

Cover Story

CLIMATE CHANGE, WATER SCARCITY, CONFLICT, AND FOOD INSECURITY IN AFRICA

Africa is grappling with an interconnected crisis of climate change, water scarcity, conflict, and food insecurity, which perpetuates poverty and constrains development. Despite a period of high economic growth in the early 2000s, the continent now faces economic stagnation, high debt, and rising hunger. Climate change has exacerbated extreme weather events, reducing water availability and agricultural productivity. Water insecurity affects 1.3 billion Africans, and over 35 conflicts across the continent have displaced millions. Food insecurity remains severe, with 868 million Africans affected and 64 million children under five suffering from malnutrition. Structural challenges such as low agricultural productivity, dependence on imports, and inadequate policy support exacerbate the crisis. Addressing these interlinked challenges requires coordinated domestic and international efforts, including increased agricultural investment, better water governance, and enhanced climate adaptation financing. However, with donor priorities shifting elsewhere, Africa faces an uphill battle in securing the necessary resources for sustainable development.

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After a fairly long period of high growth since the early 2000s, the African continent is again mired in a situation of poor economic growth, high debt levels, conflicts, and severe food insecurity. While globally, extreme poverty declined steadily since the 1990s, Africa experienced a very gradual decline in poverty and as per estimates by the World Bank, nearly 57 per cent of the world's poorest people currently live in Sub-Saharan Africa.¹ This article trains the spotlight on the vicious nexus of climate change, conflict, water scarcity, and food insecurity which constrains development and perpetuates poverty in the continent.

Although Africa's contribution to historical emissions is less than 3 per cent and its carbon footprint at 0.92 tons of carbon dioxide equivalent (tCO₂eq) is much lower than that of the

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developed countries, the continent is extremely vulnerable to climate change.² Africa has warmed much more rapidly than the rest of the world and it is likely to experience much higher temperature increases than the northern countries in future.³ According to a recent report by the African Development Bank (AfDB), nine African countries viz. Chad, Central African Republic, Eritrea, Guinea Bissau, the Democratic Republic of Congo, Sudan, Niger, Liberia, and Somalia feature in the list of top ten most vulnerable countries of the world.⁴ Most of these countries are also conflict affected and suffer from high levels of poverty and hunger.

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With nearly 1.3 billion Africans battling water insecurity and about 85 per cent of its population living without access to safe drinking water, water scarcity is another major development challenge for the continent.⁵ Climate change is one of the main reasons behind Africa's growing water scarcity as it has altered the hydrological cycle and increased the frequency and intensity of droughts in East Africa and the Sahel region of Africa in recent years causing mass starvation, deaths, and famine-like conditions in several countries like Sudan, Ethiopia, Kenya, Somalia, and Somaliland. Several experts assert that climate-induced extreme events like droughts and floods will become more frequent in Africa and lead to high GDP losses, particularly in fragile and conflict affected countries which have poor adaptive capacity.

The continent is also battling the highest number of conflicts at the moment which have killed thousands and displaced over 40 million people. More than 35 armed conflicts are taking place in countries like Burkina Faso, Cameroon, the Central African Republic (CAR), the Democratic Republic of Congo, Ethiopia, Mali, Mozambique, Nigeria, Senegal, Somalia, South Sudan and Sudan.⁶

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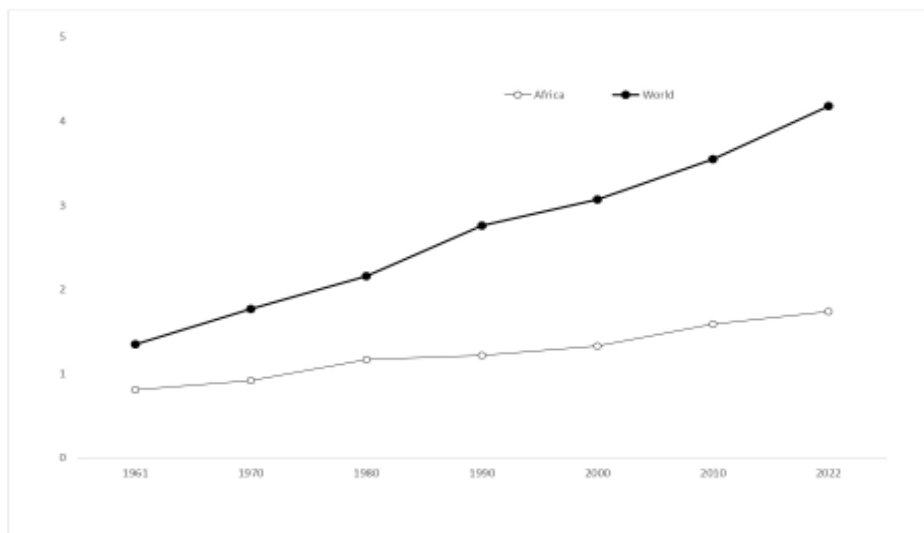
Food insecurity is another major development challenge for Africa as the continent is not on track to achieving the goal of zero hunger (SDG 2) by 2030. About 868 million African people are currently facing food insecurity and in countries like South Sudan, Central African Republic, Republic of Congo, and Malawi over 50 per cent of the population is suffering from severe food insecurity.⁷ About 64 million African children under 5 years of age (i.e. one in three children) are suffering from child food poverty which increases their chances of experiencing wasting, a severe form of undernutrition which impairs long-term development in children.⁸ Soaring food prices, conflict, and climate change are the main reasons behind Africa's food

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insecurity. The current crisis in Africa is partly due to the Ukraine-Russia war which has led to a food and fertilizer crisis for African nations. The African continent which is a net food importer is now witnessing a steep rise in its import bill which currently stands at about US\$ 60 billion and is a significant drain on its foreign exchange.⁹ In other words, Africa's low-income countries are now spending more for even less food.

