



Achieving sustainable development in Africa through inclusive green growth: leveraging the agriculture sector's potential

This policy brief is the second in a series of six briefs drawn from the fifth edition of the Sustainable Development Report on Africa, a joint publication of the Economic Commission for Africa (ECA), the Food and Agriculture Organization of the United Nations, the United Nations Environment Programme, the United Nations Industrial Development Organization and the United Nations Development Programme on the theme "achieving sustainable development in Africa through inclusive green growth". The brief highlights the role of agriculture in promoting inclusive green growth in the region.

Agriculture remains the main engine of economic growth in Africa, contributing an average of one-third of the region's GDP and employing about 70 per cent of the labour force. Agricultural GDP grew at 3.3 per cent annually over the past decade. The growth is, however, neither inclusive nor green, as African farmers still make up the largest share of the poor. Indeed, most of this growth is associated with environmental degradation. Agriculture contributes to soil degradation, loss of biodiversity, pollution, siltation of water bodies and greenhouse gas emissions, mainly through deforestation and poor agricultural practices. Moreover, the already high proportion of undernourished people living in Africa is projected to increase due to the growing threats of climate change. The crucial role of agriculture in Africa's social and economic development underlines the importance of promoting inclusive green growth in the sector in order to enhance food security, job creation and poverty reduction, and stem the degradation of natural resources.

Potential and trends in inclusive green growth in agriculture

The crop, livestock and agro forestry subsectors hold significant potential for inclusive green growth.

In the crop subsector, productivity is generally low, with little use of external inputs and low application of sustainable practices. The subsector would thus benefit from fast tracking the application of science and technology to address the causes of low crop production and to decrease high post-harvest losses. Moreover, very little value addition is currently taking place in the subsector, which has very little linkages with the rest of the value chain. Inclusive green growth approaches have the potential to enhance productivity and value addition in the subsector. Conservation agriculture, for example, increases agricultural productivity and addresses land degradation (see box). Proper implementation of conservation agriculture would improve the organic material of the soil, increase soil water retention capacity, and thus reduce the water constraints that many small-scale farmers face. Moreover, this practice can contribute to the fight against climate change through carbon sequestration, while the restoration of agriculture production and fertilizer absorption capacities will reduce vulnerability of the sector to extreme weather events. Moreover, proceeds from the carbon market can increase household revenue and further reduce vulnerability.

Zimbabwe precision conservation agriculture programme

Since 2004, the precision conservation agriculture approach has been promoted to more than 50,000 farm households through a combination of partnerships with non-governmental organizations and national agricultural research and extension departments in Zimbabwe.

The programme has been a major success. In the three seasons after its implementation, average cereal yields increased by 15 per cent, and up to 300 per cent in more than 15,000 farm households, with the yield increase varying by rainfall regime, soil type and fertility.

For inclusive green growth approaches to boost crop production, it is important to coordinate crop production policies, bearing in mind that farmers produce both cash and food crops to satisfy economic and social needs, sometimes to the detriment of environmental protection. In this regard, it is important for agriculture to leverage farm management practices, such as conservation agriculture, which can improve productivity while promoting soil regeneration.

The livestock subsector can also benefit from inclusive green growth approaches. There are different types of livestock systems in Africa, each of which has its own geographic domain as well as its own impacts. The subsector has important potential in meat exports, which currently generate more than \$400 million in revenue annually, and in the valorisation of by-products such as skins, manure and milk. However, one of the major negative impacts of livestock is overgrazing, which contributes substantially to land degradation and desertification. Inclusive green growth interventions could harness the potential of the subsector through value addition, while enabling the adoption of sustainable rangeland management. For example, the managed cattle grazing method used by the Savory Institute in the Cape Province of South Africa, to recover degraded grassland soil, concentrates grazing in small areas and moves the cattle frequently. This short term intense grazing helps to restore the grass land because it allows cattle to graze, defecate and in the process enrich the soil.

