

Community-based dryland restoration

Mali Duwa and Sutebwo forests of the Segou Region

Farmer-managed natural regeneration (FMNR) and improved forest management have provided adaptation benefits to an area particularly vulnerable to rising temperatures and other climate-related risks.

The population surrounding the Duwa and Sutebwo forests of the Segou region is dependent on rainfed agriculture in an area south of the Sahara desert that faces increasingly frequent and severe climate change hazards including rising temperatures, droughts, and floods. These impacts lead to crop losses and high food prices. Forest degradation, agricultural expansion, prolonged drought, and biodiversity loss from poaching have already weakened the ecosystem of the surrounding landscape. Between 2000 and 2015, the two forests had lost a total of 3,300 hectares of forest replaced by open savannah woodland. Most of this savannah woodland has been further degraded compromising the quality of agricultural land.

Tree Aid, an international NGO, supported local communities in carrying out tree planting and restorative care and trained community members in agroforestry and farmer-managed natural regeneration (FMNR), a method that promotes the regrowth of previously cut or burnt down trees. Trees are pruned to stimulate growth as well as provide leaf litter to nourish soils. The restored and better managed forests are now yielding fruits, nuts, oils, butters, traditional medicines, and nutritious foods to both improve food security of local communities as well as diversify incomes.

Case effectiveness on

Climate change

Mitigation: Positive

Although not quantified for this project, augmenting tree cover in wooded savannah is known to increase above-ground carbon storage. Therefore, the increased tree density, from 168 to 182 trees per hectare between 2017 and 2020, is likely to provide carbon mitigation benefits in the project area.

Adaptation: Positive

75% of intervention beneficiaries reported having fairer and more equal access to forest resources. This improved equity of access is likely to benefit community members heavily reliant on forest products.

Ecosystem health

Ecological effect: Positive

20,404 hectares of land are now reported to be under improved management with more than 345,000 new trees planted and 327,000 trees restored. Monitoring revealed that 8,300 hectares of degraded forest land have seen



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Targets poor/disadvantaged

Intervention type

Food production
Management
Restoration

Ecosystem type

Tropical & subtropical forests
Tropical & subtropical grasslands
Terrestrial production

Climate change impacts addressed

Loss of other ecosystem goods
Loss of food production
Biomass cover loss
Reduced water availability
Reduced soil quality

Instigators

International
conservation/environment
organization

Societal challenges

Biodiversity conservation
Climate change adaptation
Climate change mitigation
Disaster risk reduction
Economic and Social development
Rights/empowerment/equality
Food security
Water security

Literature info

Grey literature
Case methodology not reported

improved water retention and soil fertility. It is likely that composting efforts and indigenous tree planting will improve soil fertility further. Diversity of tree species has increased with 43 species present in 2020 as compared to 37 in 2017. The presence of the *Cordyla pinnata* threatened species has also been found to have increased.

Socioeconomics

44 Village Tree Enterprises (VTEs) were established to allow local people to collaborate in the production and sale of non-timber forest products. These VTEs have also launched savings and loan schemes to support members financially. According to a post-project assessment, 52% of the project population was under the poverty line, a 34% reduction since the start of the project.