United Nations Development Programme
Country: Ethiopia
PROJECT DOCUMENT

Project Title: Mainstreaming Incentives for Biodiversity Conservation in the Climate Resilient Green Economy Strategy (CRGE)

UNDAF Outcome 5: By 2015, the governance systems, use of technologies and practices, and financing mechanisms that promote a low carbon climate resilient economy and society are improved at all levels

UNDAF Cross-Cutting Issue: Climate change and environment

UNDP Strategic Plan Environment and Sustainable Development Primary Outcome: Mainstreaming environment and energy

UNDP Strategic Plan Secondary Outcome: Catalyzing environmental finance

Expected CP Outcome(s):

Support the establishment of a financing facility to enhance access to new and additional financial flows

Expected CPAP Output (s)

Technical studies, consultations and proposals completed for LCCR and MEA compliance; national

Multi-donor climate trust fund established and operational**.**

Executing Entity / Implementing Partner: Ministry of Environment and Forest

Implementing Entities / Responsible Partners: The Environmental Protection Bureaus of the Oromia, Amhara, Somali, Southern Nations, Nationalities and Peoples Regional State; the Universities of Arba Minch, Debre Markos, Jijiga and Wollega.

Other Partners: Zone, Woreda and Kebele technical staff and local communities

Brief Description

Ethiopia's economy and the wellbeing of its people is highly dependent on biodiversity, particularly for the provision of foods, fuel wood and construction materials. Furthermore, about 70% of the human population and 90% of the livestock population are dependent on herbal medicine and some 49,000 tons of medicinal plants per annum are gathered from the wild for their primary health care

In order to achieve the ambitious goals set forth by the Growth and Transformation Plan (GTP) and the Climate Resilient Green Economy (CRGE) Strategy of transforming Ethiopia to the status of middle-income country by 2025, the annual growth rate must be sustained at over 10%. This will inevitably have an impact on biodiversity since most of the envisaged investments involve land conversion for agriculture.

This project is designed to address this need by putting in place safeguards to, ensure that the current high level of growth and planned investments do not impact negatively on biodiversity.

Outcome 1 will support a framework for recognising the value of biodiversity to the economy. This will include clarification of what the government currently spends on biodiversity (coding the budget and also undertaking a public expenditure review) to catalyse more investments in biodiversity. It will also include ensuring that decision makers have the requisite information for decision making through the provision of improved data, decision support tools and training

Outcome 2 will pilot a programme of Payments for Ecosystem services in four sites recognised globally for their high biodiversity value but also at very high at risk of degradation. The project will put in place a system for compensating land users for engaging in biodiversity friendly practices.

Overall, the project will raise awareness of the importance of biodiversity and ecosystem services and build capacity at all levels to ensure that the PES programme can be scaled-up post-project.

Programme Period:	2015-2018
Atlas Award ID:	00087290
Project ID:	00094366
PIMS #	4644
Start date:	Jan 2015
End Date	Dec 2018
Management Arrangements	_____
PAC Meeting Date	_____

Total resources required	_____
Total allocated resources:	$ 19,316,453
• Regular	_____
• Other:	
o GEF	$ 3,316,453
o Govt. (in cash)	$ 1,600,000
o Govt. (In-kind)	$ 14,200,000
o Other (UNDP)	$ 200,000
In-kind contributions	_____

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Agreed by (Government):

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Date/Month/Year

Agreed by (Executing Entity/Implementing Partner):

_____

Date/Month/Year

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Date/Month/Year

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LIST OF ACRONYMS AND ABBREVIATIONS

ADLI	Agriculture Development Led Industrialization
AEZ	Agro-Ecological Zone
AF	Agroforestry
AIS	Alien Invasive Species
BAU	Business-as-usual
BD	Biodiversity
BDER	Biodiversity Expenditure Review (formerly known as the PEER)
BICS	Biodiversity Indicators Capacity Strengthening in Africa Project
BoA	Bureau of Agriculture
BoARD	Bureau of Agriculture and Rural Development
BoCTP	Bureau of Culture, Tourism and Parks
BoEPLU	Bureau of Environmental Protection and Land Use
BoFED	Bureau of Finance and Economic Development
CA	Conservation Agriculture
CBD	United Nations Convention on Biological Diversity
CBO	Community-Based Organisation
C	Celsius/Centigrade
CC	Climate Change
CCA	Climate Change Adaptation
CCM	Climate Change Mitigation
CDO	Cooperative Department Office
CO_2	Carbon dioxide
CO_{2e}	Carbon dioxide equivalents
CH_4	Methane
CRGE	Climate Resilient Green Economy Strategy
CRS	Climate Resilience Strategy
CSE	Conservation Strategy of Ethiopia
CSA	Climate Smart Agriculture
CSA	Central Statistics Agency
EBI	Ethiopian Biodiversity Institute
EDRI	Ethiopia Development Research Institute
EIA	Environmental Impact Assessment
EPA	Environment Protection Authority
EPACC	Ethiopia's Programme of Adaptation to Climate Change
ESIA	Environmental and Social Impact Assessment
FAO	Food and Agriculture Organization
FDRE	Federal Democratic Republic of Ethiopia
FPIC	Free, Prior and Informed Consent
FYGTP	Five-Year Growth and Transformation Plan
GDP	Gross Domestic Product
GEF	Global Environment Facility
GES	Green Economy Strategy
GHG	Greenhouse Gas
GIS	Geographical Information System
GoE	Government of Ethiopia
GTP	Growth and Transformation Plan
ha	Hectare
HQ	Headquarters
IFPRI	International Food Policy Research Institute
IGA	Income Generating Activities
IIED	International Institute for Environment and Development

IPM	Integrated Pest Management
IPNS	Integrated Plant Nutrition Systems
IPs	Indigenous Peoples
IWM	Integrated Water Management
JFMA	Joint Forest Management Agreement
km	Kilometre
LD	Land Degradation
LULUCF	Land use, Land use Change and Forestry
M&E	Monitoring and Evaluation
MA	Millennium Ecosystems Assessment
MDG	Millennium Development Goal
MEF	Ministry of Environment and Forest
METT	Management Effectiveness Tracking Tool (BD tracking tool required for GEF projects)
MIC	Middle income country
m	Metre
masl	Metres above sea level
mbsl	Metres below sea level
mm	Millimetre
MoA	Ministry of Agriculture
MoFED	Ministry of Finance and Economic Development
MPTFO	Multi-Partner Trust Fund Office (for CRGE - UNDP's)
MRV	Measurement, Reporting and Verification
MTE	Medium Term Evaluation
NAMA	Nationally Appropriate Mitigation Actions
NAP	National Adaptation Programme (for UNCCD)
NAPA	National Adaptation Plan of Action (for UNFCCC)
NBSAP	National Biodiversity Strategy and Action Plan (for CBD)
NGO	Non-Governmental Organisation
NPC	National Planning Commission
NSC	National Steering Committee
NTFP	Non-timber forest products
OECD	Organisation for Economic Cooperation and Development
OFWE	Oromiya Forest and Wildlife Enterprise
PASDEP	Plan for Accelerated Sustainable Development to End Poverty
PEER	Public Environment Expenditure Review
PER	Public Expenditure Review
PES	Payment for Ecosystem Service(s)
PFM	Participatory Forest Management
PIN	Project Inception Note
PIT	Programme Implementation Team
PM	Project Manager
PMU	Project Management Unit
ProDoc	Project Document
PROFOR	World Bank Program on Forests
PSC	Project Steering Committee
PSPC	Pilot Site Project Committee
PSNP	Productive Safety Net Programme
REDD+	Reduced Emission from Deforestation and Degradation
SEEA	System of Environmental and Economic Accounts
SLM	Sustainable land management
SNNP	Southern Nations, Nationalities and Peoples' State
SRM	Sectoral Reduction Mechanism (of CRGE)
SRS	Somali Regional State
t	Tonne

TEEB	The Economics of Ecosystems and Biodiversity
TG	Target Group
ToR	Terms of Reference
ToT	Training of Trainers
UN	United Nation
UNCT	UN Country Team
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNEP	United Nations Environment Programme
WAJIB	Waldayaa Jiraatoota Bosonaa (Forest Dwellers' Association)
WOFED	Woreda Office of Finance and Economic Development
yr	Year

1. SITUATION ANALYSIS

1.1 Biophysical Context

Country location and overview: Ethiopia is a landlocked country, located between 3º and 18º N and 33º and 48º E occupying most of the Horn of Africa. The country has a total land mass of about 1,119,683 km^2 (111 million ha): 69% (84 million ha) is classified as agricultural land suitable for crop and livestock production; 11.9% (13 million ha is forested and just over 0.7 million ha is covered by water (Figure 1 in Annex 6).

Much of Ethiopia is also part of the East African Rift Plateau, with a general elevation ranging from 1,500 to 3,000 metres above sea level (masl). Interspersed across the landscape are higher mountain ranges and cratered cones, the highest of which at 4,620 masl is Ras Dashen Mountain northeast of Gonder. The Great Rift Valley dissects the country, separating the south-eastern and north-western highlands. The north-western highlands are considerably more extensive and rugged than the south-eastern highlands and are divided into northern and southern sections by the valley of the Blue Nile. The central part of the country is covered by highlands and massifs consisting of the Gondar, Wello and Gojam highlands. These extend to the southwest, joining the Gamo Gofa, Illubabor and Wellega plateaux; and to the southeast, joining Arsi, Bale, Hararge and Sidamo highlands.

Climate and water: The climate of Ethiopia is influenced by the fact that although it lies wholly in the tropics, its nearness to the equator is counterbalanced by the elevation of the land. Rainfall occurs in a bi-modal pattern following the oscillation of the Inter-Tropical Convergence Zone (ITCZ) that passes over the country twice a year. Altitude effects are responsible for the country's three climatic zones, namely cool, temperate and hot, which are known to Ethiopians as the dega, the weina dega and the kolla, respectively. The mean annual rainfall ranges from 500 mm to 2,800 mm. Temperatures vary greatly across the country. Below 1,500 masl, the climate is hot and dry all year round. The zone between 1,500 and 2,400 masl (such as the Oromia highlands) has a more temperate, humid climate. This is the most densely populated and agriculturally productive part of Ethiopia. On the uplands above 2,400 metres above sea level, the climate is near temperate. On the higher mountains the climate is Alpine in character.

Ethiopia is often referred to as the "water tower" of East Africa because of its many rivers systems that drain into neighboring arid countries. All of Ethiopia's rivers originate in the highlands and flow outward in many directions through deep gorges. Most notable of these is the Blue Nile (Abay Wenz), the country's largest river which flows from Lake Tana. The Blue Nile and its tributaries account for 90% of the Nile River[1] flow below Khartoum in Sudan. Because of the general westward slope of the highlands, many large rivers are tributaries of the Nile system, which drains an extensive area of the central portion of the plateau. The Awash River flows northwards in the northern half of the Great Rift Valley, eventually flowing east and disappearing in the saline lakes near the border with Djibouti. The southeast is drained by the Genale and Shebele Rivers and their tributaries which flow into Somalia, and the southwest is drained by the River Omo which flows into Lake Turkana in Kenya**.**

Vegetation: Natural vegetation is classified into five biomes: savannah, montane, tropical thickets, wooded steppe and desert (Encyclopedia Britannica, 1996). According to White's (1983) vegetation classification, the country has four of the regional centres of endemism: Sudanese Regional Centre, Somalia-Maasai Regional Centre, Afromontane Regional Centre and Afroalpine Regional Centre. The natural vegetation can be assigned to ten major ecosystem types: Afroalpine and sub-afroalpine, montane grassland, montane dry forest and scrub, montane moist forest, Acacia-Commiphora, Combretum-Terminalia, lowland tropical forest, desert and semi-desert, wetland ecosystem, and aquatic ecosystem (see www.ibc.gov.et) (see further details in Annex 7)

Wildlife: The Ethiopian highlands in particular have a large number of endemic fauna, particularly birds and mammals. Among 284 terrestrial mammal species found in the country, 29 are believed to be endemic. Of these, 20 are highland forms, seven of which have been recorded from both sides of the Rift Valley, eight only from the east (Bale Mountains) and the remaining five from the west.

Many other forms of plant and animal species have yet to be exhaustively identified and inventoried.

[1] About 90% of the water and 96% of the transported sediment carried by the Nile originates in Ethiopia, with 59% of the water from the Blue Nile (the rest being from the Tekezé, Atbarah, Sobat, and small tributaries)

1.2 Economic Context

Ethiopia's economy is one of the fastest growing in Africa. GDP growth rate was over 10% between 2001 and 2010 with urban areas contributing 62% of the GDP growth, and the service and industry sectors together forming a major part of Ethiopia's GDP over the same period. The Economist Intelligence Unit forecasts that real GDP growth will average 7.2% annually between 2013 and 2017 as the dominant agriculture sector performs well, electricity supply improves and export demand picks up.

Agriculture is the backbone of the Ethiopian economy. It accounts for a little under 50% of the gross domestic product, provides employment for 80% of the population, generates about 90% of the export earnings, and supplies about 70% of the country's raw material to secondary activities. Crop production is estimated to contribute on average around 60%, livestock accounts for around 27%, and forestry and other subsectors around 13% of the total agricultural value. Over 95% of the cultivated land is under smallholder peasant agriculture. The major export commodity is Arabica coffee, followed by leather and leather products, live animals and meat, oilseeds and pulses, and natural gum. However, recent media reports indicated that sesame (an oil crop) has taken the lead over coffee as export commodity.

Livestock contributes 16% of GDP and generate 14 % of the country's foreign exchange earnings. With approximately 50 million cattle, livestock provides income for farming communities and a principal means of household saving. Livestock also confer a certain degree of security in times of crop failure, as they are a 'near-cash' capital stock. Furthermore, livestock provides farmyard manure to improve soil fertility and is also used as a source of energy.

More than 11 million smallholders (70% of cropland) engage in cereal production, which totalled 18 million tons in 2011/12. The area under cereal production expanded by 27% from 7.0 million hectares in 2003/04 to 9.6 million in 2011/12. Productivity in the agricultural sector is, however, low and reliant primarily on rain fed production**.**

1.3 Socio-Economic Context

Ethiopia has a population of over 80 million and is one of the poorest countries in the world with a per capita income of about US$ 400. Poverty is pervasive with 47% of the population estimated to live below the poverty line. Ethiopia was ranked 173rd on the UNDP 2013 Human Development Index (of 187 countries)[2].

About 80% of the population lives in the rural areas and dependent on agriculture and/or livestock for their livelihoods.Currently it is estimated that 44 % of the population lives under the poverty line, meaning they are unable to satisfy basic minimum food and non-food needs on daily basis. Some six million people on average are estimated to be in need of relief food annually due to the nation's inability to produce and/or acquire its total food requirement as well as the inability of the vulnerable populations to access the food even if it were available on the market.

1.4 Biodiversity of Global Significance in Ethiopia[3]

Ethiopia is one of the top 25 biodiversity-rich countries in the world, and hosts two of the world's 34 biodiversity hotspots, namely: the Eastern Afromontane and the Horn of Africa hotspots (see Annex 6 Figure 3). It is also among the countries in the Horn of Africa regarded as major centre of diversity and endemism for several plant species. According to a classification based on agro-ecosystem known as agro-ecological zones (AEZs), Ethiopia has 18 major and 49 minor AEZs, that are inhabited by diverse animal, plant and microbial species.

The Ethiopian flora is estimated at 6,000 species of higher plants, of which 10% are considered to be endemic. Woody plants constitute about 1,000 species. Ethiopia is also a centre of origin for many cultivated plants, of which wild relatives exist for most species.

The Ethiopian forests and woodlands are reservoirs and gene pools for important wild plants and wild relatives of domesticated crops. Species richness varies across forests, depending on environmental factors characterizing the forests. The country is also known to be a centre of diversity for a number of important forage species in the genera Trifolium, Vigna, and Dolichos, among others. Out of the 26 indigenous species of Trifolium, eight are endemic to

[2] Source: http://hdr.undp.org/en/data

[3] Source: FDRE (2014)

Ethiopia. Similarly, of the total medicinal plant species, 2.7% are endemic to Ethiopia, and most are found in the wild.

The fauna of Ethiopia is also very diverse, with many endemic, both wild and domestic animals. The Ethiopian wild fauna comprise 284 mammal, 861 bird, 201 reptile, 200 fish, 63 amphibian and 1,225 arthropod (including 324 butterflies) species. Of these; 29 mammal, 18 bird, 10 reptile, 40 fish, 25 amphibians and 7 arthropod species are endemic to the country. There are also five geographical races of honeybees which are economically important. There are also other bee species called stingless bees (meliponini) or "Tazima nib" which makes special honey underground.

Ethiopia has wide diversity of microbial biodiversity which, however, are hardly explored. Few efforts made by various institutions in the area of fermenter microbes, mycorrhiza, acetic acid and rhizobium bacteria indicated that the country has microbes of diverse economic and ecological importance. Moreover, efforts made in the extreme environments such as hot springs, alkaline aquatic ecosystems and salty areas have shown the existence of highly diversified extremophilic microorganisms in these areas. In Ethiopia, some institutions have so far identified limited number of microbial species out of which 381 species of bacteria, fungi and microalgae have been conserved in national gene bank.

1.5 Importance of Biodiversity in Ethiopia

From the depressions in the Afar (115 m below sea level) to the mountains of Ras Dashen in the north and the Bale in the southeast (rising to about 4533 meters), Ethiopia is endowed with rich biodiversity that spans a remarkable number of the world's broad ecological regions. The Simien and Bale Mountains are important areas of plant endemism with diverse flora, and the afromontane representative show affinities to South African, Eurasian and Himalayan elements. The Southwestern broad-leaved evergreen forests show affinities to the Congolian forests of western Africa. Furthermore, numerous crop plants that are known to have originated elsewhere have developed an enormous secondary diversification in Ethiopia. Species biodiversity in Ethiopia includes 280 mammals, 861 birds, 201 reptiles, and more than 6,000 plants with high rates of endemism. The white-eared kob migration in low land Gambella is the second largest mammal migration in the world. According to the International Union for the Conservation of Nature's (IUCN's) 2007 "red list" of these species, Ethiopia has 6 that are critically endangered, 23 endangered, and 70 vulnerable.

A recent study of the economic value of Ethiopia's protected areas estimates the value of biodiversity in EWCA managed protected areas to amount to at least US$ 3.75 million per annum, but could be as high as US$ 112 million per annum; the value of watershed services of protected areas to be at least US$ 432 million per annum; the economic value of carbon stored above and below ground in EWCA managed protected areas to be US$ 938 million, and the value of medicinal plants collected in EWCA managed protected areas and the value of their associated trade is estimated to amount to US$ 13.2 million per annum.

1.6 Policy Context

(i) The Growth and Transformation Plan (GTP)

The Growth and Transformation Plan (GTP) identifies two main priorities for reaching the MIC goal, the first being boosting agricultural productivity; and the second is strengthening the industrial base – particularly where this can be built on Ethiopia's huge hydroelectric power (HEP) potential, and fostering export growth – which includes export of HEP. The strategic direction of the GTP underlines that environmental conservation has a vital contribution for sustainable development and emphasizes the need to build a carbon neutral and climate resilient economy. More recently, Ministry of Environment and Forest has been established to address the environment and forest more prudently.

(ii) The Climate Resilient Growth Economy Strategy (CRGE)

In order to become a middle-income country (MIC) by 2025, the Government recognized that a conventional development path could result in unsustainable GHG emissions and unsustainable use of biodiversity. Projections show that under a business-as-usual scenario, GHG emissions are expected to grow more than double from 150 Mt CO2e today to 400 Mt CO2e in 2030. On a per capita basis, emissions would increase by more than 50% to 3.0 t CO2e, exceeding a global guideline of 1t and 2t per capita to limit the negative effects of climate change. The requirement for agricultural land is projected to increase by 19 million ha by 2030 to meet the demands of a growing population that is expected to reach 130 million in 2030, from 81 million in 2010. This means there will either have to be a dramatic increase in land available for agriculture, major technological improvements or a shift to alternative livelihoods. Business-as-usual could also be financially challenging, with a significant share of GDP being spent on fuel imports, putting pressure on foreign currency reserves. The Government, therefore, developed **The Climate Resilient Growth Strategy (CRGE**). A Green Growth strategy was therefore required **to prevent** the much needed growth **being** undermined by environmental degradation and biodiversity loss"

The CRGE has three complementary objectives: (i) Fostering economic development and growth (ii) Ensuring abatement and avoidance of future GHG emissions and (iii) Improving resilience to climate change. In order to achieve this, the CRGE is employing three broad tactics (1) Tapping into international climate finance – which requires an emphasis on demonstrable GHG abatement; (2) Seizing opportunities for innovation based on the latest production platforms – "leapfrogging" to the newest and best technology rather than reproducing each evolutionary stage undergone by already-developed economies; (3) Creating competitive advantage out of a focus on sustainable use of biodiversity and ecosystems and improving their productivity – although this last strategy is less well developed. The CRGE aims to increase per-person GDP by 475%, from US$ 380 to more than US$ 1,800 GDP per capita by 2030, while at the same time decreasing GHG emissions on a per capita basis by 35% from 1.8 t to 1.1t CO2e.

A CRGE Funding Facility has been created. The facility, managed by the Ministry of Finance, is the primary intermediary for mobilising and disbursing finance for CRGE Investments. The idea is that the facility will enable Government to manage funds within a single coherent system that allows investors to engage and determine how best to support the country's CRGE objectives. This 'programmatic approach' will minimise transaction costs, fragmentation and duplication associated with funding unconnected projects. The facility has been designed to draw down and pool multiple sources of domestic and international finance, thereby mobilising resources efficiently. Financial requirements for the CRGE's plans are estimated at $150 billion over the next twenty years. $80 billion would be capital investment and $70 billion operating and programme costs. Much investment will be required in green infrastructure (10% growth rates will require 14% annual additions in hydroelectric power). Over the next five years alone, the CRGE suggests that 27.5% of GDP will need to be invested. Where average domestic savings are only 11.9% and half the investment burden is foreign exchange-denominated, Ethiopia's green plans will inevitably rely on attracting international climate finance and other foreign investment. So far the facility has successfully accessed bilateral sources of climate finance. The Government of Norway has committed US$60 million per annum for 5 years to support CRGE energy and forestry initiatives. It will predominantly be result-based financing, with some upfront grants for enabling activities such as MRV, and capacity building to the sectors (particularly Ministry of Agriculture, EPA and the Ministry of Water Resources. The Governments of UK, and Sweden have also pledged support. The expectation is that other development partners will increasingly channel relevant bilateral and multilateral climate funds through the CRGE Facility, which also provides opportunities to complement this finance with other existing forms of investment and thereby bolster Ethiopia's compatible development activities (in areas such as food security, energy, infrastructure development and natural resources management).

The CRGE has also applied for accreditation to the Adaptation Fund under the *United Nations Framework Convention on Climate Change* in order to access multilateral sources directly.

(iii) The Environmental Policy of Ethiopia (1997)

The Environmental Policy provides the policy framework for the sustainable management and utilization of the country's natural resources. The Policy has an overall objective of promoting the sustainable social and economic development of the country through sustainable management and utilization of the natural, man-made and cultural resources and the environment of the country. The specific objectives of the policy include, inter alia, ensuring that

biological diversity and renewable natural resources are conserved, developed and sustainably used so that the needs of future generations are not compromised; identifying and developing natural resources that are currently underutilized and/or intensifying existing uses which are not widely applied; and ensuring the empowerment and participation of the people and their organizations at all levels in environmental management activities.

(iv) The National Policy on Biodiversity Conservation and Research (1998)

Three major objectives of the National Policy on Biodiversity conservation are related to this project: (a)to integrate biodiversity conservation with sectoral and cross-sectoral strategies and programmes; (b) to encourage public participation in biodiversity conservation, development and utilization; and (c) to ensure that communities share from the benefits accrued from the utilization of genetic resources and their traditional knowledge;

The policy particularly provides for, inter alia, for the conservation of biodiversity primarily through in situ and ex situ conservation to complement the establishment of protected areas that cover the various areas and ecosystems and when necessary connect them by corridors and the involvement of local communities inside and outside protected areas in the planning and management of such areas and in sharing the benefits arising there from.

(v) National Biodiversity Strategy and Action Plan (NBSAP) (2011 - 2020)

The main objective of the NBSAP is "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 there from, and that contribute to the well-being and security of the nation".[4] Revision of 2005 National Biodiversity Strategy and Action Plan started in 2012 and was finalized for the period 2011–2020 in June 2014.

(vi) Sectoral and cross sectoral policies relevant to biodiversity

The national environment policy includes various cross-sectoral and sectoral environmental policies related to biodiversity. The ones pertinent to this project are: community participation and environment, land and natural resources use rights, land use planning, social and gender issues, environmental accounting and economics, environmental information system, environmental research, environmental impact assessment, environmental education and awareness, and monitoring. Policies on land use planning, environmental impact assessment and land and natural resources use rights are of most relevance to biodiversity mainstreaming, and are briefly described below.

- **Land use planning:** The the environment policy requires the utilization of land resource to be based on land use planning. Accordingly, it provides for the development of strategic land use plans at the federal, regional and community levels. These plans are expected to define broad land use and land user categories and provide generalized resource management recommendations which would form the basis of detailed local level resource use and management plans. Of relevance to this project is the significance of assuring land tenure to the sustainable use and management of natural resources. In this regard, it stipulates the need to assure, when taking any decision, the right of land users to a secure and uninterrupted access to land and the renewable natural resources thereon (e.g. trees, water, wildlife and grazing); and the customary rights of access to and use of land and natural resources which are socially equitable and are preferred by local communities. However, where economic developments are proposed, recent trends show that in some areas these are taking priority over protection of biodiversity and ecosystem services.
- **Environmental Impact Assessment:** The environment policy stipulates the legal requirement for Environmental Impact Assessments (EIAs) as a pre-requisite for development, especially project-led development. This requires the preparation of appropriate environmental impact statements and conducting of environmental audits for private and state development projects. In this regard, the policy requires that the government establishes the necessary institutional framework for undertaking, coordinating and approving EIAs and subsequently carry out environmental audits required to ensure compliance with conditional ties. However, again, where economic developments are proposed, recent trends show that in some areas these are taking priority over protection of biodiversity and ecosystem services – often when due to the huge distances between region HQs

[4] National Biodiversity Strategy and Action Plan, P.68

and development sites, technical staff cannot physically visit and lack up-to-date information on areas which should be protected.

Ethiopia's Programme of Adaptation to Climate Change (EPACC)
Two objectives of the EPACC are relevant to this project namely (a) Prevent land degradation and thus reduce soil loss to its natural equilibrium rate of equalling the rate of soil formation from bedrock; and (b) Reduce biodiversity loss to achieve equilibrium with the natural rate of diversification.

1.7 Legal Framework

The Constitution of the Federal Democratic Republic of Ethiopia (1995) lays down the basic framework and principles governing the conservation and sustainable use of the environment and natural resources. Articles 40, 89 and 92 are of most relevance to this project as they stipulate that the right to ownership of rural land as well as of all natural resources is exclusively vested in the state and the people of Ethiopia; the government has the duty to hold, on behalf of the people, land and other natural resources and to deploy them for their common benefit and development; the government and all Ethiopian citizens shall have the duty to protect the country's natural endowment; the design and implementation of programmes and projects of development shall not damage or destroy the environment; and that the people have the right to full consultation and to the expression of views in the planning and implementation of environment policies and projects that affect them directly.
The constitution also provides for the devolution of natural resources administration to lower l**evels,** particularly grassroots. Again of relevance to this project is the stipulation that regional states shall administer land and other natural resources in accordance with the laws to be issued by the federal parliament (art 52). As the Constitution provides for the establishment of regional states structure from regional down to local levels as they find it necessary, adequate power is therefore granted to the lowest unit of government to enable public participation directly in the administration of such units (art 50),

1.8 Institutional Framework

The management of natural resources in Ethiopia is shared between the federal government and regional states. The Federal Government has the power to enact laws governing the utilization and conservation of land and other natural resources (art 51(5)), and regional states the power to administer natural resources in accordance with the laws issued by the federal parliament (art 52(2/d)). Following is the institutional framework in the country, both at federal and regional levels, relevant for the conservation and sustainable utilization of biodiversity resources**.**

Federal Government
The Federal Government is empowered by the Constitution to enact laws on the conservation and utilization of land and natural resources and following up and ensuring the implementation of laws, policies, directives and decisions adopted by the parliament and initiating and submitting to the parliament draft laws relating to the conservation and utilization of natural resources. The MEF, EBI, MoFED, and MoA are the major federal sectoral institutions relevant to biodiversity.

Ministry of Environment and Forest (MEF)
The MEF is responsible for coordinating measures to ensure that the environmental objectives provided under the Constitution and the basic principles set out in the environmental policy of Ethiopia are realized. Of particular relevance to biodiversity and this project, MEF has the mandate to propose incentives or disincentives to discourage practices that may hamper the sustainable use of natural resources and the environment; cooperate with competent agencies in the protection and rehabilitation of the environment and degraded areas; and integrate environmental concerns in the regular education curricula.

Ethiopian Biodiversity Institute (EBI)

The EBI is the lead technical institution responsible for the conservation and sustainable utilization of the county's biodiversity resources. In line with this, EBI initiates policy and legislative proposals on the conservation of biodiversity; explores and surveys the diversity and distribution of the country's biodiversity resources; ensure the conservation of the country's biodiversity using in situ and ex situ methods; develops a strategy for the conservation of species threatened by extinction; formulates policy ideas that promote processes that enhance the existence of

biodiversity and control processes that threaten biodiversity; develop systems and technical standards for the conservation of the country's biodiversity; issue directives on the collection, dispatch, and export of genetic materials from the country; and give permits for those who need to access genetic materials from the country.

Ministry of Finance and Economic Development (MoFED)
The MoFED, with the MEF are responsible for technical aspects of planning and implementation of the CRGE strategy. The CRGE sector-led development planning process is already underway in 8 key line ministries, and is expected to be integrated into the preparation of the GTP-2 for 2015/16-2019/2020. Also, a CRGE Funding Facility has been created. The facility, managed by MoFED, will centralise the various sources of finance for implementing priority projects including payment for ecosystem services (PES).

Ministry of Agriculture (MoA)
The MoA has the overall responsibility to promote the expansion of rapid and sustainable agricultural and rural development in the country. Though its major mission is agricultural development, MoA has important natural resources responsibilities. It has the power to prepare land use and administration policy and it hosts the EBI to which it delegates the responsibilities for biodiversity conservation.

Environmental Protection Organs
The Environmental Protection Organs proclamation requires each regional state to establish or designate its Regional Environmental Agency. Regional Environmental Agencies have the responsibility to coordinate the formulation, implementation, review and revision of regional conservation strategies; ensure the implementation of federal environmental standards and issue regional standards; and prepare report on the state of the environment and sustainable development of their respective regions. The proclamation also requires the establishment of a Sectoral Environmental Unit at each relevant institution. Sectoral Environmental Units will have the responsibility to coordinate and follow up to ensure that the activities of the institutions are in conformity with environmental protection requirements in the country**.**

See Annex 8 for details of the Regional Biodiversity, Agriculture and Wildlife Institutional Frameworks.

1.9 Baseline Assessment

Public Expenditure Reviews (PERs):- PERs for the Health, Education, Agriculture, Forestry and Infrastructure sectors have been done in Ethiopia. However, there has not been a specific PER on Environment or Biodiversity and Ecosystem Services.

The International Food Policy Research Institute (IFPRI) reviewed public expenditure of the health, agriculture and infrastructure sectors. Of particular relevance to this proposed project is the PER of the agricultural sector which found that while the contribution of a strong agricultural sector to the incomes of both farming and non-farming rural households is strong— the link between public expenditures in agriculture and performance in agriculture is poor, resulting in non-significant returns to agricultural spending. The review suggests that a more careful examination of the composition as well as the execution of the agricultural budget would be advisable, in order to explore how it can be made more effective.

The World Bank Program on Forests (PROFOR) reviewed 61 forestry-related PERs including Ethiopia's Agriculture and Rural Development Public Expenditure Review 1997/98 – 2005/06 and Ethiopia's Forest Revenue System and Government Expenditure on Forestry by FAO in 2001. The review found, among other things, problems with definitions of forest and forest sector; inconsistencies between policy priorities and planned budget allocations to the forest sector; and limited analysis of the efficiency and effectiveness of forest expenditures in relation to outcomes. The review concluded that a forest sector PER needed to be carried out regularly and timed so that its findings feed into the government budget process. A PER can also contribute to the Reducing Emissions from Deforestation and Forest Degradation (REDD) process, and related support mechanisms such as the Forest Investment Program (FIP).

Decision Support Tools: Geographical information systems (GIS) are being used in Ethiopia. The Ethiopia Mapping Agency (EMA) Geo-information service was established in 1954 as a unit within the Ministry of Education. Since its establishment, it has been providing services in mapping surveying, geodesy cartography and remote sensing,

photogrammetry and other related geo-information field for the last half century. However, up-to-date spatial information for example of areas important for biodiversity and provision of ecosystem services outside protected areas is if often not available to decision makers, for example HQ-based technical staff of regions.
There is some project specific biodiversity monitoring, but not at national scale. The project on Biodiversity Monitoring in Forest Ecosystems in Bale Mountains National Park (Sept 2005 – August 2008) conducted research and strengthened the capacity of researchers, park managers and other government agents, and local people to carry out vegetation mapping through remote sensing technology. Accurate and updated vegetation maps were produced and used for conservation planning and natural resource management.

A Biodiversity Indicators Development National Task Force was established as part of the Biodiversity Indicators Capacity Strengthening in Africa Project (BICS Africa) which assisted countries in eastern and southern Africa to develop biodiversity indicators of their choice (2010 BIP: http://www.bipindicators.net/). However, the work is more focused on incorporating indicators into NBSAPs than taking the next step to link to PES**.**

Payments for Ecosystem Services (PES):- ÖBf (2009) carried out a feasibility assessment of PES in Ethiopia in 2008. The study found that there is scope for payments for biodiversity conservation – however there is a strong need to improve communities` participation in income generation from biodiversity conservation. Communities are the providers of ecosystem services, but they are not the legal owners. To enter a PES deal, communities need to be facilitated to form legally recognized entities such as community based organisations. The study also found that there is enabling policy environment for PES, specifically, the environmental protection policies and proclamations, the forest policy and proclamations, poverty reduction strategies and other related sector policies all emphasize the need to involve local communities in the sustainable management of natural resources, particularly forests. However, the majority of these policies and strategies lack detail implementation guidelines for PES. The study also recognizes the existence of Oromia State Forest Enterprises supervising agency and the Bale Forest Enterprise as potential PES monitoring institutions. Last but not least the study calls for intensive awareness raising and capacity building; and the involvement of legal experts in drawing PES contracts to clearly address issues of conditionality, liability and exit options for both contract partners.
The Forest Carbon Partnership Facility review of the REDD PIN also noted that monitoring and the payment for environmental services are two key areas where capacity in Ethiopia is lacking. A REDD program will need to help the country develop both areas, or alternatively start with project-specific activities before developing a national program. The Government has developed a REDD Readiness Plan. The plan is committed to funding the following critical elements (i) empowering and strengthening local community organizations; (ii) institutionalizing the required inspection and regulatory activities at the federal, regional and district levels; (iii) increasing the number of forest inspectors and the frequency of inspection; (iv) capacity building and empowerment of the inspectors; (v) creating a wood and timber product certification system; and (vi) strengthening coordination between the judiciary and public prosecution authorities.

Investments in Conservation and sustainable use of Biodiversity: The Government invests about US$ 1.083 million dollars a year in biodiversity management. Even though the budget has been increasing every year, a financial gap analysis study by Ethiopian Wildlife Conservation Authority shows that the sector is grossly underfunded. The study estimates that the financial requirements to be at least 4 times this amount.

There are several initiatives underway to conserve threatened species including the GEF funded "Sustainable Development of the Protected Area System of Ethiopia" project which is strengthening the Protected Area system to better conserve threatened species; the other GEF funded project "Mainstreaming Agro-biodiversity" project is engaged in conserving agro-biodiversity and wild crop relatives. The Removing Barrier to invasive Plant Management in Africa project which is addressing barriers to the control of invasive plants and the "Mainstreaming Conservation of migratory soaring birds into key productive sectors along the Rift Valley/Red Sea Flyway" project which is protecting 39 species of soaring birds, of which 6 are globally threatened.

