



# A Sustainable Green Revolution for Africa



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 **Quick read**

## Introduction

A “Green Revolution” similar to that of India’s in the 1960’s is often suggested as a solution to Africa’s food insecurity problem. The main goal of the Green Revolution was to ensure India’s food security, specifically in improving the country’s food grain production. Although progress was made in terms of increasing grain yields, India ultimately failed to provide food security for their population, and the revolution brought further issues to the fore. An agricultural revolution in Africa, although no doubt desirable, should take on board the lessons of the past in India, so as to forge better outcomes.

## The Issues with India’s Green Revolution

Since the Green Revolution, India’s crop productivity has significantly improved, making the country one of the world’s largest grain and rice exporters. However, questions remain as to the success of the revolution in terms of food security, welfare, and quality of life. Despite large increases in production volume, overall food availability has barely increased due to the population almost tripling since the 1960’s. Per capita net availability jumped from 144 kg per year in 1951 to 171 kg in 1971 largely due to greater availability of wheat, but over the last 50 years has fluctuated between 170 and 180 kg.

Increases in yields have not resulted in corresponding decreases in malnutrition, with one quarter of all those malnourished in the world living in India. The country ranks 103rd of 119 countries in the 2018 Global Hunger Index and roughly 15% of the population is undernourished. India is also experiencing rapid increases in cases of over-nutrition, due to an excess in the consumption of calories and lack of variety in their diets. Today, agricultural households account for 50% of extreme poverty cases in India, with many farmers also encountering crippling debt and severe mental health issues. Alongside these problems, the green revolution has exacerbated many of the negative environmental impacts of agriculture in the region, including:

- An agricultural revolution in Africa, although no doubt desirable, should take on board the lessons of the past in India, to forge better outcomes.
- Since the Green Revolution, India’s crop productivity has greatly improved, making the country one of the world’s largest grain and rice exporters. However, questions remain as to the success of the revolution in terms of food security, welfare, and quality of life.
- Despite large increases in production volume, overall food availability has barely increased due to the population almost tripling since the 1960’s.
- Increases in yields have not resulted in corresponding decreases in malnutrition, with one quarter of all those malnourished in the world living in India.
- The so-called green revolution has exacerbated many of the negative environmental impacts of agriculture in the region, including, loss of soil fertility, soil erosion, soil toxicity, diminishing water resources and climate change.
- A more holistic and sustainable approach to advancing agricultural productivity in Africa is essential, the key being to raise productivity levels without harming the natural resources vital to supporting farming.

the negative environmental impacts of agriculture in the region, including:

- Loss of soil fertility
- Soil erosion
- Soil toxicity
- Diminishing water resources
- Pollution of underground water
- Salinity of underground water
- Increased incidences of human and livestock diseases
- Climate change



## Sustainable Agriculture for Africa

Given India's experience, a more holistic and sustainable approach to advancing agricultural productivity in Africa is essential. The key to agricultural transformation on the continent is raising productivity levels without harming the natural resources vital to supporting farming.

Many entities have significant roles to play in ensuring a sustainable future for African farming. This includes governments, private investors, farmers, multinationals, financial institutions and others.

Governments can help by implementing policies that allow for:

- Supports and rewards to farmers for engaging in sustainable farming
- Funding of domestic research and development projects
- Funding of low rate loan and credit schemes for farmers
- Facilitation of partnerships between investors and farmers
- Investments in infrastructure for storage and trade
- Subsidising of farm inputs and technologies that encourage sustainable development e.g. solar powered irrigation or cover crop seeds
- Offering extension and education services to farmers
- Efforts to ensure longer-term and secure tenancy for farmers

Government policy is the first step in encouraging the wider community to engage in a transformation of the agricultural value chain.

Private investors must invest with an ESG agenda in mind, so that their investments are to the benefit of the local environment and community.

Farmers must be willing to learn and adopt new techniques, through the education services and technologies offered, and accept that not all change is bad. Farming techniques that are detrimental to the environment and future food security of the continent must be left behind,

including slash and burn practices, over-grazing, over-tilling, over-cropping, etc. As opposed to increasing reliance on chemical fertilisers and pesticides as was done in India, farmers should be made aware of and adopt sustainable practices such as:

- Cover cropping
- Integrated Pest Management (IPM)
- Micro-dosing of fertilisers
- Agro-forestry
- Crop rotations

### Conclusion

Technical and Commercial DD evaluates the target company and the market it serves, from a commercial and operational current and future capacity and capability perspective. Essentially it helps buyer's make more informed decisions around the target's deal value, as reflected in figure 4.

This part of the DD process should also assess and determine the potential risks and mitigation strategies to increase the target's future value generation potential.



### Expert in this Insight

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