



Agriculture

After independence

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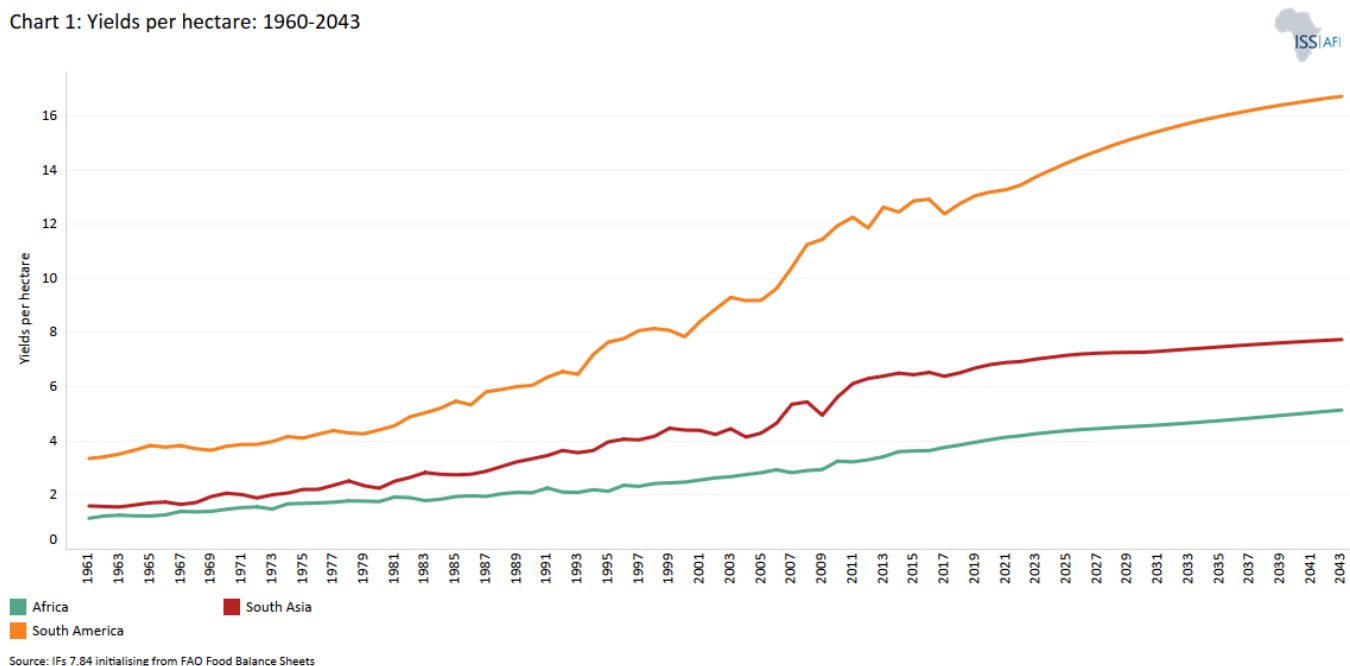
Although African independence brought many political benefits, few accrued to agriculture. With limited exceptions, rural and agrarian development received little resource and budgetary allocation after independence; leaders sought rapid industrialisation or vanity projects instead. Most African governments also retained the bifurcated system of land ownership, with customary property rights in so-called tribal lands and legal property rights reserved for a limited few and in some urban areas. Effectively, the urban elites that shared the ethnic orientation of the governing party replaced colonists in state institutions and land ownership. The notion of formalising land ownership gained wider recognition only towards the end of the 20th century when population growth had significantly complicated efforts at tenure reform.

Substantive yield-enhancing shifts were seen in agriculture elsewhere in the world, including mechanisation and the introduction of new crop varieties and agricultural chemicals in the green revolution of the 1950s and 1960s. However, the focus was on political rather than economic emancipation in Africa. Without tenure reform and being locked into an inequitable supply chain that effectively penalised efforts towards food self-sufficiency and disincentivised domestic value addition to its agricultural commodities, Africa continued to lag behind other regions concerning agrarian productivity.

