

Amhara, Ethiopia

A community-based approach
to restore degraded lands

Yearly Update 2021



Summary

Our community-focused project – in collaboration with The Hunger Project – is growing and planting native trees species to restore community land, gullies, river banks and farmlands and planting fruit trees and cash crops in homesteads.

Its goal is to improve ecological function and services through integrated, community-based natural resources management, securing sustainable livelihoods and alleviating poverty in the Machakel district of Amhara's East Gojjam zone.

Conflict in northern Ethiopia has been ongoing since October 2020 and has caused a humanitarian crisis in the region. This affected everyone in our Ethiopia team and partners directly or indirectly yet despite the unrest, we have, incredibly, achieved our planned target. 12 sites in 7 villages covering 97 ha and almost 116 000 trees were regenerating by the end of 2021. This is the final phase of active restoration in Machakel, where 1215 ha has now been restored through the planting and regeneration of more than 2.4 million trees on degraded communal lands and in agroforestry areas on homesteads, well above our target of 1149 ha.

The programme in Amhara is now scaling up and expanding to ten times its current size in neighbouring West Gojjam province (Jabi-Tehnan district). Work at the local nursery to expand its capacity began in late 2021.

COVID-19 continues to be a public risk in Ethiopia. The staff and target communities are taking all necessary measures to reduce the risk of infection.

This report shares an update of our progress during 2021. Thank you for all your support!

The project in numbers

In 2021:

150 ha of restoration, growing approx. **250 000** trees

97 ha in 12 community sites; **128 540** tree seedlings of **10** species planted with a **93%** initial survival rate

54 ha of homestead agroforestry with **115 235** seedlings planted

500 households (19 women-headed) from 7 villages took part in agroforestry training

675 community members (51 women) carried out planting activities

539 community members (15 women) carried out soil and water conservation

Since 2017:

1215 ha restored, 412 ha agroforestry and 803 ha community land

Over **3 million** tree seedlings produced and **2.4 million** planted

Average survival rates **84%** to **96%** – well above our target

4697 community members involved in planting

3811 households (7% female-headed) benefiting from agroforestry

15 villages engaged in forest restoration and/or livelihood activities



Restoration

111% of restoration target achieved on degraded communal lands and farmlands

The overall target of the project (2017-2021) was to restore 739 ha of communal lands and ensure the sustainability of the forest areas in the future. To date, the project has planted and managed 803 ha of communal land with the active participation of the local communities, which is 109% of our target.

For the final phase of the restoration in Machakel during 2021, 97 ha across 12 locations in 7 villages were restored with community associations.

In collaboration with the local community, we planted 128 540 tree seedlings of 10 tree species. 675 community members, 51 of them women, carried out seeding transportation, pit preparation, and planting activities, while the project team and local government provided logistics and technical support.

For continuous monitoring and evaluation purposes, 29 permanent monitoring plots have been established at the 12 new sites and ecological baseline data were collected and documented.

In addition, the project carried out maintenance planting of

9007 seedlings and cuttings on previous years' restoration sites. 173 community members, 4 of them women, took part.

More than 3m seedlings produced since 2016

Of the three community-based nursery sites established in the first phase of the project, two – Kuskuam and FTC – are still operating in 2021 and supplied all the seedlings for the project.

In 2021, the two nurseries produced 294 575 mature seedlings of 10 native and exotic tree seedlings for both the communal restoration sites and the agroforestry planting, which was 112% of the target. The extra seedlings were added to those distributed to the agroforestry participants to plant on their homesteads.





Soil and water conservation activities: crucial for restoration success

The landscape here is dotted with gullies, channels resulting from erosion caused by the concentrated but intermittent flow of water, usually during and immediately following heavy rains. They are one of the most destructive forms of erosion in Ethiopia. Soil and water conservation structures like check dams and cut-off drains are a crucial step in forest restoration to avoid further soil erosion and facilitate rainwater infiltration to restore critical watersheds.

Rehabilitating deep gullies involves building check dams and planting trees. In 2021 we rehabilitated 11 gullies in 4 villages, 3 more than our target. Since 2017, 38 gullies have been rehabilitated.

In 2021, the project constructed 161m³ of check dams on new sites and 15m³ on one old restoration site.

235m³ of cut-off drains – which are dug across a slope to discharge surface runoff to a waterway, reducing soil erosion and increasing land productivity – were built at 8 restoration sites in 4 villages. Since 2017, the project has constructed 365m³ cut-off drains with a length of half a kilometer.

