



Development Effectiveness Review 2016

AGRICULTURE

Thematic review



ACKNOWLEDGEMENTS

This issue of the African Development Bank (AfDB)'s Development Effectiveness Review 2016 on Agriculture is the product of strong collaboration between the Agriculture and Agro-Industry Department (OSAN) and the Quality Assurance and Results Department (ORQR). Under the overall guidance of Victoria Chisala, Cyril Blet was the task manager of this report, and Augustin Kouadio Adom, Dorra Ben Niran, Helmi Hmadi and Chimwemwe Nyirenda provided valuable statistical support. Within OSAN, technical contributions were coordinated and also provided by Benedict Kanu. We also would like to acknowledge Samuel Blazyk, Mohamud Egeh, Brian Mugova, Josephine Mwangi-Mutuura, Peter Nkhata, Elise Ouattara, Olivier Shingiro, Wael Soliman and Nawa Yeo for their insights into the report.

We especially acknowledge the contributions of chief writer Marcus Cox (Agulhas Applied Knowledge), graphic designer Nadim Guelbi (Créon Design), and editor Patricia Rogers, all consultants.

Frannie Léautier

Senior Vice-President
African Development Bank

Simon Mizrahi

Director, Quality Assurance and Results
Department
African Development Bank

Chiji Ojukwu

Director, Agriculture and Agro-Industries
Department
African Development Bank

Cover photo: Irrigation and mechanisation of farming increase yields, as is the case in the Chibombo farm in Zambia. Photo: Arne Hoel.

© 2016 African Development Bank Group

All rights reserved. Published December 2016.
Printed in Cote d'Ivoire.

African Development Bank Group
Development Effectiveness Review 2016 – Agriculture

The views expressed in this book are those of the authors and do not necessarily reflect the views and policies of the African Development Bank (AfDB), its Board of Governors, its Board of Directors or the governments they represent.

AfDB and its Board of Directors do not guarantee the accuracy of the data included in this publication and accept no responsibility for any consequence of their use.

By making any designation of or reference to a particular territory or geographic area, or by using the term "country" in this document, AfDB does not intend to make any judgments as to the legal or other status of any territory or area.

AfDB encourages printing or copying information exclusively for personal and non-commercial use with proper acknowledgment of AfDB. Users are restricted from reselling, redistributing, or creating derivative works for commercial purposes without the express, written consent of AfDB.

Note: In this report, "\$" refers to US dollars.

African Development Bank Group
Avenue Joseph Anoma - 01 B.P. 1387 Abidjan 01, Côte d'Ivoire
Phone: (+225) 20 26 10 20 • Fax: (+225) 20 21 31 00
www.afdb.org

Contents

Foreword	1
Executive summary	3
Introduction	9
Level 1: Africa's progress in agriculture	11
Agriculture for inclusive growth	11
Delivering higher crop yields to consumers	15
Moving up the value chain	16
Towards efficient management of natural resources	18
Conclusion	20
Level 2: The Bank's contribution to the agriculture sector	23
Strategic focus to transform Africa's agriculture	23
Increasing agricultural productivity	26
Establishing food security corridors	28
Sustainable use of natural resources	29
Conclusion	30
Level 3: Effectiveness in managing our agriculture portfolio	33
Designing quality projects	33
Effective delivery of support to agriculture	35
Conclusion	37
Level 4: Efficiency in supporting agriculture operations	39
A dynamic organisation providing the right mix of instruments	39
Managing our staff to deliver quality agricultural support	41
Conclusion	42
Conclusion and outlook	45

List of tables

Table 1	Development progress in agriculture in Africa (Level 1)	12
Table 2	AfDB contribution to Africa's agricultural development (Level 2)	24
Table 3	How effective is AfDB in managing its agriculture initiatives (Level 3)	34
Table 4	How efficient is the Bank in supporting its agriculture operations? (Level 4)	40

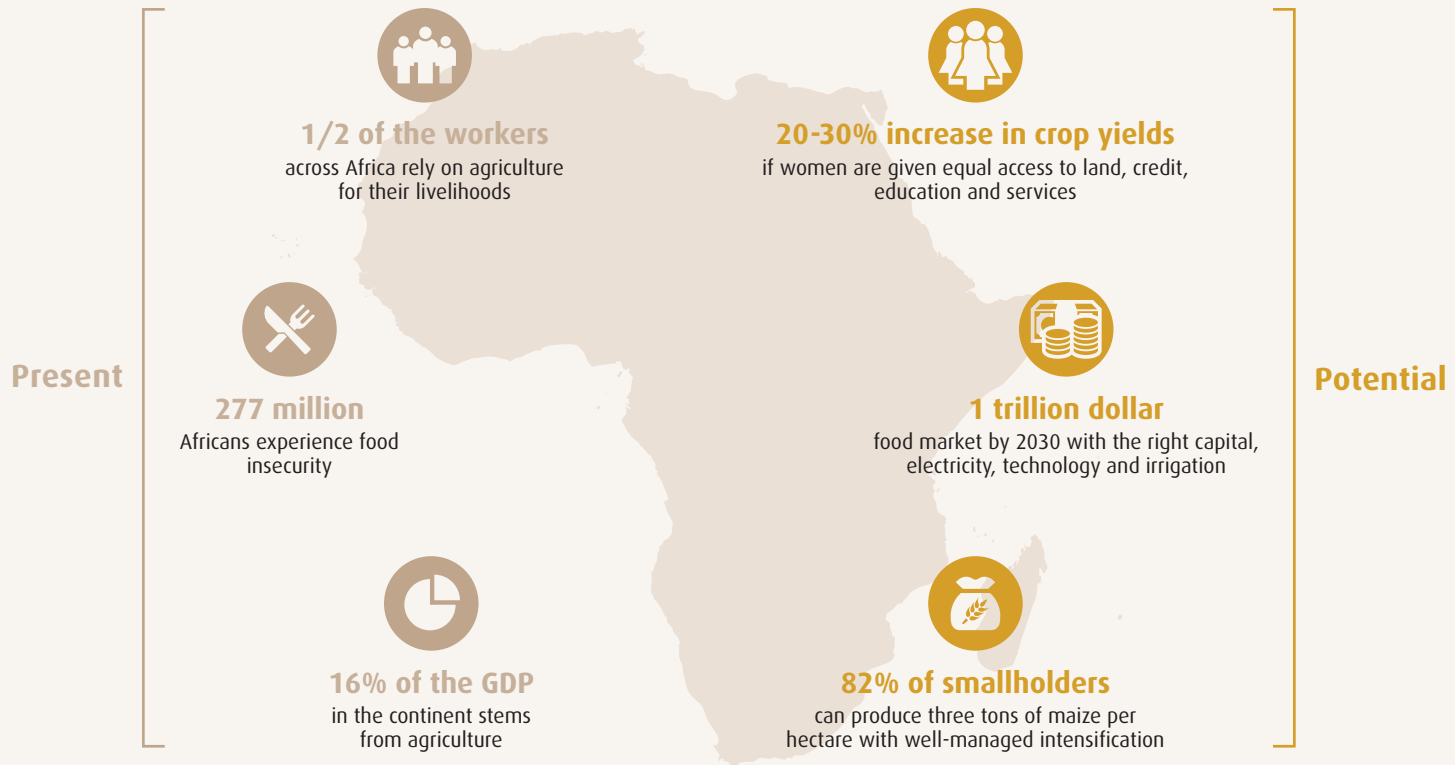
List of figures

Figure 1	Agriculture sector Results Measurement Framework	9
Figure 1.1	Agriculture and the Sustainable Development Goals	13
Figure 1.2	Africa export and import of agricultural goods (three year average)	13
Figure 1.3	Map of 2015 Global Hunger Index Scores	15
Figure 1.4	Innovative technologies to transform agriculture	16
Figure 1.5	Côte d'Ivoire has a lot to gain from moving to cocoa processing	17
Figure 1.6	Share of the largest agricultural emitters of greenhouse gases in Africa	19
Figure 2.1	Bank's agriculture investments cut across the entire value chain	25
Figure 2.2	Transforming agriculture in Ghana	26
Figure 2.3	Fighting illegal fishing in Uganda	29
Figure 3.1	Ensuring timely project readiness	33
Figure 3.2	Applying safeguards and mainstreaming gender	35
Figure 3.3	Engaging countries for greater performance	36
Figure 3.4	Informing agricultural choices through knowledge activities	36
Figure 4.1	Greater business efficiency through value for money	39
Figure 4.2	A skills mix adapted to the needs of a complex sector	41
Figure 4.3	Bringing staff closer to clients	42

List of boxes

Box 1.1	The Ethiopia Commodity Exchange	18
Box 2.1	Putting women on a level playing field	25
Box 2.2	Expanding oil palm production in Gabon	28
Box 2.3	Protecting the Congo basin forest through partnerships	30

Agriculture in Africa is ripe for change



And so is AfDB

2010–2014
Through our Agriculture Sector Strategy, we delivered around three key areas

- Rural infrastructure**
- Increasing productivity**
- Natural resource management**

We are taking bold decisions to transform Africa's agricultural sector and unlock its huge potential. Let us rise up and feed Africa!

President
Akinwumi Adesina

2016–2025

We are moving to investing in agricultural value chains using a business perspective

- Support to agribusiness & innovations**
- Climate-smart agriculture**
- Roads, energy and water infrastructure**

Together we delivered in 2010–2015

4 thousand km of rural roads



54 thousand tonnes of fertilizers & seeds



3 million people trained



We provided **\$1.23 billion** in agricultural operations. Our partners financed 32% of the total project amounts.



150 thousand microcredits loans provided



20 thousand marketing and production facilities in use



181 thousand ha of land with improved water management



Improving nutrition

To enhance access to nutritious food, agriculture is becoming more sensitive to nutrition. This implies not only raising agricultural productivity, but also making sure that young children and pregnant women enjoy better nutritional outcomes.

Foreword

Agriculture is at the heart of Africa's development: 7 in every 10 Africans rely on agriculture for their livelihoods. While Africa has enjoyed impressive growth rates for over a decade, this growth has barely touched the millions living on the land. Africa has yet to experience the agricultural miracle that has transformed other developing regions.

Yet Africa has vast agricultural potential, and most of the technologies required to boost yields are already at hand. With the right policies and investments, African agriculture could readily become an engine for inclusive growth across the continent.

The African Development Bank's work in agriculture has delivered a wide range of benefits to farmers: better seeds, irrigation and sustainable technologies, and greater access to finance and to markets. Bank projects have increased yields, production levels and incomes for farmers, resulting in more dynamic local economies. We recognise, however, that much more needs to be done.

Total investment in African agriculture is still well short of the levels required to deliver fundamental change and prosperity. Africa's rapid rates of population growth and urbanisation are creating vast unmet demands for food and agricultural products. The continent needs a major injection of both public and private finance into all stages of the agricultural value chain, using finance in smarter ways to create dynamic enterprises throughout the sector and markets. This must include both small- and large-scale agribusinesses, to ensure that agricultural development generates inclusive growth.

This is the right time for a big and sustained push on agriculture. That's why the Bank has made the transformation of agriculture one of its five top priorities (the "High5s"), along with light up and power Africa, industrialize Africa, integrate Africa and improve the quality of life of the people of Africa.

For our part, working with African governments, other development partners and the private sector, the Bank has refocused its assistance on transforming agriculture and agribusiness by 2025. We are working to create better returns to farmers and agribusinesses, including more opportunities for women and young people, while promoting improved food security and nutrition across the continent.



Dr. Frannie Leutier
Senior Vice-President,
African Development Bank Group

A stylized, handwritten signature in black ink, consisting of a large 'F' and 'L' intertwined.



Turning agriculture into a business

More than a subsistence activity, agriculture and agribusiness are increasingly becoming vibrant in Africa. In Bouaké, Côte d'Ivoire, a global agri-business group opened one of the world's largest cashew processing plants.

Executive summary

Each year, the African Development Bank (AfDB, or the Bank) presents its results through its Development Effectiveness Review series — both an annual overview, and a series of reviews devoted to particular sectors, themes or countries. Drawing on data from our Results Measurement Framework, the Development Effectiveness Reviews provide an accessible account of the Bank's contribution to Africa's development in a range of areas.

This Development Effectiveness Review is devoted to our agriculture portfolio. The agriculture sector is fundamental to Africa's development, accounting for the majority of employment and livelihood opportunities. Yet it has been subject to underinvestment for many years. The Bank has designated the agriculture sector as one of its "High5s" — that is, our five overarching priorities. Our "Feed Africa" agenda aims not just to eliminate malnutrition and extreme poverty, but also to turn Africa into a net food exporter, taking advantage of its rich agricultural resources to move it to the top of global agricultural value chains by 2025 and beyond.

This Review is organised in four parts. The first looks at Africa's recent progress on agriculture and some of the factors that are preventing it from realising its potential. The second part presents the Bank's strategy for African agriculture and describes our recent results across our portfolio, showcasing some of our more innovative operations. We then discuss how well our portfolio and our own organisation have performed, before turning to future directions for the Bank's agricultural work.

Africa's progress on agriculture

Agriculture is fundamental to Africa's development, but is performing well below its potential — Around 70 percent of Africans depend on agriculture for their jobs and livelihoods. Yet agricultural yields, which are poor in comparison to those of other developing regions, have remained static for many years, leaving millions of African farmers living in poverty. Africa's agricultural trade has been just 5 percent of the global total in recent decades, well below its potential. In the context of rapid population growth and urbanisation, food imports are rising faster than exports, and the resulting import bill is imposing a significant burden on low-income countries. Furthermore, Africa's rich agricultural resources are being depleted through poor management and climate change. Levels of investment in the sector — by both African governments and international development partners — have been inadequate.