By the early 1960s, the United Nations Food and Agriculture Organization (FAO) estimated that average yields in Africa were approximately 1.1 tons per hectare, roughly 1.3 tons per hectare below the average for the rest of the world. It took 30 years for yields to double to 2.2 metric tons by the early 1990s. By 2020, yields in Africa had increased to about 4 tons per hectare yet were still 3.7 tons below the average of the rest of the world. Thus, for successive generations, agricultural yields in Africa have remained at about half that in the rest of the world, with little prospect of catching up in the Current Path forecast to 2043 (Chart 1).

Chart 1 also compares the average yields per hectare with two global comparative regions, South Asia and South America. Because food is cheaper on the international market than domestically and because the quality of diets changes with income, Africa is becoming more, rather than less, dependent on food imports despite the continent having millions of hectares of arable land with massive untapped agricultural potential.

Chart 1: Yields per hectare: 1960-2043



Despite isolated success stories, the agricultural sector in Africa still needs to be significantly more productive than in other regions and is likely to remain so into the future. The most recent FAO data (2021) shows that 16 of the 20 countries

with the lowest average cereal yields per hectare globally were in Africa. At the same time, only one African country—Egypt, with its large Nile river and delta—is among the top 15 most productive cereal producers. The next African state on the list, South Africa, is ranked 44th, followed by Ethiopia in the 97th position.

Lengthy periods of conflict have also negatively affected agriculture. For example, [Angola](#) is one of Africa's **most fertile** countries and was, before independence in 1975, self-sufficient in all main food crops except wheat. It was the fourth largest coffee producer globally, but successive wars, which lasted until 2002, destroyed much of that. Most of its population fled to urban areas (generally to the capital Luanda). Today, nearly seven out of ten Angolans reside in urban areas, and there is still limited infrastructure to connect the capital city to the rest of the country. However, the government is working hard to correct this deficit. As a result, Angola **ranked** close to the bottom (160th of 167 countries globally) on the World Bank's 2018 Logistics Performance Index (LPI).

Next door to Angola, the Democratic Republic of Congo (DR Congo) has been host to the largest peacekeeping mission in the world for many years, yet it is still wracked by instability. The [DR Congo](#) is **ranked** 143rd on the LPI. Despite being a country with the agricultural potential to feed the entire continent, it has yet to achieve food independence, and malnutrition is widespread. With only 10% of its 80 million hectares of arable land cultivated, the country has the potential to become a global agricultural powerhouse, and the sector provides about 60% of jobs. However, most of these only provide for subsistence needs.

However, like Angola, violent conflicts have severely affected the [DR Congo's](#) agriculture sector. For example, by 2006, agricultural productivity had fallen to 60% of its level at independence in 1960. The [DR Congo's](#) current food trade deficit (the difference between the value of exports and imports) is US\$1.5 billion annually. It will increase over time, given the lack of transport infrastructure such as roads and railways, which require lengthy and costly investment, continuing to make the country a net food importer.

Africa's progress has, therefore, been slow, despite the World Bank noting that Africa has approximately 45% of the global total surface area suitable for sustainable production expansion and that low labour costs could encourage labour-intensive **agricultural production**.

The modest increases in **agricultural production** in Africa since independence were generally the result of the increased land area under cultivation rather than improved productivity, leading to Africa being described in 2013 as 'the only developing region in which the percentage of area expansion exceeded growth in yield over the period 1990–2007.'

Land rotation practices in Africa have traditionally used slash-and-burn techniques, with farmers clearing new lands and leaving the old field fallow for a year or two to recover. Although this worked well while population densities were low, shortages of arable land due to increasing population numbers forced farmers to **cultivate** the same fields season after season. For example, rapid population growth and urbanisation in Kenya and Ethiopia have increased land prices and swallowed some of the best farmland, sometimes leading to violent protests. Soil erosion, deforestation and unsustainable **agricultural** practices have also contributed to floods and soil losses.

Only those farmlands near urban areas generally had roads good enough for products to be transported to the market. The lack of paved roads and other infrastructure in prime **agricultural** areas far from major population centres means that large parts of the available arable land are not used for large-scale production. Closer to population centres, unsustainable cultivation practices in these high-density areas contribute to substantial soil degradation as average farm sizes shrink and decrease soil fertility.