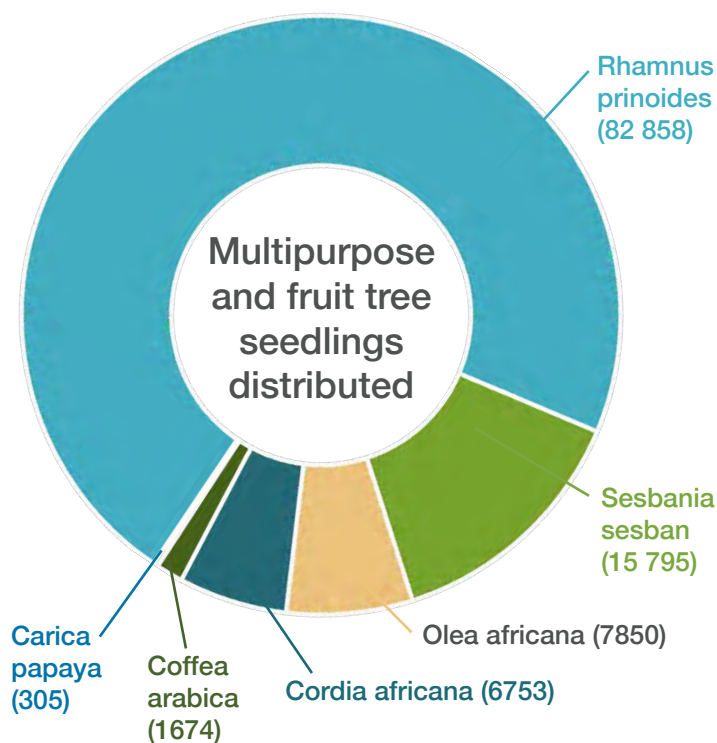
The communities are at the heart of creating the soil and water conservation. In 2021 539 community members, 15 of them women, contributed labour and local materials, and field staff provided technical support. The project provided industrial materials such as gabion wire, and sacks to make the dams.

To protect young tree plants from damage caused by animals and humans, and to encourage regeneration, 7 new restoration sites were fenced along 1475 metres by 434 communal land community members, 2 of them women. Likewise, 485 community members, 9 of them women, constructed a 1942-metre fence to strengthen the protection of 9 old restoration sites in 6 villages.

54 ha of homestead agroforestry established

In 2021, agroforestry systems were established on 54 ha of smallholder farms – a 90% achievement against the 60ha target. 500 households, 19 of them headed by women, planted 115 235 multipurpose tree seedlings, fruits and shrubs – 113 561 from the nurseries and 1674 coffee seedlings purchased from Machakel Woreda Agriculture and Natural Resource Office.





All-time, we have achieved 98% of the target area (hectares) for agroforestry. By the end of 2021, 412 ha of farm agroforestry systems have been developed with 3811 households, 276 of them women-headed, and planted 1,078,806 high-value fruit trees, multipurpose trees and shrubs.

Above target survival rates

The target was to obtain a 80% seedling survival rate after 3 years for both communal and agroforestry areas. Vegetation inventories and household surveys of 2017, 2018, 2019, and 2020 were conducted as part of the outcome/impact

evaluation, and survival rate was determined based on the permanent plots established in each respective year.

On communal restoration sites the result revealed an average survival rate of 92.8%. The inventory showed a higher survival rate of exotic species compared to indigenous species, with an average survival rate of 95.6% for exotic and 91.1% for indigenous species. The highest survival rate (98.5%) was registered for *Acacia decurrens* and the lowest (88.6%) – still high! – was for *Faidherbia albida* seedlings.

On agroforestry sites, the average survival rate of seedlings was 95.1%. The survival rate of native cash crop *Rhamnus prinoides* was highest (97%), followed by *Olea europea* (95.7%). Survival rates of 95.2%, 89.6%, 88.2%, and 86.9% were recorded for *Coffea arabica*, *Cordia africana*, *Carica papaya* and *Sesbania sesban* respectively.

These fantastic survival rates can be attributed to quality seedling production (healthy and vigorous), careful species selection for the local agro-ecological conditions, the suitability of the restoration sites, well-timed planting, good planting techniques and good seedling care, both during transportation and handling and on the sites after planting by protection from weeds and grazing.





Training

Thousands of community members trained

Several training sessions and workshops took place in 2021.

