission reductions from deforestation and/or forest degradation:

In Ethiopia, there is no expertise on the development of a system to monitor emissions and emission reduction from deforestation and forest degradation. Therefore, there is high need of undertaking training program at local level and international expertise in put to design a system to monitor emissions and emissions reduction from deforestation and forest degradation

e) Other?: Financing and providing technical support for the introduction of alternative energy sources; develop monitoring mechanism for forest and biodiversity conservation;

As discussed before, lack of alternative energy sources and high dependence on the forest resources for the House Hold Energy demand is the second most important factor for deforestation and forest degradation and technical and financial supports for the introduction of socially acceptable, affordable and ecological friendly alternative energy sources has got multi faceted benefits.

In Ethiopia knowledge on Payment for Environmental Services(PES) is not practiced and there is no expertise for the formulation and implementation of PES and there is high demand of technical support for the realization of PES in REDD forest areas.

Absence of monitoring mechanism for forest and biodiversity conservation in particular and the environmental resources at large is one of the major gaps in the country and the REDD program can work

closely with the Terrafric initiative of the SLM and AMSED of the European Union for the development of national monitoring mechanism for forest and biodiversity conservation.

On the whole the capacity required can be summarized as follows:

- Regulatory infrastructure development and enforcement on REDD
- Technical norms and environmental management tools development and application on REDD
- Environmental education pertaining to REDD
- Information generation and management pertaining to REDD
- Technology transfer and dissemination to REDD

12. Please state donors and other international partners that are already cooperating with you on the preparation of relevant analytical work on REDD. Do you anticipate these or other donors will cooperate with you on REDD strategies and FCPF, and if so, then how?:

World Bank, Farm Africa, GTZ,SOS sahel, UNDP,CIDA, WFP,

13. Potential Next Steps and Schedule:

Have you identified your priority first steps to move toward Readiness for REDD activities? Do you have an estimated timeframe for them yet, or not?

If our -R PIN gets acceptance by the Steering Committee which will convene on September 2000, we will start preparatory activities such as awareness raising campaign for relevant stake holders about the importance of implementing REDD program in Ethiopia.

14. List any Attachments included

(Optional: 15 pages maximum.)

Acronymes

ADB	African Development Bank
AMSED	African Monitoring for Sustainable Environmental development
BESMP	Bale-Eco Region Sustainable Program
CBO	Community Based Organization
CEEPA	Center for Environmental Economics and Policy in Africa
CITES	Convention on international Trade of Endangered Species
EEO	Ethiopian Environmental Outlook
EFAP	Ethiopian Forestry Action Plan
EIA	Environmental Impact Assessment
EIA	Environmental Impact Assessment
EPA	Environmental Protection Authority
EPE	Environmental Policy of Ethiopia
ESIF	Ethiopian Sustainable Land Management Investment Framework
FAO	Food and Agricultural Organization
FCPF	Forest Carbon Partnership Facility
GDP	Gross Domestic Product
GTZ	German Technical Cooperation
IBA	Important Bird Area
IBC	Institute of Biodiversity Conservation
ICT	Information Communication Technology
IDA	International Development Association
LUCF	Land Use Change and Forestry
MDG	Millennium Development Goal
MERET	Managing Environmental Resources to Enable Transition to More Sustainable Livelihood
NBAR	Network on Bamboo and Rattan
NFP	National Forest Program
NFP	National Forest Program
NGO	Non Governmental Organization
NTEAP	National Transboundary Environmental Action Program
NTFP	Non Timber Forest Product
PASDEP	Plan for Accelerated Sustainable Development to End Poverty
PDD	Project Design Document
PES	Payment for Environmental service
PM	Prime Minister
REDD	Reduction of Emission from Deforestation and Degradation
REPA	Regional Environmental Protection Authority
R-PIN	Readiness Plan Idea Notes
SFM	Sustainable Forest Management
SLM	Sustainable land Management
SNNPRS	Southern Nations Nationalities and Peoples Regional State
SOR	State of the Environment Report
UNFCCC	United Nations Framework Convention on Climate Change
VRP	Voluntary Resettlement Program
WBISPP	Woody Biomass Inventory and Strategic Plan Project
WFP	World Food Program

