Chapter 2
Feed Africa

Agriculture, the most important sector in Africa's economy, contributes 15 percent of GDP. More than 70% of Africans depend on agriculture for their livelihoods. If its full potential were unlocked, agriculture could vastly improve the lives of millions of Africans — creating jobs, increasing prosperity and reducing hunger. Much of this potential remains untapped, however, and productivity is low, contributing to persistent poverty and deteriorating food security.

This chapter starts by looking at Africa's agricultural potential and the progress made since 2010 in productivity and food security. As food demand increases and consumption habits change, net food imports are rising rapidly. This shows that there is a broader opportunity to transform agriculture into a vibrant agribusiness sector.

The African Development Bank's work in agriculture has delivered better seeds, irrigation and sustainable technologies, and greater access to finance and to markets. We show that Bank projects have increased yields, production levels and incomes for farmers, resulting in more dynamic local economies. However, the Bank has recognised that substantive transformation will require a more concerted effort that draws on the strengths of the Bank and its partners.

African agriculture has enormous potential to drive growth and prosperity

Africa has more undeveloped arable land than any other region, equivalent to 25% of the world's fertile land, yet food insecurity and malnutrition are persistent. In 2015, 24.6% of the population was at risk of ● **food insecurity**. While this is an improvement on 33% in 2000, in the face of a growing population the rate of progress is not enough.

A significant number of Africa's farmers also work fragile soils in rain-fed areas, using little or no fertiliser, pesticide, irrigation or machinery. They lack infrastructure, financial systems, scientific innovation and access to markets. This is reflected in low levels of ● **agricultural productivity** that trap millions of farmers in poverty and act as a brake on growth.

> *The underperformance of the agriculture sector keeps rural incomes low and food prices high*

Between 2001 and 2008, overall GDP in Africa grew 6% annually but agricultural GDP grew by only 3.4% a year. The underperformance of the agriculture sector keeps rural incomes low and food prices high, and limits agriculture's potential to generate jobs in the farm and non-farm sectors, including manufacturing and services. It also traps millions in hunger. More than one in four of Africa's 856 million people are undernourished, making Africa the world's most food-insecure region, with women and children particularly at risk.

Potentially, Africa's farmers could not only feed rapidly growing populations but also generate exports to meet demand in global markets. However, the region is increasingly dependent on imports. African countries spent $35 billion on food imports (excluding fish) in 2011. The share accounted for by intra-African trade was less than 5 percent. If Africa's farmers increased their productivity and substituted these imports with their own produce, this would provide a powerful impetus to reducing poverty, enhancing food and nutrition security, and supporting a more inclusive pattern of growth.

African farmers also need help to cope with the effects of climate change, which is very likely to lead to above-average warming over the course of the 21st century, reducing the yields of major cereal crops. Even modest changes in the timing and intensity of rainfall, in the frequency and duration of droughts, and surface temperature can have profoundly damaging consequences for production, poverty and nutrition. That is why we need "climate-smart" agriculture — including better water management — that increases the productivity of land, labour and capital invested in farming, and strengthens the resilience of farmers.

Development in Africa
(See Annex 1)

INDICATOR	ALL AFRICAN COUNTRIES		OF WHICH ADF COUNTRIES	
	Baseline 2010	Latest 2015	Baseline 2010	Latest 2015
Feed Africa				
● Agricultural productivity (USD per worker)	1330	1273	396	418
● Food insecurity (% of population)	23.8	24.6	34.4	30.9
● Resilience to water shocks (index)	3.06	3.55	1.57	2.23

The bullets indicate that: ● There has been regression against the baseline

How AfDB contributes to Africa's development
(See Annex 2)

INDICATOR	2013–2015			2016–2018
	Expected	Delivered		Expected
Feed Africa				
● Agriculture — Land with improved water management (ha)	149 790	136 630	91%	217 120
● Agriculture — Land whose use has been improved: replanted, reforested (ha)	177 200	257 590	145%	397 310
● Agriculture — Rural population using improved technology	1 039 650	1 791 520	172%	1 305 860
● Agriculture — People benefiting from improvements in agriculture	15 680 370	18 010 980	115%	43 143 670
— of which women	7 503 000	8 645 510	115%	22 625 840

