ETHIOTREES

PLAN VIVO PILOT PROJECT

ETHIOPIA

PROJECT IDEA NOTE

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EthioTrees

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Table of Contents

Table of Contents ........................................................................................................................................ 2
List of Figures .................................................................................................................................................. 2
Summary Information ..................................................................................................................................... 3
Part A: Project aims and objectives ............................................................................................................. 4
Part B: Proposed Project Area ....................................................................................................................... 4
Part C: Identification of Target Groups & Communities ............................................................................ 9
Part D: Land Tenure & Carbon/ES Rights .................................................................................................... 10
Part E: Project Interventions & Activities .................................................................................................. 11
Part F: Identification of Any Non-Eligible Activities ................................................................................ 11
Part G: Long-Term Sustainability Drivers .................................................................................................. 12
Part H: Application Organisation & Proposed Governance Structure ...................................................... 12
Part I: Community-Led Design .................................................................................................................. 14
Part J: Additionality Analysis ....................................................................................................................... 15
Part K: Notification of Relevant Bodies & Regulations .......................................................................... 16
Part L: Start-up funding ............................................................................................................................... 17
References ..................................................................................................................................................... 18
Appendix 1. Copy of the Memorandum of Understanding between EthioTrees and Dogua Tembien ............. 21
Appendix 2. Notification of the Designated National Authority .................................................................. 23

List of Figures

Figure 1 .......................................................................................................................................................... 6
Figure 2 .......................................................................................................................................................... 9
Figure 3 .......................................................................................................................................................... 14
### Summary Information

<table>
<thead>
<tr>
<th><strong>Project Title</strong></th>
<th>“Ecosystem restoration for and by associations of landless farmers in the Tembien Highlands (North Ethiopia)”</th>
</tr>
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<tbody>
<tr>
<td><strong>Project Location – Country/Region/District</strong></td>
<td>Ethiopia, Tigray, Dogua Tembien</td>
</tr>
</tbody>
</table>
| **Project Coordinator & Contact Details** | **In Belgium:** Sil Lanckriet; Rakestraat 5b; B-8750 Wingene, Belgium  
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Web: [www.ethiotrees.com](http://www.ethiotrees.com) |
| **Summary of Proposed Activities (Max 30 words)** | Ecosystem restoration and water conservation have proven successful in Tigray. EthioTrees is valuing degraded land that is under restoration through carbon storage, soil-water conservation, enrichment planting, and smart ecosystem management. |
| **Summary of Proposed Target Groups (Max 30 words)** | EthioTrees works with ‘associations of landless farmers’, including cooperatives of honey and frankincense producers. Landless farmers lost their land usufruct rights or they are youngsters without access to lands. |
Part A: Project aims and objectives

The overall aim of this project is to improve rural household income for landless farmers in different villages in the North Ethiopian Highlands, by supporting woodland restoration and woodland ecosystem services development. Particularly, the main aims are (i) to boost woodland ecosystem restoration on large and highly degraded slopes where cattle grazing is excluded; (ii) to store carbon in the supported woodlands; (iii) to support ecosystem services development that includes increased green water availability, honey production and frankincense production for landless farmers. The project will follow the Plan Vivo Standard to guarantee the overall sustainability of the project.

Further, our project interventions should lead to the following specific (quantifiable) project objectives:

(i) Improved local farmers **household income** through the sales of non-timber forest products such as honey and frankincense (oil).

(ii) Expected improved **productivity of downslope croplands** in the exclosures, through increased blue and green water availability, soil moisture and activity of springs.

(iii) A social shift towards **stall-feeding**, as fodder can be derived from grass taken from the exclosure.

(iv) Sequestration of carbon, mainly through increases in soil carbon and above-ground biomass.

(v) Increased biodiversity and tree cover with decreased sheet erosion rates, less land degradation (desertification) activity and water runoff – which will create resilience against the effects of recurrent droughts.

Part B: Proposed Project Area

The proposed project area is located in the Highlands of Dogua Tembien (Region of Tigray; Ethiopia), broadly around the town of Hagere Selam (13.650°N; 39.167°E).