The Government has taken action to stem forest losses: Policy options for turning around the forestry sector are being explored and implemented. Adequate incentives for sustaining the natural resource base and managing the environment need to be provided to sustain the forests of Ethiopia.

The Government has also promoted community-based forest management organizations: Over the last twelve years the Government has supported the development of community-based forest management organizations within

various Participatory Forest Management (PFM) programs. The organizations, which may take any of three legal forms— associations, cooperatives or private limited liability companies—sign Joint Forest Management Agreements (JFMA) with the Government or regional governments to manage and benefit from demarcated forest areas. The most common of the three organizational types is however cooperatives, which are often criticized for the level of bureaucracy which leads to poor performance and slow payment of dividends.

The CRGE has already made tremendous strides in providing a vision, high-level commitment, credible analysis and planning an extensive portfolio of investments: Over 150 GHG abatement technologies were screened against conditions in Ethiopia, coming up with an investment plan of over 60 viable projects. The initiatives that were prioritised include: (1) Improving crop and livestock production practices for reduced emissions, whilst increasing food security and farmer income; (2) Protecting and re-establishing forests for their carbon stocks and other ecosystem services; (3) Expanding electricity generation from renewable sources of energy for domestic and regional markets; and (4) Leapfrogging to modern and energy-efficient technologies in rural cooking, transport, industry, and buildings. Agriculture has emerged as a priority for both GHG abatement and climate adaptation. Investments in Agriculture are expected to result in a significant reduction, not only in GHG emissions in agriculture, but also in agriculture's GDP share (higher agricultural productivity and changing types of livestock), dropping from 42% today to only 29% by 2025.

The inadequacy in awareness about the marketing value of ecosystem services of biodiversity both in local and international markets coupled with the increased demand for food security and economic development disadvantage biodiversity in the extension service and national development planning. Against this background, investments will not be targeted to the most optimum land use or oriented to contribute to global benefits. Communities will of course continue mining of biodiversity products from the wild, but without systematic support, they will lose out to the considerable drivers forcing them to adopt production practices that no longer promote conservation of the very resource which has been their source for millennia. In the alternative scenario, the GEF project will remove barriers to enable adoption of utilization based conservation practices where biodiversity become part of the GTP that will improve food security while simultaneously promoting ecosystem provisioning. Providing institutional and policy enabling environment and utilizing markets for mainstreaming incentives for biodiversity conservation to increase both returns on and conservation status of biodiversity, complemented by direct protection in in-situ sites will go a long way in ensuring this.

The Government has created institutions to manage biodiversity, at federal, regional, zonal, district/woreda and local/kebele levels. Besides MEF, EBI and MoA at federal level, the BoA and BoEPLU have biodiversity desk at regional, zonal, woreda and kebele levels. However, the mandates of the federal and regional institutions relating to biodiversity are not clearly delineated.

Capacity for knowledge-based extension support: The government has intensified efforts to improve agricultural productivity in the context of the GTP. It has made considerable effort in improving extension services and seed production and distribution. Nonetheless, biodiversity is side-lined from this effort due to less attention combined with insufficient capacity for research and integration of research findings into the extension package. Although the biodiversity sector has great role in the GDP, universities and extension services are not yet sufficiently capable of practical support to the sector to maintain or improve productivity in order to complement the GTP. In addition, policymakers and agricultural specialists do not fully realize the economic potential of biodiversity in improving food security and economic development, and dealing with future uncertainties of climate change.

THREATS AND ROOT CAUSES

The root causes driving biodiversity loss include high population growth and changing population dynamics, high reliance on natural resources for economic development compounded by low levels of economic development and changes in consumption patterns, also the globalization of agricultural markets without adequate protection of biodiversity. Lack of proper recognition of the inherent importance of biodiversity to the livelihoods of the majority of the population of Ethiopia and the dependence of the whole country on ecosystem services provided by the land groups of rural people manage is exacerbating these root causes.

Habitat loss and habitat degradation continue to be major threats: Conversion of forests, woodland and shrub land into agricultural land is by far the largest driver of habitat loss resulting in loss of biodiversity and associated

ecosystem services. Information on current and historical land cover/use change show that forest resources in Ethiopia have been subject to heavy deforestation and degradation. Reusing (1998) estimated the annual deforestation rate of 163,600 ha or 3.7%, while FAO (GFRA, 2005) indicate 141,000 ha/yr or an average of 0.93% annual deforestation rates between 1990 and 2000 and 1.03% per year between 2000 and 2005.

Studies show that 80% of new agricultural land developed between 2000 and 2008 was converted from forests, woodlands or shrub lands. There is growing pressure on biodiversity and ecosystem services by farmers and livestock owners, and from large foreign agro-industrial investments. Conversion of forest to pastureland is the second biggest driver of habitat loss. According to the preliminary analyses conducted by the Ethiopian Development Research Institute (EDRI) in 2010, total cattle population is expected to increase from 51 million animals in 2008 to 110-120 million in 2030. Last but not least, over-grazing of rangeland, over-cultivation of cropland, water logging and deforestation are drivers of habitat degradation. Recent reports show the number of cattle is exceeding the available land's carrying capacity in many areas, and many rangelands are highly degraded. About 88% of the livestock feed base comes from natural grazing and browse, with crop residues accounting for some 10 per cent, and industrial by-products, such as oilseed cake, supplying the remaining 2 per cent of feed. There is increasing pressure on grazing lands with their carrying capacity becoming lower and lower in the face of ever-increasing livestock population and in the absence of any improvement made on feed and fodder availability.. This is resulting in fuel and fodder becoming increasingly scarce, water courses drying up, thorny weeds becoming predominant in once rich pastures; footpaths disappearing into gullies, soils becoming thin and stony, and as a result reduced current and future yields from agricultural land with strong implications for future food security.

The fertile agricultural areas of the highlands are so densely populated by humans that larger wildlife species are confined to montane extremes of the Simien and Bale Mountains, the arid lowlands and the Rift Valley. Although other wildlife continues to survive, density and diversity is low.

Nearly 95% of the Ethiopia's energy consumption comes from biomass fuels: This includes fuel wood, charcoal, branches, leaves and twigs. Charcoal is currently made, sold, transported and used as a major source of fuel in most urban and rural areas, despite a recent Government ban on its use. Its prevalence along the roadsides means that enforcement is lacking. Firewood consumption is expected to increase in the same proportions. Unsustainable fuel wood consumption prevents forests from regenerating and leads to increased vulnerability to climate change. Deforestation ultimately strips the land of its vegetative biomass, exposing it to high levels of soil erosion. The economic loss of deforestation is believed to be around US$ 660/ha/year, amounting to a loss of US$ 19 million per annum. In the 'business as usual' scenario, this level of deforestation and degradation is expected to worsen in the coming decades, as population grows at 2-3%/year. Estimates indicate that the economic losses from soil erosion alone could lead to a 2-3% drop in annual agricultural GDP, which would have major negative repercussions on Ethiopia's already precarious food security situation. This picture is complicated even further by the higher probability of extreme weather conditions arising from climate change and increased variability in rain and temperature (see below for further details).

Climate change: In common with the rest of sub-Saharan Africa, the agricultural sector in Ethiopia is predicted to be especially vulnerable to climate change because the country already endures high heat and low precipitation, provides the livelihoods of large segments of the population and relies on relatively basic technologies, which limit its capacity to adapt. Decreases in rainfall amount will therefore be exacerbated by higher evaporation rates associated with the higher temperatures. These fluctuations of both temperature and precipitation will have implications for biodiversity and agricultural productivity. Particularly, climate change poses a great threat to Ethiopia's position as a centre of diversity as it is likely lead to re-distribution and loss of genetic diversity.

Ethiopia's First (and only) National Communications to the UNFCCC (submitted 16 October 2001) reported that temperature across the country could rise by between 0.5 and 3.6^{o} C by 2070; the annual average temperature is expected to reach a high of 26.9°C by 2070-2099 (Cline, 2007). During the same period, precipitation is expected to decrease in the northern regions, while southern areas could see an increase of as much as 20%. Decreases in rainfall amount will therefore be exacerbated by higher evaporation rates associated with the higher temperatures.

A more recent and detailed climate change scenario was presented calculated using the HadCM3 GCM and statistical downscaling (using method SDSM v 4.2) (Getachew, 2010). This calculated the scenario for the three main livelihood zones of Ethiopia (see map Figure 4 in Annex 6). The study concluded:

- The statistical downscaling results showed that rainfall as well as temperature (maximum and minimum) are likely to increase;
- Rainfall is projected to decline by 0.8% under B2a scenario by 2080's for cropping and agro-pastoral North Somalia, some part of Southern Oromia and Central and Northern part of SNNP;
- North Somalia, some part of Southern Oromia and Central and Northern part of SNNP has got an increment in temperature and a decrease in rainfall hence it could be this areas where CC vulnerability is high as compared the rest part of Ethiopia;
- Pastoral and agro pastoral areas of Afar and Somali are more vulnerable to prevailing climate change.

OECD (2013) notes that climate change compounds a number of challenges facing natural resources management. Effective adaptation to climate change and the construction of a Climate Resilient Green Economy will depend on improved management and use of our natural resource assets.

BARRIERS

Table 2: Barriers to the Conservation of Biodiversity

Barrier	Elaboration
Lack of capacity and decision support tools to check adverse development and its impacts on biodiversity	Federal Government Departments both at national and regional level lack capacity and decision support tools to regulate on going land conversion or check adverse impacts on biodiversity. There are some rudimentary regional planning exercises, but not based on a comprehensive resource assessment. There is a strong need for tools that can track biodiversity and socio-economic impacts (such as GIS mapping of critical biodiversity areas, biodiversity scorecards) of the large investments planned by the CRGE. These are needed to shift policy and investment towards biodiversity friendly options. The economic impacts of *inter alia* pressure from population growth on ecosystem services, loss of forest cover and degradation of watershed functions are not reflected in the national accounts, which provide the essential data, based on which most economic policy decisions are made. It is not clear how much the government budgets or spends on biodiversity because the budget is not coded for biodiversity expenditure. Public expenditure review processes do not ask specific questions about biodiversity costs, benefits or risks. Consequently, the pros and cons of biodiversity friendly projects cannot be highlighted. There is a strong need for a BD Expenditure Review (BDER) to inform the CRGE investments.
Lack of a coherent incentive framework to curtail habitat loss and degradation with very short term planning horizons:	Many poor farmers and livestock keepers in Ethiopia live from hand-to-mouth and manage resources with very short term planning horizons. Under current conditions, these land users cannot afford to carry the cost burden of conservation from which the broader national and global society benefits. Although at a global level biodiversity and ecosystem services are highly valued, these values are not translated into incentives for local resource users who are in direct interaction with forest resources for their livelihoods. There is a need for an incentive framework with clear mechanisms to pay for the conservation of inter alia forests and rangelands, also watershed protection. There is also need for clear and uniform benefit sharing and reward mechanisms to discourage an "open access" mentality and forest conversion to other land use. .Secondly, given the ambitious targets set forth by the CRGE, it is clear GDP and domestic savings alone will not be enough to achieve what is needed. Ethiopia's green growth plans will require other investments and PES is one of the vehicles available to Government for attracting such finance. PES would trigger a shift from contra-conservation to conservation-compatible land uses.

2 PROJECT STRATEGY

2.1 Project Objective, Outcomes, Outputs and Activities

The Project Objective is **"to ensure that the biodiversity of Ethiopia is better protected from current and future threats by ensuring development and investment decisions do not impact negatively on biodiversity".**

This will be achieved through the following two main outcomes:

- **Outcome 1: The enabling framework for mainstreaming incentives for biodiversity conservation into the CRGE is strengthened**
- **Outcome 2: At least 20,000 hectares of the highly threatened Afromontane ecoregion are under PES resulting in improved stewardship by community land managers and reduced pressure on biodiversity**

Outcome 1: The enabling framework for mainstreaming incentives for biodiversity conservation into the CRGE strengthened

This outcome will ensure the benefits of biodiversity conservation and the costs of biodiversity degradation are reflected in the national accounts which provide the essential data on which most economic policy decisions are based. Decision support tools (such as a Biodiversity Expenditure Review, GIS mapping of critical biodiversity areas and biodiversity scorecards) will be used to inform future CRGE investments

Output 1.1: Biodiversity values and management costs mainstreamed into national accounts through a public expenditure review – ensuring no financing for investments that result in negative impacts on biodivdersity

This output will support a Biodiversity Expenditure Review (BDER) to ensure that the often neglected but very high value of biodiversity to the national economy and the livelihoods of the majority of the people of Ethiopia and the costs of degradation are reflected in national accounts. The BDER will examine CRGE facility allocations within and among sectors, and/or at national and sub national levels of government, and assess the efficiency and effectiveness of those allocations in the context of biodiversity management and conservation of threatened species. The BDER will also examine whether CRGE spending priorities are effectively matched to biodiversity priorities, identify areas of inconsistency, and identify reforms needed to improve the effectiveness, efficiency and sustainability. The expected outcome of the BDER inter alia the redistribution of spending towards biodiversity priorities, and towards longer-term goals rather than short-term ones that could result in biodiversity loss and undermine long term economic growth. This will ensure that investments that could result in the degradation of biodiversity are discouraged. The review will look closely at the linkages between the CRGE and national biodiversity policy; and the resource allocation and expenditure processes as they relate to programmes and policies that support biodiversity management. This will result in the values and costs of natural resource depletion to be better reflected in the national accounts, which provide the essential data, based on which most economic policy decisions are made. To achieve this Output, the project will facilitate a range of activities, including:

Indicative Activities

1. Support MEF and GoE (MoFED) to carry out a Biodiversity Expenditure Review
2. Develop policy brief and information notes for decision makers to make the case for redistribution of spending towards biodiversity priorities, and towards longer-term goals rather than short-term ones that could result in biodiversity loss and undermine long term economic growth.

Output 1.2: Decision support tools to ensure infrastructure placement and other investments do not negatively impact on biodiversity are in place and under implementation

Planners and decision makers require better information and decision support tools to ensure that decisions on the siting of the many new major investments arising from the CRGE do not negatively impact on biodiversity. Although there are adequate guidelines in the EIA both for assessing negative impacts as well as for amplifying positive impacts, their application is weak as often decision makers lack access to up-to-date information. This project will

support a more proactive approach that checks for potential impacts on biodiversity and seeks to avoid, mitigate or offset biodiversity loss is needed. This will be done by providing decision makers with up-to-date maps and checklists on the biodiversity and other ecosystem services of sites where major developments are proposed.

Indicative Activities

1. Develop 6[5] regional level large scale digital maps of critical biodiversity areas to cover representative threatened ecosystems);
2. Develop biodiversity score cards to determine (a) no go areas (b) areas where developments may be allowed but with certain minimum conditions;
3. Develop checklist incorporating the mitigation hierarchy to avoid-mitigate-offset impacts on biodiversity
4. Train key staff in all relevant sectors at all levels on how to use the to effectively use the maps and scorecards for better land use planning and investments

Output 1.3: Strengthened cooperation and interaction between institutions involved in managing biodiversity loss and climate change

The environmental policy and laws set out the basis for dealing with climate change in Ethiopia. However, it is essential to recognize that the implications of climate change and the steps required for an effective response go well beyond environmental management. Climate change must not be considered as a narrow sectoral issue. Instead a cross-sectoral response is needed, involving the whole of the Government. The response requires cooperation, planning and action across Government sectoral Ministries and Agencies, from finance to agriculture, from education to foreign affairs; regional government and woreda administrations; and outside government, by civil society, religious groups, the private sector, local communities, academic and research institutions, international and national NGOs and development partners.

Such improved cooperation also requires adequate capacity. Currently, there is limited government capacity in relation to the huge new green growth agenda: with ministries frequently changing their mandate and government officers moving post, there is little continuity for driving long-term agendas such as green growth. Work on the CRGE remains a secondary job for almost all government officers involved. These officers require tailored training and capacity development, supported by job-related incentives**.** To achieve this Output, the project will facilitate a range of activities, including:

Indicative Activities

1. Support joint planning and implementation arrangements between MEF, Ethiopian Biodiversity Institute, MoA, regional biodiversity units and others t
2. Support the development of effective communication tools and mechanisms that portray the link between biodiversity and climate change – including local, regional and national dialogues;

Outcome 2: At least 20,000 hectares of the highly threatened afromontane ecoregion are under PES resulting in improved stewardship by community land managers and reduced pressure on biodiversity

The *Eastern Afromontane Biodiversity hotspot* is made up of three ancient blocks of massifs (the Eastern Arc Mountains and Southern Rift, the Albertine Rift, and the Ethiopian Highlands) plus the volcanic highlands of Kenya and Tanzania- covering 1,017,806 square kilometres. The hotspot holds nearly 7,600 species of plants, of which more than 2,350 are endemic. Only 10.5 percent (106,870 square kilometers) of the original vegetation remains more or less intact, with about 15 percent of the total area (154, 132 square kilometres) under some level of official protection. Of relevance to this project is about 39.5% of the hotspot which is found in Ethiopia. The Ethiopian Highlands harbor an estimated 5,200 plant species, of which at least 200 are endemic; 680 species of birds, some 30 of which are endemic and more than 30 of the nearly 200 mammals are found nowhere else, including a remarkable

[5] Ethiopia consists of 9 regions. Given the very large area of the country and the limited project budget, and also that 6 regions expressed interest during the PPG, this was determined to be a more manageable number and will provide a useful sample covering representatives of threatened ecosystems

six endemic genera, four of which are monotypic: three rodents (*Megadendromus, Muriculus and Nilopegamys*) and one primate, the gelada (*Theropithecusgelada*)..The upper montane forests contain evergreen broadleaf montane forest characterized by the presence of myrtles (*Syzygium guinieense*), junipers (*Juniperus procera*) and African olive trees (*Olea africana*) in drier areas the forest is dominated by *Podocarpus* trees *as* well as juniper and African redwood trees (*Hagenia abyssinica*). The genus *Senecio* is particularly diverse, with half of the two dozen species found nowhere else. The foothills support woodland vegetation, with the species rich, mist-affected **—coffee zone,** where large trees provide shade around the terraces and fields. The highlands (2,200 to 3,700 meters) are again heavily terraced with only small patches of drought-deciduous montane woodland remaining, including *Acacia origena*, along with even fewer relictual stands of *Juniperus procera. S*everal crops including **coffee and teff (a cereal crop)** have been domesticated. Last but not least, the northwestern Ethiopian Highlands provide the source of the Blue Nile, which supplies two thirds of the water during the June -September rains.

During the project preparation phase, four pilot sites containing globally significant biodiversity, and currently facing very high levels of human encroachment were identified. Three of the sites are located in the south western highlands of Ethiopia, which includes the larger of the two remaining blocks of Afromontane forest vegetation that is part of the Eastern Afromontane Biodiversity Hotspot (see Annex 6 Figure 5)[6]. The third is the watershed of the Kulfo River, the major tributary of Lake Chamo in the Rift Valley.] The fourth site is located in the Somali Region, in the boundary area of the Eastern Afromontane Biodiversity Hotspot and the Horn of Africa Biodiversity Hotspot (see Annex 6 Figure 3). The sites proposed as representing globally important biodiversity for this project to pilot PES, are:

- Choke Mountain in East Gojjam Zone, Amhara Region; (12,005 ha)
- Arjo-Digo Forest, East Wollega Zone, Oromiya Region; (5,437ha)
- Kulfo Forest, Gamo Gofa Zone, SNNP Region; (1,058 ha)
- Hadew, Jijiga Zone, Somali Region. (1500 ha)

Pilot Site (name and location)	Population			Community Land Area (in ha)			
	Men	Women	Total	Forest	Other	Overall Total	Project Target Area[7]
Choke Mountain, East Gojjam Zone (Amhara Region)	120,088	120,075	240,163	7,005	98,116	105,121	12,005
Arjo-Digo Forest (Oromiya Region)	10,430	14,291	24,721	4,925	10,457	15,382	5,437
Kulfo Forest, Arba-Minch (SNNP Region)	94,370	94,520	188,890	1,058	12,567	13,625	1,058
Hadew Kebele, Jijiga Zone (Somali Region)	2,844	22,443	5,287	1,500	1,000	2,500	1,500
Total	**227,732**	**251,329**	**459,061**	**14,488**	**122,140**	**136,628**	**20,000**

The ecosystem services provided by the project's pilot PES sites include: Biodiversity conservation; Carbon sequestration; Water consumption; Water quality; Flood mitigation; Ground water replenishment; Erosion control; Microclimate stabilization; and Ecotourism (potential). (Further details about the pilot sites are in Annex 9. Specifically, Table A9_1 provides full details of the global environmental benefits provided by each site - biodiversity, water regulation and also carbon sequestration.

Output 2.1 **Prospective sellers to supply ecosystem services identified; and their capacity to modify land use practices is enhanced through technical assistance/extension on BD friendly land use practices]**[8]

[6] of the 34 globally recognized biodiversity hotspot areas in the world

[7] Additional areas beyond forest boundaries will be targeted to reach target of 20,000 ha – provisionally anticipated to Choke Mountain and Arjo-Diga sites

Since the program participants (farmers/land users) will be compensated through government-financed payments from the CRGE facility, there is no need to look for a buyer. However, before any payments can be made, there is need to define the metrics for payment and how much to pay. This is the part that this component will support. This will generally entail preparing a list of land uses and associate each with a point system upon which payments are based. Separate indices will be developed for the biodiversity conservation and other benefits of each land use. These two indices will then be aggregated to form an environmental service index to be employed as the basis for calculating payments to farmers. The points given to each specific land use will take into consideration factors such as the number of species (of plants, birds, small mammals, and insects), their spatial arrangement, stratification, and plot size. This approach will also take into consideration the different impact that different land uses are likely to have on biodiversity. The impact depends not only on the characteristics of the land use, but also on its location, its extent, and its relationship to other land uses

Initial work at each site will involve detailed identification of the providers of the ecosystem services (CBO groups)[9], as clearly the genuine and effective involvement of communities in a payment for ecosystem services scheme is crucial to success and sustainability. Site readiness assessment carried out during the PPG found that most of the potential providers are already organised into groups (CBOs / cooperatives). Where none exist, the project will support their establishment, development and legal registration. This will be followed by an awareness raising to ensure all providers understand the mechanics of the PES scheme

Once all groups of providers are organised, boundary demarcation and detailed surveys of the ecosystem services (ESs) provided by the sites will follow. This will entail preparing a list of land uses and associate each with a point system upon which payments are based. Separate indices will be developed for the biodiversity conservation and other benefits of each land use. These two indices will then be aggregated to form an environmental service index to be employed as the basis for calculating payments to farmers[10]. The extent to which land users have already adopted practices that conserved biodiversity prior to the project would be reflected in their baseline, and only increments to this index should ideally be compensated[11]. However, the project may allow a one-time payment for pre-existing biodiversity friendly practices. This payment has the further benefit of helping to alleviate financing constraints to implementing the new practices. The upfront payment, which will be provided in the early period of adoption- will be sufficient enough to 'tip the balance' between current and desired land use. Payment levels will be set at slightly more than the opportunity cost of the main alternative land uses. This effect works by increasing the net present value of engaging in the scheme and also by reducing the initial period in which adoption of these systems imposes net costs on land users. By the time payments end, the biodiversity friendly practices themselves will be ready to begin generating income for land users. The payments also alleviate the liquidity problems faced by many land users and help them finance the required investments. It is important that payments be on-going rather than finite. This is because environmental services are to be generated over a long period of time (presumably, indefinitely). Ending payments sooner creates the risk that land users will revert to their previous land use practices. Payments for environmental services can only have the desired effect only if they reach the land users in ways that influence their decisions on how to use the land.

Once the finance is brokered and metrics of payment are determined, program participants will be solicited and trained on the entire PES process. They will then enter into contracts under which they will receive a payment from Government for the environmental services that they generate on their land. They will receive annual payments over a two- or four-year period, based on the increment in environmental services provided relative to the baseline situation for that particular farm. In order to avoid perverse incentives

Once the baselines are established, site management plans will be developed with guidance on sustainable use thresholds. Project staff and local teams will facilitate and negotiate with each local community group sustainable use

[8] Given the very low level of understanding of PES encountered at national and local levels during the PPG, it was not possible to do all the analytical work envisaged– it was clear that there is need to build awareness and capacity before this work can be done. These activities will be carried out during implementation and will entail a strong focus on building capacity to implement PES.

[10]During the stakeholder consultations on 9 October 2014, the Government of Ethiopia expressed the desire that the amount paid in the PES should be the same across all pilot sites for purposes of equity. Since Government is paying for these services, the project will not stop Government from making a top up payment if needed, however the scientific work that is required in order to determine the actual payment will still go ahead. The project may consider a phased approach, starting out with the same payments and then proving the value of more biodiversity-friendly practices through the demo sites which can then get additional top-up payments

[11] Experience from other PES programmes has shown that this strict approach does not always work

agreements (specifying the thresholds, type and amount of resources that can be used, by whom, and laying out the methods, roles and responsibilities for community monitoring, regulation and resource protection). Where needed, local by-laws will be revised to ensure they comprehensively guide and govern sustainable use of biodiversity at the sites.

Site assessments during the PPG revealed the potential for various biodiversity friendly land **use practices** to be supported and included in the site management plans**:** application of compost / mulches; reduced tillage; conservation agriculture (CA); agroforestry (AF);

During the PPG, it was also determined that there is need for Memoranda of Understanding (MoUs) to be signed between the Government and communities that confirm communities are fully informed about the terms of the PES before they enter any PES agreements. An independent broker (like the one used by the Humbo PES project)[12] will therefore be contracted by the project as the vital intermediary between the buyer and seller of the ESs.

In the absence of any other PES project that focuses on payments for biodiversity conservation, the Humbo PES project will serve as a useful guide. (*See details in of lessons learned in Humbo incorporated into this project in Section 2.6).*

Indicative Activities

1. Support the establishment, development and legal registration of CBOs / cooperatives and capacity building for key members, where they are not present / active in pilot areas;
2. Use existing and / develop materials to raise awareness and educate land users (CBO / cooperative members) regional / zone / woreda government officers / local decision makers / leaders in selected sites about PES
3. Secure Memorandums of Understanding (MoUs) between communities and project (or broker) confirming that communities have access to all of the information related to the project and have been adequately consulted before the project activities begin on the ground;
4. Strengthen the capacity of kebeles and woredas to implement their mandate on utilization based biodiversity conservation;
5. Metrics for determining the payments designed: Ecosystem services in the selected sites are defined, measured and assessed; amount of payment is determined .Detailed field work at each pilot site to establish baselines, define boundaries PES metrics etc;
6. Facilitate each local community group to formulate and implement its own site management plans by clearly defining thresholds ,methods, roles and responsibilities for community monitoring, regulation and resource protection), also to modify any necessary by-laws to guide and govern the actions of its members
7. PES agreements brokered between sellers and Government specifying conditions of payment:- Hire a PES Intermediary/Honest Broker to support communities (sellers) to negotiate PES contracts with the buyers (Government) that specify conditions and amounts of payments (value of service; mode of payment; delivery of service) and clearly address issues of conditionality, liability and exit options for both contract partners;
8. Discuss and agree with each local community the fair, transparent and equitable distribution of the benefits that result from the PES
9. Establish administrative systems (one per pilot site) for handling and operationalising the payments at the pre-determined frequency using the binding contracts;
10. Monitoring and verification system to measure the impact of intervention (PES) on land use changes (actual delivery of ecosystem services), biodiversity and livelihoods in the target sites using standards and indicators derived from baseline analysis:- Support each community group to develop and implement a participatory monitoring and evaluation system to track the PES scheme and ensure it is achieving the desired outcomes**;**

[12] The use of an independent broker as intermediary is a best practice learned from the Humbo PES project. Results show that this has been a very instrumental in ensuring communities rights are protected.

Output 2.2: Institutional capacity of national and regional governments (regions / zones /woredas) and universities is in place to coordinate PES programmes - such as negotiation, contractng, transaction, verification

PES is a relatively new concept and to-date only operating at a very limited scale in Ethiopia, and thus the institutional capacity is very limited to those involved in the Humbo Project. In order to verify that the biodiversity friendly practices promoted under the project actually generate the expected environmental benefits, biodiversity will be monitored in all land use types in the target areas. [Indicators for this will be developed at the start of implementation]. Monitoring will also look at the degree to which the project is encouraging participants to undertake the desired changes in land use. This would require monitoring the changes in land use of the participants themselves, and of a control group (so that the impact of the project itself can be distinguished from other trends that might affect land use).The target group itself will be partitioned into two groups, so that the impact of technical assistance provided by the project.

Monitoring will enable the project to prevent and or address issues such as (I) non-compliance with contractual conditions;(ii) poor administrative selection (i.e., contracts offered to areas or individuals who are not in the best position to supply environmental services cost-effectively);(iii) Leakage: whereby protecting a resource in one location pushes pressure onto resources elsewhere; and (iv) Adverse self-selection, where people would have supplied the contracted PES service or activity even in the absence of a payment.

The project will support the training of Government officers and university staff on specific technical aspects of PES to enable them to carry out the aforementioned monitoring during the project period and for any future PES projects.

Indicative Activities

1. Train MEF, local institutions and other key staff in negotiation, contracting, transaction, monitoring and verification to effectively manage the PES schemes
2. Technical and financial capacity building trainings for CBOs (leaders and members) inter alia on PES;

Output 2.3: ***Increased government investment in pro-conservation PES in a range of threatened ecosystems by end of project***

The incentives system developed at the four sites is intended as a pilot, which will be refined during the project period. Based on the win-win-win benefits demonstrated during the project (maintenance of biodiversity and ecosystem services bringing local and global benefits, also enhanced livelihoods / poverty reduction), it is envisioned that the system thus developed will be continued and scaled-up across other vulnerable ecosystems beyond the project period, with funding from the CRGE Funding Facility (as agreed in the PIF). Potential additional buyers include REDD+, the voluntary carbon market and the private sector (inter alia agriculture, horticulture, forestry, hydroelectric and water companies). This will be a sustainable complement to the CRGE implementation strategy of reducing GHGs, while also ensuring other environmental benefits.

Indicative Activities

1. Additional buyers for PES identified and secured for post-project.
2. Secure GoE commitment to continue and scale-up pilot PES (to at least 250,000 ha by 2025**)**

Output 2.4: Increased awareness and understanding of the vital role of biodiversity and wider ecosystem services protection among decision / policy makers and the general public

The contribution of biodiversity and ecosystem services from PAs, forest reserves, wetlands and also much more widely across Ethiopia is undervalued, resulting in the use of the resources in a way that undermines the provision of such services. Decision makers and the public often influence biodiversity through their actions as a result of lack of awareness on biodiversity values (FDRE, 2014). This arises from the lack of effective communication mechanisms to raise awareness on biodiversity and its values. Until recently, biodiversity issues were not well integrated into the formal education system. Promotion and appreciation of community knowledge associated with biodiversity, its local uses and management that can also be used as an informal education and awareness needs to be strengthened. The country is making huge efforts to raise awareness of stakeholders, including the public in areas of biodiversity conservation, sustainable utilization and development – to which this project will enhance, as a necessary pre-requisite for scaling-up of PES post-project.

This also contributes to the planned CRGE's participatory process, which aims to work across three dimensions: horizontally across sectors; vertically from federal level down to local communities and back up to the federal level; and through time, gathering and disseminating learning to deepen benefits and widen coverage**.**

Indicative Activities

1. Use project-results to raise awareness and educate decision makers (local and national);and rural communities beyond immediate pilot sites; on the importance of biodiversity / ecosystem services for their livelihoods, adapting to climate change and wider environmental sustainability;
2. Organise study visits to pilot sites for decision / policy makers and opinion formers (e.g. journalists);
3. Organise exchange visits for land users.

Output 2.5: Lessons learned from project PES pilot programme shared between pilot sites, more widely in Ethiopia and in the region

Indicative Activities

Support regular production of a range of materials[13] (inter alia print, graphic, radio, tv, the internet and peer-reviewed journals) summarising the results, impacts and lessons learned prepared.

GLOBAL ENVIRONMENTAL BENEFITS

The project will secure conservation security for Ethiopia's biodiversity. Specific global environmental benefits to be delivered by the project are highlighted in the table below:

Without project intervention	**With project intervention**	**Biodiversity Benefits**
Habitat conversion and Habitat degradation: Conversion of forests, woodland and shrub land into agricultural and pasture land; over grazing of rangeland, over-cultivation of cropland, water logging and deforestation; resulting in loss of biodiversity and associated ecosystem services, water courses drying up; reduced current and future yields from agricultural land with strong implications for future food security.	Incentives/payments for conservation of biodiversity in agricultural landscapes: PES pilot mechanisms established in the selected sites, generating uptake of biodiversity friendly land use options that enhance conservation of globally significant species; Increased food security: more, better yields. At least 250,000 hectares of the highly threatened afro-montane forests are under improved stewardship by community land managers, reducing pressure on biodiversity, indicated by no net loss of habitat in BD sensitive areas (from clearance for agriculture)	Reduction of threats from land use changes to endemic species in critical biodiversity areas Conservation status of threatened habitats is improved. These species include: *Abyssinian longclaw, Swayne's Hartebeest, Ethiopian Wolf, and sub-species of Menillek's Bushbuck* *Other globally threatened/near threatened species like Wattled Crane, Lesser Kestres, Fallid Harrier, Lesser Flamingo and Fiedmann's Lark* *Endemic plant species such as Acanthus sennii, Echinops ellenbeckii, Erythrina brucei,*

[13] tailored for differed audiences

Biodiversity not adequately covered by CRGE: with the risk of CRGE investments being based on the omission of environmental costs, including the value of natural resource depletion, some activities encouraged to the detriment of the environment and natural resource base, and undermining of long term economic growth	Recognition that conservation and sustainable use of biodiversity as a major contributor to the CRGE goal of increasing GDP, and also delivers a coherent response to biodiversity loss, and climate change with better understanding of the role, responsibilities, and interaction of institutions involved in managing the response to biodiversity loss and climate change Requisite staff capacitated with decision support tools and well positioned to use the results from NRA, BPER and other studies regularly in their decision-making	*Euryops pinifolius, Kniphofia foliosa, Lobelia and Aloe.* *Other important species found include Coffea Arabica, Prunus Africana, Podocarpus falcatus, Terminalia brownie, – at* ***high risk*** Land use changes under PES, result in increased forest cover, reduced habitat loss and habitat degradation by 35% (*Baseline to be confirmed)*

2.2 Stakeholder Analysis

Table 3 provides an analysis of the key stakeholders identified during the PPG phase. Other groups and individuals are likely to be added during implementation.

