

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: 34683

Project Name	Humbo Reforestation Carbon Project
Region	AFRICA
Sector	Forestry (100%)
Project ID	P098428
Primary Project Proponent and Implementing Agency	World Vision Ethiopia Humbo Forest Management Group
Secondary Project Proponent	GOVERNMENT OF ETHIOPIA: Ethiopian Agricultural, Rural Development & Forestry Development Coordination Office
Environment Category	<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined)
Safeguard Classification	<input type="checkbox"/> S ₁ <input checked="" type="checkbox"/> S ₂ <input type="checkbox"/> S ₃ <input type="checkbox"/> S _F <input type="checkbox"/> TBD (to be determined)
Date PID Prepared	November 20, 2005
Date of Appraisal Authorization	Expected in March or early April, 2006
Date of Signing of Emission Purchase Agreement	Expected in June 2006

1. Country and Sector Background

Ethiopia is among the poorest countries in the world. The agricultural sector accounts for about half the national GDP, 90% of exports, 85% of employment, and 90% of the poor. Its performance therefore matters immensely for poverty and growth, both directly and indirectly through its potential for strong pro-poor growth linkages. The Government of Ethiopia's economic growth strategy, Agriculture-Development-Led-Industrialization (ADLI), accordingly places a very high priority on agricultural growth and this is the core of the government's poverty reduction strategy (SDPRP). In this strategy, agricultural growth is expected to stimulate growth through higher farm incomes, provide a market for nonfarm products and inputs, supply cheaper food (to reduce wages) and raw materials for agricultural-based manufacturing, and mobilize savings to finance investments.

In pursuit of ADLI, a series of policies were put in place in the 1990s including: (i) a more supportive macro-economic framework, (ii) liberalized markets for agricultural products, (iii) a strong extension and credit-led push on intensification through fertilizer, and (iv) decentralization of advisory services to the woreda level to work closely with farm communities. Given the policy focus on food security, the major focus of these efforts, especially the intensification program, has been on major food crops.

These early reforms provided a much needed boost to agricultural production, primarily cereals. Foreign exchange devaluation also helped increased competitiveness of export crops (coffee in particular) and liberalized grain markets led to lower consumer prices and higher producer

prices. The most significant growth in agricultural production took place in the mid-1990s, driven almost exclusively by area expansion.

These early gains slowed in the latter part of the 1990s and the first part of this decade, with large annual fluctuations in both production and prices. Agriculture value added has grown only 1.4 percent per year since 1993 with output and price increases contributing equally to this growth. Indeed, agriculture only contributed 0.3 percentage points on average to total growth over the period 1993-2003. Consequently, over the past decade, per capita agricultural GDP and grain production have continued their long term decline. With declining per capita incomes and rising real prices, rural poverty has stagnated. Rural poverty is compounded by extreme shortage of land, with per capita land area falling from 0.5 ha in the 1960s to only 0.2 ha now and the marginal productivity of labor is estimated to be close to zero.

Under ADLI, the government has focused on intensification to increase agricultural productivity, especially a centralized extension push focusing on technological packages combining credit, fertilizers, improved seeds and better management practices to raise productivity. Under this program, fertilizer use increased from 150,000 tons in 1990 to 290,000 tons at the end of the 1990's. However, as with production, the intensity of nutrient use per hectare has stagnated in the latter half of 1990s and this decade. Only 37 % of farmers use inorganic fertilizer and application rates remain low at 15 kg/ha of nutrients.

Following the serious drought of 2001, a large-scale food security program was also rapidly scaled up in poor and vulnerable areas. As a result of these various programs, public spending on agriculture, natural resources and food security, has risen from 9 percent of the total government budget in 1999/00 to 16 percent in 2003/04, the highest in sub-Saharan Africa.

