

Restoration of degraded land for food security and poverty reduction in East Africa and the Sahel: taking successes in land restoration to scale



The *Restoration of degraded land for food security and poverty reduction in East Africa and the Sahel: taking successes in land restoration to scale* project aims to reduce food insecurity and improve livelihoods of poor people living in African drylands by restoring degraded land, and returning it to effective and sustainable tree, crop and livestock production, thereby increasing land profitability and landscape and livelihood resilience.

Why the need to restore land?

In order to feed the predicted global population of 9 billion people by 2050, food availability (by increasing production and reducing losses) needs to expand by 60% globally and up to 100% in developing countries. Currently, over a billion people live on less than US\$ 1.25 per day and more than 800 million are acutely or chronically undernourished. Meanwhile, threats to the natural resource base needed for future food production are rising steadily. An estimated 3.5 billion ha of degraded land now lie unproductive due to overexploitation (CGIAR 2016).

Climate change and variability are exacerbating an already highly variable climate resulting in uncertain food security in many regions. The number of

people affected by drought or floods each year has risen to 150 million (CGIAR 2016). Restoration of degraded land can be a key pathway to achieving food security and reducing poverty for some of the most vulnerable people living in Africa's drylands. Land restoration involves restoring production from land in profitable ways for farmers and pastoralists so that their livelihoods are sustainably improved and the capacity of land to produce in the future is enhanced. Equally important are interventions to avoid further degradation, because they are generally less costly than restoration once land has been degraded – and the more degraded, the higher the cost of restoration. Core components of land restoration are recovery of vegetation and improvement and maintenance of soil health. Any land restoration intervention also has to be adapted to the specific ecological, economic, sociological and institutional context.

In order to achieve the United Nation's Sustainable Development Goals (SDGs), successful land restoration efforts need to be taken to scale, both reaching a larger number of farmers and covering larger areas (millions of hectares) over the coming decade. The Agenda 2030 for Sustainable Development, confirms the critical role of smallholder agriculture-led growth for achieving

The project is implemented in the West African Sahel and Dry Savannas (Mali, Niger) and East and Southern Africa (Ethiopia, Kenya and Tanzania). The project is led by World Agroforestry (ICRAF) in collaboration with other CGIAR centres. ICRAF is implementing the project in Kenya and Mali; the International Livestock

Research Institute (ILRI) in Ethiopia and Kenya; and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in Niger. Tanzania is primarily a learning site. The International Center for Agricultural Research in Dry Areas (ICARDA) is leading the monitoring and evaluation of the project.

the SDGs. Smallholder farming will remain an important part of global food security for at least the time horizon of most current research and development initiatives (Sinclair 2017).

Land restoration in East Africa and the Sahel

Many of the factors that affect the suitability of agricultural innovations vary at a fine scale. These include soils, climate, farming practices, household characteristics, markets, social capital and policy. This means that appropriate innovations for farmers to adopt to improve their livelihood systems must be context specific, i.e. relevant to that farmer (Coe et al. 2014).

To address this, the land restoration project, funded by the European Union and the International Fund for Agricultural Development (IFAD), applies the research “in” development approach where research perspectives and methods are embedded within development initiatives, to accelerate their impact through improving the speed and efficiency of learning about the suitability of different interventions for different people and places.

This research aims to achieve transformative outcomes by placing farmers at the centre of land restoration efforts. Participating farmers bring an implicit understanding of their system to the research process by testing and adapting the options (innovations). Co-learning amongst communities of practice (CoP) that bring farmers, community facilitators, NGOs and government extension staff, private sector actors and researchers together, allow the sharing of knowledge and experience about what works, where and for whom on the ground.

Partnerships are of critical importance for the implementation of the project and for scaling up and scaling out successes for expanded and sustainable impact. Key partners for the implementation of the project are the Drylands Development Programme (DryDev), IFAD’s country programmes, international and national development-oriented NGOs, National Agricultural Research Systems (NARS), and national technical services and authorities. Project action sites have been identified in each country to maximize overlap with and partner development projects (e.g., DryDev, CRP-DS).

Land restoration options are currently being implemented with around 10,000 households in Ethiopia, Kenya, Mali and Niger across social,



Women preparing millet in Dosso Region, Niger

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geographic and economic contexts through on-farm planned comparisons to determine which options (innovations) work where and for whom.

So what progress has been made?


Adansonia-Consulting was mandated by ICARDA to conduct an external and independent mid-term evaluation. The purpose was to provide accountability and learning to the project stakeholders and describe reasons behind the achieved results and consolidate lessons learnt and best practices for the remaining period of the project.