The bullets indicate that: ● Bank operations achieved 95% or more of their targets ● Bank operations achieved 60–94% of their targets

Principal challenges to agricultural transformation in Africa include:

- **Limited use of modern agro-inputs and mechanisation:** To improve their productivity, Africa's farmers need to use more seeds, fertiliser and agro-chemicals. Use of such inputs remains very low. In 2002–2003, African farmers used on average 9 kg of fertilisers per hectare of arable land, compared with 100 kg/ha in South Asia, 135 kg/ha in Southeast Asia and 73 kg/ha in Latin America.

  The efficiency and productivity of inputs such as seeds, fertiliser, water, labour and time vastly improved by the use of machines. Agricultural mechanisation is indispensable in improving overall agricultural productivity and profitability, and boosting rural livelihoods in developing countries — particularly in a context of increasing demand for food and fuel, population growth, accelerated urbanisation, climate change, and constraints on land and water resources. However, use of agricultural machinery in Africa is very low: a mere 3–6 tractors are in operation per 1000 farmers, on average, compared with 700–1850 tractors per 1000 farmers in Europe and Northern America.

- **Limited access to credit:** Agriculture in Africa is constrained by its limited access to financing. This is particularly true for women farmers. A perceived combination of high risk and modest returns, together with the high cost of extending the traditional banking infrastructure, has deterred commercial banks from lending to the sector. Lately, there have been some successful private sector-led approaches using innovative financing tools. For example, the Alliance for a Green Revolution in Africa (AGRA) has leveraged banks in Ghana, Kenya, Mozambique, Tanzania and Uganda to lend to small farmers and input retailers. In Nigeria, a risk-sharing facility by the Central Bank of Nigeria has leveraged funds from the balance sheets of commercial banks to agriculture value chains.

- **Poor access to markets:** Agricultural markets need to be supported by adequate physical structures — aggregation, storage and processing facilities — and also a conducive environment, such as quality standards, information services and logistics for distribution. Many of these structures do not exist in many African countries or are at best weak.

- **Gender inclusiveness:** Agricultural value chains can only be efficient if both women and men are fully engaged. Women do more of the agricultural work than men in sub-Saharan Africa, yet their productivity is lower. Women's access to formal credit sources such as bank loans remains extremely low due to a lack of regular income, inability to guarantee loans, limited land ownership rights, limited access to information and higher rates of illiteracy. Such gender inequality has a high economic cost.

> *Agricultural value chains can only be efficient if both women and men are fully engaged*

If barriers to agricultural development were removed, bringing more land under cultivation and raising farmers' productivity, Africa's annual agricultural output could increase from $280 billion to $880 billion by 2030. Growth of this magnitude would boost upstream demand for products that farmers use, including fertilisers, seeds and pesticides. It would also fuel downstream industries that depend on farm produce, such as grain refining, biofuels and other types of food processing. This combination of upstream and downstream activities could bring in an additional $275 billion in revenue by 2030.

To bring about the transformation that would unlock Africa's enormous agricultural potential, governments need to create a policy and regulatory environment that is pro-business. They must enable the private sector to take advantage of technological improvements, foster efficient agro-input delivery, and open access to credit and markets.

In order to achieve these objectives, governments need to invest in infrastructure and apply the lessons of science to embrace an African "green revolution". Africa urgently needs the scientific innovations in drought-resistant seeds, in higher-yielding varieties and in water use, fertiliser and pesticide that helped to transform agriculture in other regions.

Governments should act on their pledge to spend at least 10 percent of budget resources on agriculture. They also need to create the right market conditions, by cutting tariffs and non-tariff barriers to regional trade, eliminating transport cartels and developing marketing infrastructure.

