

## Sustainable Land Management Practices: Farmer Managed Natural Regeneration



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During the 1970s droughts came to Africa and parched the landscape. The land became degraded, and dust storms were the result. Scientists coined a new word to describe this: 'desertification'. Development agencies fought back with tree planting schemes – using exotic species like eucalyptus and pine. Tree nurseries became symbols of fresh hope - focal points for project activities. But many tree planting schemes failed: the wrong species were promoted and village woodlots were unpopular. However, all around were traditional systems that outside agencies had overlooked – indigenous trees, protected by farmers in their own fields. Another new term was created, and 'agroforestry' officially became a science in the late 1970s. The skills of local 'agroforesters' like Ousseini Kindo were noticed too. Kindo farms in Burkina Faso. His principle is to mix indigenous species – including *Bauhinia*, *Baobab* and *Faidherbia* – with his crops. Farmers have made the best of improved rainfall and helped to re-establish agroforestry parklands on Burkina Faso's Central Plateau. Whilst most of Kindo's trees come from seeds that he plants – he also makes use of natural regeneration. "Farmer-managed natural regeneration" is the correct term for this and in neighbouring Niger there has been a remarkable transformation in recent years. Seen from above, the difference in one village, Galma, is extraordinary. In 1975 tree cover was sparse. Three decades later on-farm trees dominated the landscape. But what is 'farmer managed natural regeneration'? Guero Chaibou leads a project that supports farmers in their efforts. He explains the technique.

*Well, farmer-managed natural regeneration means choosing shoots that emerge in the field. It's then a question of selecting the most vigorous ones and letting these develop. That's the first aspect of farmer-managed natural regeneration: the second is to identify the species of trees which you want – that could be *Faidherbia* for example ... So, after a few years you have an adequate density of trees which then protects the fields against wind erosion, and water erosion too. This also improves the structure of the soil, its fertility and all-in-all it allows you to carry out sustainable farming in your fields.*

But why has farmer-managed natural regeneration been so spectacular in Niger? A key reason is that many trees had been cut down for firewood during the prolonged droughts of the 1970s. But not all died: the

stumps that remained concealed rooting systems ready to respond to returning rain – there was an “underground forest” awaiting the chance to re-emerge. Farmers learnt to prune these shoots – leaving only the strongest, from the species they valued the most. Selected shoots quickly develop into trees, nurtured by the mature root network. Judging the spacing and the best mixture of species requires knowledge born from experience. Careful pruning is another essential ability. Professor Adam Toudou from the University of Niamey tells us how these skills have been sharpened – and how a new mentality has simultaneously emerged:

*Farmer managed natural regeneration isn't a new system. It's always been carried out by farmers in Niger, and everywhere you will see trees that have been protected in fields. What's new is that the farmers who have been using the system have now understood that they can improve it by developing a higher density of trees in their fields. And they are aware of the fact that they must diversify the species also. They are conscious that these trees restore fertility to the soil, better than the fallow systems which have disappeared.*

Professor Toudou recognises that these systems are more than just technical.

*The trees in the fields have a social role and an economic role too; what is new is the deliberate and committed approach to improving farmer managed natural regeneration.*

This is exactly the sort of innovative sustainable land management practice that helps create resilience in the face of climate change.

The script of the video was kindly provided by [Access Agriculture](#)