Agro forestry promotion in Africa should be part of an inclusive green growth strategy. Increasing intensification through so-called evergreen agriculture is an affordable and accessible science-based solution to regenerate the land on small-scale farms, and increase family food production and cash income. For instance, agroforestry has increased cocoa productivity in Côte d'Ivoire by more than 30 per cent, and cereal production by more than 10 per cent in the Niger. Evergreen agriculture has also been adopted and is now being scaled up in Ethiopia, Rwanda, Senegal and other countries. Malawi, the Niger and Zambia are building on the successful scaling up of the exercise. Also, the

carbon sequestered from these agroforestry practices will provide ecological benefits. The cost associated with adopting agroforestry practices could then be covered by the revenue generated from the carbon market.

Other potential inclusive green growth interventions in the sector are on water and land management, and support for improved marketing of agricultural produce. Strengthening micro-irrigation infrastructure in water-scarce areas will improve productivity, raise incomes through crop yields and outputs, and enhance household food security. This results in a significant yield improvement over traditional irrigation practices such as flood irrigation. In addition, sustainable land management has registered successful outcomes in countries such as Ethiopia. Implementation of a sustainable land management project in the country has resulted in several economic, environmental and social outcomes. Another important initiative in the sector is the support for improved marketing of agricultural produce, to boost production and profitability. This has been practiced successfully in Ghana for roots and tubers. All these initiatives are showing the huge potential of inclusive green growth approach in the agriculture sector in order to reduce rural poverty, decrease vulnerability, enhance food security and achieve sustainable development in Africa.

Building on the momentum

As the performance of the agriculture sector is far below its potential efficiency, the inclusive green growth interventions in the sector should enhance productivity and add value to primary products, in addition to rendering it green and inclusive. The growing trend of integrating inclusive green growth approaches and practices in the agriculture sector is a move in the right direction. These have amply demonstrated benefits such as increased productivity, job creation and improved natural resource management. Good practices can be capitalized upon to scale up inclusive green growth in the sector. In addition, several policy measures and interventions should also be taken to promote inclusive green economy into the sector.

Strengthen capacity at all levels. The adoption rate of conservation agriculture by smallholder farmers is low, owing to less supportive land-use policies, investment in research and extension programmes. Moreover, the low-capacity of agriculture sector stakeholders impedes the effective implementation of inclusive green growth approaches and practices in the sector. There is, therefore, a need to strengthen technical and institutional capacity by, among other things, establishing a dedicated and highly skilled green growth promotion team from government and non-governmental institutions to

drive the process. Furthermore, policies should focus on strengthening farmer-based organizations or village-based grassroots institutions to promote peer learning in inclusive green growth. More generally, investments in agriculture should increase and the sector should be made attractive to young people, as a profitable enterprise, while increasing the use and the access to technology innovation in the sector.

Capitalize on a growing body of knowledge on African soil to push for carbon payment. There is a lack of a formal soil carbon market as the Clean Development Mechanism has not yet allowed carbon sequestered from agricultural activities in its protocols. There is a need to push for including soil carbon sequestration in the Clean Development Mechanism and to develop a carbon project extension service to scale up and scale out inclusive green growth practices and approaches in the agriculture sector. Indeed, developing carbon project extension services for agroforestry and crop production would increase carbon revenue and create jobs.

Promote smart subsidies for index insurance premiums. Index insurance for livestock and crops is a potential vehicle for helping farmers to cope with covariate shocks. The insurance is sold locally, at attractive rates, to micro-finance organizations that target poor farmers. In order to increase farmers' willingness to pay, the premium should be subsidized in the initial stages to allow them time to appreciate the product and develop a taste for it. The subsidy can then gradually be removed.

Strengthen land tenure and the functioning of African land markets. Improving the functioning of African land markets could be a trigger for inclusive green growth in agriculture. Land tenure security, including entitlements and rights for women, should be strengthened to encourage equitable access to productive assets, sustainable land management and other long-term investments, such as irrigation, which are necessary to increase and sustain agricultural productivity and production.

Foster a conducive environment for agribusiness clustering to create jobs. Connecting all the agricultural value chain actors can improve the sector's efficiency by reducing the cost of operation and freeing up money for investing in higher-value activities that would create more jobs.

Transform agriculture input subsidies aimed at improving agricultural productivity into market-smart and sustainable systems. These include those for addressing market failures in the input market, crop and livestock insurance, and the micro-finance sector.

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For more information, please contact the Green Economy and Natural Resources Section of the Special Initiatives Division of ECA at +251-11-544-3089.