**Land degradation and reforestation**

Located at the northernmost limit of the Intertropical Convergence Zone, the North Ethiopian Highlands are a ‘hotspot’ of vulnerability to land degradation and climatic changes (Marshall et al., 2009). In the North Ethiopian Highlands, the interplays between climatic vulnerability and forest cover changes caused declining water availability (Nyssen et al., 2004a), as woody vegetation cover changes can induce vulnerability to droughts (Frankl et al., 2011). Consequently, water and land productivity in Northern Ethiopia is partly linked to land cover changes and droughts, while crop production is under considerable strain from water deficiencies. Indeed, green water availability is the key-element of agricultural
productivity in this region because agriculture is characterized by a low marginal product of labor and limited productivity impact of inputs such as fertilizers (Pender & Gebremedhin, 2008). Considering the situation of the late 20th century, Nyssen et al. (2004b) wrote in this perspective: ‘Soil erosion not only affects soil depth but leads in addition to rapid siltation of reservoirs. Nutrients are lost due to use of cattle dung as fuel, lack of manuring, and soil erosion. Gullyng leads to rapid lowering of ground water tables.’ According to these authors, land degradation in the Eritrean and Ethiopian Highlands is strong and clearly connected to the geomorphic processes that are impacted by land cover changes: sheet and rill erosion throughout the country, wind erosion in the dryer Rift Valley and the peripheral lowlands and gullyng in the Highlands. Furthermore, multi-model ensembles project increased (year-to-year) hydroclimatic variability in Ethiopia by the end of this century (McSweeney et al., 2010).

As a result of ongoing land degradation, reforestation projects have been widely implemented in Northen Ethiopia, and the effects of integrated catchment management have been well studied (see a review in Nyssen et al., 2009). Especially after a large-scale degradation phase around the decade of the 1980s, important and successful efforts were made, such as the creation of exclosures throughout the Highlands (Descheemaeker et al., 2006). Exclosures are naturally regenerated areas from which livestock and uncontrolled woodcutting are excluded (Reubens et al., 2009) and these have been established on a large scale in Northen Ethiopia (Lanckriet et al., 2015). Communal cost-benefit evaluation of exclosures shows highly positive outcomes, as they store green water, carbon and nutrients, and can deliver non-timber forest products (honey, incense) to the local population (Mekuria et al., 2011). Pender and Gebremedhin (2008) show that the comparative advantage of the Northen Ethiopian Highlands lies in non-cereal activities, improved grazing management and non-timber forest production. Moreover, in areas accross Ethiopia, a variety of non-timber forest products can bring substantial amounts of cash income to farmer households (Mohammed & Wiersum, 2011). However, the significant potential of non-timber forest production remains largely untapped (Tilahun et al., 2007). To date, in Northen Ethiopia, there is not enough attention to the development of community-wide benefits such as carbon storage, flood reduction and non-timber forest production when establishing exclosures (Babulo et al., 2009).

**Administrative and political units**

The project area is located in the Region of Tigray; woreda of Dogua Tembien. The region of Tigray is divided in different administrative districts called “woredas” (Figure 1). Woredas are divided in different communities or “tabias”. Tabias are informally divided in different small villages or “kushets”.
Figure 1

Map of Ethiopia and Region of Tigray and indication of the woreda of Dogua Tembien (source: IP, 2016; Ethiopian Demography and Health, 2016).
Population

According to the 2007 census, the woreda of Dogua Tembien counts 113,595 people (56,955 men; 56,640 women; including 25,290 households and 7,270 people living in urban areas). Population density is 61.31 persons per km². Around 15% of the households have access to safe drinking water. More than 90% of the population lives from (subsistence) agriculture, and farmers’ crop yields range from 500 to 1500 kg ha⁻¹ (Naudts, 2002). The very vast majority of all inhabitants (over 98%) is Tigrayan, follows Ethiopian Orthodox Christianity and speaks Tigrinya as first language.

