

# Agroforestry can ensure food security and mitigate the effects of climate change in Africa

March 10 2014

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This is David Kenduywo at his farm in Kembu, Bomet County, Kenya. He grows fodder trees and shrubs such as *Calliandra calothyrsus* for his dairy cattle and goats. Credit: ICRAF/Daniel Kapsoot

Agroforestry can help to achieve climate change mitigation and adaptation while at the same time providing livelihoods for poor smallholder farmers in Africa.

Scientists at the World Agroforestry Centre (ICRAF) say agroforestry - which is an integrated land use management technique that incorporates trees and shrubs with crops and livestock on farms - could be a win-win solution to the seemingly difficult choice between reforestation and [agricultural land](#) use, because it increases the storage of carbon and may also enhance agricultural productivity.

In a special issue of *Current Opinion in Environmental Sustainability*, scientists say that in most parts of Africa, [climate change](#) mitigation focuses on reforestation and forest protection however, such efforts to reduce deforestation conflict with the need to expand agricultural production in Africa to feed the continent's growing population.

Agriculture in Africa is dominated by [smallholder farmers](#). Their priority is to produce enough food. Under such circumstances, any measures that will be put in place to mitigate the effects of climate change should also improve food production.

"This mixture shows the role that agroforestry can play in addressing both climate mitigation and adaptation in primarily food-focused production systems of Africa" says Dr. Cheikh Mbow, Senior Scientist, Climate Change and Development at the World Agroforestry Centre (ICRAF) and lead author of the article.

"It has been demonstrated by science that if you develop agroforestry it has the potential to buffer the impact of climate change. For example, a farm with trees will suffer less to the impacts of climate change because it will absorb some of these impacts so agroforestry is a good response to develop resilience of agrosystems to the challenges brought about by climate change" he says.

The report however notes that for farmers to incorporate trees in their farms there is need to revise the cultivation methods and provide them

with some support to ensure swift adoption.

Agroforestry is one of the most common land use systems across landscapes and agroecological zones in Africa but need much more adoption in order to increase the impact on food security. With food shortages and increased threats of climate change, interest in agroforestry is gathering for its potential to address various on-farm adaptation needs. "The failure of extension services in poor African countries limits the possibility to scale up innovations in agroforestry for improved land use systems ".

The scientists conclude that agroforestry should therefore attract more attention in global agendas on [climate change mitigation](#) because of its positive social and environmental impacts.

Provided by World Agroforestry Centre (ICRAF)

Citation: Agroforestry can ensure food security and mitigate the effects of climate change in Africa (2014, March 10) retrieved 18 April 2024 from <https://phys.org/news/2014-03-agroforestry-food-mitigate-effects-climate.html>

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