Stagnating agricultural productivity coupled with poor infrastructure and policy support meant that over the years Africa's domestic food production barely matched its population growth rates, making the continent extremely dependent on food aid and imports. Although agriculture is the largest contributor to both GDP and employment in most African countries, productivity levels are extremely low. Small farmers who employ traditional techniques of production account for the bulk of the agricultural produce. The cereal yield in Africa at 1.74 tonnes per hectare is less than half of the world average of 4.18 tonnes per hectare and much lower than developed countries like the United States (8.07 tonnes per hectare), Belgium (8.6 tonnes per hectare), United Kingdom (7.7 tonnes per hectare), and Netherlands (8.94 tonnes per hectare).¹⁰ As shown in Figure 1, crop yields in Africa did not grow significantly from 1961 and have persistently lagged behind world averages. This meant that much of the increase in domestic production was due to an expansion of area under cultivation, often at the cost of natural habitat. Similarly, agricultural value added per worker in Africa is also much lower in Africa as compared to other regions of the world.

Figure 1: Cereal Yields in Africa and the World from 1961 to 2022



Source: Ritchie (2022)¹¹

Note: Cereal yield is the quantity of cereals produced per hectare of land.

It is important to note that the challenges posed by climate change, water scarcity, conflict and food insecurity are closely interlinked and therefore a siloed approach to addressing

them is sure to fail. For instance, unprecedented high temperatures due to climate change has caused extreme variability in rainfall and river discharge which has increased both the frequency and intensity of droughts in Africa. Excessive heat, water scarcity, and extreme climate events due to a rapidly changing climate in turn pose a serious threat to the zero-hunger goal in Africa. Climate change adversely affects all the four pillars of food security: availability, access, absorption, and stability. Severe effects on food availability is likely in as productivity levels in Africa are extremely low and its small farmers have little adaptive potential. Moreover, climate change also affects food access through reduced farm incomes and incomes from livestock etc. Food utilisation is also impaired as climate change adversely affects the nutritional value in crops. Extreme climate events due to climate change cause immense damage to food supply chains through disruption in storage, trade, and transport services. Water scarcity is also increasingly emerging as a source of conflict in Africa, particularly between farmers and herders in countries like Mali, Niger, Burkina Faso, and Ghani. The link between conflict and food insecurity is fairly well established in economic literature. Several reports suggest that conflict is the most important driver of food insecurity in Africa. Currently about 82 per cent Africans facing acute food insecurity live in conflict-affected countries.¹²

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African leaders and policy makers must realise the inter-linkages between Africa's core development challenges of climate change, conflict, water scarcity, and food insecurity and develop a comprehensive strategy to address them together. Africa's endemic poverty is linked to its inability to ensure food security which is intrinsically linked to climate change and water security. Therefore, Africa needs a plan backed by substantial investments to transform its agriculture sector and adapt to the changing climate. To do this, African countries must direct domestic resources towards agriculture and food security, an area which has traditionally not been prioritised by Africa's political leaders. However, food security has received due attention from African leaders in recent years. The Comprehensive Africa Agriculture Development Programme (CAADP) stresses on food security but only a handful of African countries are currently spending the targeted 10 per cent of their GDP on agriculture. According to Hodder and Migwalla (2023), the average government expenditure on agriculture in Africa currently hovers at around just 4.1 per cent.¹³ Notwithstanding the significance of increasing public spending in agriculture, it is clear that domestic resources will not be enough to address Africa's food insecurity and climate vulnerability, particularly at a time when the continent is reeling under mounting debt burdens. As per the African Development Bank estimates, Africa's debt servicing burden stands at roughly US\$ 163 billion in 2024.¹⁴ In other words, Africa needs massive international support to make the continent food secure, help adapt its agriculture to climate change and reduce the vulnerability of its people.

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Unfortunately, most developed countries like the UK, US, Sweden, and Norway are cutting their aid budgets at a time when Africa is going through multiple crisis. Many European countries are also diverting their resources towards spending on Ukrainian refugees. Addressing Africa's core inter-linked developmental challenges requires significant financial resources. Therefore, the international community must not ignore Africa now. However, merely increasing aid to Africa will not be enough as the present composition of aid is also deeply flawed. The share of agriculture in official aid is low and has stagnated at a mere 4 per cent over the years. The record in climate finance is even worse. Smaller African states face barriers to climate adaptation due to lack of domestic finance and weaker institutional capacity. Sadly, Africa has received scant adaptation finance from the international community. Developed countries have not yet delivered on their target of US\$ 100 billion of adaptation finance per year. So far, only seven countries viz. Norway, France, Sweden, Japan, Germany, Denmark, and the Netherlands have mobilised their fair shares.¹⁵ However, a large share of the adaptation finance is in the form of loans rather than grants which adds to the debt burden of African countries, many of whom are already facing debt distress.

It is clear that Africa needs more aid from the developed world to reverse recent development losses due to the COVID-19 pandemic and the Ukraine-Russia war and to put it on a path of sustained recovery which prioritises climate adaptation, better water governance, and boosting agricultural productivity for food security. But will the developed world open its purse strings for Africa?

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 - ⁷ "Africa Regional Overview of Food Security and Nutrition 2023: Statistics and Trends" at <https://repository.uneca.org/handle/10855/49998> (Accessed November 11, 2024)

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