Topographic and geological features

The tabular geomorphology of the project area is strongly influenced by the subhorizontal morphostructure of the layers (Merla et al., 1979). The project area basically consists of Mesozoic sedimentary Antalo limestone. A layer of hard Mesozoic Amba Aradam sandstone, visible in the landscape as a steep cliff of red rock, is situated upon these strata. On top of the sandstone, subhorizontal Cenozoic basalt lavas are present further upslope (Nyssen et al., 2008). After Miocene and Pliocene–Pleistocene tectonic uplift, Early Holocene weathering and soil genesis (Nyssen et al., 2004) resulted in the occurrence of Vertisols, Vertic Cambisols, Cumulic Regosols, Calcaric Regosols and Phaeozems (Vanmaercke et al., 2010). Following Lanckriet et al. (2012), in the upper basaltic areas of Dogua Tembien, these are ordered in the following catena (from top to bottom): Leptosols (7.3% of the catchment area; deeply eroded Luvisols) – Regosols (49.8% of the catchment area) – Cambisols (17.1% of the catchment area) and “walka” Vertisols (20.4% of the catchment area). In the low-lying limestone areas of Dogua Tembien (i.e. where Boswellia papyrifera is occurring), most soils are Regosols, even though the spatial soil pattern is more complex.

Biodiversity

Common indigenous tree species with high abundance in the project area are Acacia, Olea, Celtis and Cordia. Juniperus procera is rather rare. Boswellia papyrifera can be found in exclosures at low altitude (on the flanks of the deeply-incised river valley of the Geba) where all livestock grazing is banned. Dodonea and Asteraceae are common in recently established exclosures (Reubens et al., 2009). Exclosures attract a great variety of (large) wild mammals including hyenas (Mastewal Yami et al., 2010), and a high number of colourful bird species (Aerts et al., 2009).

Deforestation

Forest cover in the Northern Ethiopian Highlands is very limited, with remote sensing studies estimating current forest cover at 0.88 – 1.9 % in Tigray (excluding Eucalyptus plantations) (Kassa Teka Belay et al., 2014; De Mûelenaeere et al., 2014). Recent (pollen) analysis shows that deforestation in the Northern Ethiopian Highlands is a ‘cyclic’ process over time, activated by long-term climatic dry spells and during periods of social and political instability. For instance, there have been periods of significant
deforestation around 3500 years ago, 1500 years ago, 300 years ago and 30 years ago (Lanckriet, 2016). Yet, paleo-environmental analysis also shows that deforestation is not irreversible. Localized land resilience happened before – for instance during the Axumite era, during the 17th century or even more recently. This suggests that the dryland mountains of Northern Ethiopia can be robust and elastic for fast recovery, under appropriate management (Lanckriet, 2016). This is most clearly exemplified by the relatively successful establishment of many exclosures in the region during the past three decades. Their recent but strong growth is a very encouraging and promising development.

Climate information

Monsoonal precipitation occurs from June until September in the form of intense rainstorms with large raindrop sizes (Nyssen et al., 2005). Annual precipitation increases from north to south in the Tigray Highlands, ranging between 500 and 900 mm yr⁻¹ (Jacob et al., 2013). Inter-annual rainfall variability is equally important, as Nyssen et al. (2005) showed yearly rainfall depths in the study area range between 546 mm in 2002 to 879 mm in 1998 in the nearby town of Hagere Selam.

Land Use

Croplands are commonly cultivated with wheat (*Triticum* spp.), barley (*Hordeum vulgare*), hanfez, which is wheat and barley sown together, and the endemic *Eragrostis tef*, and are ploughed with the local hard plough or mahresha. Since the 1990s, important conservation efforts (check dams, stone bunds, exclosures, reforestation) were made and agricultural intensification was enhanced (e.g. improved crop varieties, chemical fertilizers). Still, overgrazing of rangeland is a specific problem in the Highlands, as current stocking rates are well in excess of estimated optimum stocking rates and cattle is often allowed to graze on the croplands during the dry season and on steeper slopes during the wet season (Nyssen et al., 2004a).
Part C: Identification of Target Groups & Communities

The project will work closely with rural households near young exclosures in different villages in Dogua Tembien. During the first phase of the project activities, awareness, acceptance and participation of these rural communities in the project will be assessed and ensured by the local coordinator. Following the wishes of the local households and neighbours, the project proposal will be adapted.

At each exclosed area, the project will engage a group of 10-40 landless farmers of different gender and age. The landless farmers are organised in exclosure associations. The associations elect a representative through a democratic election. The members of the association are ‘under rotation’ responsible to manage a part of the exclosure (including the patrolling process and the daily management) and will be
able to benefit from ecosystem services from the exclosure. Ecosystem services include honey production, frankincense production, olibanum distillation, and grasses for stall-feeding. EthioTrees will provide free training on the optimal and sustainable use of these ecosystem services.