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ANNEXES

ANNEXE 1

Natural Forest Types

Upland Dry Evergreen (Juniperus procera) Forests

These are found on the southern escarpments and hills of the Borena Zone of the Oromiya Regional State, and along the Eastern Escarpment of Amhara and Tigray Regional States, generally between 1,500 and 2,000 masl. Annual rainfall is between 400 and 700mm and bi-modal in distribution. Mean annual temperatures are between 18° and 25°C. It comprises an open forest tending towards Juniper woodland with a canopy of 10 to 15 meters. The dominant species is *J. procera* with other common species such as *Barbeya oleoides*, *Catha edulis*, *Olea europaea africana*, *Pistacia aethiopiica*, *Pittosporvan spp.* and *Schrebera alata*.

Mixed Juniper-Podocarpus Upland Evergreen Forest

These forests are found as dispersed patches of forest in Oromiya, SPNN and Amhara Regional States. They are found between 1,500 to 2,700 masl where annual rainfall is between 700 and 1,100 mm. Mean annual temperature ranges between 14° and 20° C. The main canopy species are *J. procera* and *P. gracilor* between 20 and 30 meters high, with a well developed strata of small to medium trees, chiefly *O. europaea africana*, *Allophylus abyssinica*, *Celtis africana*, *Croton machrostachys*, *Dombeya spp.*, *Ekebergia capensis*, *Olea hochstetteri* and *Prunus africana*. At the upper limit of 3,000 to 3,400 masl the forest first changes to *Hagenia abyssinica* forest with scattered clumps of *Arundinaria alpina* (bamboo), then with increasing altitude to *Erica arborea*.

Humid Upland Broadleaved with Podocarpus

These forests are found on the southern and southwestern side of the Bale Mountain Massif between 1,500 and 2,600 masl. Mean annual rainfall is between 800 and 2,000 mm and mean annual temperature between 15° and 20° C. The forests are characterized by *Podocarpus gracilior* mixed with broadleaved species as dominants. *Anigeria adolfi-friedericii* is present west of the Yadot river but is nowhere as common as it is in west and southwest Ethiopia where it replaces *Podocarpus* totally in the western parts of Illubabor Zone. Below 2,600 masl the main broadleaf species include *Croton machrostachys*, *Ilex mitis*, *Olea europaea cuspidata* and *Schefflera abyssinica*. Above 2,600 masl species include *Hagenia abyssinica*, *Schefflera volkensii* and *Hypericum revolutum*.

The species composition of the Bale forests is similar to those of the Borena Zone, but it also contains species that are not known elsewhere in Ethiopia. These include *Filicium decipiens* and *Alangium chinense*.

Humid Upland Broadleaved with Aningeria dominant

These forests find their greatest extent in Oromiya, SNNP and Gambela Regional States. They are found between 1,500 and 2,600 masl. Mean annual rainfall is between 700 and 2,000 mm and mean annual temperature between 15° and 20° C.

They become more diverse in species from east to west (i.e. with increasing rainfall) and with decreasing altitude (i.e. with increasing temperature). Forests in the Baro catchment are thus floristically richer than in the Omo catchments. Four strata can generally be recognized. The highest stratum is formed by trees 30 to 50 m high, the most important of which are *Aningeria adolfi-friederici*, *Ficus spp.*, and *Syzygium guineense*. Below this is a dense stratum of trees 18 to 25 m high with a wide range of species. The third stratum of small trees and bushes includes *Galinera coffeodes* and *Coffea arabica*. The ground stratum includes *Aframomum korarima*.

In the higher rainfall areas above 2,400 masl on more gentle slopes dense thickets of highland bamboo (*Arundinaria alpina*) occur. It is possible that this is an anthropomorphic sub-climax caused by frequent cultivation. There is evidence of human disturbance throughout the area and Chaffey considers that all the remaining natural forest is in fact secondary.

Riverine Forests

These are varied and have been little studied. Mesfin Tadesse (1990) reports the following common species: *Ficus sycamorus*, *Diospyros mespiliformis*, *Lepisanthes senegalensis*, *Mimusops kummel*, *Phoenix reclinata*, *Tamarindus indica* and *Trichilia emetica*.