Table 3: List of Stakeholders and their expected role in the Project

Stakeholder	Details
Local community members and groups ("land users")	The key stakeholders are the local communities, who by virtue of living closer and in harmony with the bio-resources play an important role in biodiversity management and documentation. The local communities of Arjo-Digo (Furdisa) Forest (Oromiya), the Choke Mountains (Amhara), Kulfo Catchment (SNNP) and Hadew (Somali) are the key resource managers, users and the identified potential sellers of ecosystem services (including men and women, of all ages) of the pilot programme. In existing or project catalysed groups (cooperatives or other CBOs) they will be PES programme participants tasked to implement of changes in land use patterns from contra-conservation agricultural practices to conservation compatible land uses. They will also be direct beneficiaries of PES as they play an increasingly important role in local habitat conservation and natural resource management.
Local universities in each pilot area	Wollega University (Oromiya), Debre-Markos University (Amhara), Arba Minch University (SNNP), and Jigjiga University (Somali) are also key stakeholders who are already working with the local communities. During the project they will co-chair pilot-site steering committees and be implementers, notably as key provider of technical expertise, particularly supporting field survey work for the baseline and training for technical staff. They will also play a major role in the monitoring of the project. The project will confirm details of this through MoUs and, as necessary, contracts.
NGOs and other international conservation agencies	NGOs will be involved in community participation, formation of community groups (e.g. CBOs) and strengthening of existing CBOs. These groups will provide technical support to the project, facilitate technical training and are also potential co-implementers of activities of the project. This group in the respective pilot sites will be identified upon the establishment of the project implementation units and project launch at the inception workshop.
Federal, regional, zonal and woreda level for pilot PES	The main group of stakeholders of the project will be of a range of sectors as this is by definition and inter-sectoral project – piloting what is to be a long-term PES programme. This will directly involve technical and professional staff in inter alia forestry, agriculture, ecosystems, natural resources and environment. The private sector and civil society are also stakeholders. All share responsibilities for conservation and enhancement of resources and their value addition, management of ecosystems and regulation of bio-resources use. The Ministry of Agriculture, Ministry of Water and Energy, Ministry of Tourism and

	Culture, and Ethiopian Electric Power Corporation play a role in linking livelihoods of rural communities with infrastructure development. This can in turn help in increasing the value of bio-resources. The private sector relevant to this project may be promoted/ motivated for corporate social responsibility in providing livelihood opportunities. Identification of the private sector relevant to the project will take place during the project implementation phase. Regional States and Bureaus, zones, districts/woredas and localities/kebeles will play vital roles in the implementation of the project, including effectively incorporating issues of mainstreaming incentives for biodiversity conservation into the zonal and district plans and budgets and correct perceptions often repeated during the PPG studies that PES would "reinforce the dependency culture".
BoA and BoEPLU of Oromia, Amhara, SNNP, and Somali Regional States	The provincial bureaus are key stakeholders and implementers for the pilot interventions. In particular, their roles include catalysing involvement of local communities, monitoring and evaluation of land use changes, poverty reduction and other impacts deriving from the changes. These are also target institutions for focused training to enable them to manage the PES. Details about these bureaus are presented in Section 1.10 (Pilot Areas) under BoA & BoEPLU.
Zonal and district/woreda Agricultural Offices, Environment Protection and Land Use Offices	These technical officers will closely participate in the implementation of the project. Local pilot-site project committees will be established at each pilot site to oversee and implement Activities to achieve the outputs of Outcome 2 of the project, in close collaboration with inter alia kebele Agricultural Development Agent Office, kebele Watershed Committees, kebele Environmental Clubs, kebele CBOs, kebele Youth Cooperatives. Details of the responsibilities and duties of each will be worked out by these PSSCs in collaboration with the National PMU Zone offices are anticipated to provide the services of a Finance Officer (part-time) to assist the project – which will be included in co-financing (in-kind).
Ministry of Environment and Forest (MEF)	MEF will be the national executing agency for this project and will provide a national project manager to ensure quality and timely results monitoring and reporting of the project. The project will work closely with MEF staff to catalyse the anticipated legal and policy changes necessary to achieve Outcome 1. The project will also undertake considerable capacity building efforts with MEF staff to ensure they are capable of scaling-up the PES programme post-project.

2.3 Project Risks and Assumptions

Risks and Risk Mitigation Strategies

Risk	Risk Category*	Level of Impact**	Risk Mitigation Strategy
Impact of the provision of improved decision support tools and training to Government staff limited due to regular changes in staff	Organizational	M	Training will be provided to several staff in each region. Win-win-win benefits of protecting biodiversity and wider ecosystem services will be a priority in awareness raising and training at all levels to ensure political will developed to support this work
Buyer for the PES not forthcoming	Organizational	L	The Government of Ethiopia has committed to buying the ecosystem services generated by the project activities and attracting additional buyers by the end of the project. Payments will come from National Government (MEF – at national and regional levels) and the CRGE Funding Facility budgets. From the federal government budget allocation, regional governments are required to allocate 2% of their budget for environmental activities. Some of this funding will be used to pay for PES.
Lack of acceptance of the concept of PES - development of such a system is non-trivial, as it involves a major change in understandings	Organizational	M	Through awareness raising, education and visits to countries such as Uganda and Kenya where PES is operational, the project will provide evidence of the win-win-win benefits of PES. The Humbo Project site in Ethiopia – where payments for carbon sequestration are being tested will also serve as a useful demonstration
Poor PES design and / or implementation: **1)** Non-compliance with contractual conditions; **2)** Poor administrative selection (i.e., contracts are offered to areas or individuals who are not in the best position to supply environmental services cost-effectively); **3)** Spatial demand spillovers (i.e. "leakage") - protecting a resource in one location pushes pressure onto resources elsewhere; **4)** Adverse self-selection, where people would have supplied the contracted PES or activity even in the absence of a	Organizational	M	The project will ensure all lands receiving payments meet certain basic criteria in terms of biodiversity conservation. (Not business as usual farming). These will be included in the agreed site management plans and communities will only be paid the PES when the M&E shows that these indicator species continue to be present As a mitigation strategy, the project will adopt a phased approach phased approach where an initial fixed payment is made, and then based on the more detailed information, a payment for services is designed, and a robust monitoring framework is put in place. In cases where this is not met, the commensurate payment will not be received.

payment.			There is room to adaptively manage the risks during implementation as this is a pilot. Last but not least, activities and outputs under Outcome 2 have been designed to ensure awareness raising, capacity building and education on PES at all levels for those involved in the project (also wider decision makers to national levels) notably Output 2.1 Activities 2,6,7,8; Output 2.2 Activities 1,2 and Output 2.4 Activities 1,2,3
Opportunity costs of PES are too high - the payments received are not sufficient to engender sustainable land use that is competitive against alternative incomes paid from contra conservation land uses.	Financial	L	Evidence from the field during the PPG and reports from zonal technical officers' shows that agriculture in the target sites is mostly for subsistence. Opportunity costs are therefore low.
Lack of effective governance of funds	Financial	L	Transparency, accountability, effective revenue sharing and reward schemes will be put in place in order to ensure that funds are managed properly.
Land tenure and property rights issues	Financial	L	Pilot sites are communal areas, and PES will developed between Government and the local CBO / cooperative via an independent broker, with appropriate legal advice – and using example of Humbo as a model PES scheme
Risks associated with direct payments for conservation	Financial	M	Direct payments are sometimes seen as undesirable because they require an ongoing financial commitment to maintain the link between the investment and the conservation objectives. The PES envisaged in this project will be paid by from Government budgets (both national and regional), which will ensure sustainability and continuity. Direct payment approaches are not "silver bullets" that can be applied immediately and easily in all situations. Broader policy interventions, such as removing perverse direct and indirect subsidies that encourage the loss of habitats and their biodiversity, clarifying land tenure / resource rights and strengthening governance and enforcement need to be part of the equation. There is also need to build strong institutional frameworks both at the national and local level – which is part of the project.
CRGE, land use planning and EIA systems top-down	Organizational	L	Project will adopt a bottom-up approach, in which local institutions do not replace national and international development actors, but they serve as an essential complement that ensures a bottom-up

			component emerges from participating communities. Building sustainable communities requires a proactive, localized, and highly participatory approach that depends upon the unique role and capabilities of local government and the engagement of a wide range of stakeholders.
Lack of capacity of local CBOs – but considerable community autonomy and participatory management within the community will be required for the success of the PES.	Organizational	M	Technical and financial capacity will be built within communities as part of project – with support of woreda, zone and regional technical officers to support vulnerable communities.
Social issues – project exacerbates social inequalities	Other	M	Project activities will be inclusive and planned to involve wide participation of all community members
Over the project period, Ethiopia is likely to witness continuing increases in weather variability, frequency of extreme events and climatic changes that may have deleterious impacts on ecosystem services and biodiversity over which land users have no control	Environmental	M	Ongoing assessments will measure and take into account changing climate conditions, and project activities such as community land management planning and training in land management will be adapted based on these assessments.

***Risk Categories: Financial, Operational, Organizational, Political, Regulatory, Strategic, Other (UNDP/GEF Risk Management Strategy - Resource Kit)**
****Level of Impact – H (High Risk), M (Moderate), L (Low)**

2.4 Alternative Strategies Considered

Indirect payments for conservation - These include payments/incentives that encourage rural communities to maintain biodiversity by helping them to use it sustainably. They may also provide alternative sources of products, income, or social benefits (schools, wells, clinics, etc.) as a means of encouraging communities to cooperate. Examples include initiatives like Integrated Conservation and Development Projects (ICDP) and Community-Based Natural Resource Management (CBNRM). These kinds of efforts have been referred to as "conservation by distraction" (Ferraro, Simpson 2002).

Indirect payments are generally considered to be a less effective and efficient mechanism for conservation than direct payments. Some studies have pointed to basic conceptual flaws; for example, people are more likely to incorporate new sources of income as complements to existing activities rather than as substitutes for them. Others have noted that the technical, economic, social, and political conditions needed for an indirect approach to succeed are difficult to find in the real world. For conservation initiatives that encourage extractive activities (e.g., non-timber forest product collection), sustainability remains a key concern. A recent review of ICDPs declared that there was "a notable lack of successful and convincing cases where people's development needs have been effectively reconciled with protected area management."

There are other important factors why direct payments are considered to be more efficient than indirect payments:

a) *Administrative costs*: Existing direct payment initiatives in other countries have estimated administrative costs from 5% to 25% of the operating budget, whereas indirect payments have administrative costs at least as high, and often higher.

b) *Cost efficiency*: Direct payment approaches are considered to be more cost-efficient than any indirect approach. For example, an analysis of a conservation intervention in south-eastern Madagascar indicates that, were the nearly $4 million of available conservation funds invested in annual payments conditional on the

protection of forest, about 80% of the original forest could have been protected into perpetuity, whereas only 12% could have been protected through support of indirect incentives. Furthermore, rural residents receiving conservation payments would have received incomes two times those that could be generated through an indirect intervention.

c) *Affordability*: Paying people to protect biodiversity and ecosystems services is affordable. For example, the middle-income nation of Costa Rica pays rural residents about $35 annually per hectare of forest protected, and excess demand for conservation contracts suggests that these payments are considered to be attractive. Even cheaper and closer to Ethiopia, The Wildlife Foundation in Kenya is securing migration corridors on private land through conservation leases at $4 per acre per year (1ha is 2.47 acres, thus $9.88/ha/yr).

d) *Development benefits*. The indirect approach is considered to be attractive because it appears to achieve conservation and development objectives simultaneously. However, direct payments benefit participants by improving cash flows, providing a fungible store of wealth and diversifying sources of household income. Furthermore, under a payment approach, the land holders/resource users decide how best to meet their own goals and aspirations, rather than being subsidized to carry out predetermined activities as is the case under the indirect approach. This project will pay birr annually directly to each CBO whose members meet the criteria agreed in their management plans and the CBOs will use their pre-agreed system for disbursement of the funds to all eligible members in an open and transparent approach.

Wider geographical coverage for project: was also considered. Two regions, namely Dire Dawa and Harar, which were involved at early stages in plans for a GEF biodiversity conservation project, proposed to include as part of the project the development of ex-situ botanical gardens to conserve vulnerable medicinal plants. This option was eventually rejected as it does not fit well within Output 2 as they would not provide in-situ ecosystem services necessary for the PES. Inclusion of these regions would also have reduced the funding available per site and thus risked reducing the impact of the project on-the-ground, which is considered very important for the pilot PES (Outcome 2).

2.5 Country Ownership and Eligibility

The project is the outcome of a comprehensive national dialogue between all relevant national, regional and local stakeholders, including NGOs and the private sector. During the preparation of the project (in 2011), concept notes were solicited from all relevant stakeholders – finally six regions / groups including universities submitted concept notes, some including not only BD, but also LD, CCA and CCM. The concepts are incorporated into the August 2013 PIF. During the PPG, the stakeholders were again consulted in more detail (see Annex 11), field visits were undertaken to all the proposed pilot sites and stakeholders were involved in a series of three workshops: the Inception Workshop; a review of the draft project document; and a final validation workshop.

The project is consistent with Ethiopia's Growth and Transformation Plan (2010-2015) which acknowledges the environment as one of the pillars to sustainable development. Further, the project is in line with the National Biodiversity Strategy and Action Plan (2007), which highlights the need for conservation of biological diversity outside the protected area system to be integrated within strategic land use plans, local level plans and sustainable agricultural and pastoral production strategies. Further the NBSAP states that it is important to ensure that the local communities involved in park, forest and wildlife conservation and management programmes which conserve biological diversity on behalf of the country receive appropriate economic benefits (i.e. PES).

The project is in line with Ethiopia's Fifth National Report to the Convention on Biological Diversity (FDRE, 2014).

The project will also contribute to Ethiopia attaining the Aichi targets, specifically:

> Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems;

Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced;

Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Ethiopia is eligible to receive GEF funding for biodiversity conservation as the country has been a Party to the Convention on Biological Diversity since it ratified the treaty on 5 April 1994.

2.6 Conformity to the GEF Focal Area

The project aims to mainstream biodiversity conservation and sustainable use into the main national policy driver (the CRGE) and pilot a system of payments for ecosystems services to ensure selected production landscapes in threatened ecosystems shift to biodiversity friendly practices. The project has therefore been designed to contribute to the GEF Biodiversity Focal Area strategy;

Objective 2: Mainstream biodiversity conservation and sustainable use into production landscapes, seascapes and sectors;

Outcome 2.2: Measures to conserve and sustainably use biodiversity incorporated in policy and regulatory frameworks.

2.7 Linkages with Other Projects

Sustainable Development of the Protected Area System of Ethiopia: (SDPASE): (currently in Phase II, which is from 2009 to 2016)

The UNDP-GEF funded project is mainstreaming the Protected Area System in the overall development context of Ethiopia, and is making the economic case for investment in protecting Ethiopia's biodiversity. The proposed project is building on the work started by SDPASE although it is making the case for investing in conservation and sustainable use of biodiversity outside of the protected areas.

The Biodiversity Project (Strategic Priority One (BD1) and OP1-4)) addresses capacity building across the whole protected areas sector of Ethiopia, in order to achieve a sustainable national protected area system. The project recognized the relatively weak sectoral situation, whereby the protected area system was under resourced and marginalized from the national development agenda. The project notes that past donor support to the protected areas was piece meal, focusing on individual protected areas rather than addressing the main policy and capacity enabling environment. Immediately prior to the project start, there were some positive developments in Ethiopia, with a more supportive attitude to the sector, with the approval of national policies and draft proclamation (law) for wildlife. Most importantly, protected areas are being adopted in the SDPRP II indicator matrix – thus, they are being considered as a high priority for development by the government.

The project builds on these gains and was approved by GEF as a two tranche, eight-year project, with the first tranche focusing on the national system in terms of capacity building training and integrating the protected area system into mainstream development. Developing WB led investments into the tourism sector and into critical watershed management offer entry points for such integration. Co-finance pilots on-ground protected area management models at two – three major protected area landscapes, which feed into the capacity process. The current second tranche consolidates the capacity gains, implements the business plan, and is assisting the replication of protected area management process.

Mainstreaming Agrobiodiversity into the Agricultural System of Ethiopia (2010-2015)

The main objective of this UNDP-GEF funded project is to provide farming communities with incentives (policies, capacity, markets and knowledge) to mainstream conservation of agro-biodiversity, including crop wild relatives into the farming systems of Ethiopia.

This is being achieved through three main outcomes. These are: 1. Enabling policy and institutional framework supporting in situ conservation of agrobiodiversity and crop wild relatives, 2. Markets provide incentive for farmer uptake of agrobiodiversity friendly practices, particularly for wild Arabica coffee, enset, tef and durum

wheat and, 3. Crop Wild Relatives and farmer varieties of wild Arabica coffee, durum wheat, enset and tef are conserved in in situ gene banks and on-farm conservation sites.

The focus of the project is conservation of four crops and their wild relatives in four project sites. These are Arabica coffee in Yayu Forest, tef in Minjar Shenkora, enestte in Kembata and timbaro and durum wheat in Gimbichu Woreda. Partnerships formed and lessons learnt at the pilot sites are being widely disseminated across regions and up to the federal level for strategic planning work.

SIP: Community-Based Integrated Natural Resources Management in Lake Tana Watershed (2010 to 2015)

The objective of this IFAD-GEF project is to increase household income in Lake Tana Watershed through Sustainable Land Management (SLM) practices. This encompasses creating an enabling environment for SLM, strengthening tenure security and addressing the problem of household energy, while improving land productivity and ecosystem integrity and simultaneously conserving globally significant biological diversity and protecting international water sources.

The project's immediate objective will lead to global environmental benefits as a result of reduced land degradation. The project is being executed by Amhara National Regional State (ANRS), Environmental Protection, Land Administration & Use Authority (EPLAUA), Ministry of Agriculture and Rural Development (MOARD).

Humbo Community-based Natural regeneration Project

The World Bank-funded project is Ethiopia's first PES project (a carbon trading initiative). The project has protected 2,728 hectares of degraded forest, and is now restoring and sustainably managing them. Following two years of intensive consultation, planning and negotiations with the communities, also kebele, woreda and zonal officials (2006 and 2007), a farmer-managed natural resource regeneration approach was used to restore the degraded natural forests, with village-level cooperatives subsequently managing the restored forests and where necessary replanting using saplings raised on project nurseries. Apart from local social, economic and environmental benefits, this project has also attracted a funding stream in the form of the Clean Development Mechanism (CDM), thus local communities are also benefiting from the global market in carbon. The project got recognition and was the first project in Ethiopia (also in Africa) to receive temporary certified emission reductions. About 73,000 credits were issued, and the credits were purchased by the World Bank's BioCarbon Fund, which generates income for Humbo residents. The seven CBOs in the project began to receive payments for the carbon credits in 2011 and so-far (to end 20140 have received almost $400,000 – which amounts to $36.65 /ha/yr, directly benefiting the ca 5,000 members – and indirectly also benefiting the ca 2,000 local people who declined to join the CBOs.

The Humbo project expended great efforts to ensure the legality of the scheme – including particularly World Vision facilitated the granting of legally binding tree user rights by government at woreda level, which gave communities confidence that they would benefit from their efforts in restoring the forest. This will be a pre-requisite for the GEF BD project. The Humbo project documentation includes examples / templates for the necessary agreements which should be used as models for the BD project.

The design of the GEF BD project has taken other lessons from the experience of the Humbo project, among other things the necessity of using a highly consultative and participatory approach to gain the trust of communities from day 1, the advice to use farmer managed natural regeneration to restore degraded areas, also exclosures and the requirement that funds be paid via a legally registered cooperative or other CBO. The funds from the sale of carbon credits in the Humbo project are not being distributed to CBO members – but are being managed by agreed 5 year community designed sustainable development plans. This is an option which communities on the BD project could, if desired, adopt.

Key findings of the Humbo project's study on tenure from the project

"Thus, with respect to the site of the Humbo project, as the communities have secured title to the land ……. they have a private property right over the vegetation and trees or other permanent improvements made on the land including immovable property and such right includes the right to alienate, bequeath, and transfer title to third parties."

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"Natural resource is defined as living things and non-living things, which are gift of nature found on the land. Legal counsel and confirmation from the EPA (now MEF), state and Woreda level natural resource management specialists confirm that this includes rights to carbon sequestered in the forest."

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"In the communities at the Humbo site, the specific user rights of the members of the community needs have been clearly articulated in the bye-laws that have been prepared subsequently and which has been the basis for entering into a user rights agreement with the relevant authorities at the Woreda level."

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"With regard to the duration of rights, the Federal land administration and land use Proclamation provides that a rural land use right of peasant farmers, semi-pastoralists and pastoralists shall have no time limit. Since the local community within and around the projects sites are peasants, there will be no time limit regarding their user rights over the land holdings they will be allocated."

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"Legal counsel and confirmation from the EPA (now MEF), state, and Woreda level natural resource management specialists after the preparation of the initial legal report draft has confirmed that carbon sequestered in the forest is equated to "fruits of the land that is produced by the labour, capital or creativity of the landholder" and the landholder thus has the property rights to the carbon."

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2.8 Project Sustainability and Replicability

Social sustainability: The farming (crop and livestock keeping) communities in the project pilot sites have been shown during the PIF and PPG to already have a sense of social cohesion. There are social organizational structures and some have existing governance systems, including cooperatives and community based organisation (CBOs) with existing natural resources management systems for community lands, particularly in the forests and adjacent farmlands. The capacity and strength of these community based management and governance systems will be enhanced and sustained through capacity building for members under the project – where they do not existing, the project will catalyse their establishment.

The rural communities will be supported in their conservation and development efforts through provision of socio-economic services such as early financial incentives for participation, in order to promote the envisaged biodiversity conservation activities successfully. By creating community level awareness and advocacy for biodiversity / wider ecosystem services conservation, it is envisaged that conservation related value systems will be instilled in the peoples' routine developmental activities.

Incentives and disincentives that favour the mainstreaming of biodiversity will be developed through participatory, equitable systems and will be modified based on participatory adaptive management reviews. For example, it is envisaged that communities will formulate local management plans and by-laws or other regulations to guide and govern the actions of its members towards greater biodiversity / ecosystem services conservation, hence inter alia climate resilience – reinforcing social cohesion.

2.8.1 Economic sustainability

The PES system will be developed to recompense land users for the loss of income resulting from their not exploiting the target sites (see Annex 13 for further details). The Government of Ethiopia (through the CRGE) has agreed to fund these payments during the project and by implication into the long term. During implementation of the project and based on the success anticipated by the project, the project will take steps to assist FDRE to identify additional buyers of the PES to further enhance future funding of the CRGE Facility for continuing funding of the PES in the pilot areas post-project and for scaling-up. It is anticipated that the most likely additional buyers of ecosystem services will be:

- ✓ water companies (water supplies and HEP);

- ✓ other private sector high water users (agriculture, horticulture, forestry);
- ✓ REDD+, as the country retains important forests which are at risk of degradation and deforestation;
- ✓ carbon markets – for farmer managed natural regeneration, tree planting, improved management of trees in forests and agroforestry, also silvopastoral systems and dryland soil carbon (being recognised increasingly as a potential low cost opportunity for carbon sequestration based on the vast land areas involved, although low per unit C sequestration potential).

An enhanced appreciation of the economic benefits of conserving the country's wild biodiversity and resulting protection of vital ecosystem services, through the project's awareness raising and education activities, will contribute significantly to sustainability of the project activities and knowledge of the win-win-win benefits will ensure FDRE view PES as contributing to enhancing livelihoods and poverty reduction.

Careful monitoring of the impacts of the PES on the beneficiary and surrounding communities will be used to ensure the system has the intended beneficial effects and avoids negative outcomes (leakage etc.). The pilot system will be designed to be sufficiently flexible to allow for changes to be made during the project (e.g. within the terms of the contracts).

An important element of the external support for sustaining biodiversity conservation is capacity-building of individual farmers to improve their efficiency and skills in improving their livelihoods through adoption of biodiversity friendly agricultural practises on other areas of land. Learning–by-doing and other training approaches, reinforced where possible with study visits, will help encourage farmers to try new farming methods.

Environmental and agricultural sustainability: The project aims to halt loss of high biodiversity Afromontane forests in the three nominated PES sites and encourage reduced grazing of surrounding recently deforested land which will result in assisted natural regeneration of some 5,000 ha - expanding the areas recognized as biodiversity hotspots. In all the communities, awareness raising and education on the win-win-win benefits accruing from biodiversity and ecosystem services and the economic benefits of the PES will sustain these resources. Education will also include biodiversity friendly agricultural practices to enhance ecosystem services, production and the resilience of cropping systems in areas outside the Afromontane forests, using participatory / learning by doing approaches and study visits, to reduce the leakage effects.

The project will also protect sections of the threatened Horn of Africa biodiversity hotspot in Somali region, where indigenous vegetation in the area is not found in contiguous form covering a large area, but rather it is seen as fragmented patches of bush land, shrub land and trees in agricultural sites and on the hillsides. These areas will be more challenging to protect from livestock foraging – but extensive community engagement will be used to raise awareness of the importance of these areas, not least as they include medicinal plants (including Aloe, Pelkia calmelames, Helitropium tenderia and Comberetum mola) on which local people depend for their health).

2.8.2 Replication Strategy

The principle Outcome of this project (Outcome 1) is that the vital importance of biodiversity and ecosystem services are considered more prominently in planning processes (notably the land use planning and environmental impact assessment systems). The project will ensure that the lessons from this project are widely disseminated and emulated to national and local levels, as these achievements will provide a model which other countries in the region can learn from to ensure conservation of wild biodiversity and ecosystem services is effectively mainstreamed.

The PES model (Outcome 2) will be replicated throughout Ethiopia and could be adapted for use more widely across the region, which will enhance good on-the-ground biodiversity management practices that have been demonstrated elsewhere. The project will include sharing lessons learned, using a variety of media and study visits to enable other communities to learn from the experiences of the project.

In addition, a wide range of people at all levels in Ethiopia (inter alia community members and officers from the different sectors of Government at woreda, zone, region and federal levels) will have a much better understanding of biodiversity conservation and the vital importance of that and protection of ecosystem services for sustainable development.

With the participation of different stakeholders at different levels, it will be easier to share lessons and lobby for desired changes, spearheaded by MEF and officers from the different sectors of government. It will be necessary to share information on benefits that communities have gained that have contributed to their well-being. This will encourage replication in other areas more easily.

The project will undertake field research on the impacts of biodiversity policies and laws in relation to PES. Activities will be implemented both at the national level on the development of incentive systems for biodiversity and ecosystems services and on looking strategically on the site systems for conservation related to the four selected sites. Lessons learned at the field level will inform the development of the national strategy and will help build the national strategy through the national dialogue and by involving communities. This will contribute additional opportunities for learning and scaling up the impact of the GEF project. Taken together this suite of initiatives, the project will be able to deliver significant improvements in the prospects for long term conservation of BD and protection of ESs. Thus, the results of this project will be attractive to widely replicate within the country and also elsewhere in the region through a variety of media and linkages with GoE and NGO campaigns.

2.9 Project Incremental Logic

The baseline or "business-as-usual" scenario is that the CGRE would carry on being implemented, with its vision is to achieve middle-income status by 2025 whilst building a climate-resilient green economy. However, it's main focus on GHG emissions reduction - mirroring global attention on the world's biggest environmental problem – means that the importance of biodiversity and ecosystem services to the country is not appropriately acknowledged, hence there continues to be inadequate investment on biodiversity and ecosystem services from the national and regional budgets. Sectors and sectoral policies will continue to work independently, not joining-up in their approaches to protect vital ecosystem services and sectors will fail to mainstream the importance of biodiversity and ecosystem services into their sector plans.

Land users will continue to encroach into areas of high biodiversity to secure their livelihoods, due to a range of pressures including population growth and poverty – and will lack awareness and education into the long-term and potentially irreversible harm they are inflicting on the landscape of Ethiopia for the short, medium and long-term.

The environment of Ethiopia will continue to degrade due to poor management of wild biodiversity and loss of ecosystem services outside national parks, with particularly increasing deforestation leading to degradation of water quality in rivers, siltation of dams, and increased frequency of floods and periods of low river flows. The flora and fauna of the country will continue to be damaged**.**

2.9.1 The GEF Alternative

This project will put in place *safeguards to ensure biodiversity is protected* while complementing the ambitious goals set forth by the GTP and CRGE of transforming Ethiopia to the status of middle-income country by 2030..

At the national level, the project will put in place decision support tools and build the capacity of relevant staff to ensure land use and infrastructure placement decisions do not impact negatively on biodiversity (of local, national and / or global importance) and ecosystem services.

The Biodiversity Expenditure Review (BDER), the very first for Ethiopia, will examine CRGE facility allocations within and among sectors, and/or at national and sub national levels of government, and assess the efficiency and effectiveness of those allocations in the context of biodiversity management and conservation of threatened species. The BDER will also examine whether CRGE spending priorities are effectively matched to

biodiversity priorities, identify areas of inconsistency, and identify reforms needed to improve the effectiveness, efficiency and sustainability. The expected outcome of the BDER inter alia include the redistribution of spending towards biodiversity priorities and support for vital ecosystem services, and towards longer-term goals rather than short-term ones that could result in biodiversity loss and undermine long term economic growth. This will ensure that investments that could result in the degradation of biodiversity are discouraged. The review will look closely at the linkages between the CRGE and national biodiversity policy; and the resource allocation and expenditure processes as they relate to programmes and policies that support biodiversity management. This will result in the values and costs of natural resource depletion to be better reflected in the national accounts, which provide the essential data, on which most economic policy decisions are based.

At the landscape level, the project will pilot payments/incentives for ecosystem services as a mechanism for compensating landholders for avoided land conversion. The payments will provide the additional incentive needed to engender the desired changes in land use. The incentives will be a sustainable complement to the CRGE implementation strategy of reducing GHGs while also ensuring other environmental benefits

Best practices will be widely disseminated to ensure that post-project the model can be scaled-up to benefit much wider areas of Ethiopia.

2.9.2 Co-Financing

The Government of Ethiopia has confirmed co-financing for the project at $15,800,000. This will come from the CRGE Facility, Federal and Regional Budgets. The amount from the national and regional budgets will be both in cash and in kind.

UNDP will contribute US$ 200,000 from the UNDP Country programme.

2.9.3 Cost Effectiveness

Ethiopia's Biodiversity is valued at over US$ 1 billion a year. This includes, among others, wetlands, wildlife, and medicinal plants on which generations of people depended to treat and ward off physical and mental diseases. This project will cost less than 20 million $ (of which 3.63 million $ is GEF) which is highly cost effective given the value of biodiversity and ecosystem services that could be lost without this intervention. Piloting the PES scheme will make the case for additional investments from Government and international buyers from additional buyers of ecosystem services, including from a range of private sector companies (water, HEP, agriculture, horticulture, forestry) and from global carbon markets (e.g. REDD +).

The table below shows the very wide range of economic benefits (local, national and global) of the ecosystem serices of the areas which will be targeted by the project (both those in the pilot PES and also those covered by the improved information reosurces (Output 1.2).

Summary of Economic Values of Ecosystem Services for GNP[14]

	Economic Value	Scale of Analysis	Local Economy	National Economy	Global
Direct Use Values	Employment Opportunities	GNP	√	√	
	Unlicensed hunting	GNP	√		
	Wild food	GNP	√		
	Fish resources	GNP	√		
	Agriculture	GNP	√	√	
	Livestock	GNP	√		

[14] SOURCE: ADAPTED FROM ÖBF (2009)

	grazing				
	Household water	GNP	√	√	
	Medicinal plants	GNP	√	√	√
	Timber and NTFPs	GNP		√	
	Ecotourism	GNP	√	√	√
Indirect Use Values	Carbon sequestration	GNP		√	√
	Water regulation	GNP	√	√	√
	Biodiversity		√	√	√

The Table below was prepared during the PPG as an initial effort to quantify the possible levels of PES which could be provided to the groups of land users (CBOs) [Note, for most categories there are minimum and maximum values which differ greatly, and there remain gaps in information

Range of Values of Ecosystem Services for Pilot Sites[15]

Category	Details	Value ($/ha/yr)	
		min	max
Biodiversity	total - Koorsgard (2006)	1	30
	medicinal plants - Mander (2006) and Sutcliffe (2009)	4	4
	genetic resources	?	?
	direct use values of forests and woodlands	?	?
	livelihood support values of forest resources (wood, fodder, fruit, medicinal plants etc)	181	181
	sub-total	***186***	***215***
	total economic loss due to deforestation (Öbf, 2009)	***660***	***660***
Hydrological	Water consumption	50	400
	Water quality control	20	1,400
	Flood mitigation	2	1,700
	Ground water replenishment	10	90
	Erosion control (increase lifespan of dams, reservoirs etc; increases available electricity from HEP; improves water quality; reduces flooding hazards)	20	120
	Microclimate stabilization	10	10
	sub-total	***112***	***3,720***
Carbon Stock	woody biomass	?	?
	other above-ground biomass (small branches, twigs, leaves)	?	?
	below-ground biomass, SOM, deadwood, litter	?	?
	sub-total	***0***	***0***
Direct Use Values	Recreation and Tourism	?	?

[15] Source: principally Öbf (2009) and others as mentioned in table

	Employment	?	?
	Agriculture	?	?
	Livestock grazing and fodder collection	?	?
	Timber, firewood and NTFPs (Watson, 2007 - Bale study - $407/hh in park/yr)		
	Medicinal resources (see in BD)		
	Water usage (see in hydrological)		
	Electricity production (see in hydrological)		
	Irrigated agriculture (see in hydrological)		
	sub-total	***0***	***0***
Indirect Use Values	Biodiversity (see above)		
	Climate change mitigation (carbon stocks - example Harenna Forest = $7,666 - 200 tonnes carbon/ha) Obf (2009) indicate value in REDD project $25/ha/yr	25	25
	sub-total	***25***	***25***
Option Values	Genetic resources (coffee $280/ha/yr - Sutcliffe (2009))	?	?
	sub-total	***0***	***0***
Existence Values	Cultural, spiritual	?	?
	Wilderness and Iconic	?	?
	Knowledge and education	?	?
	sub-total	***0***	***0***
Possible PES Total		**359**	**3,996**

3 Project Results Framework:

This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD: Support the establishment of a financing facility to enhance access to new and additional financial flows					
Country Programme Outcome Indicators: By 2015, the governance systems, use of technologies and practices and financing mechanisms that promote a low carbon climate resilient economy and society have improved at all levels. Outcome indicator: No. institutions that have mainstreamed climate change adaptation and mitigation; % of incremental finance mobilized; national CC financial mechanism established. Related Strategic Plan focus areas: Env. and Sust. Dev.					
Primary applicable Key Environment and Sustainable Development Key Result Area (same as that on the cover page, circle one): 1. Mainstreaming environment and energy ~~OR~~ **2. Catalyzing environmental finance OR 3. Promote climate change adaptation OR 4. Expanding access to environmental and energy services for the poor~~.~~**					
Applicable GEF Strategic Objective and Program: Biodiversity Focal Area Objective 2: Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors					
Applicable GEF Expected Outcomes: Outcome 2.2: Measures to conserve and sustainably use biodiversity incorporated in policy and regulatory frameworks.					
Applicable GEF Outcome Indicators: Indicator 2.2: Polices and regulations governing sectoral activities that integrate biodiversity conservation as recorded by the GEF tracking tool as a score.					
	Indicator	**Baseline**	**Targets** **End of Project**	**Source of verification**	**Risks and Assumptions**
Project Objective[16]	(i) A comprehensive GRCE that recognize conservation and sustainable use of BD as a major contributor to its goal of increasing GDP; and delivers a coherent response to BD loss, and CC. [the baseline and target in current PRF does somehow tackle this but as the title of the project is "mainstreaming incentives for BD conservation in the GRCE strategy" I suggest that the objective indicator is focused on the CRGE;	The importance of biodiversity conservation not adequately appreciated across sectors – or the budget process in Ethiopia	The importance of biodiversity conservation is better recognised at all levels in Ethiopia – including in the federal budget process, investment in the environment is increased and decision makers in the planning system are better able to make decisions to protect biodiversity and ecosystem services. Pilot PES operational in four sites. At least 20,000 ha of the highly threatened afromontane ecoregion are under improved stewardship by community land managers, as a result of the PES scheme piloted, indicated by no loss of habitat in BD sensitive areas (from clearance for agriculture, deforestation for fuel / building wood or grazing).	Project M & E MOFED reports MEF reports	Assumption - national stakeholders remain supportive and willing to fund PES Risk – economic development objectives overtake commitments to biodiversity and protection of ecosystem services

[16] Objective (Atlas output) monitored quarterly ERBM and annually in APR/PIR

	(ii) At least 20,000 ha of the highly threatened afro-montane forests [wording needs to change due to forests not targeted but rather ecoregion] are under improved stewardship by community land managers, as a result of a PES scheme piloted, indicated by no not loss of habitat in BD sensitive areas (from clearance for agriculture).				
Outcome 1[17]: The enabling framework for mainstreaming incentives for biodiversity conservation into the CRGE at national level strengthened	Improved recognition of conservation and sustainable use of biodiversity as a major contributor to the CGRE strategy of increasing GDP; and delivers a coherent response to biodiversity loss, and climate change. Requisite staff capacitated and well positioned to use desicison support tools and the results from BPER, and other relevant studies regularly in their decision-making Better cooperation and interaction of institutions involved in managing the response to biodiversity loss and climate change	GoE budget not coded for environment No BDER Importance of biodiversity conservation is in planning and EIA systems but staff have limited capacity to implement systems	Biodiversity Expenditure review completed GoE budget coded for biodiversity expenditure Decision makers more aware of the importance of Biodiversity to national and local economies and willing to redirect greater financial support to the Biodiversity sector 6 regional level large scale digital maps of critical biodiversity areas developed; Biodiversity score cards in place to determine a) no go areas (b) areas where developments may be allowed but with certain minimum conditions - target 6 (by end PY 2) Spatial data, decision support tools and training provided to staff in all regions to better equip them to implement systems to support	Project M & E MOFED reports MEF reports	Assumption - national stakeholders remain supportive

[17] All outcomes monitored annually in the APR/PIR. It is highly recommended not to have more than 4 outcomes.

			protection of biodiversity and ecosystem services in sustainable development Key staff trained in all relevant sectors at all levels on how to use the maps and scorecards for better land use planning and investments - – target 24 (by end PY2), 16 more (by end PY3), 24 more (by end PY4)		
Outcome 2: Payments for biodiversity conservation and wider ecosystem services is piloted at selected sites	Enhanced conservation security for the following threatened species *Abyssinian longclaw, Swayne's Hartebeest, Ethiopian Wolf, and sub-species of Menillek's Bushbuck* *Other globally threatened/near threatened species like Wattled Crane, Lesser Kestres, Fallid Harrier, Lesser Flamingo and Fiedmann's Lark* *Endemic plant species such as Acanthus sennii, Echinops ellenbeckii, Erythrina brucei, Euryops pinifolius,*	No land under PES in selected pilot sites	At least 20,000 ha under PES agreements in pilot sites. At least 25% of land users in pilot areas benefiting from PES 50 % of land users increasingly aware of importance of BD and ESs At least 25% of land users using SLM technologies to enhance production in non-PES pilot areas Key local staff of MEF and other local institutions (including universities) trained in negotiation, contracting, transaction, monitoring and verification to effectively manage the PES schemes [18] [60 overall (10 per pilot area and 20 additional for scaling-up) *Metrics for determining the*	Project M & E MEF and EPA Bureau reports	Assumption - national stakeholders remain supportive and willing to fund PES

[18] More specific targets in the logical framework

	Kniphofia foliosa, Lobelia and Aloe. *Coffea Arabica, Prunus Africana, Podocarpus falcatus, Terminalia brownie,* Land use changes under PES, result in increased forest cover, reduced habitat loss and habitat degradation by 35% Institutional capacity of national and provincial governments (*woredas*) is emplaced to coordinate PES programmes, allowing for the systematic scale up of PES across the Afromontane forests (covering at least 20,000 hectares) Increased government investment in pro-conservation PES in the afromontane forests by EOP		*payments designed:* Ecosystem services in the selected sites are defined, measured and assessed; amount of payment is determined Prospective sellers to supply ecosystem services identified; and their capacity to modify land use practices is enhanced through technical assistance / extension on biodiversity friendly land use practices PES agreements are brokered between sellers and Government specifying conditions for payments (Value of service; mode of payment; delivery of service) agreed upon by Government and sellers and operationalised through contracts Institutions in place to manage the PES scheme – such as negotiation, contractng, transaction, verification, Monitoring and verification system measures the impact of intervention (PES) on land use changes (actual delivery of ecosystem services), biodiversity and livelihoods in the target sites using standards and indicators derived from baseline information.		