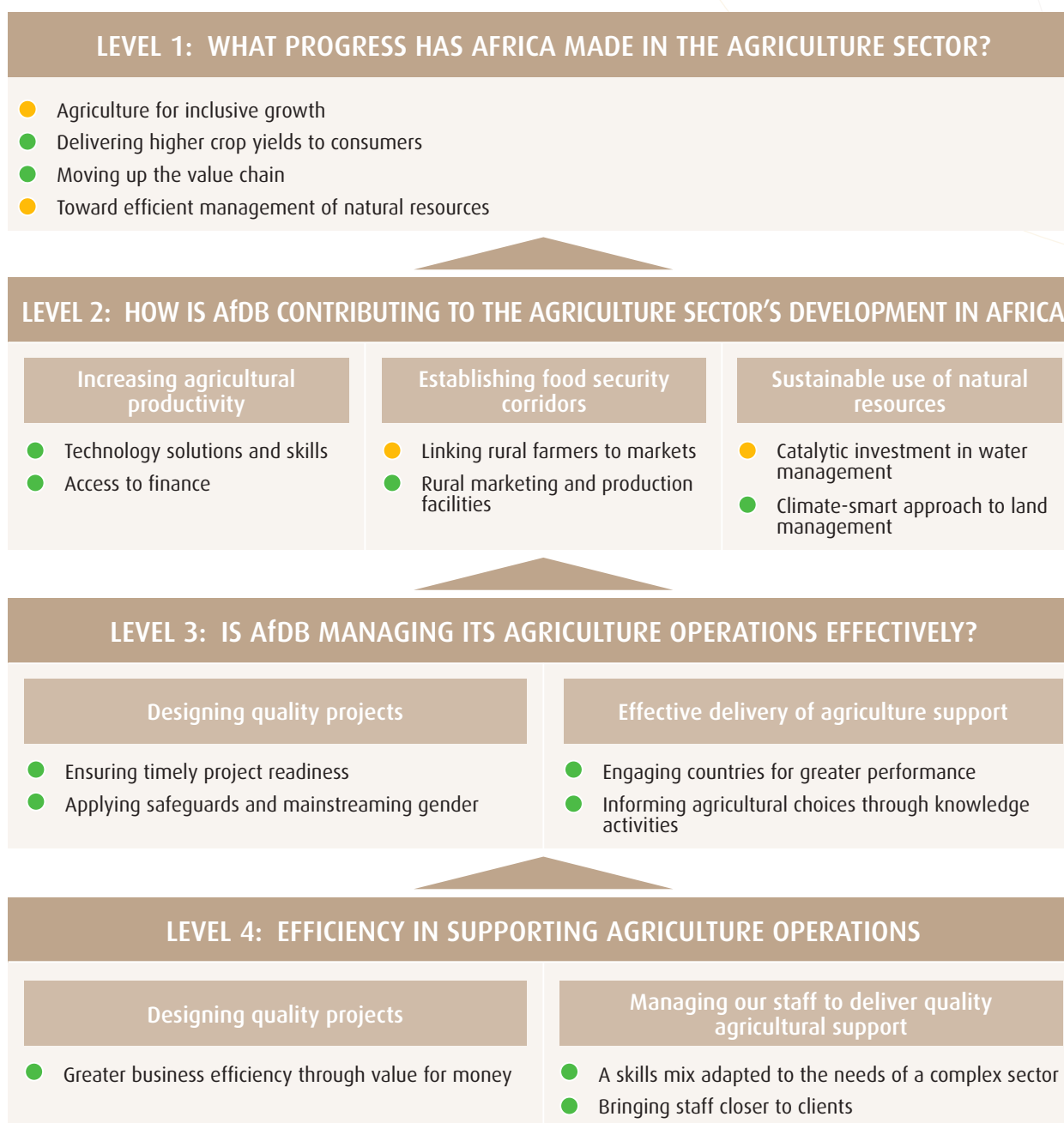
African governments have recognised the importance of agriculture to the continent's development — In recent years, African countries have committed to a range of initiatives and spending priorities related to agriculture. The African Union declared 2014 the Year of Agriculture and Food Security, and the June 2014 Malabo Declaration included a pledge to halve post-harvest losses and end hunger by 2025. It is widely recognised that the investment gap needs to be filled by both public and private investment.

Yields are well behind those of other developing regions — The production of cereals in low-income African countries stands at just 1.3 tonnes per hectare — half of India's yields and only a quarter of those achieved in China. Productivity is held back by fragmented and often insecure land holdings, poor access to finance and slow adoption of new technologies and innovative business models. At present, African farms use one-twentieth of the amounts of fertiliser used in Asian and Latin American countries. Irrigation is another key factor: only 6 percent of Africa's cultivated land is irrigated, but it produces 38 percent of the continent's agricultural output by value. Rural transport infrastructure remains underdeveloped, with just 35 percent of Africans enjoying access to an all-season road. For farmers, this means reduced access to agricultural inputs and higher costs in accessing markets. Inadequate post-harvest storage facilities and inefficient processing methods mean that 30-40 percent of each harvest is lost.

Africa faces a range of barriers to exporting agricultural produce — Most African food is consumed domestically. Even though a number of countries — among them Ethiopia, Mozambique, and Zambia — have made good progress on increasing agricultural exports, the continent imports twice as much food as it exports. Africa's exports remain dominated by unprocessed or partially processed crops, and traditional exports such as coffee, cacao, tea, spices and tobacco still account for more than a third of the total. A handful of countries, such as Kenya, have successfully moved into non-traditional exports, such as flowers, semi-processed fruit and vegetables, and livestock and fisheries exports are important for a number of countries.

Food insecurity is declining, but Africa remains vulnerable to fluctuations in global food prices and other shocks — Since 18 countries have achieved the Millennium Development Goal target on hunger, food insecurity in Africa has decreased. However, 37 countries continue to face food deficits, and a quarter of the African population still lacks reliable access to food. A number

Summary performance scorecard 2015



For Level 1 Africa's relative performance is measured by comparing its progress with progress in Africa's peer group (low-and middle-income countries around the world); for Level 2 the Bank's performance is measured by comparing expected and actual achievements for all operations that have been completed; for Levels 3 and 4 the Bank's progress is measured against its progress in achieving its 2015 targets set out in the Bank's Results Measurement Framework.

- **Good progress:** On average the group improved over baselines or reference groups.
- **Moderate progress:** Results are mixed: on average the group of indicators show moderate improvement.
- **Progress stalled or regressed:** On average the group of indicators stalled or regressed.
- **Progress could not be measured.**

of countries, including Ethiopia, Côte d'Ivoire and Angola, made good progress on improving food output through more intensive production methods. Excessive reliance on imports also leaves Africans vulnerable to volatile global food prices. African consumers spend an average of 80 percent of their income on food, and have been hit hard by recent spikes in food prices. Conflict and other crises can have a major impact on the agriculture sector — the three West African countries most affected by the Ebola epidemic are now facing serious food shortages.

Boosting agricultural productivity would have a major impact on the poor, particularly women and young people — Given the importance of agriculture to Africa's workforce, boosting the productivity of farmers is a key strategy for achieving large-scale poverty reduction. Women make up 70 percent of African farmers, but they face a range of barriers in accessing land, inputs and markets. Boosting the productivity of women farmers is therefore particularly important to poverty reduction. In addition, as over 10 million young Africans enter the labour market every year, improving agricultural productivity is a key part of the solution to the youth employment challenge.

Africa needs to manage its agricultural resources more sustainably — Africa is endowed with 60 percent of the world's arable land and an abundance of other natural resources. Yet as the continent's ecological footprint steadily increases, these resources are under threat. Over a quarter of cultivated land is now severely degraded, and 3 percent of GDP is lost annually through soil and nutrient loss. In the face of a changing climate, African countries need to build their resilience to shocks and promote better farming practices. While most African governments now pay more attention to environmental concerns in their development strategies, there are still substantial deficits in institutional capacity for environmental management.

AfDB's contribution to the agricultural sector

Agriculture is one of the Bank's highest priorities — Agriculture is one of three areas of special emphasis under our Strategy 2013–2022. We are working to scale up our results in agriculture through our "Feed Africa" Strategy for Agricultural Transformation in Africa (2016–25) — one of our High5 priority areas.

After decades of investing in Africa's rural economy, the Bank is taking a more business-oriented approach — We are working to integrate producers, processors and traders into global and regional value chains, so as to improve productivity, competitiveness, entrepreneurship, and small-medium enterprises' growth. We are giving priority to interventions that support smallholders, empower women and promote youth employment. This new approach builds on progress under our Agricultural Sector Strategy 2010–2014, which was based on two pillars – rural infrastructure and natural resource management — with capacity building as a cross-cutting theme. That strategy was closely aligned to the African Union's Comprehensive Africa Agriculture Development Programme (CAADP) and was implemented in partnership with agencies such as the Food and

Agriculture Organization and the International Fund for Agricultural Development.

During 2000 to 2015, the Bank invested US\$5.5 billion, or 9 percent of our lending portfolio, in agriculture operations — Most projects were cofinanced with African governments and other financiers. We invested in schemes to develop value chain infrastructure, increase yields and encourage higher productivity, while building capacity in a range of government agencies. We also constructed over 20 000 rural markets and storage facilities. In Tanzania, our investments in rural marketplaces across 35 districts strengthened growth centres for trade and other economic activity, and in Uganda we developed fish markets as part of a strategy for fighting illegal fishing. We responded rapidly and flexibly to periodic food crises, using our African Food Crisis Response Programme to make large sums available to help African governments cope with spikes in food prices.

A major part of our investment went towards expanding farm incomes and reducing rural poverty through productivity increases — Our projects introduced new seed varieties, fertilisers and technologies. Since 2010, we have provided over 50 000 tonnes of agricultural inputs, which was more than 50 percent above our target. Our investments in cashew production in Ghana increased rural incomes by 65 percent, while in Mali we supported the intensification of farming through high-quality seeds and improved agricultural services. Our New Rice for Africa (NERICA) project has boosted food security across seven West African countries by introducing more nutritious and high-yielding rice varieties. We have invested in agro-tech laboratories and research projects for strategic crops across the continent, generating a range of new technologies and innovations.

Access to finance was another key output of our work — Farmers need timely access to credit to purchase essential inputs at the right time in the farming cycle. They are largely beyond the reach of formal banking institutions, which find it difficult to operate in remote areas or to manage the risks inherent in farming. By providing lines of credit through banking institutions, we have helped banks serve rural clients. In Mali, for example, our support for the National Bank for Agricultural Development enabled loans to nearly 12 000 village associations and farmer organisations. We have built national capacity to promote and supervise microfinance organisations, including a new legal framework for microfinance institutions in Mozambique and over 300 000 new Rural Savings and Credit Cooperatives in Ethiopia. Overall, we financed 150 000 microcredits and trained 9000 microfinance clients in business management, to the benefit of nearly two million people.

The AfDB has been at the forefront of investing in transport infrastructure, including regional transport corridors and rural road networks — Roads are a key element in improving food security and enabling the shift into commercial agriculture. In line with our comparative advantage as an infrastructure financier, we have invested in regional transport corridors that link producers to urban

centres and ports, and rural roads that enable farmers to bring their produce to market. Overall, we constructed or rehabilitated 8660 km of main roads and 4280 km of feeder roads. Our investments had a range of positive impacts, including reducing transport costs and raising farmgate prices for agricultural products.

The Bank has been a leader in promoting sustainable land and water management across the continent — We have constructed a range of irrigation schemes, increasing resilience to drought. In Madagascar, we rehabilitated over 600 km of canals, increasing rice yields from 2.5 to 6 tonnes per hectare. Over the period, we provided improved water management on over 180 000 hectares of land. We have also promoted climate-smart approaches to land management, to preserve soil fertility and increase resilience in the face of a changing climate. We supported forest regeneration and conservation, including by developing buffer plantations around existing natural forests. Our projects planted over 64 million trees and improved land use across a million hectares. In addition, we are one of the sponsors of the Congo Basin Forest Partnership, which funds projects in 10 Central African countries to improve technical and governance capacity for forest landscapes, with a strong focus on the needs of women and ethnic minorities.

How well does the Bank manage its agriculture portfolio?

Under our Results Measurement Framework, we track a range of indicators that show how healthy our portfolio is and whether it is optimised to deliver the intended results — Applied to the agriculture sector, these indicators show that our portfolio is in robust shape. We use a quality-at-entry tool to ensure that our project designs are both technically sound and responsive to our clients' needs. Our readiness reviews gave a satisfactory rating to 97 percent of our projects by the end of the period, exceeding our targets. At the same time, we reduced the time required to approve new operations from 9 to 6 months and the time to first disbursement from 12 to 11 months, indicating good progress on building our partner countries' procurement and financial management capacity.

Our agriculture projects follow robust safeguard policies — The Bank has revised its operational policies to make sure our operations are optimised for promoting inclusive and green growth. Our new Integrated Safeguards System requires us to assess potential environmental and social impacts during project design, to minimise risk and maximise development results. Our safeguard policies encourage stakeholder participation in project preparation, helping to make our operations more responsive to beneficiaries' needs. We have also introduced an Independent Review Mechanism, which gives individuals and communities an opportunity to voice any concerns. We ensure that our project designs take account of a changing climate: in 2015, 89 percent of our new agriculture projects had climate-informed designs, compared to just 63 percent in 2010. Our revised safeguard policy also requires that our project designs be explicit about their contribution to the empowerment of women. In 2015, 87 percent of new projects had gender-informed designs.

Our agriculture projects are being implemented efficiently — At the end of 2015, our agriculture portfolio consisted of 108 operations with a combined value of US\$2.78 billion — 8 percent of the Bank's total active operations. It is crucial that we use these resources efficiently and well. Over the past five years, we achieved our targets on predictable disbursements and use of country systems. We also focused on reducing the number of underperforming projects, either by improving their performance or by cancelling them to free up the resources for more productive uses.

Our agriculture portfolio also has a strong learning orientation — Along with our operations, we produced a number of knowledge products on topics such as agricultural biotechnologies and natural resource management. We hosted or financed a range of workshops and conferences, including a high-level conference on agricultural transformation in Dakar in October 2015. This conference paved the way to the preparation of our *Feed Africa* strategy for the period 2016-2025. We sponsor a number of multi-stakeholder knowledge platforms, such as TerrAfrica on sustainable land management, the Climate for Africa's Development Programme, and the Alliance for a Green Revolution in Africa. Finally, we place considerable emphasis on learning from our own projects through the preparation of Project Completion Reports, so that we can capture and disseminate the lessons of experience.

How well is the Bank supporting its agriculture operations?

We are continuously improving our own capacity to deliver high-quality agriculture projects — The portfolio is led by our Agriculture and Agro-Industry Department (OSAN), which is well equipped both to support our project work and to provide policy advice and support to African governments. OSAN leads on agriculture projects, natural resource governance and climate change, and it manages trust funds (such as the Congo Basin Forest Fund) that support special initiatives.

We are promoting more efficient business processes and greater value for money — Our administrative overheads and project preparation costs are stable, although there is scope for improvement. We have reduced the number of projects supervised by each task manager and improved the supervision of our projects through twice-yearly missions.

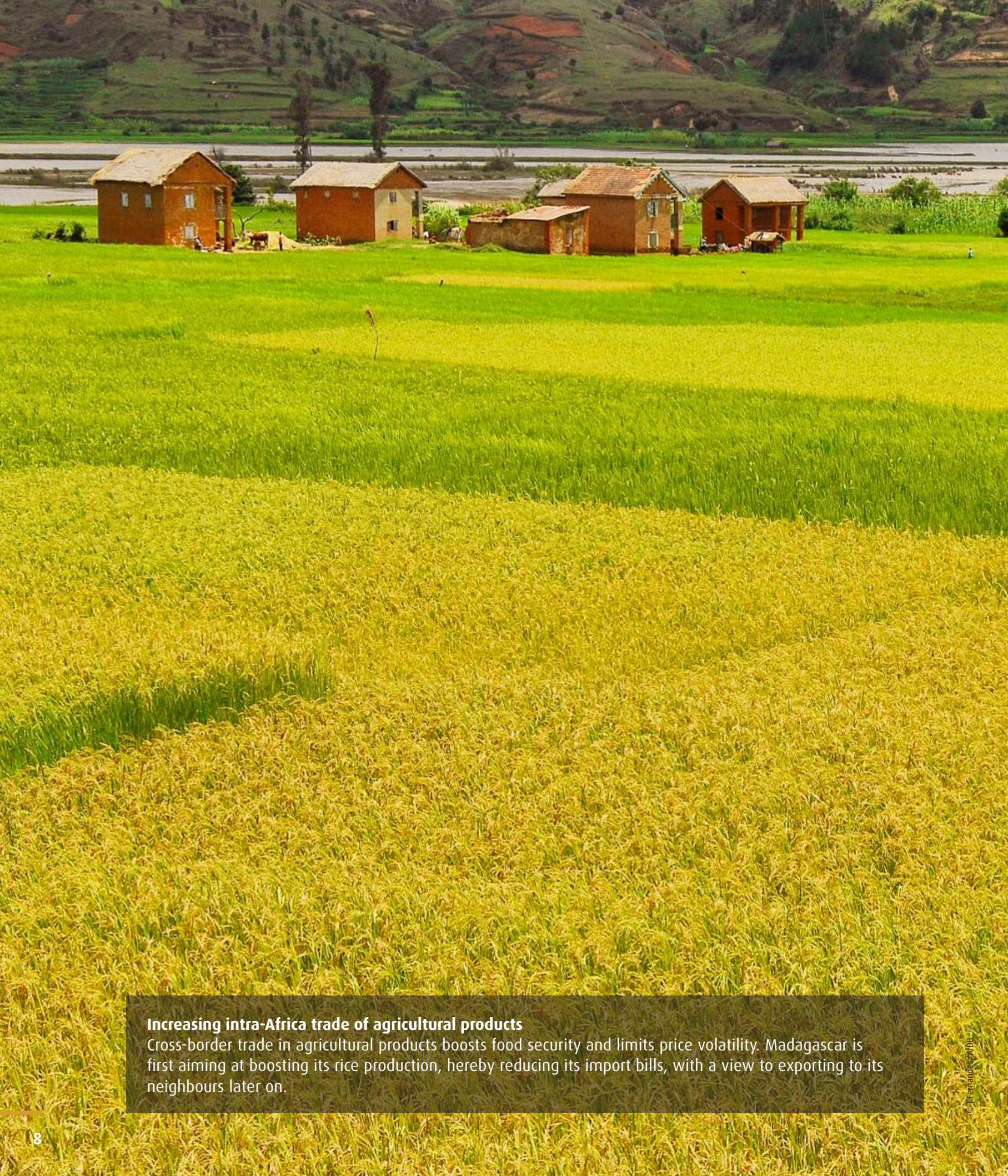
As a development bank, our expert staff are our most important resource — We strive to recruit and train people of the highest calibre and to help them develop their skills and expertise. Under our People Strategy 2013-2017, we are working to build the "workforce of the future" by strengthening leadership, improving employee engagement and allowing for more delegated authority. We track staff satisfaction through regular staff surveys. Within our agriculture team, our employee engagement index, which measures staff satisfaction, has continued to improve. We have improved the share of women in professional and managerial positions, although we are still short of our targets.

