

East Africa

Farmer Managed Natural Regeneration (FMNR)

Setting the scene

Vast areas of East Africa have become so degraded that they no longer sustain agriculture. These areas have lost virtually all of their natural vegetation – the organic matter necessary for fertile soil and moisture capture and retention. Yet, more than 70 percent of the population are subsistence farmers relying on this degraded resource base for their food and livelihoods. As the climate changes, contributing to higher temperatures, greater variability in rainfall and more extended droughts, chronic food insecurity and malnutrition are becoming a persistent and regular reality.

FMNR overview

Farmer Managed Natural Regeneration (FMNR) is a cost-effective sustainable agriculture system which has been demonstrated to transform the lives of millions of rural families across Sahelian Africa. It enhances food security, increases family incomes and re-greens farms and catchments to insure against hunger, droughts and the impacts of climate change.

FMNR yields rapid, large-scale results: providing timber for building, cooking and heating, restoring degraded soils and helping communities adapt to climate change. Farmers practising FMNR in West Africa have doubled crop yields and they have not had to rely on food handouts during hunger crises.

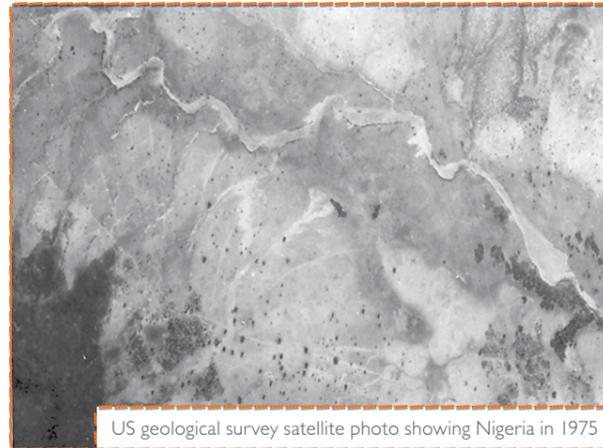
FMNR is the systematic regeneration and management of pre-existing tree stumps and root systems to restore degraded barren land to farmland and forests. The chosen tree stumps or root stocks are managed by periodically harvesting the less viable or undesirable stems and branches. Well-established root systems ensure plant survival and rapid growth, even during the dry season. Farmers can then grow other crops or graze cattle between and around the trees.



Before FMNR



After FMNR

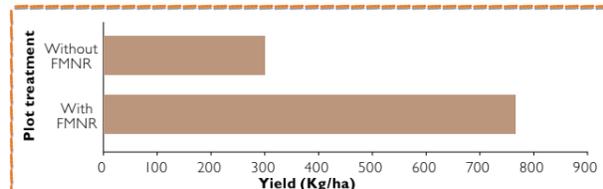


US geological survey satellite photo showing Nigeria in 1975

The FMNR system of land regeneration is far more cost effective and faster than planting new trees, which often die in harsh environments.

Key benefits of FMNR include:

- mitigating climate change through the sequestration of carbon;
- alleviating regional poverty by providing:
 - a) increased production of wood and tree products, including honey, medicine, fibre, fruit and wildlife
 - b) improved land management, which stimulates crop yields and grass growth, providing fodder for livestock or to be cut and sold as an additional source of income;
- providing faster, more sustainable reforestation at a fraction of the cost of replanting trees from nursery stock;
- increased biodiversity and environmental restoration;
- improved water infiltration, resulting in the recharging of ground water and a reduction of flooding and drought;
- reduced erosion and increased soil fertility;



Preliminary findings of the Senegal Agricultural Institute show that practising FMNR on farmland can result in a doubling of crop yields.

Proven evidence-based solution for chronically food insecure regions



2003 photo shows greatly increased tree cover. Trees are black dots.

- improved environmental and social resilience to the impacts of climate change.

FMNR is a bottom-up, capacity-building food security system which, after initial start-up assistance and training, spreads rapidly through farmer and community participation.

Project location

This project aims to reforest five million hectares over five years in Ethiopia, Kenya, Tanzania and Uganda.

Governments in these countries and the World Agroforestry Centre (based in Nairobi) have all stated their support and commitment to FMNR and World Vision has good capacity for implementation across East Africa. In addition, we now have successful FMNR pilots in Ethiopia (Humbo, Soddo and Tigray) for exchange site visits.



Community members practising FMNR



Project location:

Ethiopia, Kenya, Tanzania and Uganda

Pilot project partners:

- Community cooperatives
- National governments
- World Agroforestry Centre
- World Vision Australia
- World Vision National Offices

Climate change mitigation:

- Reforestation
- Carbon sequestration/trading

Climate change adaption:

- Flood prevention/control
- Soil erosion control
- Protecting water resources
- Natural resource management
- Income and food security

Project status: Scale up

Area: Five million hectares over five years

Total project cost: US\$7 million

Funding requirements: US\$3.5 million

The Humbo Community-based Natural Regeneration Project is Africa's first large-scale Clean Development Mechanism (CDM) reforestation project and it has been implemented in partnership with the World Bank.

This project has restored 2,728 hectares of degraded native forests, and brought social, economic and ecological benefits to participating communities. Within just two years of implementation, communities were collecting wild fruits, firewood and fodder, and reported that wildlife had returned and erosion and flooding had been reduced. The community is now receiving income from carbon trading through this project.