Over the past decade, almost all of production increase is explained by area expansion, while both land and labor productivity in agriculture have decline. The growth in yields of the five most important crops (wheat, maize, teff, barley, and sorghum) remains negative at -0.5 percent. As a result, land productivity at 1.15 t/ha of cereals is low and labor productivity is very low (agricultural value added per agricultural worker of \$144 vs. \$329 for Sub-Saharan Africa). Agricultural productivity growth has been undermined by a serious problem of land degradation. Population pressure has put tremendous stress on the natural resource endowment, particularly soil fertility. Area expansion has increased pressure to cultivate fragile and marginal lands, resulting in soil loss, mining of soil nutrients, and deforestation. Expansion of cultivation into more marginal areas, and continuing degradation of existing cultivated area has undoubtedly offset much of the potential yield gains expected from intensification.

Finally, agricultural performance has been strongly influenced by recurrent droughts, and high variability in production has compounded long-term falls in land productivity due to rising population density, land fragmentation, and degradation. The growth that has occurred has been erratic, driven largely by rainfall variation. This variability has deleterious impacts on the asset base of households, their incentives (use modern inputs), and their ability to exit poverty. High variability and weak market demand have also resulted in sharp price fluctuations, especially for non-trade staples.

The overall assessment is that despite significant expenditures on the sector, Ethiopian agriculture remains stubbornly low-input, low-value and subsistence oriented, and subject to

frequent climatic shocks. There are five main challenges: (i) a geographical and infrastructural challenge, (ii) a serious problem of land degradation, (iii) frequent exposure to risk and vulnerability, (iv) the challenge of providing appropriate and profitable technologies for a highly heterogeneous rural sector, and (v) the very small farm size and food insecure nature of a significant proportion of the population. Individually each of these challenges is surmountable, but there are no “magic bullets”. Strategies have to be developed to address these challenges on multiple fronts.

The proposed project would mainly be related to challenge (ii). Massive land degradation arises from deforestation (to meet household needs for fuel wood) and the cultivation of steep slopes to accommodate expanding population, together with ineffective or inadequate watershed treatment and uncontrolled grazing of livestock. Increasingly, poor farmers are forced to feed crop residue to their livestock and suffer “energy poverty” that forces farmers to use animal dung for fuel rather than fertilizer. Soils become depleted because of lack of fallowing, removal of crop residues, and generally low levels of agricultural technology and inputs. As a result, soil nutrient depletion and environmental degradation exceed the nutrient replacement by chemical fertilizers in recent year. Due to the high rates of erosion, the soil in many areas is less than 20-30 cm deep, which means that it is reaching the lower limits of productivity and has lost much of its capacity to retain moisture.

Land degradation leads to a vicious circle whereby land is progressively degraded because households are too poor to leave land fallow or invest in it. This may therefore represent not only a self-reinforcing but a progressive deterioration in the asset base and well-being of the rural population in many areas of Ethiopia. Without some major changes in incentives and investments, this circle of degradation and impoverishment is unlikely to stop. In this context the proposed carbon project can be viewed as a pilot to reverse the spiral of degradation in one area with denuded land with the possibility of replication elsewhere, if it is successful.

2. Objectives

The overall goals of this project are the sequestration of carbon in a biodiverse native forest, and the simultaneous reduction of poverty in the Humbo and Soddo with support of education, health, and food security financed by carbon funds. More specifically, the development objective can be stated as follows:

- The restoration of 15,000 hectares of biodiverse natural forest with expected sequestration of an estimated 2 million tons of CO₂ by 2012.

Note that the stock of carbon would be monitored/verified quantitatively over time and purchased at a price of US\$3.75 per ton of carbon. Both the BioCarbon Fund (BioCF) and the Community Development Carbon Fund (CDCF) are each interested in purchasing up to 1 million tons of carbon.

In addition, the project aims to achieve these more qualitative goals:

- Piloting community ownership and management of public land within a framework of broad core values (carbon sequestration, biodiversity enhancement, natural resource management, poverty reduction); and
- Restoration of habitat for a range of threatened species including the Ethiopian Banana Frog, the Ethiopian Thicket Rat, and the Nechisar Nightjar.

3. Rationale for Bank Involvement

It is estimated that Ethiopia retains only about 2.7 percent of its original forest cover, and clearing continues. Poor farmers have exploited the denuded, unmanaged forest in the Humbo area as a source of income through grazing and the sale of charcoal. Unsustainable exploitation can result in reduced yields, erosion, lack of clean drinking water, local flooding, fuelwood scarcity, and a loss of biodiversity.