Finally, decentralisation is bringing us closer to our clients — The Bank's Decentralisation Roadmap responds to demand from our partner countries for closer engagement. We now have 40 percent of our operational staff in the field, and 70 percent of projects are managed in our field offices. Given a dispersed workforce, strong systems for communicating and sharing knowledge are critical. Our team is supported by an IT network that enables ready access to central knowledge banks and videoconference facilities.

Conclusion and outlook

Agriculture is now at the top of Africa's political agenda — African leaders have repeatedly confirmed their commitment to the sector, providing increased levels of public investment and new policies to promote private investment.

The Bank is well positioned to support this commitment — Over recent years, we have helped to raise production levels and increase food security through our investments in infrastructure, improved farming techniques, and land and forest management. We have now made agriculture one of our High5 priorities, with a commitment to achieving transformational change by 2025. Our Agricultural Transformation Agenda is both ambitious and inclusive. Using a more business-oriented approach, it will help to introduce new farming practices and business models, and will link farmers, processors and traders into global value chains. It will support women farmers, youth and marginalised groups, helping them overcome barriers to accessing land, credit and services. It will build on our considerable expertise in natural resource management to build resilience to climate change. Our shared ambition is to transform African agriculture into a major driver of inclusive and sustainable growth. ■



Increasing intra-Africa trade of agricultural products

Cross-border trade in agricultural products boosts food security and limits price volatility. Madagascar is first aiming at boosting its rice production, hereby reducing its import bills, with a view to exporting to its neighbours later on.

Introduction

The Development Effectiveness Review series presents the contribution that the African Development Bank (AfDB, or the Bank) makes to Africa's development. Each year, our Annual Development Effectiveness Review provides an overview of Africa's development results and an assessment of the Bank's contribution, based on our corporate Results Measurement Framework. We also publish Development Effectiveness Reviews of particular countries, themes and sectors, to promote better understanding of our work among partner countries, stakeholders and the general public.

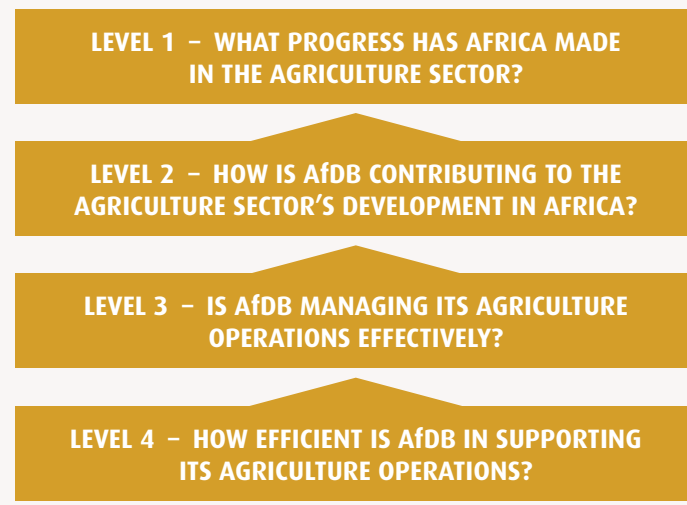
This Development Effective Review presents the state of Africa's agriculture and the Bank's contribution to the sector between 2010 and 2015. As Africa's premier development finance institution, the Bank has for many years worked to strengthen the agriculture and rural sectors. Under our Bank Strategy (2013-22), agriculture is one of three areas of special emphasis, reflecting the sector's central role in achieving inclusive and green growth. We reiterated this commitment by making agriculture one of the High5s — Light up and Power Africa; Feed Africa; Industrialise Africa; Integrate Africa and; Improve the Quality of Life for the people of Africa — to scale up our support support to achieve African agricultural transformation by 2015.

We believe that one of the most important frontiers for Africa's development is the transformation of Africa's agriculture sector, so that it can drive sustainable and inclusive growth, create jobs and improve food security. The Bank, with its depth of expertise, experience of what works and mix of financial instruments, is positioned to play a major role in that transformation.

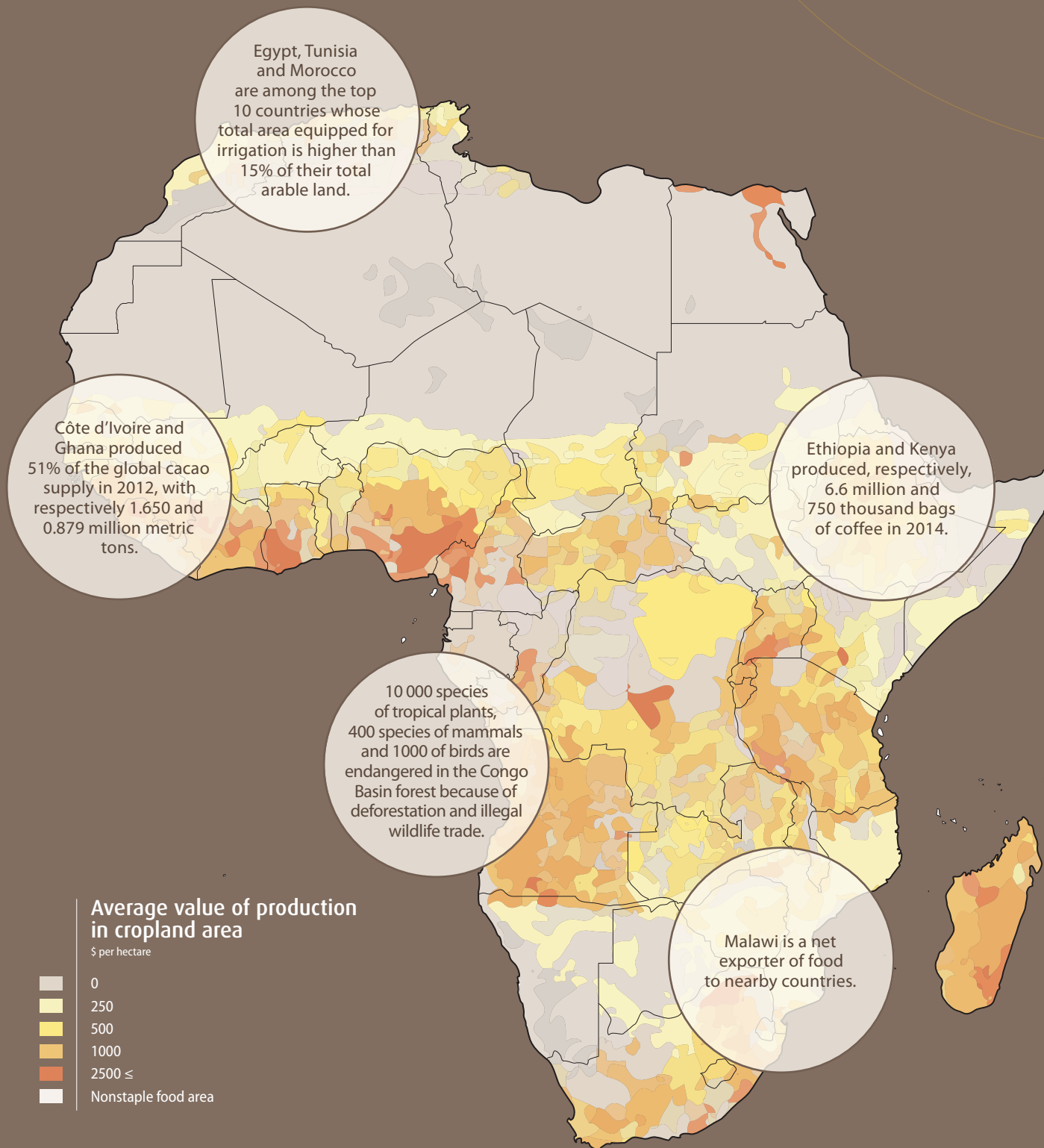
This review is organised into four chapters, corresponding to the four levels of our Results Measurement Framework. The first chapter provides an overview of African agriculture, the challenges

facing the sector and the progress being made. The second chapter sets out the Bank's contribution, drawing on aggregate data from our agriculture portfolio, and describes some of our more innovative projects and approaches. It also highlights some of the Bank's emerging priorities for future support to agriculture. The third chapter reviews how well we manage our agriculture portfolio, and the fourth describes our efforts to strengthen our own systems and capacity, so that we can deliver high-quality support. ■

Figure 1 Agriculture sector Results Measurement Framework



Countries are making headway in increasing agricultural productivity for Africa's transformation



Level 1: Africa's progress in agriculture

Agriculture is central to the lives of communities and households across Africa. The majority of Africans depend on agriculture for their jobs, businesses and food consumption, and the continent's abundant agricultural resources provide livelihoods for 7 in every 10 people. Yet yields remain low in comparison to those in Asian and Latin American countries, leaving many smallholder farmers living in poverty. Furthermore, much of Africa's farming land is losing its moisture and fertility, a process that is exacerbated by climate change. It is urgent to increase sustainable agricultural production, improve the efficiency of agribusiness and enhance incomes for those working in the sector.

This chapter provides an overview of agricultural development in Africa and its contribution to jobs, trade and economic growth. It indicates what needs to be done to promote a thriving agriculture sector, linking farmers and agribusinesses into efficient value chains for greater productivity. It highlights the importance of promoting sustainable agriculture in the context of Africa's response to climate change and Africa's transition towards a green growth pathway.

In this chapter, we also report on the indicators from the first level of our Results Measurement Framework. We show the indicators with a traffic-light rating, comparing progress with the 2010 baseline.

Agriculture for inclusive growth

Agriculture lies at the heart of Africa's development. Millions of people rely heavily on this sector for their livelihoods and way of life, and many more are consumers of produce grown on African land. However, as the population grows and agricultural yields remain stubbornly low, new investment and innovative approaches are needed to revitalise the sector.

Developing a more dynamic agriculture sector requires enhancements in productivity throughout the production and distribution process, from farmers to final consumers. It means linking smallholder farmers to wider value chains and facilitating their involvement in trade at local, regional and global levels. As agricultural producers achieve higher returns, they will be able to invest and expand production, lifting themselves out of poverty. Furthermore, if more affordable and better-quality food staples are produced, consumers can buy food at cheaper prices, raising living standards and ensuring greater food security. Thus agriculture has a key role to play in the economic transformation now under way across many African economies (see Table 3 Agriculture and the Sustainable Development Goals).

Given Africa's natural resources, there is vast potential for increased production, higher yields and better-quality agricultural produce. However, a concerted set of policies and interventions, among other things, are needed to transform and modernise the sector from farmer to final consumer, and from subsistence farming to farming as

a business. The transformation will require scaling up new business models already piloted on the continent, to create an integrated, value chain approach.

Agricultural value chains are diverse and serve different markets, from informal trade aimed at mainly low-income consumers to the high-income and export markets. Therefore, efficient and competitive agricultural chains require different business models, with ample scope for informal producers, small and medium-sized enterprises, and large-scale multinational companies.

The value chain perspective therefore helps African governments look at the complex mix of factors shaping agricultural development and at the barriers to investment and growth. The level of local infrastructure — roads, energy, access to water and information technology (IT) services — and the extent of use of technologies, systems, and innovation all contribute to the productivity of the sector. Furthermore, regional infrastructure, the removal of trade barriers and improved investment climates are key to attracting finance and promoting trade, and thus building a dynamic agriculture sector.

But the promotion of more productive agriculture must also address natural resources management in a changing climate. Agriculture is highly vulnerable to loss of soil moisture and the increasingly dramatic variations in weather conditions caused by climate change. If farming is to be sustainable over the coming decades, farmers need to find ways to adapt and become more resilient to the climatic problems.

Table 1: Development progress in agriculture in Africa (Level 1)

This table summarises development progress between 2010 and 2015.

- Progress is strong and better than peers¹
- Progress is positive but less than peers¹
- Regression against the baseline
- Data are not available to measure progress

INDICATOR	ALL AFRICAN COUNTRIES		OF WHICH ADF COUNTRIES	
	Baseline 2010	Latest 2015 ²	Baseline 2010	Latest 2015 ²
AGRICULTURE FOR INCLUSIVE GROWTH				
● Agriculture, value added (\$ in billion)	293.8	391.9	122	166.6
● Population living below the poverty line (%)	42.4	42.4	48.3	45.1
● Staple crop yield index (2005 value = 100)	111	109.7	115.7	116.4
● Agricultural productivity (US\$ per worker)	1296	1273	425	418
DELIVERING HIGHER CROP YIELDS TO CONSUMERS				
● Food insecurity (% of population)	23.8	24.6	34.4	30.9
● Road density (km per km ²)	7.9	8.2	6.7	7.1
● Fertiliser consumption (kg per hectare of arable land)	25.0	27.0	12.4	14.9
TOWARD EFFICIENT MANAGEMENT OF NATURAL RESOURCES				
● Resilience to water shocks (Index)	3.1	3.5	1.6	2.2
● Natural resources governance index (1-100)	..	43	..	39
● Forest areas (in 1000 km ²)	217	214	267	263
● Institutional capacity for environmental sustainability (index)	3.5	3.5	3.3	3.4
● Production efficiency (kg CO ₂ emissions per US\$ of GDP)	0.5	0.4	0.2	0.2
MOVING UP THE VALUE CHAIN				
● Access to finance (% population)	22	31	11	13

.. = data not available; ADF = African Development Fund; GDP=gross domestic product; US\$=United States dollars.

¹ Peers refers to other developing countries around the world. For the indicator on institutional capacity for environmental sustainability, Africa is not assessed against peers but rather on the basis of progress on historic trends.

² Where data are not available for 2015, the latest available values are used.

Source: African Development Bank, World Food Program, World Bank

Under the new Sustainable Development Goals, Africa is committed to protecting ecosystems, halting deforestation, combating desertification and restoring degraded land and soil — even as it works to end all forms of hunger and malnutrition by 2030.

