Dryland restoration = more climate-resilient landscapes: Scaling up successes from the Sahel and Greater Horn of Africa

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Drylands occupy more than a third of all the world's land, most now degraded or severely degraded. Drylands are also home to an equivalent part of humanity, and a disproportionate number of the world's poorest people. But with the right support, they is also much potential for rapid poverty reduction, increasing ecological and economic resilience, and climate change mitigation through soil carbon sequestration.

National forest landscape restoration commitments to meet international goals such as the Bonn Challenge and AFR100 have added to the growing momentum for dryland restoration. But setting ambitious goals is easy – realising them is much harder – and at current rates it will take a generation or more for most countries to reach their targets. So, how to speed up the process?

Of the many projects and programmes since the 1980s some had impact, though few were/are interconnected or well documented. ***ETFRN News 60, 'Restoring African drylands'*** collates a selection of these that highlight the roles of varied policies and stakeholder interests, and identify opportunities to encourage smallholder and community participation in effectively scaling out successes.

1. Dryland restoration has proven impacts on biodiversity, soil fertility and groundwater recharge/availability.
2. Restored resilient landscapes have increased productivity and fuel, fodder and food security,
3. Tree planting schemes are costly, and have often suffered from low seedling survival.
4. Farmer- and community-led restoration have proved highly successful and at low cost.
5. Government-led restoration initiatives are more successful with full community participation.
6. Private sector investments are limited in scale; producer organisations can be a valuable entry point.
7. Local organisations/institutions must develop and enforce their own local conventions, land use plans and bylaws governing access to and use of natural resources, in partnership with local government.
8. Smallholder communities realise tangible benefits from restored land, and external incentives and support can help promote ecologically and economically viable local enterprises.
9. A better understanding is needed of the role and participation of women, youth and other marginalised groups, and how they can benefit more from restoration activities.
10. Institutional/regulatory reforms are needed to establish more favourable enabling conditions, and to provide support to community organisations.

Farmer managed regeneration transforms treeless landscapes into productive and climate-resilient agroforestry, as here in Zinder, Niger (Photo: C. Reij).

Area exclosures allow the effective regeneration of native species, as here in Tigray, northern Ethiopia (Photo: N. Hagazi).

Farmer managed natural regeneration

FMNR is a simple and low cost technique with significant potential for scaling. The miraculous regreening of some six million hectares in central Niger is well documented, less so the several million more elsewhere in the Sahel. FMNR involves the protection, pruning and management of trees and shrubs on fields and communal lands that regenerate naturally from stumps and soil seedbanks, and has seen tree densities increase from a few to up to 200 trees per hectare, producing fuel, fodder, fruit and fibre, shade and shelter, and improving soil fertility. And at costs of around US$50/ha, this is at least one tenth of the usual cost of reforestation, and low seedling survival means success is far from guaranteed.

Area exclosures

Exclosures in Ethiopia have been highlighted as a model for dryland restoration, with some 1.5 million hectares protected in this way in Tigray region alone. Demarcated areas from one to several hundred hectares are 'socially fenced' by communities that prevent grazing and tree cutting, allowing only annual grass harvests and the collection of deadwood, medicinal plants and honey. Some are complemented with water harvesting structures or enrichment planting of economic species. However, the system depends on the full buy-in of communities and their 'free' labour of ca. 40 days per year. Improvements are also needed in the economic management of regenerating vegetation and the promotion of sustainable rural enterprises.

Prior to publication of the full volume (December 2020), individual articles will be published from September on www.etfrn.org and www.tropenbos.org.

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