Along the major streams and rivers there is generally a narrow band of gallery forest. Both these types of forest are dominated by *F. sycamorus*, together with two other tall trees: *Garcinia livingstonea* and *Vepris dainellii*. Other common trees are *Cordia africana*, *Diospyros spp.*, *Teclea nobilis*, and *T. emetica*.

Annex 2 Woodland and Shrubland Types

Five very broad types are recognized although finer divisions based on species composition have been defined.

Broadleaved Deciduous woodlands:

These woodlands are also referred to as Combretum-Terminalia woodlands, occur between 300 - 1,700masl with an annual rainfall of between 800 - 1,400mm. They dominate the woodland and shrublands of the western and southern lowlands and escarpments, and extend deep into the valleys of the Tekazze, Abay and Omo-Gibe valleys. Important genera are *Terminalia*, *Combretum* and *Boswellia*. A considerable area of these woodlands are infested with tsetse fly (*Glossina spp.*) precluding or restricting their use for livestock production.

Acacia Woodlands:

Acacia dominated woodlands are the climax vegetation for the higher rainfall areas of the Rift Valley and along the Eastern Escarpment in Amhara and Tigray Regions. They are found between 1,500 and 2,000masl and in areas with an annual rainfall of between 800 - 1,000mm. These woodlands are dominated by Acacia species (*A. tortilis*, *A. seyal*, *A. etbaica*, *A. mellifera*, *A. nilotica*) as well as *Balanites aegyptica* and *Commifera spp.*

Lower Semi-arid Boswellia-Comiphora-Acacia Woodland-Shrubland:

These woodlands are also referred to as “Xerophilous Open Woodland” by Piche-Sermolli; as “*Acacia etbaica* Woodland” by Gillett and “*Acacia etbaica* Association” by Watson. They are found in areas with lower annual rainfall, generally from 700mm down to 500mm. A wide range of species occurs which as well as *Boswellia* including *Acacia etbaica*, *A. tortilis*, *A. mellifera*, *Balanites aegyptiaca*, and species of *Acalypha*, *Barleria*, *Aerva*, and *Capparis*, etc. These woodlands contain trees producing valuable gums and resins.

Lower Semi Arid to Arid Acacia-Commiphora Woodland-Shrubland:

These woodlands are referred to as “Broken Xerophilous Open Woodland” by Piche-Sermolli and as “*Acacia bussei* Woodland” by Gillett and “*Acacia etbaica* Association” by Watson et al. They grade into Watson’s “*Acacia-Commiphora* Wooded Bushland” and his “Haud *Acacia-Commiphora* Association”. Annual rainfall is between 500mm and 350mm. Acacia species include *A. bussei*, *A.*