On average, agricultural growth reduces poverty roughly twice as much as growth in other sectors. If Africa is to achieve the transformative economic growth that it needs to reduce poverty, there is no alternative to the development of a vibrant and prosperous agricultural sector.

The business of agriculture

What Africa needs is an agricultural transformation that will integrate its farmers into the global economy. This requires a fundamental shift in attitude across the continent. Agriculture should be seen not only as a way of life or a means of subsistence but also as a potential business enterprise.

> *Agriculture should be seen not only as a way of life or a means of subsistence but also as a potential business enterprise*

African smallholder farmers make up the largest segment of the continent's private sector. By seeing agriculture as a business and farmers as entrepreneurs, policymakers and investors can leverage the continent's existing assets to catalyse economic transformation.

For decades, farming was viewed as a subsistence activity whose loftiest goal was food security for individual households. Farmers want education, health, and housing — comfort and a promising future — and they will invest in those things if given the opportunity. If the development sector started treating agriculture as a business, then the hundreds of millions of small business owners operating farms will have better options from which to choose.

Agriculture has the potential to raise incomes and contribute substantially to the economy. Hundreds of millions of small farmers, thousands of local agribusinesses, and hundreds of seed and food companies will make it pay, as long as governments are willing to increase the level of investment in the sector. It can pay in terms of incomes for smallholders and in terms of profit for the businesspeople engaged in the sector. It can also pay in terms of an improvement in the quality of life for hundreds of millions of Africans.

Over 60 percent of Africans are under 25. Roughly 350 million young people will be entering the labour force between now and 2035. Even under the most optimistic projections, wage jobs in sub-Saharan Africa will absorb only 25 percent of these 350 million workers. Farming and self-employment will have to provide gainful employment for at least 70 percent of young Africans entering the labour force until at least 2030. However, agriculture will not be attractive to young people until earnings in the sector increase substantially, and profitable farming, among many other things, requires access to land. There is a need for clear and accessible laws that foster a business environment that benefits all market players — from farmers (including the more vulnerable such as female and young farmers and smallholders), to consumers and large investors.

> *Farming and self-employment will have to provide employment for at least 70 percent of Africans*

AfDB support for African agriculture

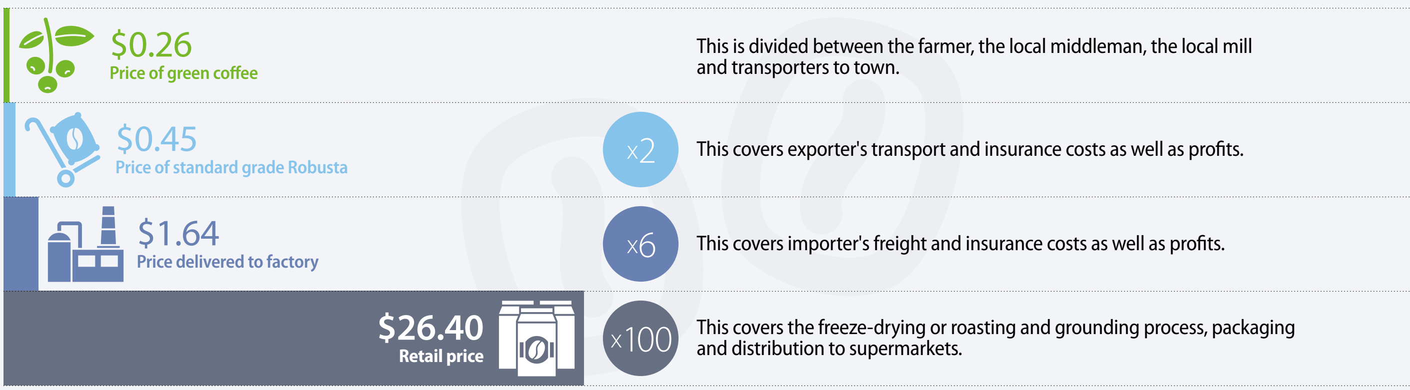
The Bank is committed to improving food security and rural livelihoods by tackling the most important constraints on agricultural productivity. Our projects are demonstrating the potential of agriculture to create decent jobs. We are also helping to promote more sophisticated value chains by linking farmers to agri-businesses (see Figure 3 example).