A sector vital to African economies

Over the past decade, Africa became the world's fastest growing continent. High commodity prices, new trading links and widespread improvements in economic governance improved Africa's economic fortunes, enabling prosperity for more of its citizens. Yet this transformation was concentrated in certain sectors and geographical areas. It has not yet translated into new jobs and livelihood opportunities for the majority of Africans. One segment of the

population in particular — the more than three-quarters of Africans who work on family farms or in agriculture-related small businesses — has benefited little from economic growth.

African governments recognise the central role agriculture must play in reducing poverty and promoting inclusive economic growth. The agriculture sector creates jobs and produces food for local, regional and global markets. Currently, agriculture's ● value added¹ stands at 391 billion US dollars across the continent. However, in the face of many decades of neglect by both African governments and international development partners, the sector has been largely static for many years. Despite Africa's vast agricultural potential, African agricultural trade represented just 5% of the global total in the mid-2000s. There is now a

1 A green bullet indicates that progress is strong and better than peers.

new urgency to transform the management of the sector and encourage more private and public investment to increase production and secure higher incomes for the agricultural workforce.

Agriculture is at the top of the development agenda in Africa — In 2003, the African Union Heads of State and Governments adopted the Comprehensive Africa Agriculture Development Programme (CAADP), committing to a range of initiatives and spending priorities with a view to achieving 6% annual growth in agriculture. The leaders agreed to spend 10% of national budgets on agriculture by 2008. However, this target proved overly ambitious. In practice, the budget share fell sharply over the period, from 4.5% in 2001 to just 2.5% by 2012, in a resource-scarce environment. Only few countries were consistent in meeting the target, including Burkina Faso, Guinea, Malawi, Mali, Niger and Senegal. In 2014, African countries spent altogether \$12 billion in agriculture in a budget constrained environment, which falls short of the \$40 billion target for this year. This demonstrates that the private sector needs to complement public funding in agriculture.












In January 2014, on the tenth anniversary of CAADP, the African Union created a new momentum by launching the “Year of Agriculture and Food Security”. In the June 2014 Malabo Declaration on “Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods”, leaders pledged to halve post-harvest losses and end hunger by 2025, and emphasised the need to mobilise financial resources. The “seize the moment” campaign launched in Accra in 2016 amplified this move and called to for more champions coming together to push for agricultural transformation.

This strong emphasis on agriculture in Africa’s development policy recognises the importance of both public and private investment in modernising the sector, promoting innovative farming methods and creating more efficient agricultural businesses. The goal is to improve livelihood opportunities for all who are engaged in agriculture, thus attracting more young people into the sector, with their energy, skills and innovation.

Food imports are rising faster than agricultural and food exports — Africa has been a net importer of agricultural produce since the 1980s. An expanding African population and a growing middle class have created greater demand for agricultural produce, leading to a sharp rise in food imports. In addition, most food produced by African farmers is consumed domestically, so agricultural exports have grown slowly. As a result, net agricultural imports are now twice as high as agricultural exports, and the resulting import bill represents a significant burden on low-income countries (see Figure 1.2). Overall, Africa’s share in global agricultural exports fell to 2% in 2009, down from 7.6% in the early 1970s.

Yet for some countries, agricultural products still make up a major share of total export revenue. For example, agricultural exports account for more than a quarter of total exports for Burundi, the Central African Republic, Côte d’Ivoire, Ethiopia, Gambia, Guinea-Bissau, Kenya, Malawi, Rwanda, Sao Tomé and Principe, Swaziland, Togo and Uganda.

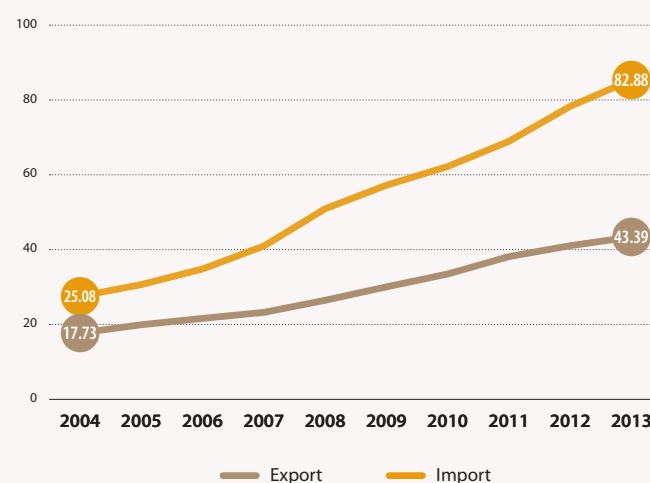
Figure 1.1 Agriculture and the Sustainable Development Goals

	Goal 1: No poverty	Growth in agriculture is at least twice as effective at reducing poverty than any other sector
	Goal 2: Zero hunger	Efficient crop production improves nutrition for better food security
	Goal 4: Quality education	Agricultural extension enables farmers to access the needed skills, tools, and knowledge
	Goal 5: Gender equality	Give equal access to resources to women to increase yield levels
	Goal 6: Clean water and sanitation	Irrigation can boost agricultural outputs
	Goal 8: Decent work and economic growth	Entrepreneurship in agriculture can generate employment and growth
	Goal 9: Industry, innovation and infrastructure	Agri-businesses will deliver processed food and rural roads increase access to market
	Goal 12: Responsible consumption and production	Modern agriculture promotes an efficient use of natural resources and reduces waste
	Goal 13: Climate action	Climate smart agriculture reduces greenhouse gases and enhances resilience
	Goal 14: Life below water	Sustainable fisheries ensure biodiversity conservation
	Goal 15: Life on land	Efficient farming minimizes the loss of natural habitats and forests for sustainable cultivation

Along with the specific focus on agriculture of goal 2, a series of goals will only be achieved through responding to cross-cutting agricultural challenges

Source: AfDB, Farming First

Figure 1.2 Africa export and import of goods in billion USD (three year average)



Source: FAO

Some countries, such as Ghana and Ethiopia, have made strong efforts to increase their agricultural exports in recent years; indeed, Ethiopia multiplied its share in global agriculture exports ninefold from 1991–1993 to 2007–2009. Mozambique and Zambia have also made good progress, against a low base. Côte d'Ivoire, Malawi and Kenya are also notable for their strong export orientation.

However, marketing African agricultural products abroad is fraught with challenges, as exporting to international markets is often tied to meeting rigorous criteria such as sanitary and phytosanitary standards. Agricultural exports are often dominated by one or a few unprocessed or partially processed crops, such as coffee in Burundi and Ethiopia, cacao in Côte d'Ivoire and Togo, or cashews in Guinea-Bissau. Indeed, traditional exports such as coffee, cacao, tea and spices, alongside beverages and tobacco, still account for more than a third of Africa's total agricultural exports. Efforts to diversify into nontraditional exports, such as flowers, semi-processed fruit and vegetables, have met with success in only a handful of countries, such as Kenya. Livestock and fisheries products are important exports for certain countries, besides making a considerable contribution to households and national economies.

Fluctuations in global food and commodity prices continue to have a damaging impact on trade and production, particularly since the 2008 global financial crisis. In the last few years, agriculture commodity prices have largely decreased, following the slump in oil prices. This may severely reduce export revenue and returns to farmers. African consumers, who spend on average 80% of their income on food, were also hit hard by spikes in food prices. Both producers and national economies are particularly vulnerable if they are overly reliant on one or a few commodities.

Amounting to 15% of the overall intra-African trade, agriculture is an important driver of economic growth, but remains fairly low. Cereals are a significant export to neighbouring countries, as are live animals, meat and dairy products. Overall, by the end of the 2000s, the value of agricultural goods exported to other African countries was one-fifth of total agricultural exports. This suggests that there is massive potential for expanding regional trade.

When countries experience crisis and fragility, the agriculture sector can be severely hit. For example, the three West African countries affected by the Ebola epidemic are now facing a serious shortage in food supplies. In Sierra Leone, two-fifths of farmers abandoned their farms, and others were constrained by travel restrictions or fear of sharing tools with neighbours. As a result, 90% of plots were not cultivated for the 2015 harvest.

Overall, the ● **staple crop yield index**² for low-income African countries has increased to 116, as compared to a 2002 base value of 100. Since 2010, progress is stagnant. There has also been a decrease in ● **agricultural productivity** across Africa, from US\$1330 in 2002 to

US\$1273 today. This remains far below the productivity achieved by peer countries in Asia and Latin America.

Indeed, productivity in African agriculture is lower than in other sectors, such as manufacturing or services. Achieving productivity gains akin to those in other regions of the world is a key priority for governments across the continent — and for many is essential to achieving inclusive economic growth. The rest of this chapter will discuss agricultural productivity in more detail, but first we examine the importance of agriculture to job creation and poverty reduction.

Creating livelihoods for the poor

Africa's economic dynamism in recent years has been remarkable, especially in the decade before 2010, with exceptionally high growth levels in a number of countries. In 2015, Africa's low-income countries averaged 6% GDP growth, and several countries made major progress in transforming the structure of their economies through better policies, new investments and new industries.

Economic growth has lifted significant numbers of Africans out of poverty. Yet the rate of poverty reduction has not been fast enough. With strong population growth, the proportion of the ● **population living in poverty**³ has been reduced very little — from 48.3% in 2010 to 45.1% today — in low-income African countries, leaving millions below the poverty line.

Some areas of Asia achieved more rapid poverty reduction when labour moved from traditional sectors like agriculture into new and more productive activities, such as manufacturing and services. However, this has not happened in Africa. By 2015, around a fifth of agricultural workers had moved into the service sector, but 70% of workers in low-income African countries and 54% across the continent still work in agriculture. Moreover, of those who remain on the land, four-fifths are living in poverty.

Given the importance of agriculture to Africa's workforce, boosting the productivity of those working the land could be the most direct route to large-scale poverty reduction. It has been demonstrated that a 1% increase in per capita agricultural incomes reduces the poverty gap up to five times more than a 1% increase in average incomes in other sectors. Moreover, improvements in the staple crop yields of smallholders reduces poverty more than productivity increases in export crops.

Across sub-Saharan Africa, four-fifths of farms are smallholdings of two hectares or less, and they provide livelihoods to 175 million people. In some countries, smallholders contribute up to 90% of agricultural production. Low productivity translates into very low average incomes. Since 2008 agricultural labour productivity in 34 sub-Saharan countries has averaged just US\$318 per worker, compared to a world average of US\$1000 for the same period.

2 A red bullet indicates regression against the baseline.

3 A yellow bullet indicates that progress is positive but less than peers.

Women make up 70% of African farmers. Women are responsible for household food and nutrition and provide the bulk of unpaid family labour. Whilst all smallholders share constraints such as poor rural infrastructure and limited access to markets and inputs, women farmers often face additional gender-specific barriers. For instance, women have unequal land rights, including restrictions on inheritance and vulnerability to dispossession following divorce or widowhood. Women-headed farms often have limited access to critical inputs such as fertiliser, and access to finance and to markets is often more difficult for women. Partly because of such constraints, women farmers are on average 13% to 25% less productive than men, and women find it harder to expand their production and improve productivity.

Across Africa, three-fifths of the population is young, and over 10 million young Africans enter the labour market every year. While investment in manufacturing continues to take place as part of a deep-rooted economic restructuring of African economies, for the near future the majority of young people will continue to work in the informal sector, many of them on family farms and agro-processing businesses. Boosting the productivity of the agriculture sector can help to improve these young people's livelihood opportunities and make effective use of their skills, innovation and entrepreneurship.

The next section looks at how to modernise the agriculture sector, deliver higher incomes to farmers and others working in the sector, and provide higher crop yields to consumers, so as to enhance food security and reduce undernourishment.

Delivering higher crop yields to consumers

Hunger and malnourishment have been reduced across Africa, with 18 countries achieving the Millennium Development Goal target on hunger. The proportion of the African population that experiences ● **food insecurity** has decreased to 24.6%, but that still leaves a quarter of the population without secure access to food (see Figure 1.3). Across the continent as a whole, people spend an average of four-fifths of their incomes on food, so they are vulnerable to price fluctuations.

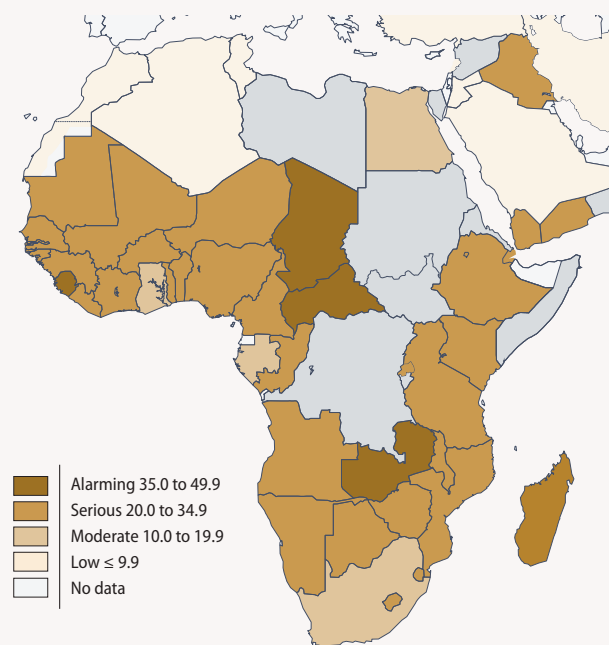
Addressing this lack of food security will require both increased food supplies and higher and more reliable incomes. Some 37 low-income African countries are now classified as suffering food deficits — that is, they are unable consistently to import the food they need or to produce enough domestically. This leads to food shortages and variable prices, especially when domestic and external shocks occur.

The growth of the African middle class, alongside the wider growth in population, is increasing demand for foodstuffs. This should create incentives for producers to increase their supply. In practice, however, growing demand is leading to increased food imports, primarily from outside Africa. Currently, Africa imports US\$25 billion in foodstuffs, but only US\$1 billion comes from other African countries. There is considerable scope for African agriculture to step up agricultural

production to meet local demand and substitute for imported food.

Between 2010 and 2013, some countries made good progress in

Figure 1.3 Map of 2015 Global Hunger Index Scores



Source: IFPRI, Atlas of African agriculture research & development, 2015

expanding their agricultural output. Ethiopia, Côte d'Ivoire and Angola, in particular, achieved production increases ranging from 21% to 38%. Encouragingly, this expansion was due mainly to intensifying production, rather than simply increasing the area of land cultivated. For this progress to be replicated across Africa, a range of measures need to be in place.

Innovative farming methods to increase productivity

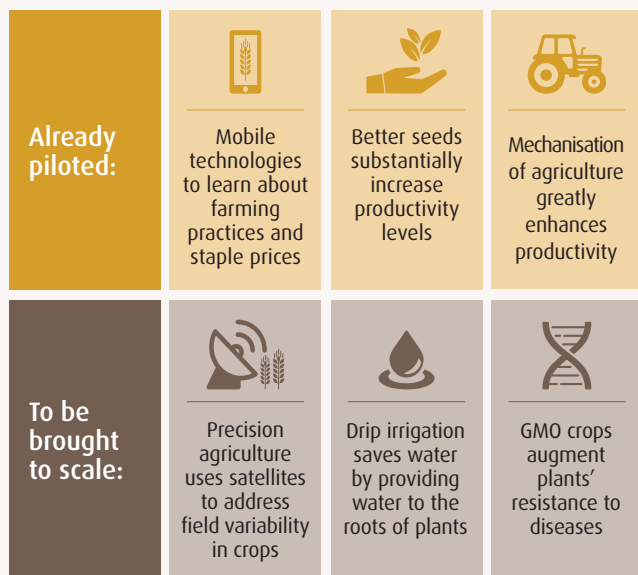
Africa's agricultural yields remain well below their potential. The contrast with other regions is dramatic. For example, the production of cereals in low-income African countries stands at 1.3 tonnes per hectare, which is half of India's yields and less than a quarter of the yields achieved in China.