- To foster a better understanding of the negative effects of land degradation, village-level community awareness events were organized by The Hunger Project. These events were attended by 2163 community members, 90 of them women, from restoration sites in 9 villages. The low number of women participants is because these events were targeted to family/households at the village level, and men – culturally considered as the head of the household – tended to register rather than women. We try to address this imbalance when we provide individual-targeted activities and training.
 - The project provided refresher training on pre- and post-planting management and sustainable management of restoration sites to 88 staff (3 of them women) from implementing partners including Machakel Woreda office of Agriculture and Natural Resources Management, Village Development Agents (DAs) and The Hunger Project. Topics included seedling transportation, spacing, pit preparation, and methods of planting, as well as on the nature of participatory forest management and community-based approaches.
 - Village leaders and police officers attended alongside staff from the same partner organizations for a stakeholders mobilization workshop, where the severity of current land degradation, technical approaches to bring nature to its former state and the roles and responsibilities of stakeholders in mobilizing the community were discussed by the 56 participants (2 women).
 - Experience-sharing visits paid to 4 successful communal restoration sites and two model agroforestry sites on private lands by 94 participants (5 of them women). Many were communal land community members or agroforestry beneficiaries.
 - 20 nursery staff, 6 of them women, received on-the-job training on seedling production activities such as compost preparation, seedbed preparation, layout setting, tree seed treatment, sowing date, mulching, watering, weeding, hoeing, pruning, transplanting, hardening, and pest control.
- In addition, a 16-minute video documentary focused on the purpose, achievements and lessons of the project was prepared in collaboration with Machakel district communication office and disseminated to stakeholders and media platforms including the Amhara mass media.



Livelihoods

Thousands of households receive regular incomes through livelihoods schemes

The project's overall aim was to improve the income of 3645 households (60% of the total households in the area) from honey, dairy, forestry, and forest-friendly businesses to mitigate the dependency of local communities on communal lands and prevent further encroachment. An outcome/impact evaluation was conducted by a consultant to understand the income and other socio-economic contributions of the project, and the analysis will be shared soon.

3811 households engaged in agroforestry

Between 2017 and 2021, a total of 3811 households, 276 of them headed by women, were trained and engaged in agroforestry practices, which exceeded our original target of 3367.

In 2021 alone we supported and trained 500 households (19 of them women-headed) from 7 Kebeles in 2021 to develop agroforestry. Some of the selection criteria were the suitability of their homesteads for agroforestry practices, their experience, and their willingness to work on agroforestry individually in their homesteads and collectively in communal restoration sites.

Rhamnus prinoides is the preferred species in the area due to its high-income potential. The skills training, the high level of farmers' interest in agroforestry and their experience of integrating trees in homesteads are likely to have led to such high survival rates (see Restoration section, above).

Grass harvesting

Restoration sites under protection yield valuable grasses as they regenerate, and this grass is harvested for livestock in what's known as a cut and carry feeding system. To date, 79 communities have increased access to livestock feed from 79 restoration sites (89% of our target) and have started practicing cut and carry feeding. In 2021, an estimated feedstock worth \$15 000 (26 728 sacks!) was harvested across 32 sites by over 1000 people in the local communities

Beekeeping

Beekeeping provides an important source of income from honey sales. The project has provided training to 110 people – smallholder farmers, youth, and agriculture extension workers, including 17 women – on beekeeping, including hive-making from local materials and bee colony multiplication and management, to promote beekeeping practices and benefits to the wider community.



What's Next?

The project is now expanding to ten times its current size into Jabi-Tehnan district in neighbouring West Gojjam province. Here, in the Gewocha Forest and its surrounding communities, a lack of proper farm and grazing land management means soil is degrading and land is becoming unproductive. Farmers in the buffer zone are encroaching into the forest to compensate for their losses from crop yields and shortages of animal feed. Trees are cut for fuel and construction wood, and charcoal is produced as a source of income, and the local government does not have the capacity to protect the forest. WeForest and The Hunger Project will sustainably restore 10 000 ha of currently degraded land and open forest and support a community resilience strategy.

How do we know our restored forests are growing and making an impact?

Every hectare under restoration is mapped with GPS points to generate polygons (areas on a map) that are assigned to sponsors. Permanent monitoring plots are established in our sites and our forestry and science teams conduct surveys to monitor progress of biomass growth, tree density, survival rate and species diversity, among other indicators. Where social impacts are also critical, we measure socio-economic indicators such as the number of beneficiaries, people trained, and income generated from forest-friendly livelihood activities.

Please visit our [Why and How](#) webpage for more information.



Stay up-to-date with your interactive [Amhara map](#), and check out the [photo album](#) of the project on Flickr.

Thank you for supporting the Amhara project!