Further, the project will work very closely with the local “woreda” council and the Bureau of Agriculture of Dogua Tembien. Simultaneously, EthioTrees had meetings and agreed with all leaders of the tabias within the project zones. Close contact with the responsible authorities will ensure that necessary permissions and by-laws are agreed on, and that project benefits can be shared with the community and village entity. Further, the Bureau of Agriculture agreed to support EthioTrees with any logistical and administrative help if required.

**Part D: Land Tenure & Carbon/ES Rights**

The Northern Ethiopian Highland is home to an old agrarian society (sensu Roberts, 1997). In Northern Ethiopia, before the late 19th century, the agro-system was organised in an unequal feudal way (locally named gult-system, or later rist-system) (Ståhl, 1974). Local noblemen, such as dedjazmach, owned most of the lands (Bruce, 1976), and these lands were often leased in a sharecropping system, locally named mwufar (Segers et al., 2010). After the end of the feudal era in 1974, the military regime or DERG (1974-1991) tried to implement a land reform (an overall nationalization of farmlands with strong state control of the farms) which succeeded only partially in the project area (Naudts, 2002). After the end of the military regime in 1991, the Tigray People’s Liberation Front (TPLF) initiated another land redistribution, where all households received about three farm plots (in total about 1 ha per household). However, croplands are still often lent out in the mwufar sharecropping system, consisting of a temporary transfer (normally for the duration of one agricultural season) of the use rights of a plot of land in exchange for a share of the grain harvest (Segers et al., 2010). Under the new constitution, ownership of all land and all natural resources in Ethiopia became ‘monopolized’ by the Federal State, while farmers received usufruct rights of the croplands (Crewett et al., 2008). Most farmers have access to land certificates to substantiate these usufruct right. Nevertheless, farmers can lose their land usufruct rights while there are a lot of youngsters without access to lands. To date, the responsibility of land reform is decentralized to the Regional Government of Tigray even though no large reforms are planned over the foreseeable future.

Common access rights are granted for grazing lands, wastelands, forests and exclosures (typically lands on sloping terrains of about 100 hectares) to the communities. In practice, these lands are directly controlled by the tabia administration and are managed on a daily basis by associations of landless farmers. In our project, we agreed on a Memorandum of Understanding (Appendix 1) between (i) the organisation and project structure; (ii) the councils of the ‘woreda’, the ‘tabia’ and the ‘kushet’; and (iii) all members of the associations. Unlike the land, sequestered carbon rights are not property of the state, but can as “fruits of the land” be considered as private property under usufruct right (see Humbo Assisted Natural Regeneration Project; UNFCCC, 2016)
Part E: Project Interventions & Activities

This “ecosystem restoration” project wants to implement the following interventions and activities over the duration of the total project period:

(i) **Assisting the associations of landless farmers in the project area to establish and manage exclosures on highly degraded wastelands.** Exclosures are naturally regenerated areas from which livestock and uncontrolled woodcutting are excluded. During the first phase of this activity, awareness, acceptance and participation of target communities in the project will be assessed and ensured by the local coordinator through qualitative interviews; and free training on improved exclosure management will be provided.

(ii) **Coordinating and supporting the associations of landless farmers in maintaining the exclosures, including implementing soil and water conservation activities and planting additional trees to further support the natural regeneration.** The project will assist the natural regeneration of the indigenous vegetation, partly through improved management and partly through enrichment planting activities. Enrichment planting to further support the forestation activity and to support biodiversity improvements will focus on indigenous vegetation (Olea, Juniperus, Ficus, Dodonea, Cordia, Celtis, Acacia); Eucalyptus will not be planted in the project area. The project will implement soil and water conservation activities, including stone bunds, soil bunds and ‘half moons’ to trap runoff water. The project will continuously monitor biodiversity, including both plants and trees as well as animals (birds, particular insects etc.). A monitoring program will be established in close collaboration with Mekelle University (Department of Land Management).