The impact of extreme weather-related events has also been profoundly felt across the continent, particularly in the agricultural sector. Droughts, in particular, cause crop failures and lower yield outputs, leading to significant food crises

and, in some cases, famine. Over the last 100 years, the continent has battled over **350 extreme drought** events, with nearly half leading to food shortages or famines. Flooding is also a regular occurrence in Africa, leading to infrastructure damage, soil erosion, crop damage, and nutrient-depleted soils. Tropical storms and cyclones impact soil salinity, contribute to soil loss and damage critical infrastructure, leaving many rural communities unable to utilise land resources. Since 95% of the continent's cultivation depends on rains and not irrigation, the impact of climate change contributes to inconsistent agricultural productivity.

Deforestation, in addition to causing soil degradation, also significantly impacts water availability. Deforestation releases stored carbon dioxide into the atmosphere, contributing to increased temperatures and varied rainfall patterns that change crop growth and yields. Forests are vital to regulating water cycles through water storage and subsequent transpiration. Deforestation also contributes to biodiversity loss, which disrupts ecological balance. An estimated 4 million hectares of forest land are cut down yearly in Africa. Many forests are converted into low-yield agricultural cropland, but the negative impacts of deforestation outweigh the yields achieved. Since 1990, Africa has decreased forest land from 722 million hectares to 642 million hectares in 2020. As deforestation continues, it will directly contribute to increased flooding, impacting the sector's productivity and giving rise to food insecurity.

In response to these challenges, the African Union launched the Comprehensive Africa Agriculture Development Programme (CAADP) in 2001, which emphasises agriculture as a critical driver of economic growth and poverty reduction. Success has been mixed, however.

On average, Africa spends only 5–7% of national **budgets on agriculture**. However, a 2018 study found that 11 African countries have allocated 10% or more of their budgets to agriculture in some years since 2005, with Ethiopia, Kenya, Mozambique and Sierra Leone achieving 6% **agricultural growth** in most of these years. Agriculture employs about half of the workforce, with smallholder farmers contributing to 80% of agriculture production in sub-Saharan Africa. However, smallholder farmers continue to face numerous challenges stemming from fragmented agricultural supply chains, lack of access to fair markets, affordable inputs, modern equipment, financial services, and essential information like market prices, weather predictions, and pest risk, ultimately resulting in reduced profit margins. Poor market infrastructure and lack of processing facilities lead to lower prices for farmers. Inadequate access to harvesting equipment, irrigation systems, cold storage, and agricultural inputs such as fertilisers hampers production.

Today, Africa is the most food-insecure region globally. According to the 2022 **Food Security and Nutrition report**, about 278 million Africans faced undernutrition in 2021. The continent has seen an alarming backsliding in the prevalence of undernourishment since 2015, amplified by the impact of the COVID-19 pandemic and Russia's invasion of Ukraine in 2022. While the Sustainable Development Goal (SDG) target of achieving zero hunger is noble, it is unlikely to be met anytime soon on the continent. In 2021, moderate and severe **food insecurity** prevalence stood at 58%. East and Central Africa are particularly struggling with undernourishment rates measuring as high as 30% and 33%, respectively, in 2021.

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Ms Alize le Roux joined the AFI in May 2021 as a senior researcher. Before joining the ISS, she worked as a principal geo-informatics researcher at the CSIR, supporting various local and national policy- and decision-makers with long-term planning support. Alize has 14 years of experience in spatial data analysis, disaster risk reduction and urban and regional modelling. She has a master's degree in geographical sciences from the University of Utrecht, specialising in multi-hazard risk assessments and spatial decision support systems.

Dr Jakkie Cilliers is the ISS's founder and former executive director. He currently serves as chair of the ISS Board of Trustees and head of the African Futures and Innovation (AFI) programme at the Pretoria office of the Institute. His 2017 best-seller *Fate of the Nation* addresses South Africa's futures from political, economic and social perspectives. His three most recent books, *Africa First! Igniting a Growth Revolution* (March 2020), *The Future of Africa: Challenges and Opportunities* (April 2021), and *Africa Tomorrow: Pathways to Prosperity* (June 2022) take a rigorous look at the continent as a whole.

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