PROJECT BUDGET

Award ID:	00087290	Project ID(s):	00094366
Award Title:	Mainstreaming Incentives for Biodiversity Conservation in the Climate Resilient Green Economy Strategy (CRGE), Ethiopia		
Business Unit:	ETH10		
Project Title:	Mainstreaming Incentives for Biodiversity Conservation in the Climate Resilient Green Economy Strategy (CRGE), Ethiopia		
PIMS no.	4644		
Implementing Partner (Executing Agency)	Ministry of Environment and Forest		

GEF Outcome/Atlas Activity	Responsible Party/ Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Total (USD)	Budget Note:
OUTCOME 1: The enabling framework for mainstreaming incentives for biodiversity conservation into the CRGE strengthened	**MEF**	**62000**	**GEF**	71200	International Consultants	30,000	70,000	21,000	55,000	176,000	Provision to hire regional / international experts to support national project staff (esp Output 1.1) if required – no of days/yr 50,50,53,25 at $600/day). Also MTE ($40,000) and TE ($40,000)
			GEF	71300	Local Consultants	54,000	64,000	18,000	34,000	170,000	Environmental Economics Consultant to work on Output 1.1 (120 days in Yr 1; 120 days in Yr 2; 20 in Yr 4); Inter-Sectoral Info and Communications Consultant to support Output 1.3 - esp including Activity 5 awards (60 days/yr) = both at $300/day Also MTE ($10,000) and TE ($10,000)
			GEF	72100	Contractual services	78,000	78,000	78,000	78,000	312,000	Output 1.2 Activities - RS / GIS, also BD expertise and data costs to develop decision support tools. Also annual audits
			GEF	71600	Travel	25,000	30,000	25,000	30,000	110,000	Local travel, also DSAs etc for regional / international consultants. Also MTE and TE
			GEF	74200	Audiovisual and print production	20,000	20,000	20,534	21,000	81,534	Reproduction of: large scale digital maps to target regions, also other regions as part of scaling-up; decision support tools (checklists, score cards etc.)

			GEF	75700	Training and conferences	35,000	45,000	40,000	45,000	165,000	Trainers to train MEF and other staff - Output 1.2 Activities 3 and 4. Also IW, MTE and TE
			GEF	74500	Miscellaneous expenses	1,000	1,000	1,000	1,000	4,000	
			Total - Outcome 1			**243,000**	**308,000**	**203,534**	**264,000**	**1,018,534**	
OUTCOME 2: Payments for biodiversity conservation and wider ecosystem services is piloted at selected sites	**MEF**	**62000**	**GEF**	71200	International Consultants	36,000	45,600	36,000	36,000	153,600	Provision to hire regional / international experts to support national staff / consultants if required
			GEF	71300	Local Consultants	69,000	78,000	66,000	60,000	273,000	Field Environmentalists at pilot sites + part-time Technical Advisor (consultant)+ Legal Consultant for Output 2.1 (30 days in Yr 1; 60 days in Yr2; 20 in Yrs 3 & 4)
			GEF	72100	Contractual services	200,000	60,000	60,000	100,000	420,000	For the four universities' support service to pilot sites (Output 2.1) - high in Yr 1 for pilot surveys and Yr 4 for final survey (Yr 1 - $50,000 per pilot site local university, Yr 2 – $15,000, Yr 3 – $15,000, Yr 4 - $25,000)
			GEF	71600	Travel	40,000	40,000	40,000	40,000	160,000	Pilot sites are remote but regular visits will be required throughout project, also DSAs etc for regional / international consultants
			GEF	74200	Audio-visual and print production	20,000	20,000	20,000	10,393	70,393	Developing materials in local languages / for those unable to read etc
			GEF	75700	Training and conferences	200,000	200,000	200,000	200,000	800,000	Universities and / or NGOs - including awareness raising, securing MoUs, tech and financial training - Outputs 2.1 and 2.2, also Outputs 2.4 and 2.5
			GEF	74100	Professional services	10,000	10,000	35,000	35,000	90,000	Independent broker for PES - Output 2.1 (intermediary between the buyer and seller of the ESs)
			GEF	72200	Equipment and furniture	80,000	24,000	24,000	24,000	152,000	pilot site offices, field equipment (GPS etc), laptops, motorbikes
			GEF	74500	Miscellaneous expenses	6,000	5,000	5,000	5,000	21,000	
			Total - Outcome 2			**661,000**	**482,600**	**486,000**	**510,393**	**2,139,993**	
Project Management Unit	**MEF**	**62000**	**GEF**	71300	Local Consultants	33,000	33,000	33,000	33,000	132,000	NPM, Federal and 4 Pilot Site Finance Officers + M&E Officer
			GEF	72200	Equipment and furniture	10,000	3,000	3,000	3,000	19,000	PMU office IT etc
			GEF	74500	Miscellaneous expenses	1,700	1,700	1,700	1,826	6,926	

			Total - Project Management Unit	44,700	37,700	37,700	37,826	157,926
	Project Total			948,700	828,300	727,234	812,219	3,316,453

Summary of Funds: [19]

	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Total (USD)
GEF	948,700	828,300	727,234	812,219	3,316,453
Donor 2 (UNDP)	50,000	50,000	50,000	50,000	200,000
Donor 3 (FDRE - cash)	0	0	800,000	800,000	1,600,000
Donor 3 (FDRE - in-kind)	3,550,000	3,550,000	3,550,000	3,550,000	14,200,000
TOTAL	4,498,700	4,378,300	5,177,234	5,262,219	19,316,453

[19] *Summary table should include all financing of all kinds: GEF financing, cofinancing, cash, in-kind, etc...*

4 MANAGEMENT ARRANGEMENTS

4.1 Project Management & Implementation

The project will be implemented over a period of four years beginning in 2015 (to 2018).

Execution Modality: The project will be executed under UNDP National Execution (NEX) procedures. The Ministry of Environment and Forest (MEF) will have overall responsibility for the project, and will involve all other relevant institutions such as Ministries of Agriculture and regional governments in the implementation of the project. The project will engage the technical services of various institutions, notably universities local to each project PES pilot site, NGOs (local and international) also individual consultants (technical and legal) to provide the necessary expertise to achieve the project Outputs and Outcomes, in particular the mainstreaming biodiversity in the CRGE and other sector policies, ensuring the legality of the payment for ecosystem services system developed and working with community groups. The selection processes will be a competitive, transparent and consultative process, involving the UNDP country office as well as the GEF Regional Office in Addis Ababa.

Oversight: Project activities will be implemented at the national and site levels. Coordination among various Government agencies, Woredas and Federal levels and relevant stakeholders will be achieved through creation of a Project Management Unit (PMU) and a Project Steering Committee (PSC). The Project Steering Committee will represent the various interests of stakeholders as detailed below (Figure 5).

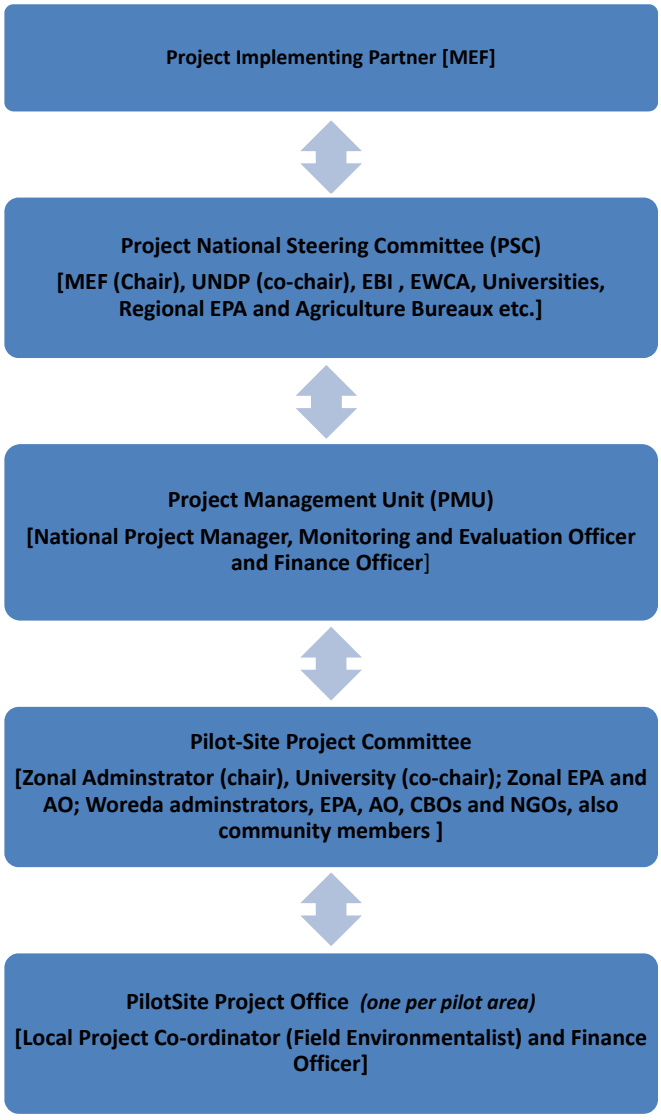

Figure 5: Project Organisational Structure

Project Steering Committee: The Project will be guided and overseen by the Project Steering Committee (PSC), the highest decision making organ of the project. The PSC shall be housed within the MEF. The PSC

will be chaired by the Executive Director of the MEF or his/her representative and shall be responsible for supervising project development, guiding project activities through technical backstopping and for contracting staff where necessary. UNDP will co-chair the PSC. The PSC members shall meet at least twice each year and comprise representatives from UNDP, participating Universities, other MEF technical staff, EBI, Ministry of Agriculture, MoFED (CRGE) and Regional Agricultural Offices. The Project Manager will provide Secretarial Support to the PSC while the Technical Adviser and Policy and Legal Expert will be members of PSC as ex-officio observers (one designated as responsible for taking and distributing minutes). The Local Project Co-ordinators (Field Environmentalist) shall attend meetings of the PSC by invitation and only on a need to basis.

The PSC will arbitrate on any conflicts within the project or negotiate a solution to any problems between the project and external bodies. In order to ensure UNDP's ultimate accountability, Project Steering Committee decisions should be made in accordance with standards that shall ensure best value for money, fairness, integrity, transparency and effective international competition. Specific responsibilities of the Project Steering Committee are divided into two: during implementation and closure.

During implementation, the PSC will in particular provide overall guidance including policy input and functional guidance as well as direction to the project, ensuring it remains within any specified constraints. It will therefore provide guidance and agree on possible countermeasures/management actions to address specific risks. It will conduct regular meetings to review the Project Quarterly Progress Report and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans. It will also review Combined Delivery Reports (CDR) prior to certification by the Implementing Partner. In addition, it will appraise the Project Annual Review Report, make recommendations for the next Annual Workplan, and inform the Outcome Board about the results of the review. Finally, it will review and approve end of project report, make recommendations for follow-on actions.

During project closure, the PSC will ensure that all project deliverables have been produced satisfactorily. In this regard, it will review and approve the Final Project Review Report, including Lessons-learned, and make recommendations for follow-on actions to be submitted to the Outcome Board. It will also notify the Outcome Board on the operational completion of the project.

The Ministry of Environment and Forests (MEF): MEF will be the Government Cooperating Agency will be responsible for implementing the project. As the implementing partner, MEF will be responsible for the delivery of the project results and accountable for resources provided, in accordance with UNDP rules and procedures.

In order to ensure an effective Project Steering Committee, the Head of the Woredas hosting pilot sites and the beneficiary communities, will nominate one individual to represent them on the PSC. Furthermore, the beneficiary communities may choose either a competent individual or a CBO representative, as may be deemed appropriate. As representatives of beneficiaries, they will be responsible for validating the needs and for monitoring that the solution will meet those needs within the constraints of the project. They will prioritize and contribute beneficiaries' opinions on PSC decisions, and contribute to resolution of priority conflicts.

United Nations Development Programme (UNDP): UNDP will be responsible for provision of resources as well as technical expertise to the project, drawing on its knowledge networks and pool of experts, and through external sourcing. It will also be responsible for project assurance, ensuring that the project is implemented in accordance with the rules and procedures for managing UNDP projects. In particular as a member of the PSC, UNDP will promote and maintain focus on the expected project outputs; arbitrate on, and ensure resolution of, any donor priority or resource conflicts; contribute opinions on PSC decisions on whether to implement recommendations on proposed changes; ensure that any standards defined for the project are met and used to good effect; and monitor any risks in the implementation aspects of the project.

Project Management Unit: The PMU shall be located within the Ministry of Environment and Forests (MEF) and will be responsible for day-to-day oversight and coordination of implementation of project activities including supervision of activities contracted to consultants. The PMU shall consist of a Project Manager (PM) and Financial Officer. The PM will be the head of the PMU and will report to MEF. S/he will maintain liaison with UNDP, and be responsible for national level outcomes as well as support to the site level project activities as outlined below.

Site Level Project Management: The project will have four pilot sites. Activities at each site will be coordinated by a Local Coordinator (Field Environmentalist) and Finance Officer. The project Pilot-Site Project Committees (PSPC) will be under the guidance and technical back-up of the National Project Manager.

At the project pilot PES sites, the PSPCs will consist of representatives of all the project's local stakeholder institutions and beneficiaries. Site committees will be responsible for catalysing and maintaining linkage between sectors (environment, wildlife, forestry, planning, land water, agriculture, etc). The site committees shall be responsible for guiding and coordinating the delivery of site activities. They will meet at least once every quarter to review work plans, review progress, discuss implementation barriers, agree on ways of addressing conservation barriers, forge linkages, harmonize activities, exchange information and experiences, provide guidance for implementation, make financial decisions and raise funds. Site committees will be chaired by the Zonal Administrator and co-chaired by a representative of the involved local University. Other members will include representatives of the Zonal EPA and AO, Woreda administrators, EPA, AO, CBOs and NGOs, also community members (men and women including elders and the youth).

Site committees will be chaired by the Head of the Zone where the pilot PES target areas are situated. The project financed Local Coordinator (Field Environmentalist will support the operations of the site steering committees by running day to day affairs of the project, ensuring development of joint workplans, receive funds, deliver activities according to work plans, prepare reports and account for their funds in a timely manner. The site policy officers are secretaries to the site committees.

Project activities at the pilot site level will be integrated into the existing structures, in particular to the Woreda and kebele extension systems, CBOs and local NGOs (for sustainability). Due to the weak capacities in these institutions, the project site team will invest considerable efforts and resources in capacity building, which will be key in sustaining project activities after the end of the current project budget. At this level a local project implementing committees / coordination units / task forces (as deemed appropriate) work to ensure activities are implemented successfully and effective dissemination of project related information to a broad array of stakeholder groups. As implementation progresses and capacities increase, it is expected that village associations and local organisations as well as woreda councils will take on an increasingly responsible role in decision making, with the support of the Kebele and Woreda technical institutions. These decisions will include local project activities, PES distribution and other financing decisions.

Technical Assistance: Short-term national as well as limited international technical assistance (TA) will be provided to the project on a consultancy basis, in order to overcome barriers and achieve the project outputs/outcomes. Particularly, this is anticipated to be require for the wide range of awareness raising, education and training to all levels (community members, local and national technical staff to senior decision makers) which are fundamental to the project (inter alia using participatory approaches; the win-win-win benefits of biodiversity / ecosystem services, adapting to climate change and wider environmental sustainability; technical issues on payments for ecosystem services (ideally using materials from TEEB); biodiversity friendly land use practices]; the role of broker between communities and Government in the PES. TA will be directly contracted by the PSC, through a transparent procurement process (i.e. the development of Terms of References and recruitment) following UNDP regulations and will directly assist the implementing entities and report to the PSC.

Many of the project activities are innovative and need some level of local consultancy input. Where needed these local and international consultancy inputs have been identified and budgeted.

Funds flow; Project funds will pass from GEF to UNDP and thereafter distributed to the implementing and executing agencies/institutions in accordance with specific tasks agreed upon and outlined in periodic work plans.

Public involvement Plan: Project preparation was done through a highly participatory process involving national consultation workshops (to provide information as well as to inform stakeholders about the intentions of the project). This highly participatory process will be continued during project implementation. At the national level, the project will engage with Federal governments, donors, NGOs, experts and representatives of relevant Regional governments in the planning and implementation of all project activities. The project will also seek to inform all stakeholders of the values of the biodiversity and

ecosystem services, the problems that they are facing, and why they need better management. The MEF will be heavily involved with this work, although all partners will also play their part.

A detailed schedule of project review meetings will be developed by project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Project Steering Committee Meetings and (ii) project related Monitoring and Evaluation activities.

4.2 Project Reporting

The core project team, in conjunction with the UNDP-GEF extended team, will be responsible for the preparation and submission of various reports, some of which form part of the monitoring process.

Day-to-day monitoring of implementation progress will be the responsibility of the Project Manager (PM) based on the project's Annual Work Plan and agreed indicators, with feedback provided from the site project officers. The PM will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion. The PM will also fine-tune the progress and performance/impact indicators of the project in consultation with the full project team at the Inception Workshop with support from UNDP-CO and assisted by the UNDP-GEF Regional Coordinating Unit. Specific targets for the first year implementation progress indicators together with their means of verification will be developed at this Workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

Measurement of impact indicators related to global biodiversity benefits will occur according to the schedules defined in the Inception Workshop, using METT scores, assessments of the project PES target areas and other means. Periodic monitoring of implementation progress will be undertaken by the UNDP-CO through quarterly meetings with the Implementing Partner, or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities. Bi-annual monitoring will occur through the Project Steering Committee (PSC) meetings. This is the highest policy-level meeting of the parties directly involved in the implementation of a project. The PSC will meet at least two times a year, more if necessary. The first such meeting will be held within the first six months of the start of full implementation.

A terminal PSC will be held in the last month of project operations. The PM is responsible for preparing the Terminal Report and submitting it to UNDP-CO and UNDP-GEF RTA after close consultation with the Local Project Co-ordinators, the Technical Adviser and the Policy and Legal Expert. It shall be prepared in draft at least two months in advance of the terminal PSC in order to allow review, and will serve as the basis for discussions in the PSC. The terminal meeting considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its objectives and contributed to the broader environmental objectives. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learnt can be captured to feed into other projects under implementation.

UNDP Country Offices and UNDP-GEF RTA as appropriate, will conduct yearly visits to project sites based on an agreed upon schedule to be detailed in the project's Inception Report/Annual Work Plan to assess first hand project progress. A Field Visit or Back to Office Report will be prepared by the Country Office and UNDP-GEF RTA and circulated no less than one month after the visit to the project team, all PB members, and UNDP-GEF.

The inception workshop, and other reports are covered in the next section.

Other Reports: The PMU will, utilizing input from the site Project Managers, provide the country UNDP Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of funds according to the established procedures set out in the Programming

and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the PMU.

The Government of Ethiopia will provide the country UNDP Resident Representative with certified periodic financial statements, with an annual audit of the financial statements relating to the status of funds according to the established procedures set out in the Programming and Finance Manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

Details of the other required reports are provided in Section 5 (below) – Monitoring Framework and Evaluation.

5 MONITORING FRAMEWORK AND EVALUATION

The project will be monitored through the following M& E activities. The M& E budget is provided in the table below**.**

Project start:

A **Project Inception Workshop** will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

The Inception Workshop should address a number of key issues including:

a) Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff Vis à Vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
b) Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
c) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
d) Discuss financial reporting procedures and obligations, and arrangements for annual audit.
e) Plan and schedule Project Steering Committee meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned.

A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan will include the dates of specific field visits, support missions from the UNDP-CO or the Regional Coordinating Unit (RCU) or consultants, as well as time-frames for meetings of the project's decision making structures. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months' time-frame. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. When finalized, the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP Country Office and UNDP-GEF's Regional Technical Adviser will review the document.

Quarterly:

- Progress made shall be monitored in the UNDP Enhanced Results Based Managment Platform.
- Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).

- Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- Other ATLAS logs can be used to monitor issues, lessons learned etc... The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

UNDP ATLAS Monitoring Reports: A Combined Delivery Report (CDR) summarizing all project expenditures, is mandatory and should be issued quarterly. The PM should send it to the PSC for review and the Implementing Partner should certify it. The following logs should be prepared: (i) The Issues Log is used to capture and track the status of all project issues throughout the implementation of the project. It will be the joint responsibility of the NPC and the Site Project Officers (with ultimate responsibility to the PM) to track, capture and assign issues, and to ensure that all project issues are appropriately addressed; (ii) the Risk Log is maintained throughout the project to capture potential risks to the project and associated measures to manage risks. It will be the joint responsibility of the Policy Specialist and the Site Support Specialist (with ultimate responsibility to the Policy Specialist) to maintain and update the Risk Log, using Atlas; and (iii) the Lessons Learned Log is maintained throughout the project to capture insights and lessons based on the positive and negative outcomes of the project. It is the responsibility of the Policy Specialist to maintain and update the Lessons Learned Log.

Annually:

- **Annual Project Review/Project Implementation Reports (APR/PIR):** This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

  The APR/PIR includes, but is not limited to, reporting on the following:
  - Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
  - Project outputs delivered per project outcome (annual).
  - Lesson learned/good practice.
  - AWP and other expenditure reports
  - Risk and adaptive management
  - ATLAS QPR
  - Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

Periodic Monitoring through site visits:

UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Steering Committee may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Steering Committee members.

Mid-term of project cycle:

The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation (insert date). The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be

prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC).

The GEF Biodiversity Focal Area Tracking Tool (METT) will also be completed during the mid-term evaluation cycle.

End of Project:
An independent Final Evaluation will take place three months prior to the final Project Steering Committee meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC).

The GEF Biodiversity Focal Area Tracking Tool (METT) will also be completed during the final evaluation.

During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Project Terminal Report: During the last three months of the project the project team under the NPC will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learnt, objectives met, or not achieved structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure the long term sustainability and the wide replicability of the Project's outcomes. Learning and knowledge sharing:

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

There will be a two-way flow of information between this project and other projects of a similar focus.

Periodic Thematic Reports: As and when called for by UNDP, UNDP-GEF or the Implementing Partner, the project team will prepare Specific Thematic Reports, focusing on specific issues or areas of activity. The request for a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learnt exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered.

Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, the project's substantive contribution to

specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

Project Publications will form a key method of crystallizing and disseminating the results and achievements of the Project. These publications may be scientific or informational texts on the activities and achievements of the Project, in the form of journal articles, multimedia publications, etc. These publications can be based on Technical Reports, depending upon the relevance, scientific worth, etc. of these Reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team, under the NPC, will determine if any of the Technical Reports merit formal publication, and will also (in consultation with UNDP, the government and other relevant stakeholder groups) plan and produce these Publications in a consistent and recognizable format. Project resources will need to be defined and allocated for these activities as appropriate and in a manner commensurate with the project's budget**.**

Communications and visibility requirements

Full compliance is required with UNDP's Branding Guidelines. These can be accessed at http://intra.undp.org/coa/branding.shtml, and specific guidelines on UNDP logo use can be accessed at: http://intra.undp.org/branding/useOfLogo.html. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects needs to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: http://www.thegef.org/gef/GEF_logo. The UNDP logo can be accessed at http://intra.undp.org/coa/branding.shtml.

Full compliance is also required with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines"). The GEF Guidelines can be accessed at: http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf. Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.

Where other agencies and project partners have provided support through co-financing, their branding policies and requirements should be similarly applied.

M& E workplan and budget

Type of M&E activity	Responsible Parties	Budget US$ Excluding project team staff time	Time frame
Inception Workshop and Report	▪ Project Manager ▪ UNDP CO, UNDP GEF	Indicative cost: 10,000	Within first two months of project start up
Measurement of Means of Verification of project results.	▪ UNDP GEF RTA /Project Manager / Project M & E Officer will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members.	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on output and implementation	▪ Oversight by Project Manager ▪ Project M & E Officer ▪ Project team	To be determined as part of the Annual Work Plan's preparation.	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	▪ Project M & E Officer , Manager and team ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG	None	Annually
Periodic status/ progress reports	▪ Project M & E Officer , Manager and team	None	Quarterly
Mid-term Evaluation	▪ Project M & E Officer , Manager and team ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team)	Indicative cost: 40,000	At the mid-point of project implementation.
Final Evaluation	▪ Project M & E Officer , Manager and team ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team)	Indicative cost : 40,000	At least three months before the end of project implementation
Project Terminal Report	▪ Project M & E Officer , Manager and team ▪ UNDP CO ▪ local consultant	0	At least three months before the end of the project
Audit	▪ UNDP CO ▪ Project manager and team	Indicative cost per year: 3,000	Yearly
Visits to field sites	▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government representatives	For GEF supported projects, paid from IA fees and operational budget	Yearly

Type of M&E activity	Responsible Parties	Budget US$ Excluding project team staff time	Time frame
TOTAL indicative COST Excluding project team staff time and UNDP staff and travel expenses		US$ 187,000	

6 LEGAL CONTEXT

This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the SBAA [or other appropriate governing agreement] and all CPAP provisions apply to this document.

Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

The implementing partner shall:

a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;

b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

Audit Requirement

MEF will provide UNDP with certified periodic financial statements, having first passed them through the PAC, with an annual audit of the financial statements relating to the status of project funds according to the established procedures set out in the UNDP Programming and Finance manuals**.**

ANNEXES

Annex 1: Risk Analysis (see page 28-30)

Annex 2: Agreements/ Co-finance letters[20]

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The Federal Democratic Republic of Ethiopia
MINISTRY OF ENVIRONMENT AND FOREST

ቀን 25/06/2015
Date
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Ref.No.

Executive Coordinator
UNDP - Global Environment Facility
Sustainable Development Cluster
Bureau for Policy and Programme Support
United Nations Development Programme
304 East 45th Street, FF 914
New York, NY 10017, USA

Subject: In kind Co-finance for the 'Mainstreaming Incentive for Biodiversity Conservation in the Climate Resilient Green Economy Strategy'.

I am pleased to inform you that the Ministry of Environment and Forest is implementing Climate Resilient Green Economy (CRGE) Strategy programme which supports conservation of the biodiversity resources. This programme contributes to the Government objectives of the Climate Resilient Green Economy Strategy.

In this context the Federal Ministry of Environment and Forest of Ethiopia and the beneficiary regions would like to co-finance of USD 14,200, 000 in kind.

We take this opportunity to re-affirm the importance of this project in contributing to the Government's Climate Resilient Green Economy path.

Sincerely Yours

Ghirmawite Haile
GEF Operational Focal Person

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[20] Any additional agreements, such as cost sharing agreements, project cooperation agreements signed with NGOs[20] (where the NGO is designated as the "executing entity", letters of financial commitments, GEF OFP letter, GEF PIFs and other templates for all project types) should be attached.

The Federal Democratic Republic of Ethiopia
MINISTRY OF ENVIRONMENT AND FOREST

Date
Ref.No.

Executive Coordinator
UNDP - Global Environment Facility
Sustainable Development Cluster
Bureau for Policy and Programme Support
United Nations Development Programme
304 East 45th Street, FF 914
New York, NY 10017, USA

Subject: Co-finance for the "Mainstreaming Incentive for Biodiversity Conservation in the Climate Resilient Green Economy Strategy".

I am pleased to inform you that the Ministry of Environment and Forest is implementing Climate Resilient Green Economy (CRGE) Strategy programme which supports conservation of the biodiversity resources. This programme contributes to the Government objectives of the Climate Resilient Green Economy Strategy.

In this context the Federal Ministry of Environment and Forest of the Federal Democratic Republic of Ethiopia would like to co-finance of USD 1, 600, 000 in cash.

We take this opportunity to re-affirm the importance of this project in contributing to the Government's Climate Resilient Green Economy path.

Regards,

Belete Tafere Dest
Minister

United Nations Development Programme

Empowered lives.
Resilient nations.

30 October 2014

Adriana Dinu
Executive Coordinator
UNDP - Global Environment Facility
Sustainable Development Cluster
Bureau for Policy and Programme Support
United Nations Development Programme
304 East 45th Street, FF 914
New York, NY 10017, USA

Subject: Co- financing in support of the UNDP/GEF project entitled Mainstreaming Incentives for Biodiversity Conservation in the Climate Resilient Green Economy Strategy

The United Nations Development Programme (UNDP) Ethiopia Country Office) would like to acknowledge the assistance provided for implementing a project "entitled Mainstreaming Incentives for Biodiversity Conservation in the Climate Resilient Green Economy Strategy ".

The Country Office, in this context would like to confirm a total grant of US$ 200,000 as parallel financing for the Mainstreaming Incentives for Biodiversity Conservation in the Climate Resilient Green Economy Strategy project.

We take this opportunity to re-affirm the importance of this project in contributing to the government's Climate Resilient Green Economy path. We look forward to working with you in implementing the project.

Yours Sincerely,

Samuel M. Bwalya, Ph.D.
Country Director

UN ECA Campus, Africa Hall Building, 6th Floor, P.O. Box 5580, Addis Ababa, Ethiopia
Tel: +251-11-551-5177 Fax: +251-11-551-4599, 5147
www.et.undp.org - registry.et@undp.org

Annex 3: Terms of Reference

Project Manager

Overall Function of the Position

The Project Manager (PM) will conduct all necessary coordination and management activities to successfully implement the project. The PM will work closely with the staff from inter alia MEF, zones, districts, kebeles, university staff and contracted NGOs / researchers. The NPC will be based in the Project Management Unit (PMU) (in MEF) in Addis Ababa and report to the Project Steering Committee

Duties and Responsibilities

- Oversee the implementation of the project activities in line with the Project Implementation Plan and under the guidance provided by the National Project Steering Committee (NPSC);
- Liaise with MEF as the implementing agency and coordinate project activities to ensure that the activities in each results area are implemented in accordance with the project objectives;
- Leading the monitoring of project activities against the established indicators detailed in the project Logical Framework.
- Liaise with implementing partners to ensure the timely submission of project reports;
- Conduct field visits as required to verify project activities relative to stated targets;
- Facilitate troubleshooting options with the relevant agencies to remove any bottlenecks that might arise during project implementation;
- Manage the personnel of the PMU and its day-to-day activities, evaluate their annual performance and make recommendations with regard to their contract renewal;
- Ensure that the work plans and budgets are in conformity with the project objectives;
- Oversee the outsourcing by competitive tender, monitor the procurement of works, goods and services for the project and ensure execution according to the rules and guidelines in conformity with the project procurement procedures manual. Coordinate and manage all procurement requirements (contracts and consultancies in the project, including reviewing consultancy reports);
- Provide guidance to contractors and consultants engaged by the project;
- Plan and arrange NPSC meetings and serve as the Technical Secretary for the Committee, prepare and circulate minutes of the meetings, and follow up on implementation of the NPSC's decisions and actions agreed;
- Manage and monitor the project risks initially identified, submit new risks to the NPSC for consideration and decision on possible actions if required; update the status of these risks;
- Ensure that the financial management arrangements are in conformity with the UNDP regulations, and that all payment vouchers and payment orders are correctly authorized thereby ensuring that all expenditures are justified, within budget frames, and in line with project objectives;
- Ensure that audits are organized on time and resulting recommendations are acted upon;
- Keep the National Focal Point (NFP) informed about key project implementation matters to facilitate the NFP's work as liaison officer with the GEF sector Ministries, other stakeholders and UNDP;
- Ensure appropriate public relations, awareness creation and marketing of the project among stakeholder groups and the public at large;
- Prepare periodic monitoring reports (technical and financial) of the project for submission to different agencies that are involved in the project implementation;
    - Oversee the preparation of monthly/quarterly/annual financial reports;
    - quarterly project status reports;
    - monitoring and evaluation reports;
    - six-monthly Procurement Reports for the World Bank;
    - annual financial statements for audit purposes.
- Organise and facilitate stakeholder consultations and project review meetings as required;
- Undertake closing out activities for the project which include final financial, procurement and technical reports, and the handing over of documents;
- Undertake any other activity that may be necessary for the effective management of the project.

Competencies

Functional Competencies:

- Ability to communicate effectively complex, technical information;
- Good management, coordination and organization skills to facilitate production of quality outputs in a timely manner;
- Ability to work both independently and collaboratively as a member of a team to produce quality outputs in a timely manner.

Corporate Competencies:

- Demonstrates integrity by modelling the UN's values and ethical standards;
- Promotes the vision, mission, and strategic goals of UNDP;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- Treats all people fairly without favouritism;
- Fulfils all obligations to gender sensitivity and zero tolerance for sexual harassment.

Required Experience and Skills

Education:

- Advanced university degree (at least MSc. or equivalent) or Bachelor's degree in geography, environmental sciences / management, environmental economics or another field relevant to the project.

Experience and Skills:

- At least 7 years of experience in a similar or related position;
- Proven track record of technical and managerial experience in the implementation of large-scale, multi-stakeholder projects, including financial management and oversight of projects;
- Extensive experience with project management, especially with project financed by multilateral organizations;
- Strong interpersonal skills with ability to work under pressure and to establish and maintain effective work relationships with people of different national and cultural backgrounds;
- Excellent skills in project planning, implementation, and team building;
- Ability to take initiative and to work independently, as well as part of a team;
- Demonstrates openness to change and ability to manage complexities;
- Ability to lead effectively, and demonstrated excellent conflict resolution skills;
- Extensive knowledge and understanding of biodiversity and / or ecosystems issues, with special focus in forest / rangelands and payments for ecosystem services;
- Experience with and understanding of Ethiopia, including biodiversity protection issues and the CRGE will be an added advantage;
- Excellent working knowledge of English and track record in producing communications and reports in English;
- Experience in writing project success stories, lessons learned and best practices.
- Knowledge of the GEF and UNDP funded projects and their technical and operational requirements.