(iii) **Complying with the Plan Vivo Standard to guarantee the overall sustainability of the project.** The project will analyze baseline conditions in soil carbon and biomass carbon, and will regularly monitor soil and biomass carbon content in the project zones, along with monitoring of socio-economic conditions and biodiversity. Carbon sequestration (in soil and above-ground biomass) in Northen Ethiopian exclosures would be significant, amounting from ~117 Mg CO₂-equivalent/ha in a five-years-old exclosure to ~246 Mg CO₂-e/ha in a twentyfive-years-old exclosure, in addition to the amounts already stored in adjacent rangelands (Mekuria et al., 2011). The bulk of the carbon sequestration is derived from the carbon stored in the exclosure soils (~80%), while the above-ground biomass accounts for ~20% of the additional carbon storage in forests as compared to rangelands (Mekuria et al., 2011).

Part F: Identification of Any Non-Eligible Activities

As an additional, non-eligible activity, this project will support the development of different ecosystem services from two non-timber forest products provided by the exclosures: honey and frankincense. The project thus aims at showing local farmers that forests can have substantial value as compared to
alternative land use types. Firstly, the project will help the associations of landless farmers to acquire bee hives and distillation units for aromatic oils. Secondly, the project will train the members of the associations to extract non-timber forest products in a sustainable way. Thirdly, the project will help the associations to bring the products to the most appropriate market. The sales of non-timber forest products such as honey, incense and olibanum (which is the frankincense resin or oil) will be used to improve local farmers household income status. Finally, the project will support awareness-raising on possibilities for access to international voluntary carbon credits.

Part G: Long-Term Sustainability Drivers

To ensure long-term sustainability, the project will support honey and olibanum production in the project zones, as well as awareness-raising on possibilities for access to international voluntary carbon credits. We refer the reader to “Part F: Identification of Any Non-Eligible Activities”.

Part H: Application Organisation & Proposed Governance Structure

EthioTrees is a non-profit organization based in Belgium (5 formal members). EthioTrees (Belgium) will act as the Plan Vivo ‘project coordinator’. EthioTrees members are Sil Lanckriet, Miro Jacob, Koen Lepoutre, Tasha Moens and Jan Nyssen. More information on EthioTrees can be found on www.ethiotrees.com. EthioTrees will thus be responsible for the registration and recording of ‘plan vivos’ and sale agreements, will manage the use of project finance in the plan vivo and make payments to producers, will coordinate and record monitoring, will negotiate sales of Plan vivo Certificates, will report to the Plan Vivo Foundation and will contract project validation and verification. EthioTrees will provide technical support, evaluate and monitor plan vivos.

EthioTrees Ethiopia is the partner in Ethiopia (i.e. a legal Ethiopian association with 11 members). EthioTrees is thus a combined Belgian-Ethiopian organisation aiming to promote ecosystem restoration and non-timber forest production in the Ethiopian Highlands, by supporting woodland natural regeneration and frankincense production development. The members of EthioTrees in Ethiopia are linked with different relevant research departments at Mekelle University: Dr. Abraha Gebrekidan Asgedom (Department of Chemistry) and Dr. Tesfaalem Asfaha (Department of Geography and Environmental Sciences). EthioTrees also has strong links with the Physical Geography research group of Ghent University, which has conducted extensive research on soil and vegetation cover dynamics in Northern Ethiopia. EthioTrees member Prof. Dr. Jan Nyssen has over 20 years of research experience in the project area (Dogua Tembien area). His research focusses on physical geography, soil science, forest
cover changes, land and water dynamics and remote sensing. Further, EthioTrees has excellent contacts in Ethiopia (Mekelle and Bahir Dar University, the Belgian Embassy in Ethiopia, regional government officials, woreda authorities) and established links with the broader environmental research community. EthioTrees members are linked with several Flemish VLIR and BOF projects in North Ethiopia. The project will benefit from the experiences learned by the “Sustainable access to safe drinking water and improved sanitation in the semi-arid North Ethiopia, with focus on the interaction between urban and rural areas” (SELAM-WATSANI) project in Dogua Tembien. The project will work closely with colleagues from the NGOs “Ma’ar” and “Trees For Farmers”, given their experiences in upscaling honey production in exclosures, and in reforesting small-scale areas in the Northen Ethiopian Highlands respectively.