To turn around this productivity deficit, African farmers need substantially better access to both inputs and markets. They require access to finance and security of land tenure, so they can invest and expand. In addition, they must be empowered to innovate and adopt new technologies, to increase productivity in a sustainable way (see Figure 1.4).

Expanding the use of fertiliser would transform agricultural yields by improving crop and soil nutrition and increasing the productivity of the land. Presently, fertiliser use in Africa remains low, although it is beginning to increase in a number of countries.

Figure 1.4 Innovative technologies to transform agriculture

A number of technologies are...



Source: Farming First and Bill and Melinda Gates Foundation

Overall, ● **fertiliser consumption** across Africa has marginally increased since 2010 from 25 to 27 kg per hectare of arable land, and from 12.4 to 14.9 kg per hectare for low-income African countries, a quantity that is less than one-twentieth of what is used in Asian and Latin American countries. Systems need to be in place so that farmers can access adequate and affordable fertiliser.

Research into new seeds, farming techniques and other innovations also has a key role in increasing productivity. For example, biotechnology creates crops that are resistant to pests, disease, drought and waterlogging. Similarly, new mobile technologies are already improving farmers' access to pricing information — for example, in Kenya, with the M-Farm app. Mechanisation is also key to getting more out of labour inputs and increasing production.

Another important production input is irrigation, which can increase yields dramatically and limit the reliance on rain. Although only 6% of Africa's cultivated land is irrigated, it produces 38% of the continent's agricultural output by value. Two-thirds of this irrigated land is concentrated in five countries: Egypt, Madagascar, Morocco, South Africa and Sudan. Irrigation has the potential to boost agricultural productivity by at least 50%; and drip irrigation is particularly sustainable, saving up to 60% more water than any other methods. Given the diversity of local ecosystems, innovative local solutions must be developed to improve water harvesting and storage, management of soil moisture and small-scale irrigation schemes.

Enhancing infrastructure for greater access to markets

Infrastructure services are fundamental to both farmers and agribusinesses. Investment is needed across the range of infrastructure, from transport, power and IT services to post-harvest storage facilities and irrigation schemes.

For farmers in remote areas, rural road networks are crucial to their ability to access agricultural inputs and bring their produce to market. Just 35% of Africans have access to an all-season road, compared to 67% across all developing countries. With lower transport costs, farmers can access markets both in Africa and globally and sell their produce at competitive prices. For example, over the last 15 years, Ethiopia's success in reducing the average distance to an all-weather road from 21 km to 12.4 km has had a major impact on reducing poverty and improving food security.

Some useful progress has been made in developing road networks across low-income African countries since 2010, with ● **road density** increasing from 7.9 km to 8.2 km per km². However, this falls well behind the rate of investment in road networks in comparator regions. Over 2005 to 2012, African countries invested the equivalent of 15% to 25% of their GDP in transport infrastructure, while India and China invested 32% and 42%, respectively. Air transport connections — especially from landlocked countries — are also critical for perishable exports, like cut flowers, meat and vegetables. Overall, Africa's transport infrastructure is improving, but it still has a long way to go.

Another key infrastructural need is for better storage of harvested crops. Between 30% and 40% of harvests are lost because of poor post-harvest storage and inefficient processing methods, and this goes up to 50% for perishable products like fruit and vegetables. Investment in infrastructure to store harvests and seeds would make a dramatic difference to the supply of food and agricultural crops.

The use of new technologies often depends on a reliable source of power. Electricity is essential to modernising agricultural practices, from operating farm equipment and irrigation systems to ensuring cold chain facilities for storing and distributing perishable goods. Similarly, the spread of mobile phones better connects farmers and agribusinesses to their markets and sources of inputs, helping them improve efficiency.

As farmers become linked to the wider agricultural sector, effective infrastructure becomes all the more critical to ensure smooth and efficient operations. The next section sets out how such links can transform African agriculture.

Moving up the value chain

Transforming Africa's agriculture sector is essential to creating new economic opportunities, growth and jobs. It is also key to providing greater food security and reducing poverty across the continent. However, such a transformation requires a more comprehensive

approach to the sector, to create conditions for efficient businesses and to encourage investment at each stage of the cycle of production and distribution.

Linking farmers into agricultural value chains will ensure better provision of agricultural inputs such as seeds, fertiliser, tools and machinery, and will connect them to enterprises that process, refine and prepare crops and livestock products for consumers at home and abroad. A more dynamic agriculture sector, with investment in agribusinesses — ranging from small and medium-sized enterprises to multinational companies — will transform returns to smallholders and build the potential of African agriculture to drive inclusive growth.

Expanding and investing in agribusiness

Historically, agricultural production in Africa has focused on core foodstuffs and a few agricultural export crops. In the first two decades after independence, African governments favoured industrialisation over agriculture. More recently, however, many African governments have attempted to promote diversification of export crops as a strategy for reducing risk to farmers and boosting export revenue in the face of fluctuating world commodity prices.

However, it has proved hard for African producers to break into new markets — not just because of domestic constraints, but also because of international protection regimes, particularly related to processed agricultural goods. Restrictions on international trade have left many African economies dependent on a handful of primary export products, such as raw coffee, cashew nuts and cocoa beans.

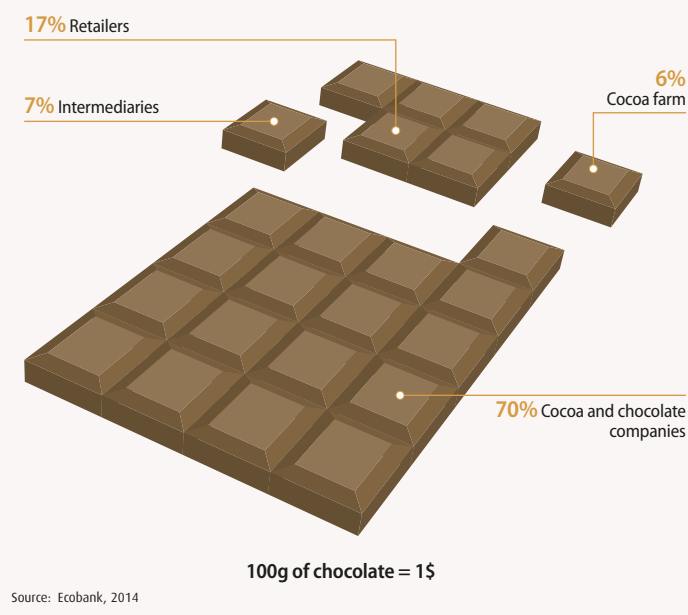
A key limitation of these export markets is that the producer of the primary product receives only a small proportion of the final retail price. Smallholders need middlemen to buy inputs and services and to sell outputs, leaving them with little return to invest in increasing productivity. For example, Ugandan coffee producers receive well under 1% of the final market retail price of coffee, and cocoa farmers in Côte d'Ivoire receive 6% of the final retail price (see Figure 1.5). The lion's share of the cost of processed food goes to agro-processing industries located outside of the continent. With scaled-up investments in agribusiness, some of this value could be captured by African countries.

Where farmers are involved in processing produce or where cooperatives or producer groups have established stronger vertical linkages, returns to farmers can be increased significantly. Business models in which firms share risks and benefits with smallholders in an equitable way have improved productivity and raised incomes.

For example, Pickou Export Ltd in Burkina Faso has developed a professionally managed hub to support smallholders growing sesame and black-eyed peas. Premium Foods provides Ghanaian farmers with financial guarantees so they can provide inputs to outgrowers on credit and be repaid in kind from produce harvested. Côte d'Ivoire, the

world's largest cocoa producer, has expanded its capacity and attracted investment from three multinational companies — Cargill & ADM, Barry Callebaut, and Cemoi & Touton — enabling it to capture a growing share of the US\$84 billion global confectionary market.

Figure 1.5 Côte d'Ivoire has a lot to gain from moving to cocoa processing



There are growing prospects for developing new business models and encouraging the growth of agribusiness across Africa. Increases in domestic demand are opening up new markets. In addition, increasing opportunities to link into global value chains are providing unprecedented opportunities for both large and small agribusinesses to establish themselves. In particular, there is scope to boost production of agricultural inputs, processing, marketing and retailing.

To encourage such developments, governments need to ensure that their policies, regulatory frameworks and public investments are conducive to the development of private agribusinesses, and that they support farmers in delivering agricultural products at competitive prices. By working together, agribusiness and government can help link farmers to consumers.

Access to finance is a key part of expanding businesses throughout the agriculture sector. Many smallholders are in dire need of greater access to credit to invest in the technologies and inputs they need and to address seasonal outlays and fluctuating cash flows. In low-income African countries, just 13% of the population has **access to finance**, compared with 31% for the rest of the continent.

Microcredit schemes have an important role to play in the agricultural sector. But increasingly, policymakers are looking to formal financial institutions to find innovative ways to lend to agricultural smallholders. Risk management tools can not only promote investment in potentially riskier agricultural endeavours,

but also serve as a catalyst, as lenders are more likely to extend credit to farmers who are covered by insurance. New financing schemes are springing up across the sector to help farmers. For example, in Ghana, cocoa farmers' associations are able to provide packages of inputs to groups of farmers, with loans timed to fit in with harvests. Nigeria has focused on developing industries across agricultural value chains, creating over 3.5 million farm jobs and spurring a revival of rural economies. This has increased food production and, in the context of lower oil revenues, has helped meet domestic demand and reduce dependence on food imports, while diversifying the country's economy.

Accelerating the regional integration of markets

African leaders have long recognised that the regional integration of markets is essential to foster robust and equitable growth. Substantial progress has been made in establishing free trade areas and removing barriers to trade. However, only one-tenth of all African agricultural trade takes place between African countries.

For farmers and agricultural traders, access to larger markets leads to higher returns, which help expand agricultural production and encourage efficiencies through economies of scale and exposure to competition. Regional trade also enables the development of more sophisticated regional value chains, which helps increase the supply and quality of produce, creating a virtuous circle. Larger markets are crucial for raising production and productivity in the agriculture sector.

Box 1.1 The Ethiopia Commodity Exchange



Ethiopia's agriculture sector is characterised by many small-scale farmers and traders, limited marketing infrastructure and mainly informal markets. Farmers across the country faced high handling costs and frequent contract defaults when selling their harvests, leading to low

and unpredictable returns on their crops, and vulnerability to intermediaries.

The Ethiopia Commodity Exchange (ECX) was established in 2008 to create more effective and integrated agricultural markets. It has successfully established new institutions and systems for regulating quality grades and standards. By enabling more secure trading and improved flows of market information, it has transformed agricultural marketing in Ethiopia. It has successfully established 55 warehouses and a clearinghouse linked to 10 commercial banks. By 2011, it was providing market information to 61 000 callers each day. This has resulted in unprecedented volumes of and prices for coffee and other produce. It has also created opportunities for unparalleled growth in the related industries, such as transport, logistics, banking and financial services. According to ECX, farmers also reported earnings of 30% to 60% of the value of goods delivered.

Cross-border trade in agricultural products also offers many benefits for consumers. Given the uneven distribution of food production

across Africa, regional trade allows consumers greater access to higher-quality foodstuffs, while reducing the volatility of prices due to variable supply. Trade is key to increasing food security for countries experiencing food deficits.

The substantial range of tariff and non-tariff barriers to trade between many neighbouring countries in Africa can be prohibitive for agricultural goods, especially those that are bulky or perishable. Studies indicate that the Burundi-Rwanda border adds costs equivalent to 174 km of shipping to prices of foodstuffs, whilst the Democratic Republic of Congo-Rwanda border adds the equivalent of 1600 km.

Border costs can also deny farmers access to quality inputs such as higher-yielding seeds or better fertilisers. For example, Ethiopia could quadruple productivity if hybrid seeds were allowed into the country. However, because of regulations, seeds are often held up at borders for long periods — delays that decrease their viability. The Common Market for Eastern and Southern Africa (COMESA) is seeking to harmonise regulations on the movement of seeds, as part of its agenda to address the different rules governing cross-border trade. This would achieve significant improvements in the functioning of national and regional staple food markets, to the benefit of farmers and consumers across the region, and would jump-start the trade of seeds in COMESA.

Similarly, the price of fertiliser varies widely between countries. The removal of trade barriers would reduce transaction costs and allow farmers access to affordable, better-quality fertiliser, which would improve productivity in staple food production. In the 2006 Abuja Declaration on Fertiliser for an African Green Revolution, African governments committed to improving timely access to fertilisers across borders. This led to commendable gains for Kenya, Angola, Cameroon, Tanzania and Zambia; but fertiliser consumption levels remain low.

The development of commodity exchange markets is another route to developing more efficient agricultural value chains, by creating a marketplace that brings together all the players in the chain. The Ethiopia Commodity Exchange involves farmers, traders, processors, exporters and consumers to promote security across the agricultural value chains and to enable fair and efficient markets between the different actors. Similar schemes are being rolled out at country and regional levels.

Towards efficient management of natural resources

With 60% of the world's arable land, Africa is endowed with abundant renewable natural resources. Yet its land, water and forests are vulnerable. With the continent's ecological footprint steadily increasing, there are clear signs that ecosystems are under stress. Over a quarter of cultivated land is now severely degraded, with 3% of GDP lost annually through soil and nutrient loss on farmland alone. The impact of climate change is likely to exacerbate these trends.

In this context, African governments are incorporating environmental sustainability goals into their national priorities and encouraging the sustainable use and management of natural resources. There is a need to build economies and societies that are resilient in the face of a rapidly changing climate. At the same time, returns to land must be improved to encourage investment in the sector and to help poor people lift themselves out of poverty.

Building resilience to climate change

Climate-smart approaches are used across the agriculture sector to strengthen resilience to climate change and improve productivity. Such approaches focus mainly on improving farming practices. They include conservation agriculture, agroforestry, mixed livestock and cropping systems, and improved crop varieties. A range of practical techniques can make considerable difference to yields, such as mulching, intercropping, crop rotation, integrated crop and livestock management, improved grazing and enhanced water and soil management. For example, conservation tillage — leaving the previous year’s crop residue on fields before and after planting the next crop — is practiced on over 300 000 hectares in Zambia, increasing yields and conserving soil fertility.

Another focus of climate-smart approaches is better water management for farmers, herders, fishers and agribusinesses.

● **Access to an improved water source** has increased from 66.5% of the population in 2010 to 71.6% in 2015. However, climate change is leading to higher temperatures, which are expected to accelerate the hydrological cycle and create serious water management challenges.

In particular, rainfall patterns are becoming more extreme, and water-scarce areas like the Sahel are becoming even dryer. In 2012–2013 alone, major droughts in seven countries affected

16 million people. At the same time, flooding is becoming more frequent, sometimes in the same places as droughts. Adaptation strategies to increase ● **resilience to water shocks** is critical, given that some 75 million to 250 million people may be exposed to water stress in the future.