Language Requirements:

- Proficiency in English and Amharic. Knowledge of local languages will be an advantage

Local Project Co-ordinator (Field Environmentalist – four posts - one per PES pilot area)

Overall Function of the Position

She/he will work closely land users (project beneficiaries) and with Local Government technical staff at Woreda, Kebele and Zone levels, also universities staff working on the project to make sure the project activities are implemented according to the project plans. He/ she will mobilise beneficiaries and facilitate / guide implementation of project activities. He/she will monitor the projects activities and produce the reports to the National Project Manager**.**

Duties and Responsibilities

Under the supervision of the National Project Manager, the Field Environmentalists will:

- Ensure proper management, day to day co-ordination and facilitation / implementation arrangements are operating for implementation of the project at the assigned PES site;
- Represent the project in relevant meetings etc. to which MEF / UNDP is invited in the assigned Zone, Woreda, Kebeles;
- Actively participate in the supervision, monitoring and evaluation of projects activities;
- In collaboration with the PM / TA, oversee all aspects of project activities implemented under the project at local;
- Plan and execute all activities of the project in the assigned districts in close collaboration with the PM, the authorities and technicians at Zone / Woreda / Kebele level and contracted NGOs / researchers;
- Assist in developing and reviewing technical studies carried out in the project sites through field visits, consultation meetings with communities, NGOs, local government in order to ensure that they get the accurate information and oversee the activities of contracted parties (e.g. providers of services to the beneficiary-communities);
- Ensure that all project activities funded community-level are within the scope of local development plans;
- Prepare the Annual Work Plan and budget at local level in line with MEF projects/programs and submit it to the National Project Manager;
- In close collaboration with the Project Accountant, ensure that funds are advanced by the project in a timely manner that it does not hinder the implementation of projects activities and that all project resources are used efficiently in support of the project objectives and targets of communities;
- Collect data (contact details, work plans, meeting schedules) and maintain comprehensive operational information on all partners activities in the assigned districts including NGOs, government offices, community based organizations and civil society;
- Prepare monthly, quarterly and annual progress reports on the status of the implementation of the project activities at local level, including technical, financial, policy matters, highlighting challenges and proposing options to solve them;
- Perform any other activities directly related to the project objectives that will be assigned by the National Project Manager.

Competencies

Functional Competencies:

- Ability to communicate effectively with local communities – including complex, technical information;
- Good management, coordination and organization skills to facilitate production of quality outputs in a timely manner;
- Ability to work both independently and collaboratively as a member of a team to produce quality outputs in a timely manner.

Corporate Competencies:

- Demonstrates integrity by modelling the UN's values and ethical standards;
- Promotes the vision, mission, and strategic goals of UNDP;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;

- Treats all people fairly without favouritism;
- Fulfils all obligations to gender sensitivity and zero tolerance for sexual harassment.

Required Experience and Skills

Education:

- A university Bachelor's degree in geography, environmental sciences / management, environmental economics or another field relevant to the project.

Experience and Skills:

- At least 3 years of experience in a similar or related position;
- Knowledge and understanding of biodiversity and / or ecosystems issues, with special focus in forest / rangelands and, ideally, the concepts of payments for ecosystem services;
- Field experience and understanding of Ethiopia, including biodiversity protection issues;
- Knowledge of the CRGE will be an added advantage;
- Strong interpersonal skills with ability to work under pressure and to establish and maintain effective work relationships with people of different cultural backgrounds;
- Ability to take initiative and to work independently, as well as part of a team;
- Familiarity with development projects implementation procedures and guidelines;
- Prepared to be based in the project area;
- Ideally, knowledge of the GEF and UNDP funded projects and their technical and operational requirements.

Language Requirements:

Proficiency in English, Amharic and the relevant local language(s).

Project Technical Advisor (Biodiversity / PES Expert) [consultant]

Overall Function of the Position

Under the supervision of the Project Manager, the TA will provide technical advice to implementing staff and others associated with the project to ensure the work is carried-out to high technical standards. The TA will work closely with the staff from inter alia MEF, zones, districts, kebeles, university staff and contracted NGOs / researchers. The TA will be based in the project management unit and report to the Project Steering Committee.

Duties and Responsibilities

The Technical Advisor (TA) will be working on a part-time/ad-hoc basis, closely with the GEF/UNDP Regional Technical Advisor and UNDP Ethiopia Country Office Programme Specialist, providing services to the Project Manager. The TA will assist the Project Management Unit through technical advice, by:

- Advising on best suitable approaches and methodologies for achieving project targets and objectives;
- Conduct field visits as required to verify project activities relative to stated targets;
- Provide day-to-day technical advice to implementing staff, consultants and contractors;
- Providing quality assurance and technical review of project outputs (e.g. studies and assessments);
- Assisting in drafting terms of reference for technical consultancies and supervision of consultants work, and through providing technical supervision of the outsourced work carried out under the project for timely and quality delivery of outputs;
- Providing assistance in monitoring the technical quality of the project M&E systems, as well as the annual work plan and indicators and targets in the log-frame;
- Assisting in knowledge management, communications and awareness raising initiatives under the project;

- Conducting periodical scheduled visits to the project sites;
- Providing advisory support for the Project Management Unit as and when required;
- Undertake any other activity that may be necessary for the effective management of the project.

Competencies

Functional Competencies:

- Ability to communicate effectively complex, technical information;
- Good management, coordination and organization skills to facilitate production of quality outputs in a timely manner;
- Ability to work both independently and collaboratively as a member of a team to produce quality outputs in a timely manner.

Corporate Competencies:

- Demonstrates integrity by modelling the UN's values and ethical standards;
- Promotes the vision, mission, and strategic goals of UNDP;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- Treats all people fairly without favouritism;
- Fulfils all obligations to gender sensitivity and zero tolerance for sexual harassment.

Required Experience and Skills

Education:

- Advanced university degree (at least MSc. or equivalent) or Bachelor's degree in geography, environmental science, environmental economics, natural resources, environmental management or another field relevant to the project.

Experience and Skills:

- At least 7 years of experience in a similar or related position;
- Extensive knowledge and understanding of biodiversity and / or ecosystems issues, with special focus in forest / rangelands and payments for ecosystem services;
- Understanding of biodiversity protection issues and the CRGE in Ethiopia will be an added advantage**;**
- Strong interpersonal skills with ability to work under pressure and to establish and maintain effective work relationships with people of different national and cultural backgrounds;
- Ability to take initiative and to work independently, as well as part of a team;
- Knowledge of the GEF and UNDP funded projects and their technical and operational requirements.

Language Requirements:

- Proficiency in English and Amharic. Knowledge of local languages will be an advantage.

Project Legal Expert [consultant]

Overall Function of the Position

The Project Legal Advisor will provide expertise to the project to ensure the pilot site activities adhere to all laws etc (national and regional), providing expertise in reviewing legal documents and if necessary proposing and catalysing revision to allow for PES – and advice on drafting legal agreements for PES.

Duties and Responsibilities

The Legal Expert (LE) will be working part-time, closely with the Project Manager as required throughout the project. The LE will provide his / her expert advice by:

- Contributing to Outcome 2: Payments for biodiversity conservation and wider ecosystem services is piloted at selected sites (Output 2.1);
- Providing other relevant advisory support for the Project Management Unit as and when required;
- Undertaking any other activity that may be necessary for the effective management of the project.

Competencies

Functional Competencies:

- Ability to work both independently and collaboratively as a member of a team to produce quality outputs in a timely manner.

Corporate Competencies:

- Demonstrates integrity by modelling the UN's values and ethical standards;
- Promotes the vision, mission, and strategic goals of UNDP;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- Treats all people fairly without favouritism;
- Fulfils all obligations to gender sensitivity and zero tolerance for sexual harassment.

Required Experience and Skills

Education:

- Advanced degree in law from an Ethiopian University.

Experience and Skills:

- At least 7 years of experience in a similar or related position;
- Legal, policy and institutional knowledge of the environmental and/or forestry sectors in Ethiopia, including land tenure;
- Experience with and understanding of Ethiopia, including biodiversity protection issues and the CRGE will be an added advantage;
- Strong interpersonal skills with ability to work under pressure and to establish and maintain effective work relationships with people of different national and cultural backgrounds;
- Ability to take initiative and to work independently, as well as part of a team;
- Ideally, knowledge of the GEF and UNDP funded projects and their technical and operational requirements.

Language Requirements:

- Proficiency in English and Amharic. Knowledge of local languages will be an advantage.

Project Steering Committee (Project Board)

The PSC will provide high-level policy guidance and orientation to the project, and will be composed of the principal stakeholders and decision-makers of the key ministries related to BD and ESs. The Executive Director of MEF will chair the PSC and UNDP co-chair. The observers should attend meetings and deliberations but will not have decision- making powers. Other members may be co-opted for regular or special meetings/sessions. The Project Manager will act as secretary to the PSC. Members of the Steering Committee will be remunerated per sitting (from the project budget).

The PSC will arbitrate on any conflicts within the project or negotiate a solution to any problems between the project and external bodies. In order to ensure UNDP's ultimate accountability, Project Steering Committee decisions should be made in accordance with standards that shall ensure best value for money, fairness, integrity, transparency and effective international competition. Specific responsibilities of the Project Steering Committee are divided into two: during implementation and closure.

During implementation, the PSC will in particular provide overall guidance including policy input and functional guidance as well as direction to the project, ensuring it remains within any specified constraints. It will therefore provide guidance and agree on possible countermeasures/management actions to address specific risks. It will conduct regular meetings to review the Project Quarterly Progress Report and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans. It will also review Combined Delivery Reports (CDR) prior to certification by the Implementing Partner. In addition, it will appraise the Project Annual Review Report, make recommendations for the next AWP, and

inform the Outcome Board about the results of the review. Finally, it will review and approve end of project report, make recommendations for follow-on actions.

During project closure, the PSC will ensure that all project deliverables have been produced satisfactorily. In this regard, it will review and approve the Final Project Review Report, including Lessons-learned, and make recommendations for follow-on actions to be submitted to the Outcome Board. It will also notify the Outcome Board on the operational completion of the project.

The Project Steering Committee consists of:

- Executive Director, Ministry of Environment and Forest (Chair)
- UNDP (Co-Chair)
- MEF Technical Expert
- MoA
- MOFED
- Ethiopian Biodiversity Institute
- Representatives of pilot site universities (one from each of four institutions)
- UNDP-GEF Project Manager (Secretary)

The following entities are Observers

- Project Technical Adviser
- Project Legal and Policy Adviser
- Project Field Environmentalists (4)
- EWCA representative

The principal tasks of the PSC are the following:

1. Provide high level orientation and guidance for the project (institutional, political and operational)
2. Ensure that the project develops in accordance within the agreed framework and achieves its outcomes and objectives.
3. Oversee monitoring and evaluation functions.
4. Approve annual progress reports, workplans and budgets
5. Pay special attention to the assumptions and risks identified in the ProDoc and seek measures to minimize these threats to project success;
6. Ensure collaboration between institutions.
7. Pay special attention to the sustainability of activities developed by the project.
8. Ensure the integration and coordination of project activities with other related government and donor-funded initiatives.
9. Report periodically to MEF and UNDP.

Annex 4: Capacity Assessment

A HACT Micro Assessment was completed of the Environment Protection Agency (now MEF) on March 15, 2013. The Executive Summary of the Assessment follows – and full report is available from UNDP Ethiopia.

1. EXECUTIVE SUMMARY

1.1. In accordance with our agreement and the related TOR of the engagement, we have assessed the financial management capacity of Environmental Protection Authority. Following the assessment, the overall financial management risk of the implementing partner's for cash transfers is classified as Low. It is the conclusion of the assessment that the implementing partner is capable of correctly recording all transactions and balances, supports the preparation of regular and reliable financial statements, safeguards the entity's assets and are subject to acceptable auditing arrangements. Most areas of financial management under assessment have been rated as 'Low' risk except staffing, accounting policies and procedures which were rated as 'Moderate'.

1.2. It is the conclusion of the assessment team that there is reasonable adequacy that the financial management system in place provides the necessary reasonable assurance that cash transfers can be used for the intended purposes and the reports being produced by the system can be relied upon to monitor project.

Annex 5: Special Clauses

In case of government cost-sharing through the project which is not within the CPAP, the following 10 clauses should be included:

1. The schedule of payments and UNDP bank account details.
2. The value of the payment, if made in a currency other than United States dollars, shall be determined by applying the United Nations operational rate of exchange in effect on the date of payment. Should there be a change in the United Nations operational rate of exchange prior to the full utilization by the UNDP of the payment, the value of the balance of funds still held at that time will be adjusted accordingly. If, in such a case, a loss in the value of the balance of funds is recorded, UNDP shall inform the Government with a view to determining whether any further financing could be provided by the Government. Should such further financing not be available, the assistance to be provided to the project may be reduced, suspended or terminated by UNDP.
3. The above schedule of payments takes into account the requirement that the payments shall be made in advance of the implementation of planned activities. It may be amended to be consistent with the progress of project delivery.
4. UNDP shall receive and administer the payment in accordance with the regulations, rules and directives of UNDP.
5. All financial accounts and statements shall be expressed in United States dollars.
6. If unforeseen increases in expenditures or commitments are expected or realized (whether owing to inflationary factors, fluctuation in exchange rates or unforeseen contingencies), UNDP shall submit to the government on a timely basis a supplementary estimate showing the further financing that will be necessary. The Government shall use its best endeavours to obtain the additional funds required.
7. If the payments referred above are not received in accordance with the payment schedule, or if the additional financing required in accordance with paragraph ( ) above is not forthcoming from the Government or other sources, the assistance to be provided to the project under this Agreement may be reduced, suspended or terminated by UNDP.
8. Any interest income attributable to the contribution shall be credited to UNDP Account and shall be utilized in accordance with established UNDP procedures.

   In accordance with the decisions and directives of UNDP's Executive Board:

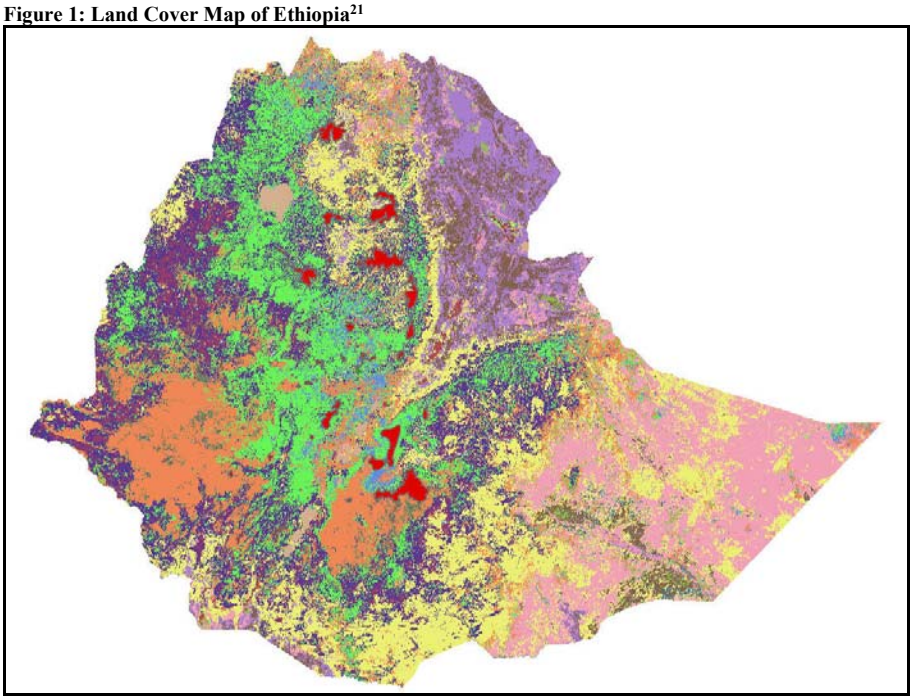
   The contribution shall be charged:

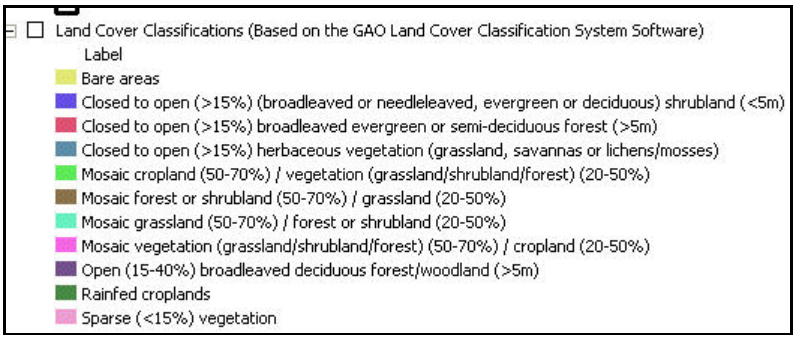
   (a) […%]cost recovery for the provision of general management support (GMS) by UNDP headquarters and country offices
   (b) Direct cost for implementation support services (ISS) provided by UNDP and/or an executing entity/implementing partner.

9. Ownership of equipment, supplies and other properties financed from the contribution shall vest in UNDP. Matters relating to the transfer of ownership by UNDP shall be determined in accordance with the relevant policies and procedures of UNDP.
10. The contribution shall be subject exclusively to the internal and external auditing procedures provided for in the financial regulations, rules and directives of UNDP.

Annex 6: Figures

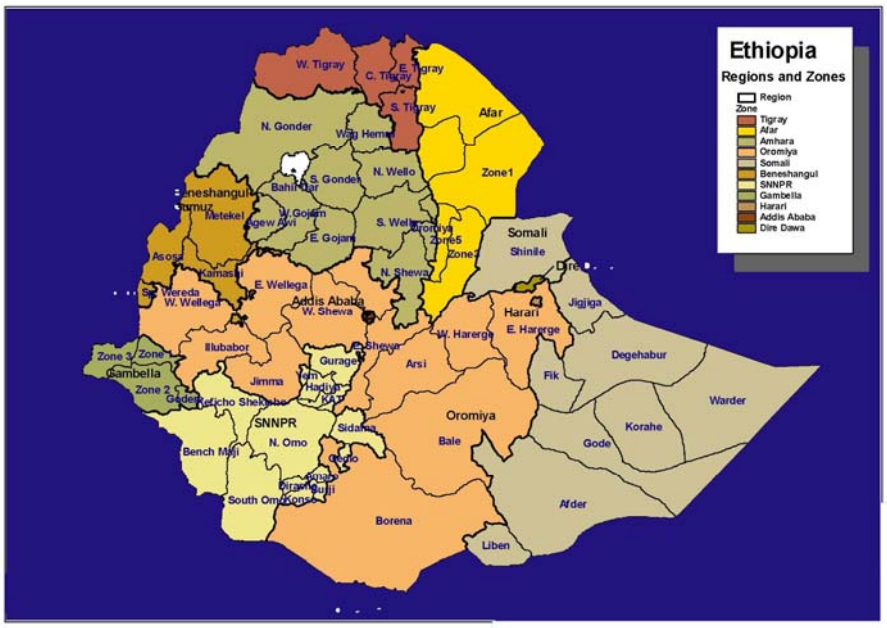
Figure 1: Land Cover Map of Ethiopia[21]





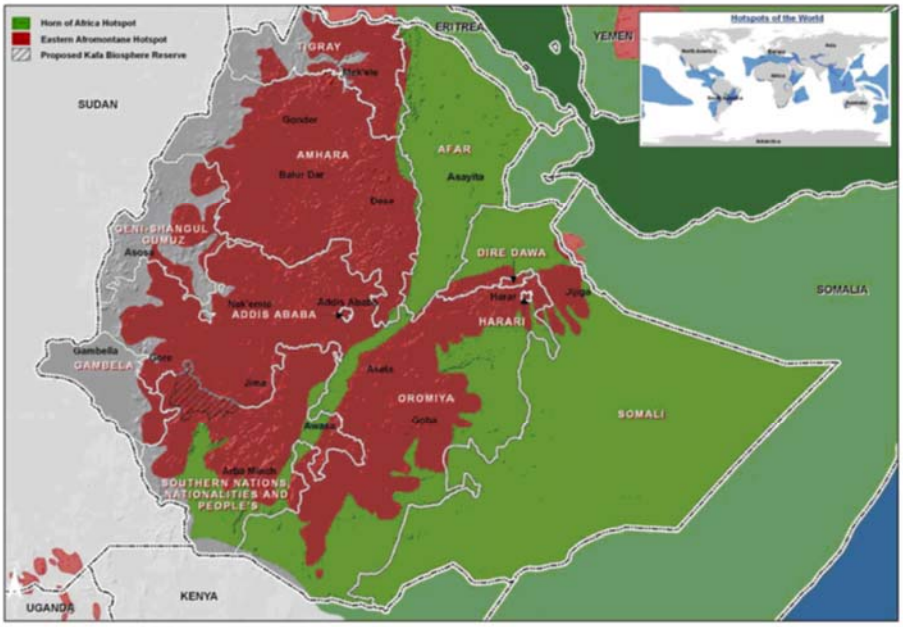
[21] Source: http://gisedu.colostate.edu/webcontent/nr505/ethiopia2009/nr505_fall09_final_CYoung_Bissell/GISAnalyses.html

Figure 2: Map of administrative areas of Ethiopia[22]



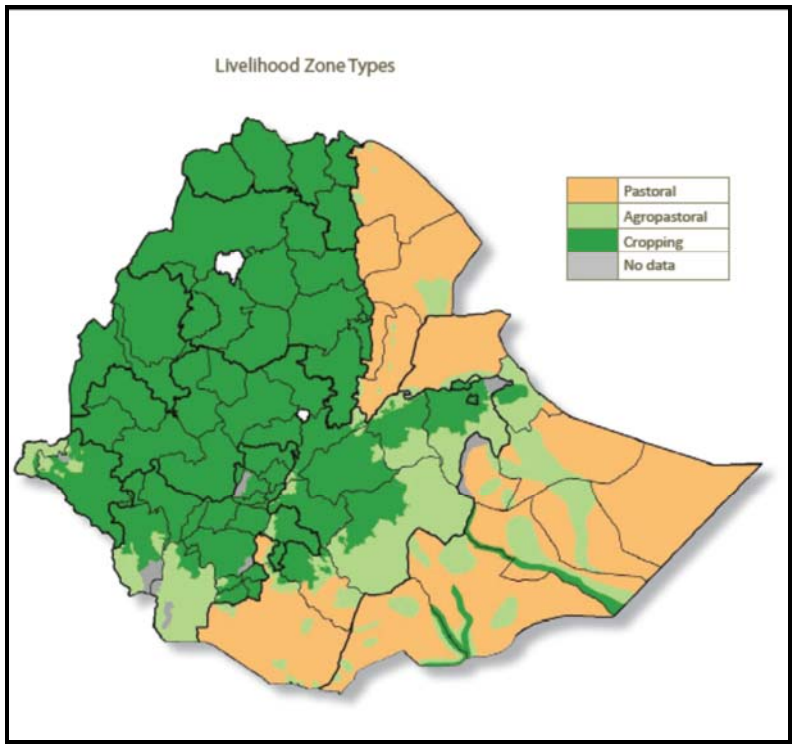
[22] Nine Regions, their respective zones, one 1 City Council and 1 City Administration)

Figure 3: Biodiversity Hotspots of Ethiopia[23]



[23] Source: http://imperia.verbandsnetz.nabu.de

Figure 4: Livelihood Zones of Ethiopia[24]



[24] Source: http://www.feg-consulting.com/what/services/early_warning/livelihood-integration-unit-liu/liu-atlas/complete-atlas/Atlas%20Final%20Web%20Version%206_14.pdf

Annex 8: Regional Biodiversity Institutional Framework

The 1995 Constitution of Ethiopia provides for the establishment of regional states' structure from region down to local levels, adequate power being granted to the lowest unit of government to enable public participation directly in the administration of such units (art 50). In line with this, regional states have put in place an administrative structure which consists of regional government, zone, woreda (district) and kebele (locality) levels. Regional government is the highest organ of state power at regional level. It is responsible to lead and coordinate state administration activities within the region, and coordinate and follow up activities of the various sectoral institutions at regional level (mostly called Bureaus).

A zone is an administrative unit, below regional government, comprising of a defined number of districts. It is responsible to coordinate activities of woredas within the zone, and coordinate and follow up activities of the various sectoral institutions and departments in the zone. As relates to natural resources, the Zonal Administration has the responsibility to ensure the proper conservation and protection of natural resources in the zone.

Woredas are units of state administration below zone, each with its own democratically elected representatives. Woredas have the power to, inter alia: develop social and economic development programmes/projects; collect taxes and approve their budget; protect and develop natural resources within their territory; and mobilize the public for development activities.

Kebeles are the lowest state administration units having their own councils consisting of democratically elected representatives. Kebeles are responsible to implement plans and directives issued by woredas; formulate action plans for implementation of socio-economic development plans; initiate any other programme for the benefits of their residents; protect and develop natural resources; and draw-up and implement directives. Woredas and kebeles are structures that provide for the local community to participate in decisions regarding their social, economic and environmental concerns, as well as, in the implementation of such decisions.

In addition to the political administration structure, regions have sectoral institutions, which have structures from region down to woreda levels, responsible for the different sector of natural resources within their respective levels. The structures of the sectoral institutions at zonal and woreda levels, called Department and Office, respectively, have the mandates vested in the structures at the regional level Bureaus. Bureau of Agriculture (BoA), and Bureau of Environmental Protection and Land Use (BoEPLU) are the major natural resources sectoral institutions relevant to biodiversity whereas some other sectoral institutions do contribute in one way or another.

In general, the four regional states in which the pilot sites are located have more or less similar institutional frameworks (details are provided in Annex 7).

Bureau of Environmental Protection and Land Use (BoEPLU)

BoEPLU is an institution responsible for regulating environmental and natural resources protection at regional level. BoEPLU is supposed to be established in all regions; it has been established in Amhara and Oromiya regions and is in the process of establishment in the Southern and other regions.

BoEPLU has powers relating to land administration, natural resources regulation and environmental protection. With regard to land and natural resources, BoEPLU has the specific mandate to formulate regional land protection policies and strategies; administer land resources in the region; prepare land use planning and ensure its implementation; prepare land use master plan and ensure its implementation; undertake cadastral surveying and register landholdings, issue land holding certificates; conduct and cause to be conducted study on development corridors and growth centres, and regulate its implementation; study and identify land for various development works and services; prepare compensation for persons evicted from their land for development works; resolve, or cause be resolved, land and environmental protection disputes; prosecute illegal uses of natural resources; regulate the movement of forest and wildlife products and prosecute their illegal movements; and, in cooperation with concerned bodies, issue or cause be issued license for trade in forest and wildlife products, hunting and farming permits and provide technical assistance.

As relates to the environment, BoEPLU has the responsibility to formulate regional environmental protection policies and strategies; prepare regional environmental standards; regulate and follow-up that development activities are planned and implemented without damaging the environment; regulate and follow up that development bodies prepare environmental impact studies prior to implementation; undertake environmental audit; monitor any damage caused to habitats and biodiversity and take corrective measures; regulate and monitor any damage caused to natural resources; promote public awareness relating to land use and environmental protection; and communicate and cooperate with concerned bodies with respect to land and environmental protection issues.

Relating specifically to biodiversity, BoEPLU is mandated to monitor the damage caused to habitats and biodiversity and take corrective measures. It is not clear, however, as to what corrective measures it may take against damage caused to habitats and biodiversity as there is currently no law to this end, except perhaps relating to state forests and protected areas. BoEPLU in the pilot sites, thus, coordinate, monitor and evaluate natural resource conservation activities.

Bureau of Culture, Tourism and Parks (BoCTPs)
The BoCTPs plays a major role in registering the traditional knowledge related to biodiversity and forest management. Registering the knowledge and utilities that a community practices in conservation of biodiversity and forest management will ensure that the knowledge will pass on to generations to come.

Bureau of Agriculture (BoA)
BoA is the major sectoral institution, at regional level, responsible for the conservation and sustainable use of natural resources. Though descriptions of mandates vary from one region to the other, the conservation and sustainable use of biodiversity is vested to BoA.

Cooperatives Department Office (CDO)
The office holds the biggest share in the plan to coordinate and formulate cooperatives in the Regional States. Regional States like the SNNP follows the Federal Cooperative Societies Proclamation No. 147/1998 and the Amendment Proclamation 402/2004; whereas others like the Amhara Regional State has its own customized proclamation on cooperative societies.

Oromiya Forest and Wildlife Enterprise (OFWE)
The Oromiya Regional State established OFWE as a separate institution, which is responsible to administer state forests in the region. The enterprise administers, on concession, state forests in the region, funding itself with income from the use there of. It is responsible to develop management and use plan for the various state forests (natural forests designated as state forest and state developed forests) in the region and administer the same accordingly.

Annex 9: Details of Pilot Sites for the Payments for Ecosystem Services Programme

Following consultations with six regions, pilot sites of 20,000ha in four regions of the country (see Figure 6) are proposed as representing globally important biodiversity for this project to pilot PES, namely:

- Choke Mountain in East Gojjam Zone, Amhara Region;
- Arjo-Digo Forest, East Wollega Zone, Oromiya Region;
- Kulfo Forest, Gamo Gofa Zone, SNNP Region;
- Hadew, Jijiga Zone, Somali Region.

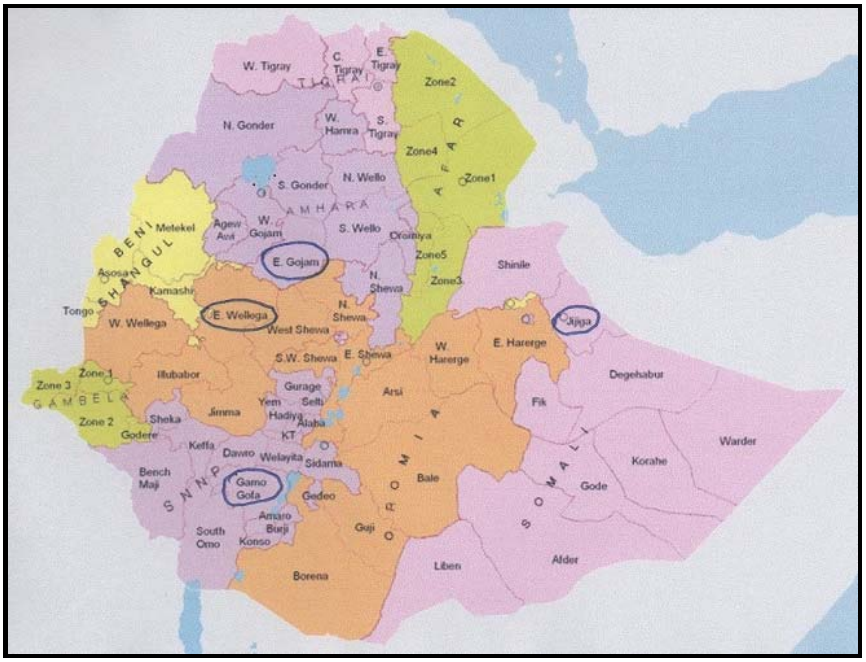


Figure 6: Map showing the general of locations of pilot PES sites

The ecosystem services provided by the project's pilot PES sites include:

- Biodiversity;
- Carbon sequestration;
- Water consumption;
- Water quality;
- Flood mitigation;
- Ground water replenishment;
- Erosion control;
- Microclimate stabilization;
- Ecotourism (potential).

All these are important locally at the pilot sites and to varying extents nationally, however, Table A9_1 summarises the global environmental benefits (GEBs) provided by each site – biodiversity, water regulation and also carbon sequestration.

Table A9_1: Global environmental benefits provided by proposed pilot sites

Site Name	Site Location (zone, region)	Key Species	Global Environmental Benefits
Choke Mountain	East Gojjam Zone, Amhara Region	• High diversity of plant and animal life, 49 bird species are recorded including Erckel's Francolin (Francolinus erckelii), Wattled Ibis (Bostrychia carunculata), White-collared Pigeon (Columba albitorques), Dusky Turtle-dove (Streptopelia lugens), Thick-billed Raven (Corvus crassirostris), Abyssinian longclaw (Macronyx flavicollis), Streaky Seedeater (Serinus striolatus), Vanellus melanocephalus, etc of which 16 are parts of the Afro Tropical Highlands biome. • Moist moorland, sparsely covered with Giant Lobelia (Lobelia rhynchopetalum), lady's mantle (Alchemilla humania), Guassa grass (Festuca spp.), Red hot poker (Kniphofia spp.), St. John's wort (Hypericum revolutum), Helichrysum spp., Arundinaria alpina, Erica arborea, Euryops pinifolius, Hygenia spp., Cordia spp., Ficus spp., Echinopis spp., Acanthus sennii, Erythrina brucei, and others. Bamboo (Arundinaria alpina) is found both as a homestead plantation and as part of the natural vegetation cover. Korch (Erithrina brucei) is commonly grown as a border demarcation plant in the area.	• Moist moorland and Erica spp. Forest - part of one of the Eastern Afromontane 'Biodiversity Hot Spots' harbouring more endemic mammals, birds and amphibians than any other region in Africa • The geological turmoil that created the mountains of this hotspot has also yielded the Blue Nile Gorge (One of the important rivers in the world) and an extraordinary lake (Lake Tana) • Catchment area for tributaries of the Blue Nile • Carbon sequestration
Furdissa in Arjo-Digo Forest	East Wollega Zone, Oromiya Region	• Moist evergreen Afromontane forest and important riverine and riparian woodland. The common species in this forest include Pouteria altissima, Pouteria adolfi-friederici, Trilepsium madagascariense, Morus mesozygia, Mimusops kummel, Podocarpus falcatus, Coffea arabica, Galiniera saxifraga,	• Moist evergreen Afromontane forest - part of one of the Eastern Afromontane 'Biodiversity Hot Spots' • Catchment area for tributaries of the Blue Nile • Important vegetation protecting the quality, quantity and regulating flows

		Syzygium guineense ssp. afromontanum, Apodytes dimidiata, Prunus africana, Albizia gummifera, Albizia schimperiana, Croton macrostachyus, Cassipourea malosana, Ekebergia capensis, Euphorbia ampliphylla, Ficus sur, Maesa lanceolata, Teclea nobilis and Bersama abyssinica.	into the tributaries of the Blue Nile • Carbon sequestration
Kulfo Forest	Gamo Gofa Zone, SNNP Region	• Savanna forests in the rift valley region • Tropical mountainous rain forests along the escarpments and the upland areas – including Acacia tortilis, Acacia nilotica, Acacia seyal, Combretum mole, and Balanites aegyptiaca. • Kulfo groundwater forest located on Kulfo River is dominated by Ficus sycamorus, Garcinia livingstonea, Cordia africana, Diospyros spp., Vepris dainellii, Teclea nobilis and Trichilia emetica. Other species found near the edges of rivers include Kigelia pinnata, Terminalia brownii and Tamarindus indica. These habitats are home to at least for 200 species of birds. To-date, 37 species of mammals have been recorded including the Swayne Hartbeest, Burchell Zebra, Grant gazelle, Guenther Dik-Dik, Greater Kudu, Hunting Dog, Hippopotamus, Grey Duiker, Common Bushbuck and Crocodile.	• Part of one of the Eastern Afromontane 'Biodiversity Hot Spots' • Includes the important Lake Chamo and about 40 rivers • A transboundary watershed, as tributaries to the Omo Basin drain into Lake Turkana (Kenya) • Range of high biodiversity forests – important for flora and fauna • Important vegetation protecting the quality, quantity and regulating the flows into springs, rivers and rift valley lakes • Carbon sequestration
Hadew	Jijiga Zone, Somali Region	• Small acacia stands and Balanites aegiptica and Mauria spp. Medicinal plants recorded in area include Aloe, Pelkia calmelames, Helitropium tenderia and Comberetum mola.	• Mixed rangeland ecosystem, part of one of the Eastern Afromontane Biodiversity Hot Spots bordering the Horn of Africa Biodiversity Hot Spot, including range of locally essential medicinal plants – predicted to include species of future scientific and commercial importance • Carbon sequestration

Table A9_2: Summary statistics on the pilot sites

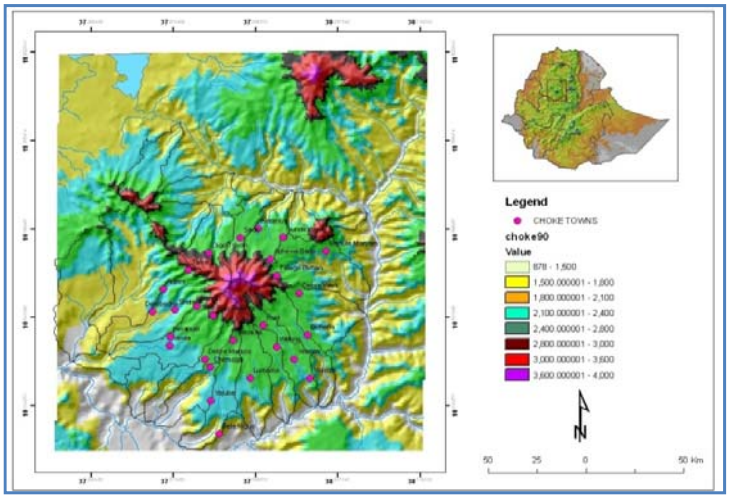
Pilot Site (name and location)	Population			Community Land Area (in ha)			
	Men	Women	Total	Forest	Other	Overall Total	Project Target Area[25]
Choke Mountain, East Gojjam Zone (Amhara Region)	120,088	120,075	240,163	7,005	98,116	105,121	12,005
Arjo-Digo Forest (Oromiya Region)	10,430	14,291	24,721	4,925	10,457	15,382	5,437
Kulfo Forest, Arba-Minch (SNNP Region)	94,370	94,520	188,890	1,058	12,567	13,625	1,058
Hadew Kebele, Jijiga Zone (Somali Region)	2,844	22,443	5,287	1,500	1,000	2,500	1,500
Total	**227,732**	**251,329**	**459,061**	**14,488**	**122,140**	**136,628**	**20,000**

Choke Mountain in East Gojjam Zone, Amhara Region

Biophysical Setting

The Choke Mountains, Amhara are a large block of highland found south of Lake Tana in Central Gojjam extending from Aba Felassie (near Debre Work) in the east and close to Tilili town in the west (EWNHS, 1996). The mountain range is located on a plateau that rises from a block of meadows and valleys. The altitude ranges from 2,800 to 4,100 masl, located north of Debre Markos. While, the central peak is located at $10^0$42’ N and $37^0$50’ E, the whole mountain area extends over 10□41' to 10□44' N and 37□50' to 37□53' E and covers an area of about 173,443 km^2 (Figure 7). The Choke Mountains Range is considered as one of the East African Afromontane ‘Biodiversity Hot Spots’, harbouring a high diversity of plant and animal life. Forty-nine bird species are recorded including Erckel's Francolin (Francolinus erckelii), Wattled Ibis (Bostrychia carunculata), White-collared Pigeon (Columba albitorques), Dusky Turtle-dove (Streptopelia lugens), Thick-billed Raven (Corvus crassirostris), Abyssinian longclaw (Macronyx flavicollis), Streaky Seedeater (Serinus striolatus), Vanellus melanocephalus, etc of which 16 are parts of the Afro Tropical Highlands biome. Furthermore, the Choke ecosystems are an important catchment area and thus have a substantial impact on the downstream Blue Nile (including the quantity, quality and timing of water reaching the river system).