The proposed project governance structure is schematized in Figure 3. The project “Ecosystem restoration for and by associations of landless farmers in the Tembien Highlands (North Ethiopia)” is fostered by EthioTrees Belgium and EthioTrees Ethiopia, along with interested ‘exclosure associations’ of landless farmers. Cooperation with all local authorities (woreda, tabia, kushet) will be close. The ‘daily’ coordination of the project (including administration) is handled by the EthioTrees local coordinator (Mr. Seifu Gebreselassie). He is officially employed by EthioTrees Ethiopia Association. Mr. Seifu Gebreselassie is an experienced forester with an extensive social network in the Dogua Tembien area. He will work closely with the members of EthioTrees as well as with the members of the exclosure associations, and with the ‘woreda’. As stated above, the governance structure has been formalized in a Memorandum of Understanding between all relevant actors. The EthioTrees local coordinator will be rigorously monitoring the results over the course of the project period.

Concerning ecosystem restoration activities, the local coordinator is responsible to:

- provide training and consultancy to all interested individuals or entities linked with the activities of EthioTrees and requesting these services;
- actively search for areas that are suitable for improved exclosure management, and ensure that the authorities, the farmers and the farming associations agree with these activities;
- work using a community-driven approach, by fully taking into account the demands of the local farmers and population;
- purchase a variety of seedlings, and coordinate the improvement activities of an estimated 300 hectares per year in the designated project zones;
- regularly monitor socio-economic conditions within the project zones, following the guidelines that have been provided (i.e. qualitative interviews and socio-economic survey).
- regularly monitor biodiversity, biomass and soil organic carbon content within the project zones, following the guidelines that have been provided (i.e. sampling along transect lines, biomass measurements, mixed soil sampling and Walkley-Black analysis at the Laboratory for Soil Chemistry at Mekele University).
Concerning non-timber forest activities, the local coordinator is responsible to:

- provide training and consultancy on honey and oil production to all interested individuals or entities linked with the activities of EthioTrees and requesting these services;
- actively involve in setting up the bee hives and distillation units by the associations of landless farmers, and check on the quality of the honey and oil;

![Diagram showing the governance structure](image)

*Figure 3*  
Schematized summary of the governance structure of the project “Ecosystem restoration for and by associations of landless farmers in the Tembien Highlands (North Ethiopia)".

The future sales of Plan Vivo certificates will be the responsibility of EthioTrees Belgium. A minimum of 60% of all revenues will be allocated to the exclosure associations. Revenues will be allocated to the different associations based on their representative carbon storage achievements. These revenues will be invested in community projects, depending on the specific needs and wishes of the affected communities, and to be decided using a participatory approach.

**Part I: Community-Led Design**

Participation and acceptance by the local population and the landless farmer groups is key to the successful management of the project. During the very first phase of the project activity, awareness and
acceptance of target communities in the project will be ensured by performing about 30-50 qualitative interviews in the project area. Issues raised during these consultation rounds will be incorporated in an improved project design.

As stated above, exclosure associations consist of landless farmers who will benefit from non-timber forest production. These elect a representative through a democratic election. The members of the association will manage parts of the exclosure and the non-timber forest production. Gender equality within every association will have to be ensured. All members of the associations will be trained in the Plan Vivo methodology by EthioTrees members, and he/she will be trained to optimally manage a part of the exclosure (guarding process, enrichment planting of trees, soil and water conservation, honey production, frankincense cultivation, limited timber production, grasses for livestock feeding in stable). Regular discussion sessions, training session and workshops will be organized together with the local coordinator, the local authorities and EthioTrees (Belgium and Ethiopia).

Moreover, during all activities, additional measures can be taken into account to ensure a democratic project design. For instance, the exclosure should not hamper agricultural activity of other villagers and should be agreed on by the tabia and kushet council, all members of the exclosure association and all neighbours. Moreover, the exclosure can only be located on previously degraded rangelands or wastelands and not on previous croplands or important grazing lands. To avoid increased grazing pressure elsewhere in the village, EthioTrees will support stall-feeding (among others by distributing a certain amount of feed boxes). Livestock feeding can be partly derived from biomass (grasses) from the exclosure.

Participation of women in the associations will be actively encouraged. Women participation will be stimulated by organising separate meetings with female association members where they can express their opinion separately and where they can prioritize their needs. These meetings will be organised before the establishment of ‘plan vivos’, to ensure that the needs of the female members are fully incorporated in them. Overall, the project aims to integrate gender equality in the project design.

