



World Vision

# RESTORING DEGRADED LAND, GROWING FUTURES

How Farmer Managed Natural Regeneration is renewing forests and farmland while improving livelihoods

“[FMNR] is probably the largest positive environmental transformation in the Sahel and perhaps in all of Africa.”

—Chris Reij, Sustainable Land Management specialist at the World Resources Institute, quoted in *Scientific American*\*



## How poor land management affects the environment

Across Africa, **poor land management** exacerbates the problems caused by extreme rainfall patterns—drought and heavy rain. Deforestation and land degradation erode topsoil, reduce soil fertility, increase air temperatures, and lead to other negative outcomes. These in turn **amplify the impact of drought and flood cycles that contribute to crop failures and famine.**

## How Farmer Managed Natural Regeneration fights back

Farmer Managed Natural Regeneration (FMNR) is a simple, scalable, sustainable land management approach that **empowers farmers to stop and reverse land degradation through regrowing trees on farmlands, on grazing lands, and in degraded forests.** Championed by World Vision Australia’s Principal Advisor for Natural Resources and 2018 Right Livelihood Award Laureate, Tony Rinaudo, this system involves pruning the regrowth that sprouts from tree stumps and roots. These regenerated trees have a greater chance at survival than transplanted seedlings. In the Sahel region of Africa and around the world, FMNR **revitalizes the land** by improving soil structure, slowing erosion, retaining water, and increasing biodiversity at virtually **no cost to the farmer.** With measurable improvements in yields, income diversification, and environmental benefits, FMNR is an important tool for building improved and resilient livelihoods for smallholder farmers.

\*Hertsgaard, Mark. (2011, January 28) The Great Green Wall: African Farmers Beat Back Drought and Climate Change with Trees. *Scientific American*.



“Sometimes you don’t need to plant anything, just to assist the natural regeneration of land ... We can be really transformational if we build the capacities of communities to do it themselves.”

—Nora Berrahmouni, Forestry Officer at the Food and Agriculture Organization, quoted on CNN\*



### The genesis of FMNR

In 1983, while changing a flat tire on a dirt road in Niger, Tony Rinaudo noticed small green leaves sprouting from a nearby tree stump. He saw that the stump growth, unlike trees he had tried planting in arid farmlands nearby, **was thriving without any human intervention**. When he introduced the concept to farmers as part of an agricultural development program, showing them how to select the best trees for regeneration, it **set in motion a “re-greening” movement** that has restored tree cover to 17.3 million acres (7 million hectares) of land.



### FMNR’s impact today

Since this formal approach to FMNR started to take root in the 1980s, World Vision has promoted it in **24 countries in Africa, Asia, and the Caribbean**. In the last 10 years alone, **2.5 million acres (1 million hectares) of land have been regenerated**, impacting more than **6 million people** by improving crops and reducing hunger.

#### Environmental impacts

- » Sequesters carbon to help combat climate change
- » Improves soil structure and fertility
- » Slows wind- and water-related soil erosion
- » Protects livestock against searing winds and high temperatures
- » Retains water, allowing springs to recharge and water tables to rise
- » Restores habitats for natural predators of crop pests
- » Improves pollination and renews natural local ecosystems

#### Livelihood and social impacts

- » Improves food security, health, and resilience
- » Nurtures education and training, especially for women
- » Reduces land management costs
- » Increases incomes through improved crop and livestock production
- » Offers income diversification opportunities through sales of sustainably harvested timber and non-timber forest products, as well as through carbon credits

\*Monks, Kieron. (2016, September 26) Can the Great Green Wall change direction?  
Retrieved from <http://www.cnn.com/2016/09/22/africa/great-green-wall-sahara/index.html>.

Before



After—two-year transformation



# CASE STUDIES



## Turning back the desert in Niger

- » By 2009 in Niger, 10 million hectares had been lost to land degradation over just nine years.
- » FMNR allowed farmers to grow over 280 million trees, **restoring 7 million hectares** to date.
- » Farmers now produce an additional 500,000 tons of cereals a year—enough to **feed 2.5 million people**.
- » Gross **income grew by up to \$1,000** per household, benefiting 4.5 million people.

## From poverty to plenty in Ethiopia

- » In Humbo, Ethiopia, a World Bank biocarbon project using FMNR **sequestered more than 1 million tons of CO<sub>2</sub>** equivalent.
- » The project **restored 2,700 hectares of forest**, earning a \$425,000 carbon credit for local cooperatives to **improve livelihood resilience for over 5,000 households**.
- » The improved land even empowered farmers to **sell 100 tons of surplus grain** to the World Food Program during the 2012 drought.
- » The project **inspired FMNR and land restoration movements across Ethiopia and the region**. World Vision Ethiopia alone promotes FMNR across 82 districts, and in 2016 World Vision programs accounted for 16,000 hectares of land leveraging FMNR.
- » In response, the Ethiopian government set a target to restore 15 million hectares of land using FMNR and other land management techniques, as part of its Green Growth Strategy.



Humbo, Ethiopia

## WORLD VISION'S COMMITMENT to restoration and the future of FMNR

- » World Vision is partnering with the **World Agroforestry Center** and the **World Resources Institute** in the **EverGreen Agriculture Partnership** to scale environmental restoration across Africa and revitalize smallholder farming.
- » World Vision is a member of the **Global Partnership on Forest and Landscape Restoration (GPFLR)**.
- » We are also a **technical implementation partner to the AFR100**—a movement including 24 African countries to date, which aims to **restore 100 million hectares of degraded land** in Africa in response to the Bonn Challenge to restore 350 million hectares globally by 2030.
- » We aim to **expand FMNR in 16 countries across Africa**: Burundi, Ethiopia, Ghana, Kenya, Lesotho, Malawi, Mali, Niger, Rwanda, Senegal, Somalia, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe.
- » We bring **decades of expertise** in environmental restoration and livelihood development.
- » We have 40,000 staff working in nearly 100 countries, 95 percent of whom work in their home country or region. We have **10,000 staff working in 25 countries across Africa**.
- » We already operate in areas covering about **85 million hectares** in Africa alone.

For more information, visit [worldvisionphilanthropy.org/ee](https://worldvisionphilanthropy.org/ee) or contact Christopher Shore at [cshore@worldvision.org](mailto:cshore@worldvision.org)