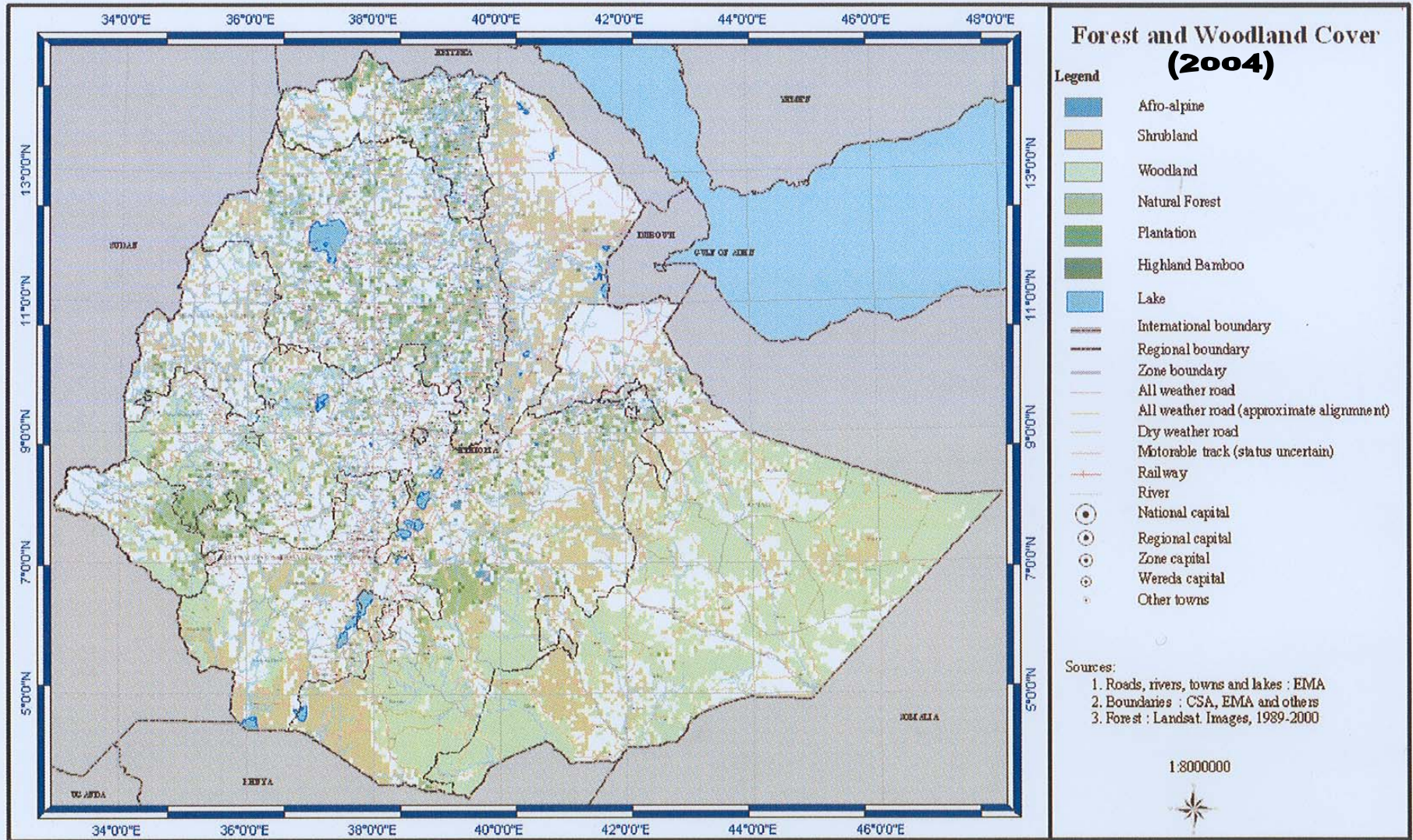
tortilis, *A. senagal*, *A. horrida*, *A. edgeworthii*, *A. mellifera*, and *A. nubica*. Other species include *Albizzia anthelimitica*, *Commiphora spp.*, and *Cordia spp.*

It is in this woodland that Bally (1966) found *Cordeauxia edulis* a source of the Yehob nut in Somali Region. This plant is now on IUCN's list of endangered plants.

Arid Sparse Shrubland:

Referred to by Piche-Sermolli as "Sub-desert Scrub" and by Watson as "Arid Plateau Association". Annual rainfall is below 350,mm. The vegetation consists of sparse shrubs of *A. tortilis*, *A. edgeworthii*, *A. horrida*, *Mimussops angel*, *Moringa peregrina*, *Salvadora persica* and *Ziziphus hamus*.

Annex 3 Forest and Woodland Cover of Ethiopia



Annex 4 Extent of Wood lands and Shrub lands by Regional State

Table 4a. Woodlands

REGION	Area (hectares)	As % of National Woodland
Oromiya	9,823,163	34%
SNNPR	1,387,759	5%
Gambella	861,126	3%
Dire Dawa	0	0%
Harari	0	0%
Amhara	1,040,064	4%
Tigray	294,455	1%
Beneshangul	2,473,064	8%
Afar	163,657	1%
Somali	13,199,662	45%
TOTAL	29,242,949	25.54%

Table 2b. Shrublands

REGION	Area (hectares)	As % of National Shrublands
Oromiya	7,750,422	29%
SNNPR	2,434,779	9%
Gambella	146,103	1%
Dire Dawa	36,635	0%
Harari	7,497	0%
Amhara	4,352,672	16%
Tigray	1,841,182	7%
Beneshangul	1,422,191	5%
Afar	3,024,697	11%
Somali	5,384,022	20%
TOTAL	26,400,200	23.06%