**Part J: Additionality Analysis**

This project is not the product of a legislative decree, or a commercial land-use initiative likely to have been economically viable in its own right. Rather, EthioTrees provides the practical training, technical support and incentives to develop ecosystem restoration activities.

Below, a table has been included in order to describe the most important barriers to the development of this project.

**Table 1: Additionality of the combined EthioTrees – Plan Vivo effort.**
### Barrier

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<th>Financial</th>
<th>Baseline scenario</th>
<th>Additionality of the combined EthioTrees – Plan Vivo effort</th>
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<tbody>
<tr>
<td></td>
<td>- Limited funds</td>
<td>Start-up capital secured by EthioTrees; payment for ecosystems scheme supported by Plan Vivo</td>
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<tr>
<td></td>
<td>- Other priorities</td>
<td></td>
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<td></td>
<td>- Limited private credit availabilities</td>
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<th>Technical</th>
<th>Baseline scenario</th>
<th>Additionality of the combined EthioTrees – Plan Vivo effort</th>
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<td>Although natural resources conservation is quite well established in Tigray (especially as compared to other regions in Africa), to date technical knowledge on socio-economic ecosystem service valuation is still limited. Thus, to strengthen the existing efforts, there is ample opportunity for projects focussing on valuation of (socio-economic) ecosystem services.</td>
<td>Academic input of environmental scientists; skilled local coordinator; training for local farmers; focus on (socio-economic) ecosystem service valuation</td>
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<th>Institutional</th>
<th>Baseline scenario</th>
<th>Additionality of the combined EthioTrees – Plan Vivo effort</th>
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<td>- “Top-down approach”, although room is given for local initiatives</td>
<td>Bottom-up approach with first consultation round, continued workshops and benefits for landless farmers</td>
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<td></td>
<td>- Rewarding for implementation activities</td>
<td>- Rewarding for implementation results</td>
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Furthermore, other additionality and spill-over effects of the project may include increased blue/green water availability for crops close or downstream to the exclosure, erosion control, limited timber production and non-timber forest production (honey and incenses).

### Part K: Notification of Relevant Bodies & Regulations

This project intends to comply with all relevant national and international regulations, including the Federal Forestry Conservation, Development and Utilization Proclamation 1994 (Proclamation No.94/1994). The project is fully in line with the Ethiopian Federal Government’s Climate-Resilient Green Economy Strategy (OECD, 2016). After 1991, the Federal Government reformed the land tenure system and made large investments in soil and water conservation structures (e.g. exclosures, stone bunds, check dams and reservoirs) as well as in agricultural inputs such as fertilizers and improved seeds.
Overall, as impacted by these ‘green’ developments, the Highlands are now ‘greener’ than in the past (Nyssen et al., 2014). In line with the Government’s Climate-Resilient Green Economy Strategy, reforestation is key to adapting to hydroclimatic changes in the Ethiopian Highlands. Overall, the fight against land degradation and climate change has become a central element of Ethiopia’s government policies.

EthioTrees extensively engaged with the woreda administration and will engage with the Environmental Protection Authority.

**Part L: Start-up funding**

EthioTrees is provided with ~15,000 euros of start-up funding for this project and plans for strong expansions of the funding budgets, basically derived from Belgian private, local, regional and federal funding budgets.
References


UNFCCC, 2016. Available from: https://cdm.unfccc.int/Projects/DB/JACO1245724331.7/view (accessed on 28/05/2016)

Appendix 1. Copy of the Memorandum of Understanding between EthioTrees and Dogua Tembien

Memorandum of Understanding between EthioTrees Belgium and EthioTrees Ethiopia

EthioTrees aims to improve value creation from ecosystem services in the Woreda Dogua Tembien. Specifically, objectives of EthioTrees in Dogua Tembien are to increase biodiversity, water infiltration and carbon storage through improved soil and biomass status in exclosures and to encourage sustainable and fair production of non-timber forest products such as essential oils from frankincense trees.