The main findings are as follows:


- **Relevance:** The land restoration project is in line with the IFAD Strategic Framework 2016-2025 and the CGIAR Strategy and Results Framework 2016-2030. The project’s theory of change describes well how the research “in” development approach induces expected outcomes and impacts by describing the causal interrelationships from the project’s outputs to outcomes and impacts. The project targeting the restoration of millions of hectares of degraded land for smallholder-led agriculture may significantly contribute to the achievement of the SDGs, especially for SDG 1 “no poverty” and SDG 2 “zero hunger”.





- **Effectiveness:** The project is on track and all targeted outputs will be achieved by the end of the project. However, an updated planning of activities per country for the remaining project period should be elaborated.



- **Efficiency:** The implementation of the land restoration project is largely based on a broad and well-functioning network of developing partners multiplying the development results in a cost-effective way. The project is currently reaching about 10,000 households, or more than 50,000 beneficiaries in the four action countries.


- **Impact:** To assess the full ecosystem and livelihood benefits induced by the land restoration project in the selected scaling up and scaling out domains it is suggested to conduct a comprehensive impact evaluation study two to three year after project closure.


- **Sustainability:** As for the impact it is too early to evaluate conclusively the sustainability of the land restoration measures promoted by the project at large scale.

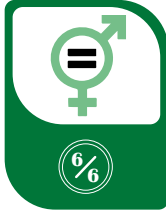

- **Science quality:** The land restoration project is applying state of the art agricultural research in partnership with many development actors bringing in their complementary experiences. The project has published numerous papers, many of them in peer-reviewed journals. Moreover, an impressive number of factsheets, tools, guides, blogs, videos and conference presentations have been released.



- **Governance and management:** The project is systematically monitoring and collecting electronic data from the participating famers. The three annual progress reports are comprehensive




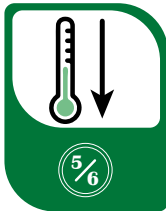
and well-presented. However, these annual reports are not enough for quick adaptive management. Moreover, there is no functioning steering committee. At the time of the review there is no updated planning of activities per country for the remaining project period.

- **Gender equality and women's empowerment:** The land restoration project is gender-sensitive and promotes gender equity at project staff and at beneficiary level (lead farmers and participation farmers). The project record and analyse data is systematically gender-disaggregated. Gender differences in knowledge and perceptions relating to both causes of degradation and preferences in terms of restoration options are systematically considered by the project.


- **Innovation and scaling up:** Many agricultural innovations have been identified, tested and adapted by the farmers. The upscaling success is very impressive. The upscaling of basin planting in Kenya and Farmer Managed Natural Regeneration (FMNR) in Niger is very quick.


- **Environment and natural resources management:** Most of the promoted best options have had a direct positive impact on the environment and the natural resources at landscape level. The increased yield of cereals and legumes on farms where FMNR or basin planting is applied improves the livelihoods of the beneficiaries and increases also their resilience since both options are significantly more drought-resistant.


- **Adaptation to climate change:** Most of the land restoration techniques promoted by the project contribute to maintain and enhance the vegetation cover and are important adaptation measures to climate change. The land restoration project is clearly strengthening the environmental vulnerability and the resilience of beneficiary communities at large scale.



- **Partnership:** Numerous development partners with complementary areas of expertise at local, national, and global level contribute significantly to the land restoration on a large scale.



CoPs are a key element of the project and allow vivid exchange amongst the stakeholders. They are learning platforms amongst stakeholders to enable dialogue, collaboration, communication, sharing of information, and the creation of new knowledge.

What do the results mean?

Overall, the performance of the project is satisfactory to highly satisfactory (score: 5-6). The mid-term evaluation expects that all targeted

outputs will be achieved by the end of the project, 31 March 2020 (with a no cost project extension).

The project may significantly contribute to food security and poverty reduction at large scale. The widespread upscaling of best options by voluntary farmers on their farms and by neighbours is very impressive. The sustained dissemination of best options, however, depends on the ongoing functioning of the CoPs and continuous sharing of lessons learned within a particular community across and between the nested communities at all levels.

The engagement of national institutions is fundamental for the sustained scaling up and scaling out through best options in the national agricultural strategy. A comprehensive scaling out strategy should be prepared together with key development partners for implementing the process after project closure.



Kenyan farmer showing his improved maize in the planting basins © C. Watson



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