The regional city of Soddo, and the nearby town of Humbo are located about 320 km southeast of Addis Ababa in a high elevation region with rainfall of 1200 mm per annum. It is estimated that 85 percent of the people living in the Humbo region are poor. The 15,000-hectare area where the proposed Humbo Community Forest is to be located was cleared prior to the late 1960s. In order to restore and protect the forest, and to achieve increased benefits from it, improved land management is needed.

The limited resources of the Ethiopian Forestry Department would not allow for large-scale community reforestation in this region, and World Vision could not justify the project at the expense of other, more compelling food security projects elsewhere in the country. However, the sale of Verified Emission Reductions (VERs), combined with the additional forest products to be harvested from this area, would make the project viable, and there is potential for a large proportion of the population in the Humbo area to benefit, as well as for many more in other parts of the country if the pilot is successful.

The objectives of the project are in line with those of the Africa Action Plan, which supports the expansion of areas under sustainable land management. Also, Ethiopia's Country Program for Sustainable Land Management (ECPSLM) is currently in the process of being developed, and the proposed Carbon Project could be viewed as a Pilot that would fit well under the umbrella of the ECPSLM.

There are several possible reasons for Bank involvement. This is the first BioCarbon Fund operation in Ethiopia, and the Fund wishes to draw on the Bank's multisectoral expertise to oversee the preparation process and to formally appraise the operation. For the Bank it would be a learning opportunity and an entry point into the Carbon business, which, if successful, could be scaled up in Ethiopia and elsewhere, as other regions are already doing. The proposed project is also an interesting pilot for technical reasons, i.e. it would help determine whether a low-cost approach with natural regeneration/afforestation will work. One would also be able to test whether appropriate incentives can be designed for involving communities in the establishment and management of the forest that would seek to optimize sustainable carbon sequestration.

Information on Project Proponents. *World Vision Ethiopia* has been involved in reforestation projects throughout the country since 1984 through its Area Development Programs (ADPs). Currently it operates 36 ADPs in seven Regional States. It has worked extensively with communities and forestry departments in planning, implementation, and ongoing management of forests. Emphasis has recently shifted to smaller communities and individually-managed nurseries and planting schemes. Another emphasis of World Vision Ethiopia is watershed management with regeneration, reforestation, and wise management/utilization at community level. World Vision has obtained approval from zonal, state, and federal government departments to implement this project, and has secured letters of support demonstrating the commitment of the Ethiopian government to restoration of forest biodiversity.

The secondary project proponent is the ***Ethiopian Agricultural, Rural Development & Forestry Development Coordination Office (ARDFCO)*** which is the main government agency with responsibilities for forestry activities in the Soddo and Humbo regions. The ARDFCO has technical expertise to assist with the implementation of reforestation activities and commercial recovery of forest products.

4. Preliminary Project Description

Proposed project activities would include:

1. Establishment of the ***Humbo Forest Management Group (HFMG)*** through which the project would be implemented. HFMG would be incorporated as a non-profit entity. It would secure legal title to manage the proposed revegetation area in a participatory manner. It would further adopt a constitution and by-laws by which the project is to be managed. The HFMG would be comprised of local people, including both men and women, and would represent the diversity of land users in the Humbo region. The HFMG would also include representation of World Vision and the Ethiopian Forestry Department.
2. Implementation of Farmer Managed Natural Regeneration (FMNR) on an area of 15,000 hectares in the Humbo region. This would involve regeneration by area closure and selected planting with seedlings from nurseries. The technology has been developed in Niger over 20 years and is now implemented on over 2 million hectares in Niger, Chad, and Burkina Faso. The proponent proposes that only species endemic to the area be used to restore the forest including *Acacia* spp., *Aningeria adolfifericii*, *Podocarpus facutus*, *Olea africana*, *Cordia Africana*, *Croton macrostachytus*, *Erthrina* spp., *Ficus* spp., and other indigenous species. But this is to be reviewed during preparation (see issues section below).
3. Establishment of legal structures by which the carbon sequestered on the site can be used to generate Emissions Reductions (ERs) within the frameworks being established by the Ethiopian Office for the Clean Development Mechanism (CDM);
4. Establishment of a monitoring system to assess carbon accumulation, and maintenance of records of carbon stocks; and

5. Production of a comprehensive study of findings about the methodology utilized in this project, and the potential for replication elsewhere of community-managed nonprofit entities in the sequestration of atmospheric carbon, protection of biodiversity, and the alleviation of poverty.