[25] Additional areas beyond forest boundaries will be targeted to reach target of 20,000 ha – provisionally anticipated to Choke Mountain and Arjo-Diga sites



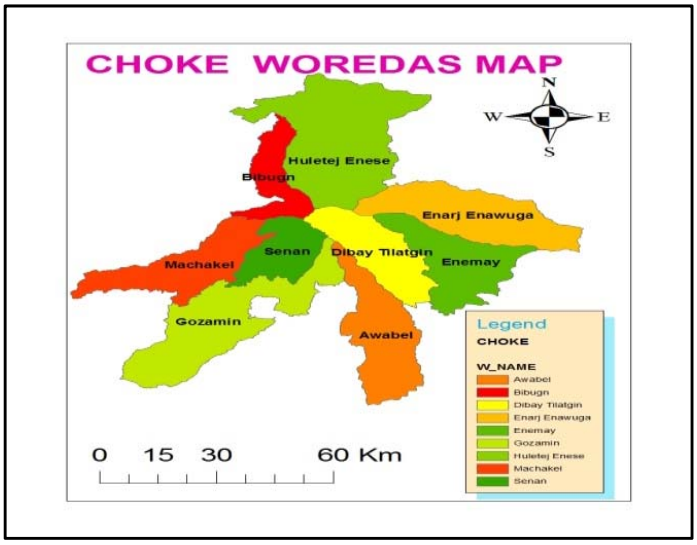


Figure 7: Location map of Choke Mountains (Source: BoEPLAU, Amhara Regional State)

The major natural habitats are moist moorland, sparsely covered with Giant Lobelia (Lobelia rhynchopetalum), lady's mantle (Alchemilla humania), Guassa grass (Festuca spp.), Red hot poker (Kniphofia spp.), St. John's wort (Hypericum revolutum), Helichrysum spp., Arundinaria alpina, Erica arborea, Euryops pinifolius, Hygenia spp., Cordia spp., Ficus spp., Echinopis spp., Acanthus sennii, Erythrina brucei, and others. Bamboo

(Arundinaria alpina) is found both as a homestead plantation and as part of the natural vegetation cover. Korch (Erithrina brucei) is commonly grown as a border demarcation plant in the area.

According to the Amharic survey report entitled "Establishing National Park on Choke Mountains" (Abeje Zewide et al., 2005), the endemic species registered in the area are Abyssinian longclaw (bird) and plant species such as Acanthus sennii, Echinops ellenbeckii, Erythrina brucei, Euryops pinifolius, Kniphofia foliosa, Lobelia and rhynchopetalum. In addition, Choke Mountains are home to different species of mammals including leopard (Panthera pardus), common jackal (Canis aures), colobus monkey (Colobus gureza), common duiker (Sylvicapra grimma), Anubis baboon (Papio anubis), bush pig (Potamochoerus larvatus) and small mammal species.

Choke is the water tower of the region, serving as a catchment of the upper Blue Nile Basin. Many of the tributaries of the Blue Nile that make up 60% of its flow originate from these mountain ranges. Among these are the Gilgel Abbay, Birr, Abbaya, Lah, Gedeb, Chemoga, Cheye, Temcha, Suha, Teza, Teme, Sede, and Muga Rivers that flow from the mountains into the Blue Nile from all directions at different stages of the river course. It is, therefore, the actual water tower of the Blue Nile and is the lifeline for the millions of people living downstream in Ethiopia, Sudan, and Egypt (Shibru Tedla, 2009).

The central cone of the mountain chains of Choke is included in six woredas (districts) of Eastern Gojjam Zone, namely Hulet Ej Enesie, Enarj Enawga, Sinan, Debay Telatgin, Bibugn and Machakel. The area above 2,800 m covers 148,807 ha whereas the area above 3,000 m and 3,600 m cover 948,036 and 32,636 ha respectively. While the area between 2,800 and 3,000 masl can also be used for conventional agriculture, the area higher than 3,000 masl is marginal for crop cultivation because of low temperature and the limited growing period. The mountain range is densely populated, with an average of 260-270 people per km^2. Settlements are fairly common up to 3,600 masl. At present, there is an extensive agricultural activity up to 3,380 masl, including on steep slopes.

Economic and Socio-Economic Details

The Choke Mountains range is densely populated, with an average of 260-270 people per km^2. Settlements are fairly common up to 3,600 masl. At present, there is an area extensive (illegal) agricultural activity up to 3,380 masl), including on steep slopes. East Gojjam zone has considerable ecological and socioeconomic significance at the local, national and regional levels in its contribution to food security in Ethiopia. This highland zone has the most favourable climate with land resources suitable to grow large variety of crops, also livestock, it stands as the most intensively cultivated and is considered as one of the bread basket areas of the country. However, this situation is changing due to anthropogenic environmental and land degradation (Simane, 2012).

Commonly grown crops in different parts of the region include, barley, teff, Faba beans, potatoes, maize and sorghum. Potatoes are extensively cultivated and comprise the main marketable produce of the area. Potato fields are seen as high as 3,140 masl. Maize is grown up to high altitudes – the ranging is now up to 2,900 masl, a new observable fact ascribed to climate change. Engido (an oat species), a newly introduced fodder crop, now used as food crop, is cultivated as high as 3,450 masl. Flax is grown at high altitudes (to. 3,550 masl). Sorghum is grown mainly in lowland parts (Blue Nile Gorge) of the watershed region. The mountains are totally unprotected and are critically threatened by the rapid expansion of agriculture and overgrazing resulting in excessive soil erosion. This has highly reduced agricultural productivity of the land and exacerbated food insecurity of the inhabitants of the mountain range. The land below 3,600 masl is extensively used for crop production, while the higher grounds is used for grazing of small ruminants, primarily sheep, and horses, or not used at all.

Arjo-Digo Forest, Oromiya Region

Biophysical Setting

Arjo-Diga Forest (including Burka Gudina, Furdisa, Firomsa & Arjo Forests) are located within the 'moist evergreen Afromontane forest' and is characterized mainly by broad-leaved evergreen species (Figure 8). Important riverine and riparian woodland. The common species in this forest include Pouteria altissima,

Pouteria adolfi-friederici, Trilepsium madagascariense, Morus mesozygia, Mimusops kummel, Podocarpus falcatus, Coffea arabica, Galiniera saxifraga, Syzygium guineense ssp. afromontanum, Apodytes dimidiata, Prunus africana, Albizia gummifera, Albizia schimperiana, Croton macrostachyus, Cassipourea malosana, Ekebergia capensis, Euphorbia ampliphylla, Ficus sur, Maesa lanceolata, Teclea nobilis and Bersama abyssinica.

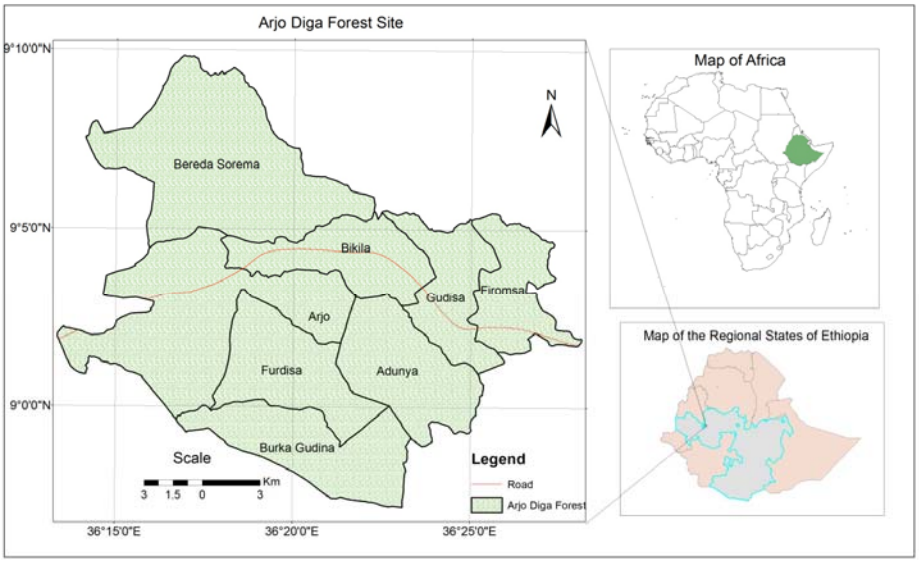


Figure 8: Location map of Arjo-Diga forest/Furdisa (Source: Wolega University, Oromiya)

The rainy season of the area is from March to November with maximum rainfall between June and September. Even though the intensity varies, almost all months receive rain, with the annual total ranging from 1,600-1,850 mm. The rainfall is unimodal, with monthly rainfall rising steadily from March to a peak at August and then descends gradually to the month of December. The temperature ranges from 14^0C to 26^0C. The hottest and coldest months are March and July, respectively.

The extent of modified and transformed forest system in the area is high. Over the last 5-10 years, about 415.8 ha of Diga-Arjo Forest has been modified and transformed into different land use types. Settlement, agricultural land expansion, logging of trees for timber production and collection of wood and charcoal for fuel are evidenced at the site. The majority of the forest periphery area has been converted for food crops production and some areas are utilized for mixed tree-crop production (mango). About 311.85 ha of the area have been converted to farmland within the past 5 years. Crops cultivated at the periphery of the forest include teff, maize, sorghum, sesame and barley. Some fruit trees and woody plants like coffee and mango are also cultivated in mixed cropping pattern.

Economic and Socio-Economic Details

According to the information obtained from Diga woreda's Agriculture office of Oromiya, based on 2010 census estimation, the size of the total population of Diga woreda is 106,664, of which 44,351 are male and 62,513 are female. Concerning the educational status, kebeles in Diga woreda adjacent to the sites has 33% of illiterate, 30% of 1-4 grade level, 25% of 5-8 grade level and 11% of grades 9-10.

Agriculture is the dominant sector and biggest employer of the economically active population at the site. The farming system in the woreda as a whole is a mixed, including grain crops and livestock production. It is characterized by extremely small holdings that are private farmers, dispersed cropland holdings with traditional farming. Farmers and their families living adjacent to the pilot sites are dependent on the forest and forest products as sources of income and means of survival. Seventy percent of the farmers are dependent on crop production and animal husbandry, 12% on animal husbandry, 5% on agroforestry, 20% on charcoal making and 5% on fire wood selling. Poaching buffalo for meat is commonly practiced by the communities living around the forest. [Poaching buffalo is a cultural norm and provides with the prestige of being hero or superman in the society.] Illegal bush meat collection is also widely practised by the communities.

Kulfo Forest in Arba-Minch, SNNP Region

Biophysical Setting

The central rift valley basin of the country is among the regions substantially affected by land degradation and soil erosion. The population density and growth rate is relatively high compared to national average, which imposes greater pressure on land and water resources.

The topography of the area is marked by a series of undulating and rugged landscapes, which include, from east to west, the Rift Valley Plain, the escarpment with incised valleys, and high plateaus topped by hills and mountains (Figure 9). The lower part lies in the plain of the rift valley while the middle and upper parts are situated in the southwestern highlands of Ethiopia. Topographic effects cause substantial variability in bio-physical conditions of the area. Moving from the lowland area of the rift valley system to the escarpments in the area, there is change in climate. For example, the mean annual precipitation in Arba-Minch (1,200 masl) and Chencha (2,700 masl) is 782 mm and 1,392 mm respectively. The rainfall pattern is of a bimodal type. The first rainy season, locally known as gabba (or belg), occurs from March to June and the peak reaches 148 mm in April for Arba-Minch and 185.4 mm for Chencha. The second season, locally known as silla (or keremt/meher), occurs from August to November. The maximum mean monthly temperature in Chencha is 15^{o}C in February and the minimum temperature is 13^{o}C in October. The average annual temperature of Arbaminch is 23^{o}C. There the maximum mean monthly temperature is 26^{o}C, which occurs in March and the lowest temperatures are recorded from December to February.

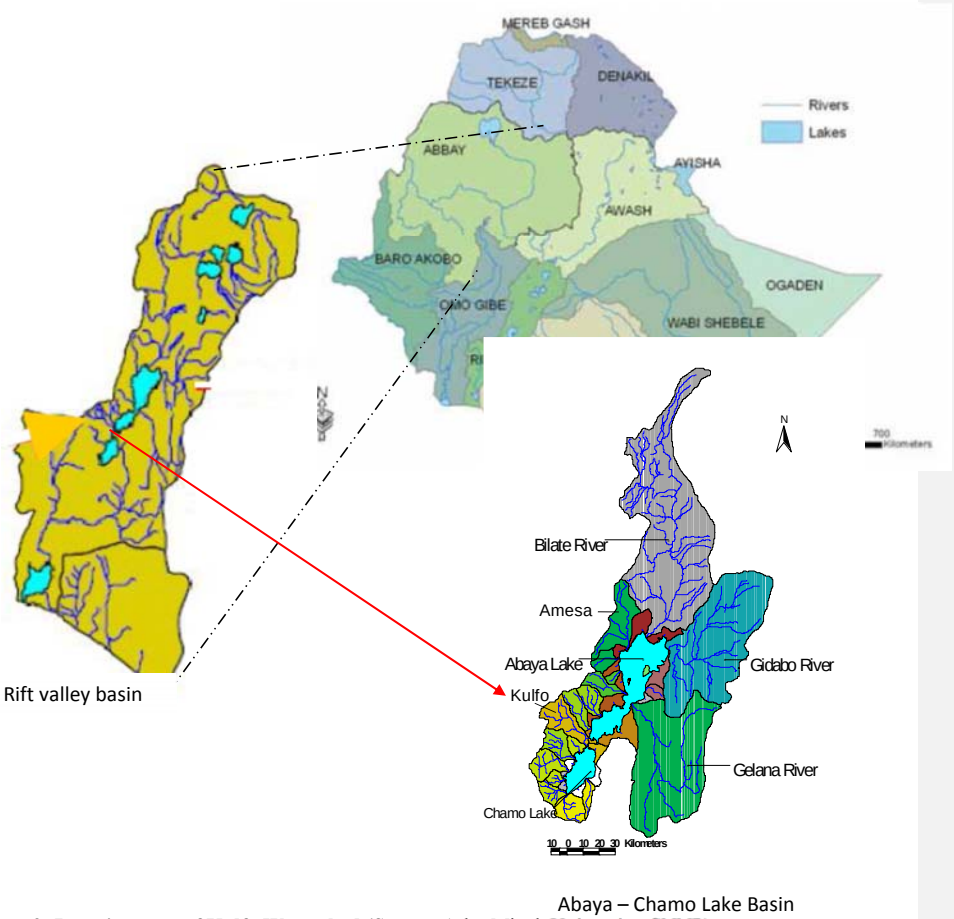


Figure 9: Location map of Kulfo Watershed (Source: Arba-Minch University, SNNP)

The natural vegetation in the area in general is savanna forests in the rift valley region and tropical mountainous rain forests along the escarpments and the upland areas. Today the natural vegetation cover, especially which is found along the escarpment and fan areas, are veld-like and used predominantly for extensive pastoralism, fuel and construction purpose. On the other hand, coffee, enset and cereals are widely cultivated in the upland areas and fruits like banana and mango in the irrigated areas of the rift valley region along the shores of Lakes Abaya and Chamo. The forests in the lowlands near to springs play an important role in regulating water fluxes and sediment transport. There are about forty springs emanating from inside the forests. The most common woodland trees along the escarpment of the rift valley include: Acacia tortilis, Acacia nilotica, Acacia seyal, Combretum mole, and Balanites aegyptiaca. The tree species in the community are Juniperus procera, Hegannia abssyinica, Pinus patula, Cupressus lusitanica, Erythrina abyssinica, Croton macrostachyes, Euphorbia spp., Terminalia brownie, Olea africana, Ficus soria, Cordia africana, Sterculia africana and Acacia abyssinica. In addition, Moringa oleifera and Coffea arabica are also planted in large numbers, mainly around homesteads of highland areas.

The Kulfo River Catchment is located within the central rift valley system. The catchment area of Kulfo is about 493 km^2 and located between 5°55'N and 6°15'N and 37°18'E and 37°36'E. It is especially important because:

- it is the major tributary of Lake Chamo;
- in its pathway to the lake it flows through ground forest harboring biodiversity and the 40 springs;
- it drains Arba-Minch town, one of the rapidly growing towns in the region and situated in the lower reach of catchment;
- sources of livelihood for thousands of people living in rural and pre-urban areas of the catchment including Arba-Minch town.

Nearly 41% of the catchment area is used for settlements and agriculture. The area is characterized by remarkable elevation difference that reaches from 3,600 masl at the peak of the Wisha Ridge to 1,108 masl, the confluence with Lake Chamo.

The Kulfo groundwater forest located on Kulfo River is dominated by Ficus sycamorus, Garcinia livingstonea, Cordia africana, Diospyros spp., Vepris dainellii, Teclea nobilis and Trichilia emetica. Other species found near the edges of rivers include Kigelia pinnata, Terminalia brownii and Tamarindus indica. These habitats are home to at least for 200 species of birds. To-date, 37 species of mammals have been recorded including the Swayne Hartbeest, Burchell Zebra, Grant gazelle, Guenther Dik-Dik, Greater Kudu, Hunting Dog, Hippopotamus, Grey Duiker, Common Bushbuck and Crocodile. The lakes support stocks of Nile perch and cat fish.

Economic and Socio-Economic Details

According to the USAID baseline study report on SNNP livelihood profile in 2005, Gamo Gofa Zone includes three livelihood zones namely:

- Chamo-Abaya irrigated banana zone;
- Gamo Gofa enset and barley zone;
- Gamo-Gofa maize and root crop zone.

In both irrigated and non-irrigated localities/kebeles of the Chamo-Abaya zone, maize is the primary food crop, rain-fed cotton is a primary cash crop, while livestock production, including the fattening of oxen, is another important income source. Those farmers with irrigated bananas as a cash crop have the additional advantage of being able to feed their livestock with dried banana leaves as supplementary feed if pastures become dry. The belg rains provide an essential green harvest of maize and haricot beans as well as one of two sweet potato harvests. Dry maize is harvested during the meher season, beginning in September. Most of the better off and middle households are able to eat from their own maize production for ten to twelve months of the year and better-off households may also produce some surplus. Cotton is harvested from October to December and bananas are harvested every three months.

The Gamo Gofa enset and barley livelihood zone is a mountainous and densely populated zone that includes the wet woina dega and dega agro-ecological zones of Gamo Gofa zone. The agricultural system is mixed farming and the rural population is self-sufficient in food. Households grow enset, barley, wheat, sweet or Irish potatoes and pulses (horse beans, peas and haricot beans). All crop production is rain-fed. Households obtain cash income from crop, livestock and livestock product sales.

Gamo-Gofa maize and root crop livelihood zone is the best in Gamo Gofa Zone. The maize cycle straddles both the short (belg) and main rainy (meher) seasons, whilst teff is a shorter cycle crop depending only on the meher, and therefore offers an important 'second chance' for those who can grow it when the belg season fails. Sweet potatoes are a particularly important crop, because there can be two harvests per year. The staple foods are, in order of amount consumed: maize, enset, sweet potatoes, taro, teff and yams. Most households possess goats (there are fewer sheep) and poultry, but livestock numbers are modest amongst all households.

Changes in land use/land cover types across the entire region from 1976 to 2000[26] were significantly large. Bush/shrub woodland and cropland (including mechanized farming) increased in area. Bush/shrub woodland

[26] Most recent data available

increased tremendously from 100 km² (1.8 %) in 1976 to 669 km² (12.0 %) in 2000. Deciduous woodland and sparsely vegetated land cover classes lost half of their area over two and a half decades while fire-dominated bush land vegetation declined from 4% of the total area cover in 1976 to a mere 1% in the year 2000.

In the highland parts of the area, small-scale crop cultivation dominates. Evergreen forest and deciduous forest/woodland have suffered from deforestation and degradation due to the direct conversion of forest to farmland and through logging and human settlement. In the mid-1970s, the Gughe peak, which is the highest point within the Gamo highlands and source of the Kulfo River that drains to Lake Chamo, lost the climax Afromontane vegetation to farmland. However, there are still some remnant patches of evergreen dry Afromontane forest and moist Afromontane forest on mountain tops and on inaccessible steep slopes. Similarly, riparian forests lost a significant area (~ 100 km^2) between 1976 and 2000.

The population at Gughe was estimated at 221,643 in 1976. The total rural population density has nearly doubled over the last three decades (1976-2007) with the current rural population density of 214 persons/km² and 89 persons/km² (Population Census Commission, 2008) in the highland areas. Due to population intensity cropland holding has progressively declined from 1 ha per household in 1970 to 0.25 ha per household.

Hadew Kebelein Jigjiga Zone, Somali Region

Biophysical Setting

Hadew is one of the kebeles (localities) in Jijiga Zone, which is located at 10º 62" – 10º 31" N and 81º 11" – 81º 90" E, in the eastern part of Ethiopia. The topographic features of this area are characterized by hilly mountains and lowland plains with an altitude ranging between 1,300 and 1,700 masl (Figure 10). Most of the mountainous areas are marginal land, whereas most of the land on the plain is a mix of informal settlement and agricultural land. Apart from this, the plain part of the low lying area consists of an ephemeral river, which is the major course of floods of west Jijiga run-off. As a result of this, the area is prone to recurrent flooding.

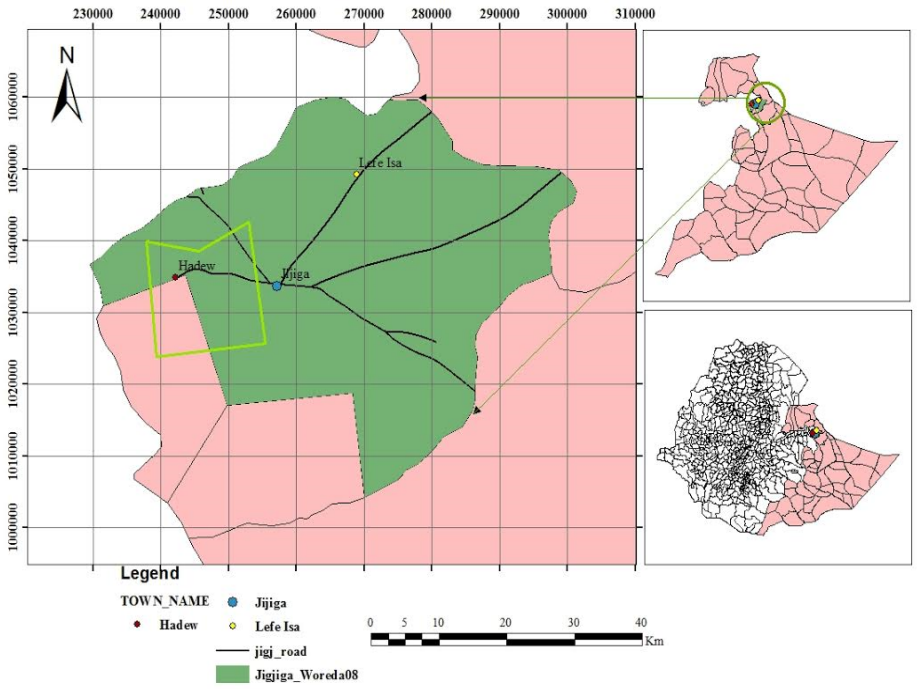


Figure 10: Location Map of Hadew

Most of the mountainous area is covered with shrubs and bushes, with fragmented patches of exotic trees in the inhabited area. The vegetation is predominantly composed of indigenous and Acacia spp., which are particularly grown around the lower slopes of the Karamara Mountain. The vegetation cover is categorized as that of arid and semi-arid lands (highly variable, including cactus scrub, thorn scrub and woody and sparse grasses formations). The vegetation in the area is not found in contiguous form covering a large area, but rather it is seen as fragmented patches of bush land, shrub land and trees in agricultural sites and on the hillsides. However, the scrub steppes consists of a broken but sometimes thick cover, forming a 3-5 m high storey of short, stunted, multi branched obconical (inverted cone-shaped) shrubs and scattered umbrella shaped trees of heights up to 8 m. The area is mainly dominated by small acacia stands and Balanites aegiptica and Mauria spp. Medicinal plants recorded in area include Aloe, Pelkia calmelames, Helitropium tenderia and Comberetum mola.

At present, the vegetation cover in the area is under intense pressure because of ever increasing demands of the population for construction material, fuel wood, fodder and agricultural expansion. The local community and their domestic animals have profoundly affected the vegetation. An annual 3% increase of population and corresponding increase in livestock plus lack of awareness aggravates the situation. The cumulative effect of these factors is exacerbating the fast disappearance of the indigenous Acacia woodlands. Clearance of vegetation cover for different uses is common in most parts. However, the basic causes of vegetation cover losses are similar to other parts of Ethiopia. They stem from the growing demand for land and forest products and the lack of sustainable resource management due to economic, social and institutional constraints.

In general, encroachment, informal settlement, recurrent drought, rugged nature of the terrain, complete removal of crop residue, high fuel and construction wood demand, the low level of application of soil

reconditioning inputs (manure, mulch or compost) and of biomass productivity, poor land use and livestock management, poor land management practices, unfavorable land and natural resource polices, and lack of awareness are some of the root causes leading to accelerated deforestation and consequently to severe loss of biodiversity (flora and fauna) and accelerated soil erosion.

Economic and Socio-Economic Details

The total number of households in Hadew is estimated at 801, with on average 6.6 persons per household (Getachew, 2010) – giving a total population of around 5,287. Both pastoralist and agro-pastoralist communities in Hadew are engaged in various economic activities to earn a living. Traditional pastoralism, sedentary farming or crop production, commercial activities such as livestock trading, trade of Khat, trade of milk and milk products, waged labourers, preserving hides and skins, also cattle fattening are the main economic activities. Agro-pastoralism is the dominant form of livelihood (Kinde, 2008; Getachew, 2010), and agriculture comprises livestock rearing and crop production. The crops cultivated are maize, sorghum, wheat and other cereals. Khat and some other vegetables are also grown as cash crops. Livestock reared are cattle, goat, sheep, camel and equines. Off-farm activities include, selling fire wood/charcoal and transporting commodities of cross border traders.

Local Administrative Contexts in Pilot Areas (relevant to the project)

Bureau of Agriculture (BoA)

BoA is the major sectoral institution, at regional level, responsible for the conservation and sustainable use of natural resources. Though descriptions of mandates vary from one region to the other, the conservation and sustainable use of biodiversity is vested to BoA. In Oromiya region, the BoA is mandated to conserve and develop biodiversity emphasizing on species (wildlife, bird and genetic resources in general) exposed to extinction; and conserve or cause the conservation of biodiversity and natural antiquities and supervise their utilization. The Bureau has mandates to demarcate, register and administer (except those concession to OFWE) state forests and wildlife conservation areas in the region; facilitate conditions for and implement the participation of local communities around forest and wildlife conservation areas in the conservation, development and sharing the benefits there from; develop and implement state forest management plan; and expand infrastructure in state forests wildlife conservation areas; undertake soil and water conservation activities; undertake water-shade development to conserve natural resources based on scientific principle; and undertake the preservation of water and soil in dryland areas (Proclamation No 87/2004, art 17).

The BoA of SNNP, on the other hand, is given mandate to initiate policy proposal on biodiversity and indigenous biological resources, and issue and implement directives; cause and promote the conservation and development of natural resources and parks, implement and supervise the implementation of forestry and wildlife laws; and issue and implement directives that enable the regulation of pollution of natural resources and the environment (Proclamation No 106/99 article 23). Moreover, since BoEPLU is not yet established in SNNP, BoA has responsibilities related to rural land use and administration. Thus, the Bureau is mandated to provide training on land use and issue land holding certificate to peasants and pastoralists (Proclamation No 106/99 article 23). In addition, the rural land law of the Southern region (Proclamation No 110/2007, art 14) gives BoA the responsibility to implement the rural land law by providing necessary technical support and by coordinating the competent authorities. It also mandates BoA to establish, at all levels, institutions which shall implement rural land administration and land use systems; establish rural land administration and use committee at kebele level; and establish a system for information exchange between regions and federal government relating to rural land administration and use. The Natural Resource and Environment Protection Authority of the region is also under BoA.

In parallel, according to the Proclamation no 167/2009 issued to provide for Amhara Regional State executive organs' re-establishment, organization and determination of powers and duties mandated the BoA to direct in collaboration with the relevant bodies, the activities of preservation and utilization of the forest and wildlife in the region. However, redundantly, the same mandate is given to the BoEPLU by the same Proclamation.

The Agriculture Bureau (BoA) of Somali region is one of the bureaus that have been established to realize the following 15 mandates of which five mandates have been taken away by other more recently established bureaus (numbers 7,8,9,14,15).

1. Encourage the expansion of agricultural development in the region on the basis of the agricultural development policy of the country; ensure that land utilization and its distribution are executed in accordance with the land use policy of the country.
2. Provide agricultural extension carries to farmers.
3. Make necessary effort, in cooperation with appropriate organs or the provision of agricultural inputs farm mechanizations and credit services to the farmers.
4. Control the transformation of animal and plant species within the region and take measure against Illegal transformations of same.
5. Undertake quarantine controls over animals, animal products and plants within the region, those get in or out of the region.
6. Facilitate conditions, in cooperation with the appropriate organs, for encouragement of agricultural investment, issue agricultural license to the domestic investors engage in agricultural activity in the region and supervise.
7. Ensure that laws, regulations and directives issued in relation to the protection conservation and utilization are respected in the region.
8. Cause the implementation, in the region, of the country's natural recourse development and environmental policies.
9. Encourage the expansion of the region's forestry development and make the necessary effort for the provision of satisfactory seedlings and technical services.
10. Cooperate in the study, data collection and registration of natural resource deposits of the valleys in the region.
11. Undertake researches and training programs which assist the enhancement of agricultural development in the region, cause the promotion in cooperation with appropriate organs, of the rural Technology.
12. Organize and administer breading centres necessary for the breading of special species of animals, fish and seed.
13. Register, and provide necessary support to, peasant association, and agricultural cooperatives in the region.
14. Promote the protection and development of the region's forestry and wild life resources; supervise the unlawful utilization of same.
15. Administer game reserves and protective forests located within the region.

One problem with the arrangement of BoA in the regions is lack of uniformity and consistency of mandates. For instance, though the sectoral arrangement is basically the same in all regions, the mandates of BoA are formulated and worded very differently from one region to the other, consequently there is lack of uniformity and consistency in the biodiversity mandate of BoA of the regions. Another example is the lack of clarity in the biodiversity mandate of BoA. The biodiversity mandates of BoA, particularly those outside of forest and wildlife conservation, are not sufficiently stated and delineated as opposed to the federal institutions, particularly, the EBI.

In general, the BoA in the pilot sites has roles concerning the general conservation of biodiversity. In their annual plans, the bureaus include conservation activities such as soil and water conservation. The plans include the conservation, seed multiplication and replanting of indigenous trees. Except Somali, the BoAs of the rest Regional States, where the pilot sites are located, have a kind of Forest Task Forces in one form or another. The main mandate of the task force is to protect and rehabilitate the forests in the respective Regional States. The task forces also give permission or reject requests to cut trees from forests.

Bureau of Environmental Protection and Land Use (BoEPLU)

BoEPLU is an institution responsible for regulating environmental and natural resources protection at regional level. BoEPLU is supposed to be established in all regions; it has been established in Amhara and Oromiya regions and is in the process of establishment in the Southern and other regions.

BoEPLU has powers relating to land administration and natural resources regulation and environmental protection. With regard to land and natural resources, BoEPLU has the specific mandate to formulate regional land protection policies and strategies; administer land resources in the region; prepare land use planning and ensure its implementation; prepare land use master plan and ensure its implementation; undertake cadastral surveying and register landholdings, issue land holding certificates; conduct and cause to be conducted study on development corridors and growth centers, and regulate its implementation; study and identify land for various development works and services; prepare compensation for persons evicted from their land for development works; resolve, or cause be resolved, land and environmental protection disputes; prosecute illegal uses of natural resources; regulate the movement of forest and wildlife products and prosecute their illegal movements; and, in cooperation with concerned bodies, issue or cause be issued license for trade in forest and wildlife products, hunting and farming permits and provide technical assistance.

As relates to the environment, BoEPLU has the responsibility to formulate regional environmental protection policies and strategies; prepare regional environmental standards; regulate and follow-up that development activities are planned and implemented without damaging the environment; regulate and follow up that development bodies prepare environmental impact studies prior to implementation; undertake environmental audit; monitor any damage caused to habitats and biodiversity and take corrective measures; regulate and monitor any damage caused to natural resources; promote public awareness relating to land use and environmental protection; and communicate and cooperate with concerned bodies with respect to land and environmental protection issues.

Relating specifically to biodiversity, BoEPLU is mandated to monitor the damage caused to habitats and biodiversity and take corrective measures. It is not clear, however, as to what corrective measures it may take against damage caused to habitats and biodiversity as there is no law to this end except perhaps relating to state forests and protected areas. BoEPLU in the pilot sites, thus, coordinate, monitor and evaluate natural resource conservation activities.

The BoEPLU of the Oromiya region, for instance, was established by Proclamation No 147/2009, having offices at zonal and district levels and, as may be necessary, at lower levels (art 4). It has the overall responsibility to administer rural and urban land and prepare land use planning; regulate that development activities are carried in accordance with land use planning and environmental protection; and organize and manage data relating to land administration, use and environmental protection. BoEPLU has been established by merging the environmental protection mandates that were vested to regional Environmental Protection Organs, and the rural land administration responsibilities, which were within BoA.

Likewise, Proclamation No 167/2009 of the Amhara region has mandated BoEPLU to direct in collaboration with the relevant bodies, the activities of preservation and utilization of the forest and wildlife in the region. It is also mandated to carry out studies to improve the preservation, use and development of the biodiversity, ecological and other environmental resources and thereby take short and long term rectification measures in respect of the problems identified by the studies. The Proclamation has also given power to BoEPLU to undertake value assessment studies as regards environmental resource, course the inclusion in their feasibility calculation, of the value of environmental resources whenever programs and projects are formulated as per the results of the said assessment and call, as per the assessment, for the payment of compensation commensurate with the damage to any environmental resource occasioned during the implementation.