In accordance with this Memorandum of Understanding between the Ethiopian entity EthioTrees, as represented by Mr. Seifu Gebreselassie (here named as Party 1) and the Belgian entity EthioTrees, as represented by Mr. Sil Lanckriet (here named as Party 2), the parties agree on the following:

Concerning ecosystem restoration (1)

Party 1 agrees to support reforestation activities in different tabias in Dogua Tembien. Therefore EthioTrees plans to:

1a) help to improve the status of (young) exclosures by improved management in these exclosures, aiming at 300 hectares per year;
1b) work using a community-driven approach, following the demand of the local communities and complying with international standards on participatory project management;
1c) provide all seedlings required for enrichment planting activities;
1d) provide free training sessions on planting and consultancy on exclosure management to the communities;
1e) monitor the evolution in biodiversity, groundwater recharge, social and economic standards and carbon storage within the project zones.

Party 2 agrees to support these activities by:

1f) transferring at least 60% of any future financial revenues from carbon sequestration to the communities (farmers associations) in a clear and transparent manner. Revenues should be allocated to (new or existing) social and environmental community projects, to be agreed on with the communities.
1g) providing the necessary funding and consultancy for the activities.
Concerning **essential oil activities (2)**

**Party 1 agrees to**

- 2a) provide free training sessions and consultancy on management of frankincense trees and cultivation of the resins to all interested individuals or entities linked with the activities of EthioTrees and requesting these services;
- 2b) thoroughly check on the environmental sustainability of frankincense processing with limitations on grazing and overexploitation, and proceed only with sustainable production;
- 2c) actively involve in setting up the distillation units in the villages and setting up the distillation activities by associations of (landless) farmers and provide training on the distillation;
- 2d) provide fair prices and aim for fairtrade and biological certification of the oil products at international standards.

**Party 2 agrees to support these activities by:**

- 2e) transferring any profit derived from sales of oil products on the international market to (new or existing) social and environmental community projects, to be agreed on with the communities.
- 2f) providing the necessary funding and consultancy for the activities.

Concerning **support from the Woreda (3)**

**Party 1 and Party 2 agree to**

- 3a) work closely with the Woreda and comply with all Ethiopian laws.

**For agreement of party 1,**

[Signature]

**For agreement of party 2,**

[Signature]
# Appendix 2. Notification of the Designated National Authority

Designated National Authorities (DNA)

<table>
<thead>
<tr>
<th>Country</th>
<th>Organization’s address / Contact person</th>
<th>Other informations</th>
</tr>
</thead>
</table>
| Ethiopia | Ministry of Environment, Forest and Climate Change  
Addis Ababa, Ethiopia  
Mr. Yohannes Ameha Assefa (yohannesameha@gmail.com; y.ameha@yahoo.com; epa_ddg@ethionet.et)  
Environmental Expert  
Phone: +251 911 734 374  
Fax: +251 115 580 524 |                    |

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**yohannes ameha <y.ameha@yahoo.com>**  
Tue 8/23/2016 10:08 AM  
Postvak IN  
**To:** Sil Lanckriet;  
yohannesameha@gmail.com;  
epa_ddg@ethionet.et;  
**Cc:** Seifu Gebreslassie <seifu.gb21@gmail.com>;  
Miro Jacob <mirojacob@gmail.com>;  
You replied on 8/23/2016 3:53 PM.  
**Dear Sil**  
Thanks. I received the document. I will read it and if I have comments I will forward it. Once again thanks for choosing us to work with u. On behalf of my Ministry I am always ready to help you on any issues. hence, dont hesitate to ask me anything.  

**best**
Notification of natural regeneration project in Dogua Tembien

Sil Lanckriet
Mon 8/15/2016 4:52 PM
To:
yohannesameha@gmail.com;
y.ameha@yahoo.com;
epa_ddg@ethionet.et;

1 attachment

To the Ministry of Environment, Forest and Climate Change
Responsible Designated National Authority of Ethiopia

Dear Mr. Yohannes,

With this email we would like to inform you that EthioTrees Association would like to start a natural regeneration program in the 'woreda' of Dogua Tembien, Tigray.

The project is a collaboration between EthioTrees Belgium, EthioTrees Ethiopia and many partners in the local society (in Dogua Tembien).
We work in close collaboration with the woreda.
You will find more information in the document attached.

We would appreciate any comment that you would have on the project proposal and we would like to work closely with the DNA of Ethiopia.

Yours sincerely,
Sil Lanckriet
EthioTrees