Project Phasing. The project will be executed in several phases as follows:

Phase 1: Information gathering and establishment of community management group. The project would commence with an information gathering phase involving the range of community stakeholders including women, herders, settled farmers, wood harvesters, bee keepers, community leaders, district councils, and government forestry agents. This consultation process would seek to understand, accommodate and integrate the community needs and expectations of the forest resource, and secure community commitment for the project. Future forest users would agree on the management, use and ownership of the forest products that would be generated following reforestation. Information gathering would include culturally appropriate focus groups and other qualitative and quantitative data collection methods. Following information gathering, the Humbo Forest Management Group (HFMG) would be formed. This initial process is expected to take six months; however, consultation and communication activities will already start during preparation and would be ongoing throughout the life of the project.

Phase 2: Education and Initial Implementation. The education and implementation phase will involve teaching, demonstrating, and practicing the techniques of the Farmer Managed Natural Regeneration method for land and forest managers. Implementation of this forest management system on a proportion (approximately 20% or 3000 hectares) of the project site will follow. The education and implementation phase of the project is anticipated to last about six months.

Phase 3: Implementation Review. Following initial implementation there will be a project review, among other things to discuss how much of the project implementation is to be delegated to community stakeholders. This implementation review process is expected to take one month.

Phase 4: Complete Implementation. Complete implementation will involve the entire project site (15,000 hectares) being managed according to the FMNR techniques. Contingent on the outcome of Phase 3, this process may be managed increasingly by the local community. It is anticipated that this phase of the project will take 12 to 18 months.

Phase 5: Forest Management. Following the completion of Phase 4, forest management and monitoring will become the primary activity. Forest products will begin to be harvested within three years from project implementation, and it will be the responsibility of the project managers to monitor forest project utilization and carbon sequestration.

Phase 6: Carbon Monitoring and Reporting. At the beginning of the first commitment period the project management team will produce carbon-monitoring reports, and continue these over the five-year period 2008 – 2012.

Activities to be financed

The project would purchase verified, sequestered carbon. Funds would be used to grow and manage the forest and also support development work in the communities around the two sites.

5. Financing

Source:	(\$m.)
BORROWER/RECIPIENT	0
CARBON FUND PURCHASES	7.5
Total	7.5

6. Implementation

Implementation would be carried out by the Humbo Forest Management Group in close collaboration with the adjacent communities.

7. Sustainability

Sustainability of the forest and its sequestered carbon is the essence of the project and will have to be insured by local ownership of communities and the benefits they derive from the operation.

8. Safeguard Policies that might apply (including public consultation)

Safeguard Policies Triggered <i>(please explain why)</i>	Yes	No	TBD
Environmental Assessment (OP/BP 4.01)		x	
The project is assigned EA Category “C” since there is no intervention which may adversely impact the natural environment. No environmental assessment is needed.			
Natural Habitats (OP/BP 4.04)		x	
Forests (OP/BP 4.36)		x	
Pest Management (OP 4.09)		x	
Cultural Property (OPN 11.03)		x	
Indigenous Peoples (OP/BP 4.10)			x
Ethnic groups identified as IPs by the Bank may be in the project area.			
Involuntary Resettlement (OP/BP 4.12)			x
Temporary or permanent restriction of legal or traditional access to resources in the project area may require the project to incorporate a resettlement policy framework or a process framework.			
Safety of Dams (OP/BP 4.37)		x	
Projects on International Waterways (OP/BP 7.50)		x	
Projects in Disputed Areas (OP/BP 7.60)		x	

9. Contact point

Contact: Ernst Lutz

Title: Sr Economist
Tel: (202) 473-1043
Fax: (202) 614-0868
Email: Elutz@worldbank.org

10. For more information contact:

The InfoShop
The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 458-5454
Fax: (202) 522-1500
Web: <http://www.worldbank.org/infoshop>