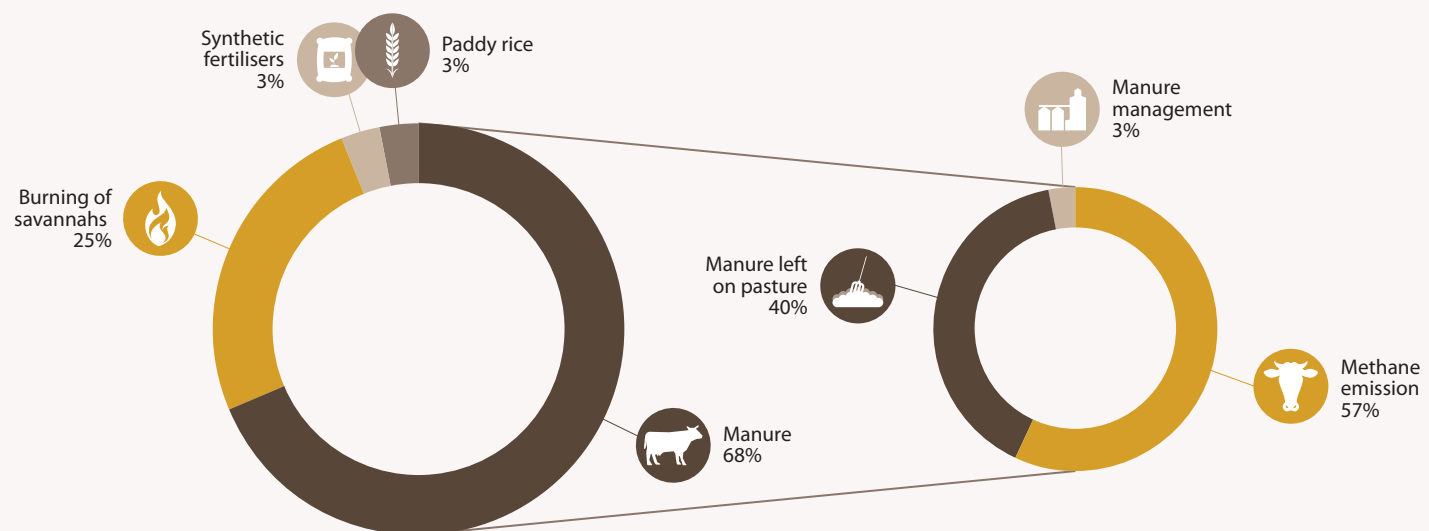
Complementary measures need to be in place to encourage the adoption of better farming practices. Addressing the widespread insecurity of land tenure, the inefficiency of markets and the financial insecurity farmers face will encourage investment in farms and more sustainable farming systems. In addition, schemes that involve payment to farmers for ecosystem services would give incentives to use sustainable farming methods.

The agriculture sector creates greenhouse gases, contributing to climate change. Some 10–12% of global emissions are due to agriculture, with 15% of those from Africa. Emissions are caused by manure, fertilisers, crop residues and burning savannah, and they also come from the digestive systems of livestock (see Figure 1.6). However, these levels of greenhouse gases from African agriculture remain a small proportion of global carbon emissions. Africa’s ● **production efficiency** has improved from 0.5 kg of carbon dioxide emissions per dollar of GDP in 2010 to 0.4 kg today.

Revitalising forests and ecosystems for higher yields

With 65% of Africa’s arable land degraded, sustainable land management practices are crucial. Healthy soils are needed for a healthy food system. When 180 million people rely on depleted soil to grow their food, many suffer from poor nutrition as well as food insecurity. In addition, production decreases as land degrades; annual economic losses from land degradation are on the order of US\$68 million.

Figure 1.6 Share of the largest agricultural emitters of greenhouse gases in Africa



Source: FAO

The Africa Soil Information Service initiative, launched in 2009, is mapping soil conditions across the continent and will be able to predict changes in soil properties, providing valuable advice to policymakers and planners. The initiative is funded by the Alliance for a Green Revolution in Africa and the Bill and Melinda Gates Foundation.

Across Africa, agroforestry plays an important role in integrating the cultivation of certain trees and crops to achieve benefits in terms of soil health and production. It moderates local microclimates and creates greater resilience to climate change impacts, thereby helping to maintain higher yields. This approach also contributes to mitigating climate change through carbon sequestration and by producing improved livestock feed that reduces methane emissions.

African forests make a major contribution to global climate change mitigation through carbon sequestration. Forest cover in Africa accounts for 23% of the global forest carbon stock and extends over a quarter of sub-Saharan Africa's land area. The forests contribute to economic development, providing timber and non-timber products and serving as a major source of fuel for many Africans. They also have exceptional biodiversity. Thus forest conservation is key to promoting resilience in regard to land and water. Although deforestation (at 0.7%) requires priority actions, the loss of ● **forest areas** is taking place at a slower rate than in peer regions in Asia and Latin America.

While African governments are giving more attention to environmental goals in their development strategies, there are still major gaps in ● **institutional capacity for environmental management**. Other ecosystems that need careful management are

marine and coastal fisheries, which make a substantial contribution to livelihoods and to food security, but are often over-exploited. Similarly, sustainable management of wildlife is a growing challenge, particularly given the threat of poaching to so many species across the continent.

Conclusion

While the last decade has seen unprecedented economic growth rates across Africa, agricultural development has lagged behind. Yet the agriculture sector is central to the lives of many citizens. Higher returns to agriculture would transform Africa's poverty profile, improve food security and nutrition, create jobs, and contribute to inclusive economic growth across the continent.

There is huge potential for increasing agricultural productivity in Africa. However, we know from experience that agricultural development needs innovative farming methods and technologies, improved rural infrastructure, better access to high-quality seeds and fertilisers, and access to local, regional and international markets. Ensuring land tenure and access to credit are also critical, particularly for the many women farmers.

The good news is that agriculture is now back at the top of the African political agenda. However, additional public and private finance is required at every point across the sector, from input industries to retail markets. Linking farmers to global value chains and expanding agribusinesses are vital for transforming the sector. In addition, by promoting agricultural resilience, sustainable agriculture and better natural resource management, Africa will accelerate its efforts to address climate impacts and to make the transition towards green growth. ■

MapAfrica is showing where we invest in agriculture to have an impact on people's lives



 MapAfrica

Enhancing transparency

The Bank is committed to increased transparency and demonstrating results. It has developed a new geocoding tool — MapAfrica — an interactive, online platform that maps the locations of the Bank's investments in Africa. Explore our 6000 project locations, including for the agriculture sector by visiting mapafrica.afdb.org.

Level 2: The Bank's contribution to the agriculture sector

This section reviews the African Development Bank's contribution to addressing the many challenges facing Africa's agriculture sector. As the continent's premier development bank, the Bank invests in a wide range of operations promoting agricultural development, to boost economic growth, reduce poverty and improve food security and nutrition.

In this section, we analyse the recent performance of Bank agriculture sector projects, their results, and their contribution to Africa's development results. We also consider the results from our agribusiness and natural resources management projects.

The AfDB is only one of many actors in the agriculture sector. To assess the Bank's own contribution, we present the aggregate results from across our operations. We use 19 indicators from Level 2 of our Results Measurement Framework to assess the outcomes and outputs of Bank projects that closed between 2010 and 2015, and for which we have project completion reports. This method provides a picture of progress against Bank agriculture strategies and indicates how our work contributes to Africa's agricultural development. We also provide examples of the more innovative aspects of our work in the sector. We start the section by locating the portfolio within our agriculture and agribusiness strategy.

Strategic focus to transform Africa's agriculture

Our Bank Strategy (2013–22) highlights agriculture as one of three areas of special emphasis for our work in Africa. This reflects the central, cross-cutting role of the agriculture sector in achieving economic growth and reducing poverty across the continent. Additionally, we are working to scale up results in agriculture as part of our High5 priority areas: Light up and Power Africa; Feed Africa; Industrialise Africa; Integrate Africa and; Improve Quality of Life for Africans. Our goal is to transform agriculture in Africa by 2025 and beyond.

As part of our Feed Africa priority, the Bank will work with partners to implement its Agricultural Transformation Agenda, to achieve four ambitious goals: eliminating extreme poverty, eliminating malnutrition, developing Africa as a net food exporter, and moving Africa to the top of global agricultural value chains, where it has a comparative advantage.

Our agriculture operations are increasingly taking a business approach. This reflects the importance of increasing efficiency and productivity across the sector, from input production to the sale of agricultural products to consumers. Our aim is to bring agriculture to the top of Africa's transformation agenda, so that those working in the sector, including producers, processors and traders, achieve greater returns for their labour. Increasing agricultural production leads to improved food security, exports and economic growth.

We focus on measures that prioritise smallholders and industries, create youth employment and empower women. Moreover, we invest to enable both men and women farmers to link into global and regional agricultural value chains and attract private sector investment into farming, small-scale agribusiness and larger scale agro-industries. This will help to expand efficient and competitive agricultural production, to the benefit of both producers and consumers.

Agriculture priorities aligned to the Bank's strengths

The Bank has long been a supporter of African agriculture and rural development. In the 1990s and 2000s, we funded a large number of multi-component rural development projects, which took a long-term approach and emphasised sustainable resource management. Earlier evaluations had demonstrated that some of our previous projects were too narrow in scope and were constrained by a short-term focus, rather than putting an emphasis on impacts and reaching end-users.

When preparing our Agricultural Sector Strategy (2010–14), we drew on the findings of a 2009 evaluation of agriculture operations, which highlighted that the Bank should be selective in its choice of interventions, and more focused on delivering results in its areas of comparative advantage. The evaluation also recommended that

Table 2: AfDB contribution to Africa's agricultural development (Level 2)

This table presents the contribution the Bank is making to development through its operations in agricultural development. The Bank's performance is measured by comparing expected and actual achievements for all operations that have been completed:

- Bank operations achieved 95% or more of their targets
- Bank operations achieved 60–94% of their targets
- Bank operations achieved less than 60% of their targets
- Data are not available to measure progress

INDICATOR	2010–2015		2016–2018	
	Expected	Delivered	Percent	Expected
INCREASING AGRICULTURAL PRODUCTIVITY				
Technology solutions and skills				
● Social facilities established or rehabilitated: rural schools, health centres, etc. (#)	920	830	90%	650
● Rural population trained / recruited / using improved technology (#)	1 737 380	2 933 070	169%	1 274 540
● Total population benefitted from improvements in agriculture (#)	32 859 200	35 971 230	109%	43 289 480
— of which women ¹	16 073 500	17 606 470	110%	22 712 450
● Agricultural inputs provided: fertiliser, seeds, etc. (tonnes)	35 910	54 330	151%	1480
Access to finance				
● Microcredits granted (#)	150 280	150 370	100%	..
● Microfinance clients trained in business management (#)	98040	9360	95%	..
● People benefiting from microfinance and social activities (#)	1950 570	1 949 400	100%	..
— of which women ¹	975 290	974 700	100	..
ESTABLISHING FOOD SECURITY CORRIDORS				
Linking rural farmers to markets				
● Roads constructed, rehabilitated or maintained (km)	10 580	8660	82%	12 680
● Feeder roads constructed or rehabilitated (km)	5870	4240	72%	9490
● People with improved access to transport (#)	9 545 260	10 032 230	105%	..
— of which women ¹	4 092 430	4 341 600	106%	..
Rural marketing and production facilities				
● Rural marketing and production facilities constructed or rehabilitated (#)	20 750	20 230	98%	1750
● Agricultural community-based projects executed (#)	5560	5420	98%	1000
SUSTAINABLE USE OF NATURAL RESOURCES				
Catalytic investment in water management				
● Boreholes and wells drilled/rehabilitated and equipped (#)	3090	2470	80%	2490
● Workers trained in the maintenance of water facilities (#)	1570	1260	80%	..
● Land with improved water management developed or rehabilitated (ha)	191 120	180 880	95%	217 100
● Volume of water mobilised (billions of m ³)	(2012) 8.5	10.1	120%	..
Climate-smart approach to land management				
● Land whose use has been improved: replanted, reforested, landscaped, etc. (ha)	888 500	1 069 030	120%	397 240
● Plants introduced (seedlings, trees, etc.) (#)	22 036 720	64 171 170	291%	86 800
● Community forest plantation created (ha)	(2012) 50 000	47 600	105%	..

.. = data not available; ha=hectares; km=kilometres; #=number; m³=cubic metres

¹ Gender-disaggregated figures are extrapolated from a subset of projects that have available data with baseline and actual data built in. As more projects have started to include gender-informed design, these data are expected to become increasingly robust and complete.

Note: UA figures from material converted at 1 UA= US\$1.46.

Source: African Development Bank

the Bank move away from multi-component projects, tailoring its interventions to specific country contexts, promoting country ownership and working in a more flexible way.

Consequently, the Agricultural Sector Strategy marked a shift in direction for the Bank, with a much clearer focus on increasing productivity, improving local infrastructure and managing natural resources more efficiently. The Strategy had two main pillars: rural infrastructure and natural resources management, with building capacity at all levels as a cross-cutting theme. These priorities were firmly rooted in the African Union’s 2003 Comprehensive African Agriculture Development Programme, and were core to the Bank’s Medium Term Strategy (2008–12). Moreover, investments in these priorities drew on the Bank’s substantial experience and expertise.

In accordance with this Strategy, the Bank worked to build up its partnerships, so that its assistance was complemented by that of other specialised development agencies. For example, the Bank works closely alongside the Food and Agriculture Organisation (FAO), the International Fund for Agriculture Development (IFAD) and other agencies. They offer expertise on particular parts of the agricultural value chain, such as seeds, fertilisers, and research and extension.

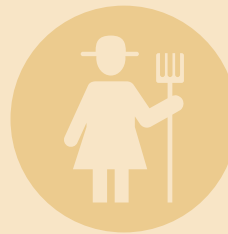
Drawing on our analysis of Africa’s needs and the Bank’s track record in the sector, we are now reorienting our agriculture portfolio towards a new approach, to better support our regional member countries’ ambition to transform their agriculture sectors. While putting a renewed emphasis on addressing gender challenges (see Box 2.1), our new approach represents a paradigm shift away from supporting subsistence agriculture, towards investment in agriculture and agricultural value chains, using a business perspective. Encouraging efficient and profitable economic activity from input producers, farmers, agribusinesses and larger scale agro-industries, while building opportunities for smallholders and local agricultural enterprises to participate, will increase the productivity of agriculture throughout the value chain (see Figure 2.1).

Agricultural achievements for shared growth

Between 2000 and 2015, the Bank provided US\$5.5 billion in agriculture operations to Africa (9% of our lending portfolio), and for 2010–2015 it provided US\$2.3 million. Overall, the share of agriculture in the Bank’s portfolio has decreased over time, reflecting an increase in investments in other sectors. Over 2010–2015, the average size of Bank commitment in the new projects of the Agriculture and Agro-Industry Department was US\$20.2 million. On average, we provided 41% of the total finance for these projects, demonstrating effective partnerships with African governments and other financiers.

Our assistance to rural and agricultural infrastructure has contributed to African governments’ goals by increasing production and trade in a labour-intensive sector, thus promoting inclusive growth. Our infrastructure investments, both in major highways and rural road networks, have enabled better access to markets locally, regionally and globally, helping farmers become more efficient and better able to compete in international markets. A range of local

Box 2.1 Putting women on a level playing field

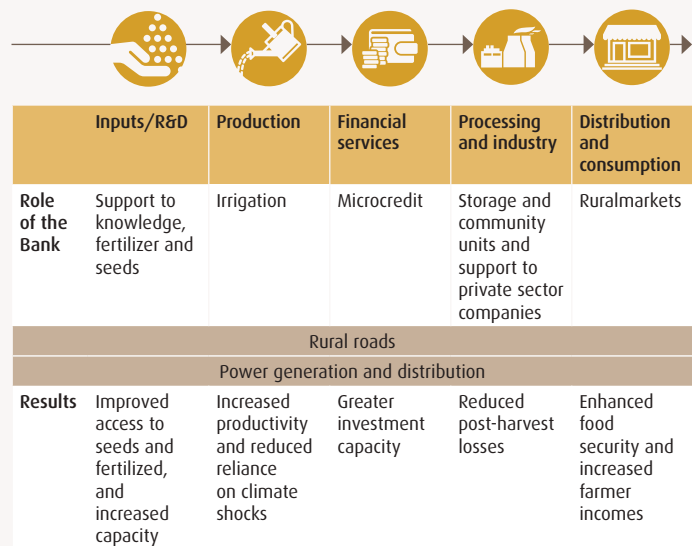


The Bank is mainstreaming gender issues in its projects, as we are determined to ensure that women are able to participate more successfully in agriculture and agribusinesses. A recent Bank report, Economic Empowerment of African Women through Equitable Participation in Agricultural Value

Chains, highlighted that women farmers often lack access to assets, financing and training, and are time-poor because of their domestic responsibilities. Women’s participation in commercial and high-value-added agricultural activities is also limited.