The Environmental Protection, Mines and Energy Resources Development Agency of Somali Regional State of Ethiopia is established as autonomous government organ (Proclamation No. 135/2014) to:

- demarcate forestlands, and to register, develop and protect them;
- forward policies on the development and means of mitigating and controlling desertification;
- undertake a research on the status of forest cutting in the region, causes of deforestation and its social and environmental impact, then issues the necessary policies, strategies for controlling mechanism;
- mitigate the dependence on charcoal and woods in collaboration with the concerned organs and its stakeholders through the use of biogas;
- expand aforestation activities of deforested areas;

- propose laws that enables enable to control illegal cutting of forests and deforestation of land for charcoal, woody and woody construction etc;
- provide community awareness education on the benefit of forest and environmental conservation;
- in collaborate with the concerned organs, initiate legal instrument on the conservation and utilization of forest and wildlife in the region and follow up its implementation;
- cause the implementation of natural resources and environmental policies in the region.

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Annex 11: List of Stakeholders Consulted during Project Preparation Grant Period

Region	Target site	Name	Responsibility	Institution	E-mail	Cell phone
Amhara	Choke	1. Dr. Belay Semani	Researcher & lecturer	A.A. University	simaneb@yahoo.com	0911-223044
		2. Dawit Tegene	BoEPLU, Process Owner	Debre-Markos	0587716811 (fax) Yeshi4555@yahoo.com	0911-092021
		3. Amsalu Kebede (Getenet Mengesha)	Head, BoEPLU	East Gojam zone		
		4. Mulugeta Mekuria	Expert, BoA	Office, Debre-Markos		0913-395186
		5. Dr. Mesele Yihune	Director, Ckoke Watershed	Debre-Markos University	mesyih@gmail.com 0587711764 (fax)	0911-869067
Oromiya	Furdisa (in Arjo forest)	6. Dereje Ejigu	Expert, Rural Land & Environment Protection	Oromiya, EPA Bureau	derejeegutema @gmail.com	0913-496747
		7. Dr. Eba Mijena	Vice President, Academic & Research	Wolega University	Eba.mijena@gmail. com	0911-110148
		8. Kidane Yambo	Head, BoEPLU	Wolega zone	0576613579 (fax) Kidane_yambo@yahoo.com	0917-812787
		9. Tolera Megersa	Environmentalist	Wolega University	057661980 (fax)	
		10. Muleta Ebissa	Head, Environment Dept.	Wolega University	muletaebissa@gmail.com	0917-853465
SNNP	Kuflo (Arba-Minch	11. Abera Willa Hifam	Vice Head	NR & EP Authority, Awassa	0462205104 (fax) Amlf09@yahoo.com	0912-068409
		12. Misrak Kumalo	Expert, Environment	NR & EP Authority, Awassa	Msrk_kumalo@yahoo.com	0916-861412
		13. Dereje Elias	Researcher, Kulfo research project	Arba-Minch University	drj.elias@gmail. com	0911-706759
		14. Dr. Guchie Gule	Vice President for Research & community Service	Arba-Minch University		
		15. Fekade-Silase Beza	Head	NR & EP Authority, Awassa		

Region	Target site	Name	Responsibility	Institution	E-mail	Cell phone
Somali	Hadew	16. Ahmed Adem	Expert, Environment protection & forestry	Jigjiga Environment protection & forestry	AhmedAden@ yahoo.com	0915-749446
		17. Hamdi Abdulahi	Dept. Head, Environment protection & forestry	Regional Office, Jigjiga	0257752221 (fax)	O915-744572
		18. Hibu Nour	Biodiversity Officer	Jigjiga, Environment protection & forestry		
		19. Seyid Mohamed Ali	Vice President for Academic & Research	Jigjiga University	0257755947 (0257755976) (fax) Seid514@gmail.com	
		20. Getachew Megersa	Environmetalist	Jigjiga University	Medhanitb27@gmail.com	0923177661
Harari	Selat (ecological site)	21. Dr. Sultan Haji Temam	Head, EPA	Bureau of Harari	Sultan2ht@ yahoo.com	0915-021020
		22. Faiza Mohamed	Biodiversity expert	EPA, Harari		
		23. Afendi Ahmed	Process Owner, Ecosystem & Biodiversity Unit	EPA, Harari		
		24. Hana asnake	Biodiversity expert	EPA, Harari		
		25. Samir Bekri	Officer, pollution & Impact assessment	EPA, Harari	samtoken@ gmail.com	0920-913974
Dire-Dawa	Awale	26. Masresha Yimer	Core Process Head – Biodiversity, ecosystem, climate change study & monitoring	EPA, Dire-Dawa		0915-755160
		27. Andualem Tesfaye	Expert, Biodiversity, ecosystem, climate change study & monitoring	EPA, Dire-Dawa		0920-652700
		28. Mamush Zewdu	Expert, Biodiversity, ecosystem, climate change study & monitoring	EPA, Dire-Dawa		
Region	Target site	Name	Responsibility	Institution	E-mail	Cell phone
N/A	N/A	29. Wubua Mekonen	GEF Programme Analyst	UNDP CO		
N/A	N/A	30. Sinkinesh Beyene	Team Leader	UNDP CO		
N/A	N/A	31. Alice	RTA	UNDP		

		Ruhweza				
NA	NA	32. Dr. Gemedo Dale	Director General	Ethiopian Biodiversity Institute		0911-887041
N/A	N/A	33.		Ethiopian Wildlife Conservation Authority (EWCA)		
N/A	N/A	34.		Ministry of Agriculture		
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Annex 12: Land and Forest Tenure in Ethiopia[27]

Background

It is important considering options for developing payments for biodiversity conservation and wider protection of ecosystem services that a thorough analysis is made of land and forest tenure.

Land policy, the real source of power in imperial and contemporary Ethiopia, remains at the centre of a policy debate (Crewett et al, 2008). The debate has largely been carried out along two opposing arguments concerning property rights to land. The Ethiopian Government continues to advocate state ownership of land whereby only usufruct rights are bestowed upon landholders. The usufruct rights exclude the right to sell or mortgage the land. This, the Government asserts, is to protect the rural peasants from selling off their land to wealthy individuals leaving them landless and without source of livelihoods. The Government builds its argument on the premises of social and historical justice that is based on two principles:

- justice understood as egalitarianism– guaranteeing every farmer in need of agricultural land equal rights of access to such land;
- historical justice – granting tenure security to the Ethiopian farmers who had experienced land deprivation and land expropriation through different mechanisms during the imperial era.

The Government's position that emphasizes the social function of land is challenged by advocates of a privatization of property rights – most prominently, the Ethiopian Economic Association (EEA), some political parties in opposition to the current regime and a number of donor agencies. These tend to argue that state ownership of land prevents the development of a land market, discourages farmers to invest in land and thereby holds down land productivity as well as encourages unsustainable land use practices. The debate has been described as being politicized and ideological.

The recent literature on property rights over land and other natural resources commonly uses a broad classification along open access (no rights defined), public (held by the state), common (held by a community or group of users), and private (held by individuals or "legal individuals" such as companies) property regimes, but such classification can only be a rough guide to the effective entitlements that a right-holder in one of the stylized property regimes holds in reality. This conceptualization of property rights also neglects the plethora of social relations that are defined through property, sometimes called "layers of social organization" and that need to be analysed in order to understand what property means in different contexts. As a first step, it therefore appears useful to further differentiate the exact nature of property rights.

The concept of "bundles of rights" as it is developed by Schlager and Ostrom (1992) is useful to analyse the distribution of rights among different user groups and between individuals under various tenure regimes in Ethiopia (see Table A12_1). Schlager's and Ostrom's interest was primarily in analysing common property regimes used by collectives of resource users.

Table A12_1: Bundles of Property Rights

Level of right	Type of right	Authorized actions
Operational	Access	Right to enter a defined physical area and enjoy non-substractive benefits
	Withdrawal	Right to obtain resource units or 'products' of a resource system

[27] Sources: Crewett et al (2008) and USAID (2014)

Collective choice	Management	Right to regulate internal use patterns and transform the resource by making improvements
	Exclusion	Right to determine who will have access rights and withdrawal rights, and how those rights may be transferred
	Alienation	Right to sell or lease management and exclusion rights

Schlager and Ostrom then differentiate four types of users ("positions") with different bundles of rights (see Table A12_2). Authorized users hold access and withdrawal rights but "lack the authority to devise their own harvesting rules". Claimants also have management rights, whereas proprietors also dispose of exclusion rights. Only owners hold all four types of rights (access, withdrawal, management, exclusion, and alienation) and can sell or lease but not bequeath their collective choice rights. A further clarification of the concept of "bundles of rights associated with position" led to the integration of a fifth user type: an authorized entrant. The authorized entrant holds solely access rights and replaced the authorized user as the position with the weakest bundle of rights.

Table 2: Bundles of Rights Associated with Positions

	Owner	Proprietor	Claimant	Authorized user	Authorized entrant
Access rights	+	+	+	+	+
Withdrawal rights	+	+	+	+	
Management rights	+	+	+		
Exclusion rights	+	+			
Alienation rights	+				

"Ethiopia has undergone multiple political practices of regime control from imperial to derg to the current regime – processes by which the state has controlled the rural masses through agricultural policies, repression, and tenure systems".

Crewett et al (2008)

Historical Setting

Ethiopia has a long legacy of state intervention in land tenure relations as the state has exerted considerable influence on local land tenure regimes throughout different political regimes.

The country differs in some respects from a number of other African countries in its property rights system. As Ethiopia was not colonized (with a very brief exception of Italian occupation in the 1930's and 1940's), there is no colonial heritage or legacy applicable in other sub-Sahara African countries and societies that resulted in land grabbing by European settlers, which contributed to the formalization of private property right to land. The colonial legacy in Ethiopia rather confers to an imperial colonialism in the second half of the 19th century with the expansion of the empire, starting from its heartland in Abyssinia towards the South and the imposition of an exploitative land tenure system in those newly conquered territories. Overall, this imperial history of conquests of autochthonous ethnic groups and a certain regional and temporal variation in imperial governance modes of these newly conquered areas resulted in a diversity of land tenure systems across the country.

A redistributive land reform in 1975, which only transferred usufruct rights to the rural peasantry, ensured some form of continuing state ownership. As a consequence, in the last three decades since the derg took power, the Ethiopian state and its local representatives have been the dominating force in the highland areas in defining access, distribution and tenure terms of user rights. This legacy has weakened or largely crowded out not only the remains of

customary institutions, but also the imperial land use institutions, which were superimposed on the diverse traditional land holding systems. Furthermore, there is no real "go back-to-customary-rules" type of perspective, since the pre-1975 land tenure system under imperial rule has been widely conceived as unjust among the rural peasantry as much as among the more progressive urban elites: land was concentrated in the hands of absentee landlords, tenure was highly insecure, and arbitrary evictions posed serious threats to tenant farmers.

After the Derg

After the fall of the derg (military socialist) regime of Mengistu in 1991, privatization of farm collectives took place rapidly and many international observers expected that in this process of "post-socialist transition," a transformation of land institutions towards a privatization and registration of land titles would follow, which was regarded as a means to increase productivity of Ethiopia's smallholder agriculture. However, these expectations were not fulfilled. The Transitional Government of Ethiopia, in its declaration on economic policy in November 1991 (Transitional Government of Ethiopia 1991), announced the continuation of the land policy of the derg regime.

The new constitution of 1995 approved and confirmed the state ownership of land in Ethiopia (Federal Democratic Republic of Ethiopia 1995). Article 40 of the 1995 Ethiopian constitution states that "the right to ownership of rural land and urban land, as well as of all natural resources is exclusively vested in the state and the peoples of Ethiopia. Land is a common property of the nations, nationalities and peoples of Ethiopia" (Federal Democratic Republic of Ethiopia 1995, Article 40).

The article further specifies a "right to obtain land without payment" for "Ethiopian peasants" for grazing and cultivation purposes as well as a right to be "[protected] against eviction from the possessions" (ibid., sections 4 and 5). The article further stipulates that any transfer of land is prohibited and "shall not be subject to sale or other means of exchange" (ibid, section 3).

There are some notable differences between the rules of 1975 and 1995. The 1975 proclamation prohibited the lease of land and the hiring of labour and concealed the maximum land size per individual to 10 ha; such provisions are absent in the 1995 document. Furthermore, Article 40, section 7 specifies the rights to the compensation payments for investment on land in case the "right to use expires," also newly introduced:

"Every Ethiopian shall have the full right to the immovable property he builds and to the permanent improvements he brings about on the land by his labour or capital. This shall include the right to alienate, to bequeath, and where the right of use expires, to remove his property, transfer his title, or claim compensation for it."

Federal Democratic Republic of Ethiopia 1995, Article 40.7

At the same time, there are serious omissions that leave tenure security unclear. In particular, the proclamation does not state the duration of usufruct rights for landholders. Broadly speaking, while the 1995 constitution and the subsequent Proclamation 89/1997 largely confirm state ownership of land as continuation of derg policies, they also provide some specifications that seek to take account of the necessity for a rural land and labour markets to emerge.

Several regional governments have made use of the powers vested in them in the 1995 constitution and Proclamation 89/1997 to formulate their land policies, among them Tigrai Region (1997, amended 2002), Amhara Region (2000), Oromia Region (2002), and Southern Regional State (2003).

According to the constitution, regional land policies need to be in accordance with federal law; all regional policies therefore validate state ownership of land and farmers only receive usufruct rights to plots of land without transfer rights, such as sale or mortgage. All regional proclamations confirm at least formally that land rights are to be granted to men and women, including the right to lease out land, although most regions restrict the period of the lease and limit leasing rights to only a share of the farmland.

Only one out of the four regional policies mentioned above rules out future land redistribution (Oromia), one does not specify (Tigrai) and the two other regions make it conditional on the demand of the community and a scientific assessment of its effects on land productivity (Amhara Region, and Southern Nations, Nationalities, and Peoples Regional State). In three out of four regional states, landholders need to comply with a number of user rules and management obligations to secure their usufruct and access rights. In Tigrai and Amhara regions, the right to use land depends on the residence in the kebele, a restriction already in place under the derg regime. At the same time, some regions formulate the aim to introduce certificates designed to increase tenure security and to reduce border conflicts. Inheritance rights have also been specified and in some case been extended beyond the core family: for example, in the Amhara region, it is allowed for land to be bequeathed to people outside of the family if those assisted the rights holders in times of need.

The "Oromia Rural Land Use and Administration Proclamation 56/2002" (Regional Government of Oromia 2002) grants higher levels of tenure security than the other three regional policies because it rules out redistribution of land plots (Regional Government of Oromia 2002, Article 14.1). The proclamation grants "lifelong usufruct rights" (Article 6.1) to agricultural land "free of payment" to all male and to female residents whose livelihoods depend on agriculture (Article 5.1).

However, there are three important restrictions formulated in the proclamation that allow the state to expropriate land use rights from plot holders.

- ✓ Article 6.4 grants the right of expropriation if land is required for "more important public uses", but the rights holder needs to be compensated and can remove investments thereon.
- ✓ Article 14.4 specifies that "irrigation land" is excluded from the prohibitions of land redistribution, which is allowed subject to the "participation and consensus of the user community." Those losing irrigation land are entitled to compensation with "reasonable rain-fed land."
- ✓ Land can be expropriated if needed for irrigation infrastructure. In the latter case, even the compensation to the former rights holder is limited.

Furthermore, the "Oromia Rural Land Administration and Use Regulation No. 39/2003" (Regional Government of Oromia 2003, hereafter referred to as the regulation) states that if land users fail to use their land in every production season (except in the case of restoring fertility), the land use rights can be terminated (Regulation, Article 3.5). According to the regulation in Article 22.1, after a period of three years without cultivation, the land will be expropriated; in the case of irrigated land, this can be applied already after two years. In addition, the regulation imposes a number of obligations on land management practices (for example, Article 17).

Despite these contradictions and limitations, the provisions laid out in the proclamation and the regulations constitute a significant improvement in tenure security compared to the situation under the derg. Thus, many land rights holders in Oromia now enjoy a larger bundle of rights then under the derg and can be regarded to be owners, in principle. This holds particularly for married and non-married women who also received individual rights titles (see Table A12_3). Oromian peasants now have improved exclusion rights through a relaxation of inheritance limitations and the abandoning of redistribution programs, which is accompanied by the right to rent out a share (up to half) of the landholding.

Table 12_3: Distribution of Bundles of Rights according to the Oromia Regional Land Proclamation (de jure situation)

	Land use and land administration authority	PA committee	PA member (m/f)	PA member, married (M/F)	PA member, non-married (F)	PA member (size of plot below minimum size)
Access Rights			+	+	+	+
Withdrawal rights			+	+	+	+
Management rights	+	+	+	+	+	+
Exclusion rights			+	+	+	+
Alienation rights			+	+	+	
Type of right holder	not clear	not clear	owners	owners	owners	proprietor

However, there are severe limitations of these rights for some rights holders. Divorced women still lack secure land rights since numerous exceptions severely limit these rights. Owners of very small plots may experience intervention by others such as co-heirs and holders of irrigation land who share the management right of 'making improvements of the resource' in the community where they live. At the same time, some provisions in the proclamation and in particular in the regulation attenuate this tenure security by imposing limitations on lifelong tenure (for example, by defining management obligations) or linking land rights to social status (such as denying effective equal rights to widows and divorced women). Given the number of exceptions and prohibitions, and the lack of clear specifications of responsibilities and decision criteria, the current legal framework allows for an enduring influence of the state bureaucracy on land distribution and land rights.

Current Situation

Tenure Types

The communal rist system was prevalent in the northern regions of Tigray and Amhara and was based on ancestral claims and customary law (USAID, 2014). By birth-right, both male and female descendants could substantiate and claim their use-rights to a portion of arable land. The land was owned by the lineage or community rather than the individual, who was entitled to rent his or her use-rights but could not mortgage, sell, or give the land away. Rist rights were conditional upon payment of taxes or fulfilment of obligations to the family or community, who retained secondary rights to an individual's holdings, such as access to use or gather water, trees, or fodder.

Gult, a form of private ownership, prevailed mainly in the southern regions, consisting of large holdings granted by the Emperor or provincial authorities (USAID, 2014). Owners were entitled to collect taxes or labour service from tenant farmers, some of whom had been cultivating the same land under customary or community-property rights. Gult rights were often provided in lieu of salaries to imperial officials and soldiers. The gult system was characterized by greatly concentrated landholdings and absentee ownership, political patronage, and widespread share-cropping under penurious terms. Owners could lease, sell, or mortgage land while tenants were subject to numerous restrictions, steep taxes, mandatory labour services and arbitrary eviction. All gult rights were abolished by the Derg and tenants were entitled to claim the lands that were not reallocated as state farms.

A third form of tenure included lands granted by the Emperor to the Ethiopian Orthodox Church, which held an estimated 10–20% of all arable land; tenant farmers on these lands also provided tribute or labour in exchange for use-rights (USAID, 2014).

All land is now vested by law in the Government and people of Ethiopia. However, people have land use rights that are transferable through inheritance, gifting, divorce and rent. Investors can also lease land from government for commercial farming. Increasingly broad discretion is granted to regional governments to regulate and administer use-rights and several have issued decrees or passed laws that vary in the degree to which they allow broad rental rights. The current land tenure system of State control over rural arable land resembles the rist system and the system during the Derg, with the exception that the communal rist system is replaced by State peasant associations.

Certification of Land Use Rights

Land certification was introduced in some areas to reduce tenure insecurity by allowing rural landholders to certify their use rights. This system of rural landholding certification was first introduced in the Tigray region in 1997 followed by the Amhara region in 2003 and later by the Oromia and SNNP regional states to reassure rural land holders of their use rights and to promote tenure security (USAID, 2014). Since the introduction of land certification in 1998, over 20 million certificates have been issued.

Proponents of certification suggest it avoids the debate surrounding ownership, instead focusing on formalizing state recognition of the use-rights of holders. Empirical evidence has suggested that certification of land in Amhara has increased participants' perception of tenure security. A recent review, noting the value of certificates for prompt and fair compensation, state that ―taking of land by government – whether for urban expansion, outside investors, or internal redistribution – without use of certificates to determine compensation levels or prompt award of compensation could jeopardize credibility of certificates. However, it is a big empirical question whether fair and adequate compensation is paid to certificate holders, particularly in the case of government takings for public investment in roads and development projects.

The federal Ministry of Agriculture is supporting a broad titling and certification initiative that is being implemented in Amhara, Oromia, SNNP, and Tigray Regions. Regional governments are the principal administrators and regulators of land, including the assignment and granting of use-rights and regional land-use planning and administrative authorities are responsible for recording, documenting, and administering use-rights.

Implementation of land administration at the regional and local levels is constrained by a shortage of trained staff and finance, exacerbated by the intent to further decentralize land administration to Land Administration Committees at the woreda and kebele levels without always providing sufficient resources. However, USAID and other donors are supporting initiatives for rapid and relatively cheap land demarcation and certification and strengthening village-level institutions for land allocation and conflict management.

The Institute of Land Administration (ILA) was established at Bahir Dar University in 2008 to offer training in land administration, geodesy and geomatics at the B.Sc. level with technical assistance of the Royal Institute of Technology (KTH) and financial support of SIDA. The institute also initiated the formation of a national association for land administrators in 2009. The Haromaya University's Department of Law is in the process of establishing a Land Tenure Institute that will conduct research in land tenure and administration issues.

Efforts to convey more secure tenure rights through low-cost certification of plots have been well received by rural Ethiopians as well as many external donors who believe that such measures will underpin greater rural investment and poverty reduction.

"However, these certification schemes do not address common property holdings (pastures, forests, watersheds) that contribute to degradation of land, nor do they facilitate rental of land or permit mortgaging. Further, while they are judged to have reached the poor, they have not always been supportive

of women‘s rights to land. Efforts to enable land-poor Ethiopians in some highland areas to relocate to less densely settled lowland areas have been perceived as less successful in sustainably expanding access to land.” USAID (2014)

Decentralisation
The USAID (2014) notes that they hope / intend to “provide support with decentralization and federal restructuring to improve resource governance. This could include devolving authority for forest management and expanding participatory forestry pilot programs….”

Trees and Forests
Forests and other wooded lands cover an estimated 52% of Ethiopia; the estimated annual rate of deforestation is 1.1% (USAID, 2014). While the estimated contribution of the forest estate to GDP is only 2.8%, 90% of the population relies on various forms of biofuels, 68% of which comes from woody biomass. Use of non-timber forest products such as honey, medicinal and spice plants, fodder, and the benefits of environmental services are essential aspects of people‘s livelihoods. Forest clearance for agricultural expansion and settlement, habitat fragmentation, and the impact of uncontrolled grazing and fire upon forest regeneration are all drivers of deforestation in Ethiopia.

Encroachment on state forest reserves and associated illegal logging and arson is a significant problem in Ethiopia.

Legal Framework: The Constitution (Art. 40) vests the ownership of all natural resources in the State (ibid.). However, The Forest Conservation, Development, and Utilization Proclamation No. 94/1994 provides for the conservation, development, protection and utilization of the forest resource and mandates three tenure types, including State forests held by Federal and Regional governments, and private forests.

The Forest Development, Conservation, and Utilization Proclamation No. 542/2007 recognize state (encompassing both Federal and regional) and private forest ownership. However, the revised proclamation does not explicitly address participatory forest management, indicating a continuing absence of policy direction from the Federal government in support of community authority over forests.

However, Oromia (Forest Proclamation of Oromia, No. 72/2003) region has promulgated a law regarding forest management and utilization. This same proclamation, as well as Proclamation 110/2007 of the Southern Nations, Nationalities, and People‘s Region (SNNPR), recognizes communal forest and landholdings subject to common use, establishing a legal basis for community forest ownership.

Tenure Types and Issues: State forests include all forests held by the federal or regional state governments (ibid.). Private forests include all forests outside state control and include those held and managed by individuals and groups, including community forest associations.

Critical questions regarding resource governance underlie the potential for sustainable management of the forest and woodland estate in Ethiopia. Ethiopian and international forestry experts stress the need to distinguish forest tenure issues from those of land and land policy and address issues that are pertinent to forest management and use. In particular, there is a need to assess the policy environment and enabling circumstances of the evolution of community forest management and to clarify land and forest-use rights in forest areas.

In some forest areas, robust, complex customary rules and practices governing forest utilization persist, despite continuing claims of exclusive authority by some government forest authorities. Perceived insecurity of tenure, including restrictions on transfer rights and the potential for government seizure of holdings was found to have a robust negative impact on farmers’ willingness to invest in perennial crops such as chat and coffee, as well as the planting of trees.

Government Administration and Institutions: There is no single federal authority responsible for all forestry sector policies and programs, although the Ministry of Agriculture has authorities for most federal forestry policies (ibid.). Both federal and regional authorities are responsible for designating and

demarcating State, regional, and protected forests. Fifty-eight National Forest Priority Areas (NFPA) were designated in 1985; responsibility for their management as Regional Forest Protected Areas shifted to regional authorities upon promulgation of the 1995 Constitution.

The Forestry and Wildlife Conservation and Development Team within the Ministry of Agriculture and Rural Development are responsible for forest policy and oversight of forest management by Regional governments. The Ethiopian Agricultural Research Organization and a number of other government authorities are also directly and indirectly involved with management and research in the forest sector. Despite the promulgation of a forest policy and proclamation (No. 542/2007), lack of enforcement regulations and shifting responsibilities among different levels of government weaken forest management and enforcement efforts. Nonetheless, the Federal and regional governments have taken steps to improve the policy environment. In 2007, the Oromia Region government established the Oromia State Forests Enterprises Supervising Agency (OSFESA), with the mandate to support the establishment of community-based forest enterprises and facilitate the expansion of participatory forestry efforts.

Government Reforms, Interventions and Investments: In the mid-1990s, the regional bureau of agriculture supported an initial assessment and trial of participatory forest management in the Amhara Region that failed to meet its objectives to build effective participation and management by stakeholder communities (ibid.). Lack of clear policy directives regarding joint management and insufficient training to build the capacity of community stakeholders to participate in the process were cited as reasons for its failure.

Since 2000, the Governments of Germany and Ethiopia have collaborated to implement the Integrated Forest Management Project, which supported a community forestry trial project in the Adaba-Dodola Forest Priority Area. Under the WAJIB initiative (WAJIB in local language stands for Waldayaa Jiraatoota Bosonaa, which means Forest Dwellers' Association), forest dweller associations, consisting of a maximum of 30 members, were formed with exclusive user-rights to blocks of forest averaging 360 ha. As of 2007, 77 registered user-groups had legally recognized management and use-rights to 77 forest management blocks totalling 35,000 hectares.

As a result of the success of the WAJIB initiative, the practice of participatory forest management, including defined rights of management and use to demarcated forest areas, has been extended to other areas throughout the country. A similar initiative by FARM-Africa and SOS Sahel is supporting participatory forest management activities in Oromia and SNNP Region. To date, an estimated 90,000 hectares are being managed as community forests, with authority granted to a combination of forest cooperatives and associations. There is a need for legislation that regulates and assures the continuous use of the forest resources by communities.

Annex 13: Details of the Proposed PES for the Pilot Programme[28]

Aims and Objectives of the Pilot Programme

This project aims to pilot a PES programme of positive incentive measures to encourage the achievement of biodiversity-friendly outcomes and support activities that promote the conservation and sustainable use of biodiversity and other ecosystem services. The understood intent is for the Government of Ethiopia to continue and scale-up the programme post-project (i.e. from early 2019).

The objective of the pilot programme is to secure the ecosystem services of the pilot areas – and ideally to increase those services in areas which have suffered from degradation (e.g. upper areas of Choke Mountain where cattle and sheep have been illegally grazed (Figure 11); zone around Erica spp.

[28] A detailed PES design document has been prepared to provide a wide range of background information for project implementation, given the low level of awareness and understanding of PES encountered during the PPG. Annex 11 is Chapter 3 of that document.

forest on Choke, where tree stumps exist and should re-sprout, providing exclosure is implemented (Figure 12); also restoration of cleared gaps in Furdissa (Figure 13) and Kulfo Forests and alien invasive species in Somali. Notably, this should increase the biodiversity of the pilot areas, increasing carbon stocks or definitely reducing carbon stock losses and reducing the sediment loads of watercourses downstream of the pilot areas (Figures 14 and 15).

Photo copyright Anne Woodfine

Figure 11: Illegal grazing of Afromontane communities above 3,500m in Choke Mountain

Photo copyright Anne Woodfine

Figure 12: Recently deforested land around Erica spp. forest, Choke Mountain

Photo copyright Anne Woodfine

Figure 13: Incomplete forest cover due to recent deforestation, Furdissa Forest

Photo copyright Anne Woodfine

Photo copyright Anne Woodfine

Figure 14: Comparisons of water quality between high altitude springs on Choke Mountain and run-off along track during a heavy rain shower at about 1,500m lower altitude

Photo copyright Anne Woodfine

Figure 15: Heavy sediment load in a river draining a degraded area of Furdissa Forest

What are the benefits and how will they be managed and allocated?

The great advantage of participating in payment for ecosystem service schemes is the possibility of receiving financial benefits, either directly or indirectly.

During the PIF development, it was agreed that the programme would adopt the “direct” approach and this was confirmed as the preferred option during the PPG. This means that the project will catalyse provision of monetary incentives, which seek to emulate market prices, paying (i.e. recompensing) relevant land users to do two things:

1. achieve biodiversity-friendly outcomes;
2. not achieve biodiversity-harmful outcomes.

Use the direct payments approach (rather than indirect or "in-kind"[29]) is in-line with the recent growth in programmes implementing PES schemes, as direct incentive measures are increasingly applied in both developed and developing countries. A major contributory factor in the increasing application of these schemes is that land users can make their own decisions as to how the money they are paid is spent. Also, more generally, PES is found to be more successful then legally restricting access etc. – as land users tend to cooperate more easily when they are offered carrots rather than threatened with sticks.

Again as mentioned in Chapter 2 (of the PES Design Document), payments for ecosystem services using the direct approach are typically achieved by paying landowners to manage their assets to achieve biodiversity conservation. This can, for example, be management contracts on private farms which have rules for biodiversity management activities and payments linked to the achievement of specified biodiversity objectives.

As all land is now vested by law in the Government and people of Ethiopia (see ProDoc Annex 10). Ethiopians have land use rights that are transferable through inheritance, gifting, divorce and rent however. Increasingly broad discretion is granted to regional governments to regulate and administer use-rights and several have issued decrees or passed laws that vary in the degree to which they allow broad rental rights – thus the general phrase land users is used in this project and for the programme, meaning the groups of people who through membership of a cooperative or CBO have use rights over land of high biodiversity value / providing ecosystem services. This could be a community forest association or a WAJIB (WAJIB in local language stands for Waldayaa Jiraatoota Bosonaa, which means Forest Dwellers' Association), forest dweller associations (by definition these consist of a maximum of 30 members, were formed with exclusive user-rights to blocks of forest averaging 360 ha.)[30] .

It is essential that the PES benefits reach the hands of all of the people committed to the programme in an organized and transparent manner.

Important questions include:

- ✓ How, how much and when will financial benefits be paid to community members?
- ✓ How will the resources be allocated?
- ✓ Will payments be made to the group or to individuals?
- ✓ To whom are the payments made - men or to women?

Financial planning is fundamental to ensure that the resources are used in a way that is beneficial for all community members for an extended period, while also guaranteeing the provision of the ecosystem service. The creation of a financial management fund with use criteria and resource distribution as well as a transparent governance structure is recommended.

In addition to financial benefits, community members engaging in this programme of payment for ecosystem services transactions will also gain the benefits of extended experience with government agencies and universities, through transactions and interactions with other stakeholders and intermediaries.

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[29] In-kind payments could, for example involve community members deciding that in-kind payments such as the building of a new school or technical training to develop new projects within the community will be more beneficial for them in the long run.

[30] In 2007, 77 registered user-groups had legally recognized management and use-rights to 77 forest management blocks totalling 35,000 hectares. As a result of the success of the WAJIB initiative, the practice of participatory forest management, including defined rights of management and use to demarcated forest areas, has been extended to other areas throughout the country.

Improved ecosystem resilience and land productivity are also potential community level benefits of the PES programme and linked project activities on agroecological / sustainable land management and climate smart agriculture.

From both the consent and benefit allocation perspectives, it is important to consider both gender and equity impacts at all stages of the programme and project - including development and implementation, as this approach is not only the most ethical way to develop projects, but also helps to ensure project sustainability. Equitable outcomes depend primarily on high levels of transparency and accountability. It is important to recognize that communities are not homogenous, but rather that there are differences and inequities which exist in and between even adjacent communities. The project or programme may not benefit all members in the same way.

It is also important to consider gender issues for many reasons including the application of international human rights legislation and standards, different roles and interests of men and women with regard to natural resource management, and increased overall levels of participation. In addition, studies show that when women are the recipients of income from carbon projects[31], the money is more likely to have positive welfare outcomes, thus having a greater effect on poverty and equity impacts.

Community engagement with the pilot PES programme

Clearly, the genuine and effective involvement of communities in a payment for ecosystem services scheme is crucial to success and sustainability. This participation should go far beyond solely receiving the benefits from the transaction. For a payment for ecosystem services transaction to be successful, it is necessary that rural community members actively participate from the beginning of project identification and design, with suggestions and input. Community members should also remain involved in the implementation, as well as the monitoring, of activities related to the program.

Historically, community populations have not always had satisfactory experiences with mechanisms that were created and developed at national and international levels without the consultation of their positions and consideration of their beliefs, conditions and lifestyles. Additionally, in many cases, the rights related to the land tenure were not legally resolved. It is therefore fundamental that this project recognises the rights of local communities over their territories and Memoranda of Understanding (MoUs) are signed between the Government and communities that confirm communities were fully informed about the terms of the PES before they sign necessary legal agreements.

The MoUs must confirm that local communities give (or withhold) their consent to proposed measures that will affect them or the land and resources they own or use. The process of these MoUs is essential for ensuring that commitments made by communities are made only when the community fully and realistically understands a PES project. This does not mean that every single member of a community has to agree with a project, but that a consensus is reached within the community (through a council or tribal government, for example) to move forward. Communities must give their consent before a project begins to implement activities so that they still have the option to refuse project implementation. In addition, they must be presented with complete information on the intent and scope of the project in a language and process which they can easily understand. Coercion or intimidation which forces community members to make a certain decision is not allowed. The process of securing these MoUs for this project will reflect locally accepted, traditional consultation processes and respect customary leadership.

Box 1: Why should project developers be concerned with stakeholder participation?

[31] Which are also likely to apply to wider ecosystem services projects

For project developers, engagement with communities is necessary, not just to comply with project standards, but also to ensure project sustainability. Ensuring the full participation, acceptance and consent of communities does require additional effort, time and money from project developers, but experience has shown that doing so helps to avoid delays, setbacks and conflicts during project implementation. In addition, community engagement helps to reduce risks, especially because non-engagement could lead to increased leakage[32] (activity shifting) and reduced permanence when forest-dependent communities are impacted negatively, marginalized or even excluded from project opportunities. Working with community members and other stakeholders also increases the reputation of projects in the marketplace by ensuring that elite capture and other potentially poverty exacerbating effects do not occur. Standards for carbon projects, such as the Community, Climate, and Biodiversity Standard, require community engagement, which increases market access for projects. Finally, projects showing good social practice are often able to access 'softer' finance which is aimed at helping protect communities and the poor from adverse climate change impacts more easily.

Source: Ebeling and Olander (2011)

It is fundamental for this project that each community agrees to participate in the programme (i.e. the majority of members of each CBO / cooperative agree) and to work with the other institutions involved before any action is undertaken. The first step[33] will be to confirm the programme[34] objective(s) and the responsibilities of community members are perfectly clear for everyone. That is, community members, ideally all, should understand not only the benefits of the programme, but also the commitments that they must undertake. Reaching this agreement must be done with objectivity and in a participatory manner, identifying the possible risks for implementing the programme. Only after this process are community members able to offer their free, prior, and informed consent. The consent to participate in the project should be written (in the local language, also Amharic and English), mentioning the agreements, responsibilities of each partner and formally authorizing project implementation. The project Legal Advisor will provide appropriate legal advice and certify that the terms of the agreements, as well as the PES programme objectives, are in agreement with current laws[35].

Community members should be able to answer the following questions:

- ✓ To whom does the right to the PES belong (the landowner, a person who has use rights, the federal or local government)?
- ✓ Who is paying?
- ✓ What ecosystem service(s) are the buyers paying for?
- ✓ How much is the buyer willing to paying?
- ✓ Whom is the buyer paying?
- ✓ For how long?
- ✓ Who receives the money and how?