Our agriculture projects often have other components in transport or microfinance. In the Democratic Republic of Congo, the Bank supported the rehabilitation of the agriculture sector in Katanga, Kasai-Oriental and Kasai-Occidental provinces. The project increased food production and technology use, and rehabilitated 593 km of feeder roads, connecting production areas to markets.

In Sierra Leone, we enhanced food security by contributing towards increasing agricultural production and farmers' income in five districts (Kambia, Port Loko, Moyamba, Pujehun and Kenema). With our support, about 8000 ha of tree crop plantations — cocoa, coffee, and oil palm — were rehabilitated; 240 km of feeder roads

Figure 3 **Moving up in the coffee value chain**

Who is making profits in the coffee market chain?



Uganda is one of Africa's largest coffee exporters. More than 1 million farming households (about 7 million people) rely on growing and selling coffee beans as their major source of cash income.

An Oxfam study traced the costs that go into the price of coffee by interviewing people who are part of the value chain in Uganda. The study showed how value is added to coffee as it moves from the farmer, through the various stages of processing and distribution, to the supermarket shelf. It found that, in this case, the farmer received just 1 percent of the retail price of the coffee.

Source: Oxfam

repaired to increase farmers' access to markets and promote local and intra-regional trade; and 3000 ha of inland valley swamps rehabilitated.

Box 4 **Climate-smart approach to land management**

We have introduced climate-smart approaches to land management, to protect arable land from the impacts of climate change and to address food security and reduce poverty for those who live on degraded land. In Morocco, for example, our support for drip irrigation saved water while fighting droughts. We supported forest regeneration and conservation work in forest reserves and re-vegetated marginal lands, as in the Congo Basin Forest. Project results exceeded the targets for the year, with the production of 3.4 million forest and agroforestry saplings, the planting of 16 500 ha and the involvement of over 48 000 people in the production or processing of non-timber forest products. We developed buffer plantations around existing natural forests and supported agro-forestry activities that reduce poverty.

Central to the success of these projects has been involving communities in the sustainable management of forests and their resources. In a multi-component project in Kenya, forest regeneration and conservation through community stewardship have resulted in protecting and sustainably managing 62 726 hectares of natural forests. At the same time, the incomes of over 17 000 people were increased through the restoration of land, better flood control and modern agricultural and livestock management.

We recently approved a Rural Enterprises Project in Madagascar aimed at reducing food insecurity and fragility, and increasing youth employment in agriculture. The project will enhance agribusiness by supporting young rural enterprises and entrepreneurs in the agriculture and agroindustry sector, developing agricultural investment zones (including construction of irrigation networks, and building up processing and marketing infrastructure) and facilitating access to financial and non-financial services.

> *We are helping to promote more sophisticated value chains by linking farmers to agri-businesses*

The project is expected to directly benefit at least 500 new enterprises (at least 40% of them headed by women) and the entire population of the municipalities concerned, estimated at 186 000 inhabitants (51% of them women). The project will also generate 25 000 direct and indirect jobs annually.

We have supported African governments in integrating climate resilience into their plans and policies. Climate-smart approaches preserve soil fertility and strengthen the climate resilience of the agriculture sector, including crop production, livestock, aquaculture and fisheries.

The implementation of climate-smart approaches requires strong institutions and policies at each level of the system, from local organisations and national government bodies to regional institutions with the appropriate authority and governance arrangements. Such approaches also require appropriate financing mechanisms to promote the uptake of improved technologies at all levels (see Box 4).