In line with our gender strategy, we will promote the economic empowerment of women through equitable participation throughout agricultural value chains. We will strengthen our efforts to promote security of land tenure for women, both in our operations and through country dialogue on legal reforms. We will also ensure that women have greater access to affordable finance and an integrated package of support to help them develop agribusiness, including through greater access to technology. With more access to agribusiness development services, women farmers will be able to adopt innovative approaches to agribusiness and smarter agricultural practices.

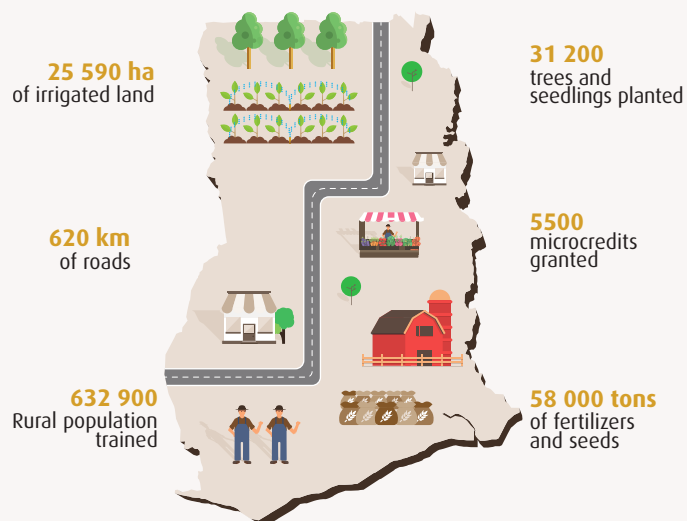
Figure 2.1 Bank’s agriculture investments cut across the entire value chain



Source: AfDB

activities and strengthened services have achieved higher yields and greater productivity, and capacity building has been central to our agriculture projects. We have also invested in developing practices and structures to manage renewable natural resources more sustainably. This diversity in our portfolio is reflected in our results achieved in Ghana (see Figure 2.2).

Figure 2.2 Transforming agriculture in Ghana



Source: AfDB

At times of food crisis, we have acted rapidly and flexibly. When dramatic and unexpected spikes in global food and agricultural commodity prices took place in mid-2008, we made large sums available to help African governments address the resulting crisis in food security. Under our African Food Crisis Response Programme (AFCR), we provided short-term relief using our fast-track procedures, making US\$138.5 million in funding available from other agricultural and non-agricultural projects and providing additional budget support.

At the same time, under the AFCR, we invested heavily to increase resilience to future food shocks. By July 2009, 27 regional member countries had benefitted from the AFCR, and between 2008 and 2011 we approved 35 operations for a total commitment of over US\$1 billion. This helped African governments introduce policy measures to contain food prices and led to better harvests, which have continued to improve in subsequent years. The AFCR proved its value as an instrument and offers a model for rapid actions in the event of any similar crises in the future.

Increasing agricultural productivity

Expanding agricultural production is critical to increasing farm incomes and addressing rural poverty. A key objective of many of our regional member countries is to improve the productivity of agriculture to increase production, raise incomes and achieve food security.

In our agriculture and rural development operations, we have financed a wide range of activities to help smallholder farmers produce more crops. In particular, our projects have directly

improved the quality and availability of inputs to farmers and helped transform farming practices, to improve yields and encourage diversification of outputs.

Access to technology solutions and skills

Our agriculture projects have introduced improved seed varieties, fertilisers and new technologies. Improved seed varieties that are resilient to changing local conditions can transform yields and increase returns to farmers and agricultural workers. Since 2010, we have provided 54 330 tonnes of ● agricultural inputs, including fertiliser and seeds,¹ which was more than 50% above our target. We have introduced farming practices and technologies that preserve the resource base for the future through sustainable use of resources.

In Ghana, high-yielding cashew clonal material and the introduction of more intensive farming methods, through intercropping with high-value food crops, have nearly tripled cashew nut yields and increased rural incomes by 65%. The project created jobs on the land and in processing factories, and promoted sustainability, particularly by restoring forest canopy. In Mali, we provided improved, high-quality seeds and strengthened the capacity of agricultural services to support intensification of farming. We financed certification laboratories, cold chambers and facilities for the production and processing of seeds. In Liberia, we provided electronic registration to 290 thousand farmers and stakeholders along the agriculture value chain. This provided them with an opportunity to receive inputs and certified seeds against an out-of-pocket contribution of 10% of the costs. In addition, we set up an ICT platform for input distribution designed for agro-dealers.

Our investments in research have developed improved seeds and technologies. Under the New Rice for Africa (NERICA) project, we contributed to food security across seven West African countries through the development of more nutritious and high-yielding rice varieties. NERICA farmer groups received production and processing equipment, storage and marketing infrastructure and a mix of improved rice varieties for farmers to test out, so they could achieve the best yield for their local circumstances. NERICA rice varieties mature quickly and cope well with drought and weeds, which are major features of upland rice farming. The project improved food security and reduced poverty for 241 000 mainly subsistence farming households. Four-fifths of the 1320 beneficiary rice farmer groups were women's organisations. The project has received international recognition for its innovative and transformative qualities: it received the 2014 Development Impact Honors from the United States Treasury Department.

Through the ongoing CGIAR's Support to Agricultural Research for the Development of Strategic Crops in Africa, we supported agro-

1 A green bullet indicates that bank operations achieved 95% or more of their targets.

tech laboratories and solutions for four main African food crops: cassava, maize, rice and wheat. By working across the full value chain of each crop, this programme has already led to 143 new technologies and prototype agricultural innovations for crop varieties and management, while over 2500 agricultural options are being promoted for adoption. This is leading to significant improvements in food security and employment.

We also financed livestock projects to improve the quality of stock, breeding technology, stock management and milk processing. In Ethiopia, home to the largest livestock population in Africa, our support to the national livestock programme provided the infrastructure, technology and skills to transform the sector. The project trained 790 artificial insemination technicians and over 65 800 farmers, to ensure lasting impact.

After a major crisis, resuming farming activities is critical for achieving livelihoods and food security, and it often contributes to resettlement and reconciliation. We supported the resettlement of Kenyans who had been displaced during the post-election violence of 2007–2008. We provided them with basic housing and agricultural inputs sufficient to cultivate one acre of land. In DRC, in areas where conflict had destroyed agricultural infrastructure and disrupted government support, we trained over half a million subsistence farmers and provided seeds, fertiliser and other support to help reestablish farms.

Our assistance to horticulture in Ghana was highly innovative, providing new knowledge and technology to dramatically increase the returns to fruit and vegetable producers, up to sevenfold for certain products. Our export marketing and quality awareness project worked with farmers and processors to develop handling, transport and storage facilities for perishable produce for domestic and export markets, aided by a laboratory to test for pesticide residue. In another project in Ghana, we enabled small and medium-sized enterprises to move into higher-value agricultural activities such as fresh juice production, mushroom cultivation, beekeeping and fish farming. Linking farmers to more sophisticated value chains increased the returns to the enterprises by two-thirds. In addition, many enterprises have taken on apprentices, demonstrating the potential for rural enterprises to generate youth employment.

In Swaziland, the population in the Komati valley below Maguga Dam reduced food insecurity by transforming its farmers into commercial entrepreneurs. The project established 27 farmers' institutions that helped achieve an incremental production of 69 thousand tonnes of sucrose, moving away from subsistence to sugar-cane monoculture. This sugar industry experience has shown that expanding and moving up the value chain and diversifying the export market are critical for developing competitive advantages.

As a result of our agriculture projects, almost 3 million more people of the continent's ● **rural population are trained / recruited / using improved technology** — 169% of our target for the period. The ● **total population benefiting from improvements in**

agriculture was nearly 36 million, and another 43 million people will be added to this figure over 2016–2018 as current projects come to fruition. Just over 16 million (49%) of those benefiting from improvements in agriculture were women.

Access to finance

Farmers need timely access to credit to increase their output and improve their yields, because they require finance to purchase seeds, fertiliser and other inputs at the right time in the farming cycle. Formal banking institutions find it costly to deliver loans to smallholders based in rural areas because of low population densities, low loan volumes, poor communications, lack of security and the risks inherent in farming.

Our operations have helped African farmers overcome their limited access to financial services. By providing lines of credit through banking institutions, we are helping banks identify ways to lend to rural clients. In Mali, for example, we provided a line of credit through the National Bank for Agricultural Development, enabling loans to 11 800 village associations and farmer organisations between 2004 and 2008. These loans financed inputs for cotton, cereals, vegetables and livestock.

We have also built national capacity to promote and supervise microfinance institutions, which are specifically geared to providing credit to farmers, small producer associations and small and medium-sized enterprises. In Mozambique, we supported the Central Bank in preparing a legal framework for microfinance institutions and promoted the launch of the rural finance strategy. Over the life of the project, 105 thousand clients benefited from rural financial services.

Building the capacity of local organisations or producer groups helps farmers access credit. In Ethiopia, through our projects, a total of 300 000 Rural Savings and Credit Cooperatives were formed, trained, and developed and were able to draw down a US\$73 million line of credit, which we provided in partnership with IFAD and the Development Bank of Ethiopia. Through this route, credit was extended to 2.3 million households, of which 59% were headed by women.

The Bank has also provided microcredits focused on particular subsectors. For example, to reduce rural poverty in coastal areas in Mozambique, we have supported artisanal fisheries. Our projects directly supported the provision of improved fishing boat and gear technology with methods to make fishing more efficient, and as a result fishermen's incomes doubled over the 11-year period.

Our projects have granted a total of 150 370 ● **microcredits**, which was in line with our target. We include training as a key part of our microfinance schemes, to ensure the finance is put to good use. Between 2010 and 2015, 9360 ● **microfinance clients were trained in business management**, which was very close to our target. Overall, nearly 2 million ● **people benefited from microfinance and related social activities**.

Increasingly, we are providing innovative assistance to the wider agriculture sector to help farmers link to more sophisticated agricultural value chains. Our private sector window provided a US\$13 million loan to agribusiness companies in Gabon, to expand

Box 2.2 Expanding oil palm production in Gabon



Through our private sector window, we provided a US\$13 million loan to support oil palm and rubber production and develop industries that add value to these products. The project established a new organic oil palm estate, replanted other estates and established outgrower schemes. This

approach tripled agricultural exports, supported smallholders, and provided 400 permanent jobs and 4400 seasonal jobs.

The project also created six modern towns with roads, schools, boreholes and electricity for over 900 households. It demonstrates an investment that improves productivity and increases exports whilst improving poor people's lives by providing fair wages and social amenities.

production and add value to the production of oil palm and rubber. This loan, the first non-sovereign loan to the agriculture sector, has successfully increased employment opportunities, achieved greater returns to agriculture and expanded exports (see Box 2.2).

Establishing food security corridors

Because transport infrastructure is essential for trade in agricultural and food products, it is a high priority for ensuring food security. In line with our comparative advantage as a financier of infrastructure, we have been at the forefront of investing in major roads across Africa, to enable increased trade and access to food.

The Bank has supported the construction of regional transport corridors that link urban centres to ports. In addition, it also developed networks of rural roads to link the farmers and rural communities living near these highways, so that they can access markets in urban centres. We have also constructed other agricultural infrastructure, including storage and marketing facilities, which have contributed to greater agricultural output and trade.

Linking rural farmers to markets

Promoting trade and food security by ensuring that major transport corridors are in place has continued to be a high priority for the Bank. These major roads enable farmers and agribusinesses to access larger markets in bigger urban centres in the region and globally, making a substantial contribution to poverty reduction.

For example, over this period we financed 14.1 km of the Nairobi-Thika corridor in Kenya, which has reduced transport congestion and transit costs and times for thousands of commuters. Over 26 000 businesses, of which 50% are informal enterprises, have benefitted. Farm-gate prices for dairy products and horticulture have increased because of improved access to markets, inputs and extension services. The corridor has enabled the development of new food processing activities. Overall, our road projects have resulted in 8660 km of **constructed, rehabilitated or maintained roads**,² which was 82% of our target. We expect to deliver a further 12 680 km in 2016–2018.

To help farmers reach these main roads and markets, we have constructed and rehabilitated 4280 km of **feeder roads**, which was 69% of our target. We learned from these operations the difficulties in identifying reliable and skilled service providers for road maintenance and adapted our approach so that we can build or rehabilitate a further 9490 km in 2016–2018. These all-weather roads reduced transport costs for farmers, who can now acquire inputs more cheaply and receive greater returns on their produce. Higher returns provide incentives and opportunities to increase production, improve yields and invest in storage for harvested crops.

In partnership with IFAD and the Government of Uganda, we supported an innovative, participative project to improve transport infrastructure in 26 districts in Eastern and Central Uganda, rehabilitating 3000 km of all-weather rural roads and community access roads and bridges, alongside other interventions. Marketed produce increased by 7.5%, household incomes rose by 40%, and travel costs were reduced by 63%, whilst people also gained better access to school and health facilities. In Cameroon, we rehabilitated 234 km of unpaved roads, which reduced transport costs by 45% and increased traffic volume by 250%, leading to increased prices to farmers and improved outputs and yields.

Our projects have used participative methods, working closely with local farmers to identify the key constraints to agricultural development and the most effective ways of addressing them. In Nigeria, we worked with cofinanciers in a Nigerian programme to build and rehabilitate feeder and all-weather roads, consulting closely with the wider community of farmers, pastoralists, fishermen and other entrepreneurs to identify the most useful investments. Over 144 000 people benefited from the programme. As a result of our projects, over 10 million **people have improved access to transport**, which exceeded our target.

Rural marketing and production facilities

We recognise the crucial need to improve storage and marketing infrastructure for many agricultural communities across Africa. Post-harvest losses are extremely high for many smallholders; a recent Bank/FAO study concluded that post-harvest losses across the continent in cereal grains, roots and tubers, fruit and

² A yellow bullet indicates that bank operations achieved 60–94% of their targets.

vegetables, meat, milk and fish amount to US\$48 billion each year. In the African Union’s 2014 Malabo Declaration on “Accelerated Agricultural Growth and Transformation”, African leaders pledged to halve post-harvest losses by 2025.

Between 2010 and 2015, we constructed or rehabilitated 20 230 ● **rural marketing and production facilities**, close to our target of 20 750. We provided crop storage facilities for both durable and perishable produce. Our assistance to enable Malawian smallholders to produce more and increase their harvests included building and rehabilitating 24 community storage facilities for farmers to use to preserve their crops. In Guinea-Bissau, where rural infrastructure has deteriorated because of political instability and lack of investment, we financed a project to rehabilitate agriculture, part of which was the construction and rehabilitation of 17 warehouses and 9 cereal banks.

Building up market infrastructure in rural areas has far-reaching effects on farmers’ production and trade, and also benefits consumers. Rural markets become centres for commercial and social interactions, with other enterprises, including agribusinesses, developing where agricultural produce is sold. Farmers gain market information to inform their planting choices and diversify their production to meet demand. For consumers, markets provide enhanced food security and improved product quality. The increased demand for produce in turn leads to more incentives and resources for farmers to reduce post-harvest losses and invest in their farms.