[32] Leakage occurs when measures to enhance ecosystem services provision in one location leads to increased pressures for conversion in another. If leakage risk is expected to be high, the scope of the monitoring and accounting framework may need to be expanded so as to detect, and consequently address, leakage

[33] This was not done during the PPG as it was deemed inappropriate to raise expectations when the project had not yet obtained CEO Endorsement

[34] Programme here refers to the PES – which will continue beyond the life of the project

[35] As necessary, the Legal Advisor will catalyse necessary changes to laws etc to enable this

- ✓ How can we guarantee that the benefits are distributed in a transparent manner?
- ✓ What are my responsibilities if I decide to participate in the programme?
- ✓ What happens if I don't meet my responsibilities?
- ✓ How can we guarantee that the rights of all community members will be considered and respected?
- ✓ What laws /by-laws should be modified or created for the project to be implemented?
- ✓ Is there a need for a government agency or other independent institution to administer the resource?

The key issues and challenges which face those obtaining the MoUs (source: Ebeling and Olander, 2011) are summarised in Table A13_1.

Table A13_1: Key Issues and Challenges in the Community MoU Process
Time: Sound, consensus-based decisions will only emerge from processes that are iterative, inclusive and allow enough time for systematic consultation, information gathering and feedback. Projects are necessarily iterative since communities have the right to consent (or not) at all key stages of project development.
Who has the right to give consent? Consent should be granted by the representative organizations of indigenous groups or other local communities. For some groups, this may be clearer than for others, but it is necessary to ascertain which group has the ability to give consent in order for the project to proceed.
Cost of providing independent and comprehensive information: Providing balanced information to community members is a costly process including impact studies to fully understand the costs and benefits of project implementation, making information accessible, providing access to legal advice and participatory mapping to clarify customary rights, areas and rights holders.
Securing MoUs is more difficult when outcomes are uncertain: For forest carbon projects especially, there is uncertainty regarding financial outcomes. This makes it difficult to be definitive about financial returns when holding consultations with communities. For this project, the financial returns will be more certain as the Government (Federal and Regional budgets) has undertaken to fund the PES pilot (co-financing for the GEF project – mostly / all under the CRGE).

Throughout the consent process, potential benefits and risks for the communities or stakeholders involved must be discussed in great detail in order to minimize these risks and ensure maximum community benefits.

For the PES programme of this project (also post-project scaling-up), which will affect communities' use rights (and in some cases possibly occupation), the key elements of effective engagement which need to be negotiated prior to any other work include:

- ✓ Identifying customary land areas: involving community members in data gathering, using indigenous names and land-use classifications, identifying important religious, cultural or economic sites, identifying all users and rights holders, working with neighbouring groups to define and agree boundaries;
- ✓ Engaging with representative organizations: involving customary institutions recognized by the state and accepted by people, such as local government and ad-hoc institutions established by the community to deal with outsiders;

- ✓ Providing information about potential impacts, costs and benefits, risks, conflicts, opportunities, obligations and duration as well as legal implications, communicating in local language and ensuring widespread participation;
- ✓ Ensuring consent is freely given: avoiding any form of coercion, allowing legal representation, allowing all interest groups and representatives to participate;
- ✓ Ensuring consent is prior: for community-based projects, planning the project together with communities through an iterative process, with the "no-project" option being presented as real alternative, rather than presenting the project as a "done deal" at the end;
- ✓ Ensuring there is consent: allowing time for institutions to consult with and obtain feedback from the wider community, ensuring effective communication of potential implications of proposed intervention; the output being a written agreement;
- ✓ Addressing gender issues: recognizing that men and women typically have very different roles and interests in natural resource management and can contribute complementary skills and knowledge, as well as having different levels of power, influence, and control—all of which need to be taken into account to avoid perpetuating or accentuating gender inequity.

Note – Consent to the PES programme is not just a "one-off" exercise carried out at the end of planning project interventions; instead, it defines an entire way of engaging and planning with local stakeholders through a rights-based approach. Not meeting these principles in payment for ecosystem service programs constitutes a violation of the rights of traditional communities. In addition, the inadequate involvement of the communities can put the project in jeopardy, not only from an ethical stance, but also project viability, as a transparent, just and egalitarian association is fundamental for the success of any PES program.

Valuation of the ecosystem services in the pilot areas

As discussed in Chapter 2, a key step in designing a PES programme must be to value nature – which itself is not an insignificant task. Notably, Figure 4 provided a flow chart which can assist in understanding the complexities of valuing ESs by categorising them seven groups.

Clearly, functioning ecosystems produce multiple services and these interact in complex ways, different services being interlinked or "bundled" together, and therefore affected negatively or positively as one service (e.g. food) increases (e.g. Bennet et al. 2009). Most studies so far have focused on one or a few services such as carbon sequestration or water quality and/or quantity. Characterizing multiple ecosystem services as well as biodiversity across the same region has only recently emerged as a field of study (e.g. Schröter et al. 2005), however during the PPG it emerged that this seems to be the preferred option for this pilot. This was particularly as experience shows that payment schemes are most effective when seeking to cover, to the extent feasible, all ecosystem services provided by a particular ecosystem - the "bundling" of the ESs. Further, as there is to be a single buyer (the Government) for the services across the pilot areas (Figure 10), this can be tested.

Figure 10: Bundling of Ecosystem Services[36]

Bundling - a single buyer pays for the full package of ecosystem services which arise from the same habitat

The Total Economics Valuation (TEV) approach differs in some respects on the specifics to the content of Table A13_2 , which was designed by its authors specifically to relate to protected areas of Ethiopia and details the direct and indirect use values, but does not deal with the much more difficult to quantify option values and non-use values in Figure 4.

Table A13_2: Summary of Economic Values of Ecosystem Services for Ethiopia's GNP[37]

	Economic Value	Scale of Analysis	Local Economy	National Economy	Global
Direct Use Values	Employment Opportunities	GNP	√	√	

[36] See Chapter 5 for post-project alternative options

[37] Source: adapted from ÖBf (2009). Also see Annex 11

	Unlicensed hunting	GNP	√		
	Wild food	GNP	√		
	Fish resources	GNP	√		
	Agriculture	GNP	√	√	
	Livestock grazing	GNP	√		
	Household water	GNP	√	√	
	Medicinal plants	GNP	√	√	
	Timber and NTFPs	GNP		√	
Indirect Use Values	Carbon sequestration	GNP		√	√
	Water regulation	GNP		√	√
	Biodiversity	GNP		√	√

Many workers use land use／land cover and total land areas as a proxy for the provision of services, even though some question the relationships between land use, land cover and service provision (Naidoo et al. 2008). However, it is important to determine the ecological or physical boundaries of ecosystems, however arbitrary it may sometimes be, as this provides an important basis for adaptive and practical management through the mapping of particular functions and landscape units, the so-called "service-providing units" (discussed in detail later in this Chapter) and assessments of payments.

Step-by-step guide to implementation with each community group in the pilot sites

Table A13_3 provides a detailed schedule of the steps which need to be followed with each established community group (if there are no pre-existing groups, the project will support their development and registration). Many of the arrangements as to who is / are responsible should ideally take the form of formal agreements, including contracts and Memoranda of Understanding (MoUs).

Table A13_3: Steps and Suggested Responsibilities in the PES Pilot

Steps	Who are likely to be involved?	Who may be responsible?
1. Identify and demarcate pilot sites	land users, field environmentalists	field environmentalists
2. Determine current usage of each pilot site with local CBO members	land users, field environmentalists, local technical staff, local university staff and project technical advisor	field environmentalists, local university staff and project technical advisor

3. Analyse key drivers of degradation or unsustainable forest management	land users, field environmentalists, local technical staff, local university staff and project technical advisor	local university staff
4. Determine sustainable harvest levels for locally vital resources	land users, field environmentalists, local technical staff, local university staff and project technical advisor	local university staff
5. Identify areas which require exclosure and ensuring these fenced (or other arrangements made) to avoid grazing / harvesting of resources	land users, field environmentalists, local technical staff, local university staff and project technical advisor	field environmentalists
6. Assess available areas for reforestation (favourable geographic and ecological characteristics)	land users, field environmentalists, local technical staff local university staff and project technical advisor	field environmentalists
7. Agree management plan with each community	land users, field environmentalists, local technical staff local university staff and project technical advisor	field environmentalists
8. Obtain consent from communities to participate in programme	land users, field environmentalists, local technical staff, legal advisor	field environmentalists
9. Enter into PES agreement	land users, field environmentalists and legal advisor	field environmentalists and legal advisor
10. Set-up monitoring and evaluation systems (community and also expert-led components)	land users, field environmentalists, local technical staff, local university staff and project technical advisor	field environmentalists, local university staff, project M & E officer and project technical advisor
11. Independent certification of BD and other ESs benefits		Independent national broker
12. Tree planting and improved forest management activities (as locally appropriate)	land users, field environmentalists, local technical staff (agriculture and forestry extension officers)	field environmentalists, local technical staff (agriculture and forestry extension officers)
13. Education and training in BD friendly land management for cropping areas, including setting-up farmer field schools and/or demonstrations	land users, field environmentalists, local technical staff (agriculture and forestry extension officers)	field environmentalists, local technical staff (agriculture and forestry extension officers)

Definition of the land area – the "Service-Providing Units"

As mentioned in Chapter 2, it is vital to delineate the boundaries of the land over which each CBO or other group has rights early in the discussions with each community. This is likely to involve marking the boundaries of their land using locally available materials. It should also involve mapping using existing (if available) maps or hard copies of satellite imagery – which could then be used to prepare digital maps of the sites using GIS. The use of satellite imagery will clearly not be familiar with community members – but an experienced facilitator should be able to assist members to identify pertinent features on the ground and image thus become used to the concept. Alternatively, also using participatory approaches, groups of community

members should work with the facilitator to prepare a sketch map of the community's resources[38], using a flip chart and coloured pens[39] – including the land which will be included in the PES – but also other lands over which they have jurisdiction – for example their croplands (over which each family is likely to have tenure) – which will be useful for work to encourage use of more biodiversity friendly / SLM technologies in these areas to provide additional livelihood support (to supplement the PES payments).

Framework of valuation for the pilot PES using a straightforward aggregation

Table A13_4 was prepared during the PPG as an initial effort to quantify the possible levels of PES which could be provided to the groups of land users (CBOs) once they have prepared management plans and entered into agreement with Government to secure the identified ecosystem services. Note, for most categories there are minimum and maximum values which differ greatly, leading to a ten-fold difference in the value/ha/yr ($359 to $3,996). However, there remain gaps in information and it is accepted that the total amounts under even the lowest level of payments would be unaffordable for FDRE ($359 for 20,000ha would be $7.18 million/yr).

Table A13_4: Range of Values of Ecosystem Services for Pilot Sites[40]

Category	Details	Value ($/ha/yr)	
		min	max
Biodiversity	total - Koorsgard (2006)	1	30
	medicinal plants - Mander (2006) and Sutcliffe (2009)	4	4
	genetic resources	?	?
	direct use values of forests and woodlands	?	?
	livelihood support values of forest resources (wood, fodder, fruit, medicinal plants etc)	181	181
	sub-total	186	215
	total economic loss due to deforestation (Öbf, 2009)	660	660
Hydrological	Water consumption	50	400

[38] Teams should follow approaches developed by the FAO LADA programme – see http://www.fao.org/nr/lada/index.php?option=com_content&view=article&id=32&Itemid=113&lang=en

[39] It is good practice to always leave the original map with the community – facilitators take photographs or otherwise make copies for reference.

[40] Source: principally Öbf (2009) and others as mentioned in table

	Water quality control	20	1,400
	Flood mitigation	2	1,700
	Ground water replenishment	10	90
	Erosion control (increase lifespan of dams, reservoirs etc; increases available electricity from HEP; improves water quality; reduces flooding hazards)	20	120
	Microclimate stabilization	10	10
	sub-total	112	3,720
Carbon Stock	woody biomass	?	?
	other above-ground biomass (small branches, twigs, leaves)	?	?
	below-ground biomass, SOM, deadwood, litter	?	?
	sub-total	0	0
Direct Use Values	Recreation and Tourism	?	?
	Employment	?	?
	Agriculture	?	?
	Livestock grazing and fodder collection	?	?
	Timber, firewood and NTFPs (Watson, 2007 - Bale study - $407/hh in park/yr)		
	Medicinal resources (see in BD)		
	Water usage (see in hydrological)		
	Electricity production (see in hydrological)		
	Irrigated agriculture (see in hydrological)		
	sub-total	0	0
Indirect Use Values	Biodiversity (see above)		
	Climate change mitigation (carbon stocks - example Harenna Forest = $7,666 - 200 tonnes carbon/ha) Öbf (2009) indicate value in REDD project $25/ha/yr	25	25

	sub-total	25	25
Option Values	Genetic resources (coffee $280/ha/yr - Sutcliffe (2009))	?	?
	sub-total	0	0
Existence Values	Cultural, spiritual	?	?
	Wilderness and Iconic	?	?
	Knowledge and education	?	?
	sub-total	0	0
Possible PES Total		359	3,996

It had been anticipated that the final valuation of the ESs would vary between the four pilot sites – and perhaps also within each pilot site (between lands of different CBOs) due to the different ESs the lands provide. However, during the PPG and particularly during the two validation workshops, participants strongly felt that to avoid generating ill-feeling, certainly during the pilot, there should be equity between the regions and thus a single figure should be paid per hectare for the PES during the pilot phase (anticipated to be for Yrs 3 and 4 of the project). This should be set at a level which encourages participation and is comparable to what could be achieved in more global markets.

The level of PES will be agreed at project start-up, taking into consideration that, during the pilot, communities will receive many benefits in addition to the monetary compensation for the PES (financial incentive to join the scheme early in the programme, also the education and training in biodiversity friendly land use practices). However, evidence shows that the Humbo project has earned land users around $36/ha/yr for a single ecosystem service (carbon sequestration) and should be used as a guide. At the end of the pilot, it should be possible for representatives of the land users to generate higher levels of payment for the bundled ecosystem services than this level in the range of rapidly developing markets.

The graph in Figure 11 provides an illustration of the principles which need to be applied for each CBO (example from UK).

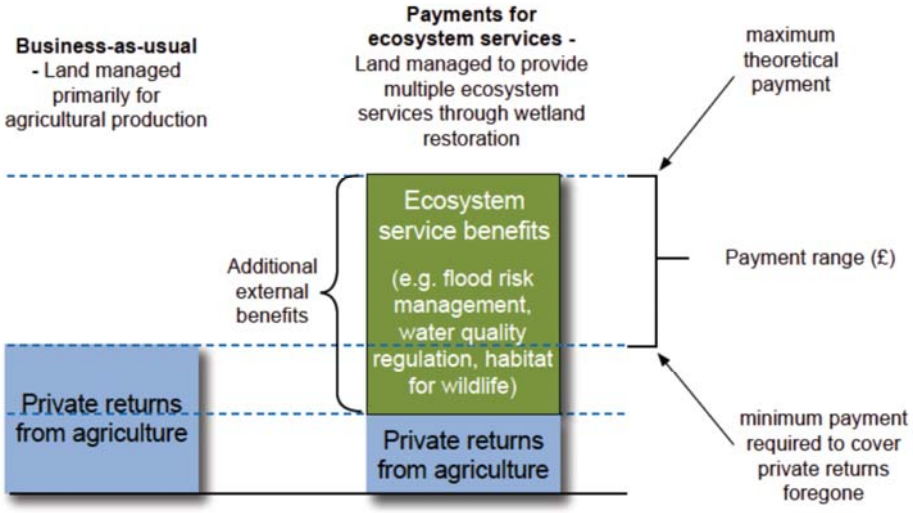

Figure 11: Land managed primarily for agricultural production vs. land managed to provide multiple ecosystem services under a PES scheme

Ultimately in determining the marketable value (potential price) of an ES in a voluntary market such as is planned for this programme during this pilot phase (i.e. in the 2015-2018 period supported by GEF, which will be funded by the CRGE and not a regulated markets such as caps or emission quotas e.g., as in Kyoto Agreement) is determined by supply and demand: what the buyer is willing to pay and what the seller is willing to accept. (See Chapter 5 on discussion of issue post-GEF project.)

It is important that agreed PES prices include provision for them to increase according to a recognised national indicator of inflation (or changes in C prices – in the post-project system – again see Chapter 5 for further details). This should be set-out clearly in the legally binding contract.

Capacity building

For practical reasons, the project will have to communicate and negotiate project design and planning through a community institution that can speak on behalf of the wider community – the CBO or cooperative. This institution should also be able to ensure that those project activities that are undertaken on a group basis can be effectively executed. It must be recognized, however, that where local institutions are present, they may not be representative,

accountable, or transparent. Throughout, particular attention should be paid to gender and representation of potentially less vocal groups throughout the process

Ensuring effective community engagement will often require dedicated effort in building capacity to enable participation. (When determining budgets, it is important to recognise that this capacity building support for community organizations should be considered as an investment, which will have benefits beyond the scope of the project.)

During the PPG, an assessment has been made on whether the project proponents have the capacity to deliver on the suite of actions required for project success, as making a project work in practice is complex as it is a more long-term commitment. Reforestation, conservation or forest management projects represent complex social, technical and operational challenges that not all entities are prepared for. The following capacity building interventions have been identified as necessary having identified the realistic limitations of existing capacities.

Development of CBOs / cooperatives – the project will support establishment of effective registered groups, where none exist (notably in East Wollega Zone) and support reinvigoration of those which are not operating as effectively as is required (including ensuring each has a bank account into which PES can be made);

Financial planning - It is important that each CBO or other group contracted to provide the ESs services has the capacity to manage the finances earned under the PES. The project will provide training to several members of each community group which proposes to enter into a contract to ensure they have capacity in financial planning to ensure that the resources provided under the programme are used in a way that is beneficial for all community members for an extended period, while also guaranteeing the provision of the ecosystem service. With community agreement, it will be recommended to each group that a financial management fund is created, with agreed use criteria and resource distribution as well as a transparent governance structure.

Ecosystem services and the concept of PES

Sustainable management of ecosystems – tailored to the specific CBO's lands

Participatory monitoring and evaluation

Education and training in BD friendly land management for cropping areas - likely to involve establishment and support to farmer field schools

[Additional capacity building activities will be added as required during implementation, scheduled via annual workplans.]

Legal aspects of the programme

Given the novel nature of this pilot programme in Ethiopia[41] it is vital that at all stages the project ensures that ownership rights, contracts and other agreements are legal. This is particularly complex in Ethiopia where tenure etc. can vary between regions. The project will recruit a part-time legal and policy advisor to support this vital aspect of the work (also working on Outcome 1). The following outlines the key aspects of the role for Output 2.1 as identified during the PPG. This may be supplemented during project implementation as and when issues arise.

[41] The only PES to-date in Ethiopia is the Humbo project, which has secured new funding stream from the Clean Development Mechanism - from which this project has taken some lessons, but as it has solely focused on forest restoration, it differs considerably from this pilot programme.

Due diligence and ownership rights (over tenure, biodiversity and other ecosystem services) - Local circumstances and tenure laws vary considerably between countries and within Ethiopia also between regions. Typically, rights over ESs such as BD, water and forest carbon are still not specifically regulated in most jurisdictions and, in these cases, must be inferred from existing law. Because forest carbon is closely tied to land and natural resources, rights to PES from that and other ESs may be considered part of project participants' property and use rights to land and forest in the project area. Some governments, however, claim that ecosystem services belong to the country's people as a whole, and therefore that any ecosystem services transactions must pass through the government.
It is a vital step that the project legal advisor secures legal documents in each region declaring that the CBOs have rights over the ESs. (Given the success of the Humbo project, this is not anticipated to be a problem – but this step must be completed before work with the communities begins.)

Where the law does not explicitly specify ownership and transfer rights over the full range of ESs, a careful examination of existing applicable law will be necessary to determine whether rights can most logically be inferred for the group that holds rights in land and forest.

It is important to note that any claims to ESs rights based on inferences and interpretation of existing laws could quickly be challenged by new legislation, and more specific regulation is to be expected in many countries. The project therefore needs to remain vigilant about any evolving legislation or even new interpretations of the existing framework. In any case, a formal government endorsement (or some other written statement) of the project and/or its rights should be very useful for any project. Detailed due diligence, including property surveys to confirm the size and boundaries of project areas, is also advised.

At the very least, property and use rights of land and/or forests should be clearly defined before projects proceed and clear evidence will be required by the ESs buyer. Apart from potential challenges to legal ESs rights, project participants who have insufficient rights in the project area cannot guarantee that underlying project activities will continue as promised, resulting in risks to carbon credit generation.

For example, carbon standards require compliance with applicable national and local laws as a pre-condition for validation and verification, meaning that project participants must be able to lawfully perform project activities. Moreover, most standards also require forest carbon project participants to give evidence that they have "control over the project area" and so project participants must have at least:

- ✓ Use rights sufficient to perform the project activities (such as planting trees),
- ✓ The right to exclude or prohibit uses incompatible with project activities (e.g., agricultural encroachment).

Review local regulatory requirements - Review of applicable legislation and regulation is a formal requirement of the Clean Development Mechanism other PES standards and is a key part of project planning for compliance over the course of project development and implementation, as in order to obtain necessary approvals and inform government agencies in a timely fashion. Binding laws and regulations will include land-use, forestry, environmental and potentially, labour laws and regulations, as well as any specific requirements established for carbon projects. Given the type of project financing and revenues (from GoE), legal due diligence is also likely to require to include laws covering business conduct, taxation and foreign investment regulations.

Environmental impact assessments (EIAs) may be required for reforestation and forest management activities – but needs to be ascertained on a case-by-case basis during project implementation, as CBOs will be being supported by the project to develop their own management plans in a "bottom-up" approach, so the requirement or otherwise cannot be determined during the PPG. Mitigation measures for potential negative environmental impacts may be required, for example in afforestation /reforestation activities employing non-native species, species with high water demand and planting techniques

that disturb soils significantly. Communication with regulatory authorities and legal compliance should be seen as an important ongoing part of the project process.

Drafting of a legally binding PES agreement – once an agreed management plan is in place, also indicators have been agreed and the "service providing unit" is defined, using the template of the agreement used in the Humbo Project and the example structure:

Structure of a PES Agreement

- ✓ Define the rights and responsibilities of buyers and sellers
- ✓ Design a nationally accepted type of contract
- ✓ Define the payment basis – delivery of what?
- ✓ Set-out a procedure for dispute resolution
- ✓ Set-out the agreed payment / benefit sharing system (including in-kind)

The project's Legal Advisor will draft agreements for signature between the GoE and each CBO (with support from the independent broker) defining the following:

Elements of an Agreement

- ✓ Terms and types of payments
- ✓ Timing of payments
- ✓ Requirement or conditionality for payment (e.g., report, data)
- ✓ Managing and mitigating the risks
- ✓ Length of contract
- ✓ Dispute resolution

Lessons from existing PES schemes included in this design

Improving Targeting: For many PES programmes using direct payments (as will be used in this programme – see reference in Chapter 2), targets are defined in the form of a specific practice rather than a specific (measurable) environmental outcome and the need to improve targeting is a recurrent theme in the literature. While the use of 'proxy indicators' is sometimes more practical and easier to monitor (e.g. total area of a particular habitat / ecosystem), in particular in light of existing deficiencies in biodiversity indicators and associated data sets, it may give rise to a certain lack of effectiveness and also risks to lock-in practices or technologies rather than encouraging innovation and new management techniques.

The targeting of payments to local conditions and needs has proved to be challenging, in particular in their initial stages — some programmes are now moving towards more differentiated and targeted payments.

Proposed approach for project - Particular attention will be given early in pilot project implementation to defining clear terms of reference including objectives, measurable targets, associated indicators as well as baseline standards for eligibility for the PES and non-monetary benefits (awareness raising / capacity building). Clear rules and criteria will be agreed to reduce the risk of unexpected reactions by target actors of the programme, with possibly adverse consequences for biodiversity and ecosystem services.

Economic Instruments (PES) Set Too Low: Recent experience shows that PES are in some cases set too low to effectively change behaviour or to meet financial requirements for resource management. Care is necessary in the calibration of payments to ensure that prices reflect a resource's full economic value and the social costs of resource and ecosystem degradation.

Proposed approach for project – the PES levels will be discussed extensively to gain agreement from the sellers and buys – then implemented in a flexible manner to ensure that the system does not give rise to unexpected outcomes. The PES monitoring system will include not only the monitoring of the ecosystem properties, but also socioeconomic and other variables. Should the system not provide the anticipated results, the payments system will be revised during the project.

Some Voices Unheard: In developing countries, negotiations for voluntary PES schemes are typically with the authorities (both formal and traditional), and it is very rare that all voices are heard. This may lead to equity issues as well as limited value of PES schemes for poverty alleviation objectives. In particular, land ownership plays an important role in designing PES schemes. The allocation of formal land titles may generate important equity effects when introducing such schemes.

Proposed approach for project – The project approach at pilot sites will be highly consultative, working directly with local land users in their established groups (CBOs / cooperatives) where they exist and where they do not at present exist, catalysing their establishment / registration. The project will take a bottom-up approach, holding regular community meetings at times and in venues which enable men and women of all ages can fully participate. The project will support capacity building to enhance these groups, including assisting members to develop management plans for their service providing units, supporting them in financial planning to ensure PES birr are equitably shared via financial management funds (with bank accounts). There will also be extensive efforts in awareness raising and education (including BD friendly practises for cropland management to boost generation of revenue and livelihoods outside PES areas).

PES Not Poverty Alleviation Tools (per se): the poor are likely to be affected and implications for them have been considered in detail – thus this PES programme has been designed in a pro-poor manner to ensure that poverty is not a barrier, so the PES will be both accessible and beneficial to them.

Proposed approach for project – Participation is not dependent on education level, wealth or land ownership, merely being a member of a community with a shared area of communal land which provides ecosystem services.

Importance of Community Recognition: Community recognition can act as an important non-monetary (or 'non-market') incentive, in particular in the context of community-based natural resource management programmes. The involvement and empowerment in natural resource management alone generates awareness and a sense of responsibility, with positive impacts on patterns of natural resource use. Transparency, participation, inclusion and ownership are important factors in the effective empowerment of communities.

Proposed approach for project – Environmental awards will be used to act as an important non-market incentive. They are frequently used to encourage good governance favourable for the conservation and sustainable use of biodiversity. While awards usually have a monetary component, the formal recognition by the community or society alone is an important (non-monetary) incentive for the conservation and sustainable use of biodiversity.

Potential risks and how can they should managed during implementation

If PES programmes are not designed correctly, there are many potential risks that could be faced by community members who are signatories to a PES agreement. These are outlined here to highlight the dangers to be avoided during implementation:

- Community members not involved in decision-making process at national or international levels - may lead to the implementation of activities with which communities do not agree or from which they are excluded;
- Possible eviction from traditional lands due to exclusionary models of conservation;
- Benefits may not be distributed equally or fairly within a community;
- Corruption and embezzlement of funds by national elites;
- Violation of free prior and informed consent and the United Nations Declaration on the Rights of Indigenous Peoples ;
- Reliance on markets to provide funding;
- Recent focus on carbon and often not on other services the forest / rangeland also provides such as biodiversity protection, watershed services and source of livelihoods for many people does not adequately value the ecosystems;
- Opportunity costs related to non-PES land use revenues.

Other risks may also exist – thus when working with each community, project and local staff (government and NGO), also contractors (e.g. university staff) need to remain vigilant to recognise and react to each risk as and when it arises.

It is of utmost importance for each community to be made aware of, consider and weigh both the benefits and risks to determine whether or not implementing the programme in their territory will allow them to reach their goals and will be beneficial for them or not.

How to address lack of awareness of PES in the programme

FDRE (2014) notes that:

> "The contribution of biodiversity and ecosystem services from PAs, forest reserves and wetlands is undervalued, resulting in the use of the resources in a way that undermines the provision of such services. Decision makers and the public often influence biodiversity through their actions as a result of lack of awareness on biodiversity values. This arises from the lack of effective communication mechanisms to raise awareness on biodiversity and its values. Until recently, biodiversity issues were not well integrated into the formal education system. Promotion and appreciation of community knowledge associated with biodiversity, its local uses and management that can also be used as an informal education and awareness needs to be strengthened."

The country is already making huge efforts to raise awareness of stakeholders, including the public in areas of biodiversity conservation, sustainable utilization and development. The project will contribute to this, for example through lobbying decision makers, providing information on project activities to journalists (for their better understanding and inclusion in reporting) – and organising visits to the pilot sites towards the end of the project to enable these and other groups to see the win-win-win benefits of PES. The project will most importantly support awareness raising and education to people of all ages on the importance of BD and ESs in the pilot communities from very early stages of the project, during the FPIC process – using existing (if necessary translated into local languages with project funds) and project-developed materials.

Logical Framework: Mainstreaming Incentives for Biodiversity Conservation in the Climate Resilient Green Economy Strategy

Outputs	Indicative Activities	Objectively Verifiable Indicators[42]	Sources of Verification	Assumptions
Objective: To ensure that the biodiversity of Ethiopia is better protected from current and future threats by ensuring development and investment decisions do not impact negatively on biodiversity				
Outcome 1: The enabling framework for mainstreaming incentives for biodiversity conservation into the CRGE strengthened				
Output 1.1: Conservation security for threatened biodiversity is enhanced by redistribution of spending towards biodiversity priorities	1. Support MEF and GoE (MoFED) to implement the initial biodiversity expenditure review (BDER) on the environment; 2. Based on the results of BDER, catalyse increased funding for biodiversity conservation.	BDER document completed (by end PY2) Verified increase in FDRE spending on BD (by end PY4)	Project monitoring and evaluation system MoFED reports	National stakeholders remain supportive
Output 1.2: Biodiversity conservation is enhanced by better accountability of potential negative impacts on biodiversity in planning processes	1. Develop 6 regional level large scale digital maps of critical biodiversity areas; 2. Develop biodiversity score cards to determine a) no go areas (b) areas where developments may be allowed but with certain minimum conditions; 3. Train key staff in all relevant sectors at all levels on how to use the to effectively use the maps and scorecards for better land use planning and investments	Number of high quality region maps prepared – target 3 (by end PY2) and at least 3 (by end PY3) Number of scorecards developed – target 6 (by end PY 2) Number of staff	Project monitoring and evaluation system	National stakeholders remain supportive Recent high resolution imagery and GOS software available Staff supportive

[42] Where numbers of people to be recorded, numbers of men and women should be noted separately and concerted efforts made to ensure women equally represented, or organise separate groups for women to ensure their ability to participate and benefit from the PES programme

		trained – target 24 (by end PY2), 16 more (by end PY3), 24 more (by end PY4)		
Output 1.3: Strengthened cooperation and interaction between institutions involved in managing biodiversity loss and climate change	1. Support MEF, Ethiopian Biodiversity Institute, MoA, regional biodiversity units and others to develop effective communication tools and mechanisms that portray the link between biodiversity and climate change – including local, regional and national dialogues; 2. Support the establishment of partnerships between the Climate Sector and the Biodiversity sector that result into joint planning and implementation of programmes.	The state of the national biodiversity information exchange system Number of partnership established and effective - (by end PY4) Number of meetings / participants, establishment of coordination mechanism, number of institutions involved – (by end PY4)	Project monitoring and evaluation system MEF reports	National stakeholders remain supportive
Outcome 2: Payments for ecosystem services (including biodiversity conservation) is piloted at selected sites				
Output 2.1 Selected highly threatened	1. Support the establishment, development and legal registration of CBOs / cooperatives and capacity building for key members, where they	Number of new CBOs established (by end PY2)	Project monitoring and	Local stakeholders appreciate

ecosystems are under improved stewardship by community land users, reducing pressure on biodiversity	are not present / active in pilot areas; 2. Use existing and / or project-developed materials to raise awareness and educate land users (CBO / cooperative members) in selected sites on the importance and win-win-win benefits of biodiversity / ecosystem services for their livelihoods, adapting to climate change and wider environmental sustainability; 3. Secure Memorandums of Understanding (MoUs) between communities and project (or broker) confirming that communities have access to all of the information related to the project and have been adequately consulted before the project activities begin on the ground; 4. Strengthen the capacity of kebeles and woredas to implement their mandate on utilization based biodiversity conservation; 5. Technical and financial capacity building trainings for CBOs (leaders and members) inter alia on PES; 6. Detailed field work at each pilot site to establish baselines, define boundaries etc; 7. Facilitate each local community group to formulate and implement its own sustainable use of biodiversity agreements by in situ management (specifying the type and amount of resources that can be used, by whom, and laying out the methods, roles and responsibilities for community monitoring,	Number of existing CBOs / members "registered" with programme – (by end PY4). No. of materials produced / distributed (including printed materials in local languages, posters, radio broadcasts, films etc for adults – also for ecoclubs / school teachers) and number of recipients (by end PY4) Number of CBOs signing MoUs (by end PY4) Number of training courses held and number of participants (by end PY4)	evaluation system MEF reports	potential of PES to support BD conservation and protection of ecosystem services Local CBO / co-operatives continue to wish to be involved National stakeholders remain supportive

	regulation and resource protection), also to modify any necessary by-laws to guide and govern the actions of its members 8. Project legal expert and PES broker to support communities (sellers) to negotiate PES contracts with the buyers (Government) that specify conditions and amounts of payments (value of service; mode of payment; delivery of service) and clearly address issues of conditionality, liability and exit options for both contract partners; 9. Discuss and agree with each local community the fair, transparent and equitable distribution of the benefits that result from the PES - the creation of a financial management fund with use criteria and resource distribution as well as a transparent governance structure is recommended; 10. Establish administrative systems (one per pilot site) for handling and operationalise the payments at the pre-determined frequency using the binding contracts; 11. Support each community group to develop and implement a participatory monitoring and evaluation system to track the PES scheme and ensure it is achieving the desired outcomes 12. Support awareness raising and education (including participatory farmer field school approaches and demonstrations)	Number of training courses held and number of participants (by end PY4) At least 20,000ha surveyed (by end PY1) Baseline reports produced for each service providing units (by end PY1) Number of sustainable use agreements and by-laws agreed – (by end PY2) Number of management plans agreed – (by end PY2) Number of contracts drawn up and signed – (by end PY2)		

		Number of financial distribution agreements reached – (by end PY2) Number of systems developed and amounts of cash disbursed to CBOs – (by end PY4) Number of M & E systems developed and being actively used – (by end PY2) Regular (at least annually – ideally more frequent) surveys completed Activities of extension support		

		on biodiversity friendly practices & uses – (by end PY4)		
Output 2.2: Institutional capacity of national and regional governments (regions / zones /woredas) and universities is in place to coordinate PES programmes	1. Train MEF, local institutions and other key staff in negotiation, contracting, transaction, monitoring and verification to effectively manage the PES schemes	Number of staff in pilot areas trained – target 80 acress 2 sites (by end PY4)	Project monitoring and evaluation system	Local stakeholders appreciate potential of PES to support BD conservation and protection of ecosystem services
Output 2.3: Increased government investment in pro-conservation PES in a range of threatened ecosystems by end of project	1. Additional buyers for PES identified for post-project 2. Secure GoE commitment to continue and scale-up pilot PES (to at least 250,000 ha by 2025)	PINs developed (by end PY4) Commitment letter from MoFED / CRGE Funding Facility (by end PY4)	Project monitoring and evaluation system	National stakeholders remain supportive
Output 2.4: Increased awarness and understanding of the vital role of biodiversity and wider ecosystem services	1. Use existing and project-developed materials to raise awareness and educate: ➢ decision makers (local and national); ➢ rural communities beyond immediate pilot sites on the importance of biodiversity / ecosystem services for their livelihoods, adapting to climate change and wider	Numbers of trainings & participants, radio / tv, newspaper reports etc (by end PY4)	Project monitoring and evaluation system	Local stakeholders appreciate potential of PES to support BD conservation and protection of

protection among decision / policy makers and the general public	environmental sustainability 2. Organise study visits to pilot sites for decision / policy makers and opinion formers (e.g. journalists) 3. Organise exchange visits for land users	Number of visits and participants (by end PY4) Number of visits and participants (by end PY4)		ecosystem services
Output 2.5: Lessons learned from project shared across project sites, more widely in Ethiopia and in the region	1. Support regular production of a range of materials[43] (inter alia print, graphic, radio, tv, the internet and peer-reviewed journals) summarising the results, impacts and lessons learned prepared.	Frequency of production of materials (by end PY4) Numbers of publications (ranging from informal to papers in perr-reviewed journals) (by end PY4)	Project monitoring and evaluation system	Participants at all levels willing to record and disseminate their experiences

[43] tailored for differed audiences