More than 18 million people have benefited from improvements in agriculture through our support

Since 2013, 18 million **people have benefited from improvements in agriculture** supported by the Bank. Our projects have **enhanced water management** across 137 000 hectares of land, and 1.8 million **people in rural areas used improved technology** in agriculture. In Ghana, we supported a project that led to remarkable increases in exports and earnings from non-traditional agricultural products (see Box 5).

Although the Bank has made some substantial investment in this sector, we recognise that this has not been enough to achieve the substantial transformation required for a strong, sophisticated agricultural sector.

Transformation is beginning to occur in some countries and across a diverse range of agricultural commodity value chains, such as in the horticulture sector in Kenya, or in the rice sector in various countries in West Africa. The lessons learned from these experiences help frame our strategy. Successful transformations are business-led, and involve, among other conditions, productivity-increasing technology and inputs, and a well-functioning and vibrant private sector that can manage and allocate skill and capital to scale up emergent success.

Looking forward

The African Development Bank aims to make Africa self-sufficient in food by transforming the agriculture sector from one of subsistence to one that is a creator of jobs, wealth and growth. The Bank is bringing agriculture into Africa's transformational agenda; it is one of the top five priorities established by the Bank's — "High 5s" — in order to deliver real changes in the lives and livelihoods of Africans.

The Bank demonstrated its commitment to agriculture at the Feeding Africa conference held in October 2015 in Dakar. The conference led to an 18-point action plan to accelerate investment in agribusiness, including a new facility at the Bank to provide funding and guarantees to African women in agribusiness, as well as projects tackling youth unemployment.

Our agricultural operations will now be framed within a more business-oriented approach, based on a deeper understanding of the obstacles, potential and investment opportunities right across the sector, from the supply of inputs to the final point of retail. We will work to develop an integrated, vibrant and dynamic sector.

Box 5 **Boosting horticultural exports and incomes in Ghana**

The Export Marketing and Quality Awareness Project (EMQAP) in Ghana, supported by the AfDB, aimed to increase export earnings from non-traditional agricultural products. Commodities were selected for which Ghana could develop a comparative advantage to produce for the domestic market and for export to regional and international markets.

The project imported 30 varieties of mangoes from Florida in 2011 for evaluation for their commercial potential. Over 2.5 million seedlings were raised and planted in Greater Accra, Eastern, Brong-Ahafo and Northern regions. Export volumes rose by 16.1% in 2012 in comparison with the project start-up period. Among other non-traditional commodities, pineapple production amounted to 41 211 million tonnes in 2013, 65% of it exported. Significant increases were also recorded for producers of papaya and bird's-eye chillies.

Technology dissemination improved the knowledge, attitudes and practices of farmers, resulting in increased yield levels. Greater productivity led to significant increases in income from horticultural crops. Annual household gross incomes of pineapple farmers rose by an average of 90%.

In particular, we will connect farmers better to local, regional and global agricultural value chains, to ensure they have larger, more reliable markets for their produce. We will focus on expanding smallholder agribusiness and larger scale agro-industry, creating vertically integrated value chains to increase output and create jobs. Our close engagement with the private sector will encourage increased investment in agriculture, including private equity.

We will support African countries achieve self-sufficiency in key staples

Underpinning this vision are four specific goals: helping to eliminate extreme poverty; ending hunger and malnutrition; making Africa a net food exporter; and moving Africa to the top of export-orientated global value chains where it has comparative advantage.

Given the scale of resources required, and the scale of coordination needed to transform the entire value chains, it is important to apply a targeted investment strategy. We will aim to: achieve self-sufficiency in key staples (rice, wheat, fish); move up the value chain in key export-oriented commodities (cocoa, coffee, cotton, cashew, cassava and horticulture); create a food secure Sahel (sorghum, millet, cowpea, livestock); and realise the potential of the Guinea Savannah (maize, soybean, livestock).

We will continue to support countries to create better returns to farmers and agribusinesses, including more opportunities for women and young people, while promoting improved food security and nutrition levels. We are refocusing our assistance to the agriculture sector and intend to play a key role in catalysing agricultural transformation. ■