This virtuous circle of increased production, low prices and greater food security was seen in Tanzania, where — in partnership with IFAD, Irish Aid, the Tanzanian government and local communities — we upgraded 24 rural marketplaces and 9 storage facilities, as well as basic facilities in 35 districts. The rural marketplaces were large buildings with storage, hygiene and sanitation facilities. They became growth centres for agricultural trade and other economic activity. This innovative project was scaled up, demonstrating the Bank’s capacity to achieve effective results and replicate successes.

The market centres developed in Malawi are used for both wholesale and retail activities. The markets led to the promotion of maize contract farming to service strategic grain reserves, which are used in times of food scarcity. Commodity exchange markets were also established. In Uganda, fish market stalls were set up as part of a project to fight illegal fishing (see Figure 2.3).

Our projects in the rural sector were participatory, designed in consultation with local communities. Project activities often improved agricultural production and promoted food security through a multidimensional approach. For example, in Guinea-Bissau, besides building warehouses, cereal banks and markets, we undertook a number of other activities, from rehabilitating agricultural tracks and garden wells to improving rice-field lowlands and mangrove areas. Over the period, we delivered 5420 ● **agricultural community-based projects** across the continent, 98% of our target.

Sustainable use of natural resources

While Africa has vast resources of land, water, forests and fisheries, they need to be managed well and sustainably if they are to contribute to food security and poverty reduction. The Bank has been a leader in promoting sustainable natural resource management, the second pillar of its Agricultural Sector Strategy (2010–14).

Figure 2.3 Fighting illegal fishing in Uganda



The Bank provided \$32 million to enable Ugandan farmers, including to fight against illegal fishing and cross-border fish trade that lead to loss in tax revenue.

This project reduced illegal fishing on lakes by 12.5%.

Source: AfDB

We have provided water infrastructure facilities to enable cultivation and have improved water and land management. Our projects have addressed the problems of land degradation and soil fertility that are caused by poor practices and natural desertification. We have also integrated climate adaptation measures in the agriculture sector and have strengthened farmers’ resilience to climate change.

Catalytic investment in water management

Africa has many ecosystems, and we have used various technologies to make water available for cultivation. Farmers need access to water, but they also need to manage it carefully. Our projects have constructed different types of irrigation schemes, which increase crop yields significantly. We have also improved drainage and flood control and assisted on-farm management of water.

Creating secure land tenure is often the key to encouraging farmers to invest in their land — for example, by undertaking new farming practices or irrigation schemes. In Madagascar, for instance, we carried out major rehabilitation works on more than 600 km of canals, providing equipment and a drainage network for a new irrigation system for rice farmers. We also helped to provide 5000 individual land titles to farmers — an important incentive to make good use of the irrigation. The investment was transformational, with the cultivation area expanding fourfold to 5000 hectares and yields increasing from 2.5 to 6 tonnes per hectare, with some farmers producing as much as 8 tonnes per hectare. More than 245 farmers became successful entrepreneurs.

Smallholders who depend on rain-fed farming make up the vast majority of African farmers, and they often suffer from erratic rainfall and droughts. In Mozambique we supported 18 irrigation schemes covering 700 hectares, to reduce poverty by improving production and promoting food security. Working closely with farmers, we provided various irrigation models, including treadle, diesel and electric pumps, and built a diversion weir.

Achieving changes in farming practices requires careful consultation with farmers and investments that are well tailored to local conditions. In Mozambique, intensive support to farmers included conducting information campaigns and training, establishing farmer associations, introducing credit schemes and linking farmers to markets. As a result, farmers adopted new practices to make use of the irrigation scheme, increasing average crop intensity by half. In some cases, farmers were able to double their yields.

Many parts of Africa are prone to seasonal floods from rivers and

then lack of water during the dry season. In Mali, our project invested in different engineering options to increase water storage capacity from flood waters. As a result, 92 000 hectares are now under full water control, with major increases in production and intensification of a wide mix of crops.

Over the whole period, we have developed or rehabilitated 180 900 hectares of ● **land with improved water management**, which was 95% of our target. We expect to develop or rehabilitate another 217 100 hectares over the next three years.

Climate-smart approach to land management

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 for crop production, livestock, aquaculture and fisheries. 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.

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.

We supported forest regeneration and conservation work in forest reserves and revegetated marginal lands, as in the Congo Basin Forest (see Box 2.3). We developed buffer plantations around existing natural forests and supported agro-forestry activities that reduce poverty. In all, our projects introduced over 64 million ● **plants (seedlings, trees, etc.)**, which was nearly three times our target, and led to more than 1 million hectares of ● **improved land**, which was replanted, reforested or landscaped. We also helped create 47 600 hectares of ● **community forest plantation**.

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 62 730 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.

Conclusion

Since its establishment, the AfDB has made a substantial contribution to Africa's agricultural development. By creating agricultural infrastructure and feeder roads, supporting the uptake

Box 2.3 Protecting the Congo basin forest through partnerships



The Congo Basin Forest Partnership was set up in 2008 to alleviate poverty and limit the effects of climate change by reducing the rate of deforestation and forest degradation in the Congo Basin. The Partnership aims at promoting the equitable and sustainable use, conservation and management of

the Congo Basin's forests and ecosystems. Initial participants included the AfDB, the Central Africa Forests Commission and the United Kingdom. The Congo Basin Forest Fund is an innovative funding mechanism, mobilising resources from the UK and Norway. It finances projects in 10 Central African countries that are committed to reducing emissions from forested lands, in line with the United Nations Reduction of Emissions, Deforestation and Degradation programme (REDD+).

The projects in the Congo Basin have three specific aims: (i) increase technical capacity to manage multiple forest landscapes, (ii) improve forest governance to promote more equitable sharing of benefits among forest stakeholders, including women and ethnic minorities, and (iii) increase institutional capacity to implement sustainable forest management and REDD+.

In 2013, the Fund disbursed US\$13 million to 21 projects. Project results exceeded the targets for the year, with the production of 3.4 million forest and agroforestry saplings, the planting of 16 500 hectares and the involvement of over 48 000 people in the production or processing of non-timber forest products. Another 88 000 people benefitted from project activities, which included the construction of semi-durable bridges and a feeder road, the distribution of land for agroforestry plantations, and the provision of scholarships relating to climate change and forestry.

of improved inputs and new technologies and making farming more climate-resilient, our assistance has changed the lives and prospects of many smallholder producers.

Among our success stories in recent years are better food security and nutrition for many countries under our African Food Crisis Response Programme; higher yields and incomes to farmers across Africa through improved irrigation, inputs and climate-smart farming practices; and the development of agribusinesses for farming, livestock and fishing.

We have learned lessons from our work. Our Agriculture Sector Strategy focused our operations more, in line with our experience and our strengths as a multilateral development bank. We are now moving to a more business-oriented approach, which will expand our engagement with the wider agriculture sector and focus on linking producers to local, regional and global agricultural value chains.

The next chapter looks at the management tools we use to ensure that our portfolio is effective and to track our results. ■



Scaling-up agri-businesses

Agribusinesses enhance food supply and support job creation. Morocco's Savat company secured loans critical to buy land and increase exports through the country's Central Guarantee Fund supported by the Bank.

Level 3: Effectiveness in managing our agriculture portfolio

This section reviews how well the Bank manages its agriculture projects. Using 18 indicators in the third level of our Bank Results Measurement Framework, we check whether our projects have been well designed and whether they comply with our social and environmental safeguards and our gender mainstreaming emphasis. We monitor how closely our projects are supervised, and we track disbursement rates so that we can address any problems quickly. In addition, we assess how well we work with our country partners to implement agriculture projects and achieve high-quality results, asking how far we use their systems and how effectively we engage both at national and local levels. We also take stock of whether we have captured lessons learned that we can feed into future operations.

Designing quality projects

We use our quality-at-entry tool to ensure high-quality project design across the Bank's portfolio, including for our agriculture projects. Assessing quality-at-entry ensures that the design of an intervention is technically sound and meets the recipient's development needs — a critical step, since poor design is hard to correct once a project is under way. This is particularly important in agriculture projects, since many local stakeholders are involved in project implementation.

Readiness reviews are used to check that the Bank's standards have been met in project concept notes and appraisal reports, highlighting whether a project design is ready for approval and implementation. Since 2010, the proportion of **new agricultural operations given a satisfactory rating**¹ increased from 94% to 97%, which meets our stretch target. We have also refined our quality standards for both our operations and country strategies and have established a year-long training programme, from October 2015, for Bank staff to update and refresh their skills in all aspects of project design and management.

To design evidence-based projects, we draw as far as possible on national data to identify areas for our investment and provide baselines against which project results can be monitored. In Nigeria, the largest agriculture project in our current portfolio drew heavily on national data and uses the country's own indicators. This encourages ownership of our assistance during the early stages, and also promotes national accountability for delivering successful outcomes.

Ensuring timely project readiness

We continually aim to improve the way we prepare our agriculture projects. One key measure of our efficiency is the time we take to design, approve and start to implement projects. When identifying and preparing a project, we must ensure that it is fully aligned with our strategic priorities and those of the regional member country, provides the best design to address the identified needs, and will achieve sustainable results. The preparation process must comply with our exacting quality standards. We have set targets to increase the timeliness of these preparations and, since 2010, we have reduced our **time for approving operations from 9 to 6 months**, which met our target for improvement (see Table 3).

Figure 3.1 Ensuring timely project readiness



Ensuring timely disbursement after project approval often requires targeted efforts by our teams and by our partners. It may involve speeding up legal processes on both sides and building

¹ A green bullet indicates that good progress has been made and we are on track to meet our target.

Table 3: How effective is AfDB in managing its agriculture initiatives (Level 3)

This table presents the Bank's progress in achieving its 2015 targets for portfolio management.

- Good progress has been made and we are on track to meet our target
- Little progress has been made and we are at risk of not achieving our target
- No progress has been made or we have moved even further away from our target
- Data are not available to measure performance.

INDICATOR	AGRICULTURE DEPARTMENT OPERATIONS			ADF COUNTRIES	
	Baseline 2010	Latest 2015	Target 2015	Baseline 2010	Latest 2015
DESIGNING QUALITY PROJECTS					
Ensuring timely project readiness					
● Time to first disbursement (months)	12	11	11	12	11
● New operations rated satisfactory (%)	94	97	97	94	97
● Time for approving operations (months)	9	6	6	9	6
Applying safeguards and mainstreaming gender					
● Projects with satisfactory gender-equality outcomes (%)	65	75	75	65	72
● New projects with gender-informed design (%)	77	87	87	73	85
● New projects with climate-informed design (%)	63	89	90	63	90
EFFECTIVE DELIVERY OF AGRICULTURE SUPPORT					
Engaging countries for greater performance					
● Predictable disbursements (%)	70	76	78	70	74
● Use of country systems (%)	56	57	60	56	60
● Disbursement ratio of ongoing portfolio (%)	20	24	24	15	19
● Time for procurement of goods and works (months)	6	7	7	6	7
● Operations with satisfactory mitigation measures (%)	55	62	65	45	55
● Operations no longer at risk (%)	19	25	20	18	28
● Operations at risk (%)	19	16	16	21	18
● Operations eligible for cancellation (%)	9	7	6	9	7
Informing agricultural choices through knowledge activities					
● New ESW and related papers (#)	3	5	5
● Completed operations rated satisfactory (%)	73	76	78	65	75
● Completed operations with sustainable outcomes (%)	79	82	85	72	74
● Completed operations with a timely PCR (%)	89	95	95	85	89

ADF = African Development Fund; ESW = economic and sector work; PCR = Project Completion Report; ... = Data not available

Source: African Development Bank

procurement and financial capacity in regional member countries. We also give careful consideration to loan conditions, becoming more selective and focused to increase efficiency. Over the period, we achieved our target, reducing the ● time to first disbursement from 12 to 11 months. Improving management efficiency in this way allows us to transfer Bank resources more quickly, deliver development results sooner and achieve higher value for money.

To achieve our targets and to make further improvements, it is important that we assign staff with the right skills to each project. For designing and supervising agriculture projects, we have found

that we deliver more effective and efficient projects if we have a broad mix of skills working together in the project team.

Applying safeguards and mainstreaming gender

Our operational policies and guidelines have served Bank clients well over previous decades, even as African economies and capabilities have also developed significantly. However, the context facing African countries has changed, with new global challenges and opportunities. To deliver our Bank Strategy (2013–22) in this changing environment, we revised and strengthened our operational policies to ensure that we can better deliver on our

goals of inclusive and green growth. Each of our agriculture sector projects needs to address the changing context, as well as being economically, financially, environmentally and socially sound. Rigorous attention to our policies and standards during preparation helps us achieve higher development impact from our agriculture portfolio.

In particular, our new Integrated Safeguards System ensures that we assess environmental and social impacts during project design. This involves identifying possible risks associated with our investments and putting in place measures to avoid or mitigate them. We have improved the proportion of our agriculture **● operations with satisfactory mitigation measures** from 55% in 2010 to 62%, which meets our target and exceeds the average figure across all Bank operations.

Our safeguard policies also encourage stakeholders to participate at an early stage of project preparation, which improves design and increases ownership. We have an Independent Review Mechanism, which individuals and communities can turn to if they believe a Bank project will harm their interests. For example, in the Marrakesh-Agadir Motorway investment in Morocco, a request under the Mechanism led to additional civil works and improvements to mitigate the risk of flood damage and limit the impact of the works on access to communal lands.

Given the growing impact of climate change, we check how far the design of each agriculture project strengthens climate resilience and addresses climate change impacts. We have made important progress, with 89% of **● new agriculture projects having climate-informed design**, compared to just 63% in 2010.

Integrating gender equality into the design of all our agriculture projects — and encouraging our regional member countries to do the same — is one of our key objectives. **● Projects with satisfactory gender-equality outcomes** increased from 65% to 75% over the period. Because we recognise the importance of the economic empowerment of women for Africa's development, our revised safeguard policies and guidelines ensure that project designs are explicit about the role of and benefits for women in our operations. We are making good progress in this direction: 87% of **● new projects have gender-informed design**, compared to 77% in 2010.

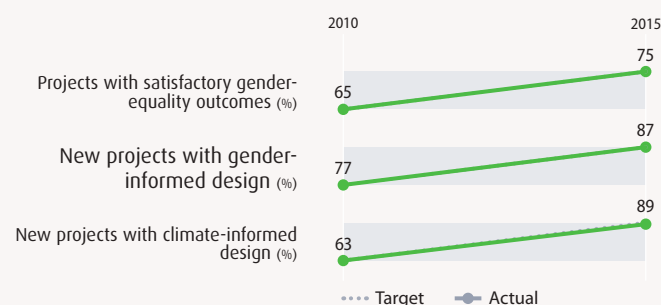
Effective delivery of support to agriculture

At the end of 2015, our agriculture portfolio consisted of 108 operations with a combined value of US\$2.78 billion — 8% of the value of the Bank's total active operations. The average size of our agriculture sector investments was just over US\$18 million, which is smaller than the average Bank project at US\$29 million.

Overall, our agriculture project performance is satisfactory, although we constantly seek to make improvements. We are working to prioritise our interventions more carefully and ensure they will

have maximum development impact. We also set stretch targets to improve our effectiveness, using a number of management tools to improve portfolio performance. We have established a new Bankwide unit, the Delivery and Performance Management Office, in part to strengthen our supervision of agriculture projects. By tracking project performance during implementation, we can act quickly to address any problems.

Figure 3.2 Applying safeguards and mainstreaming gender



In this way, we continue to become a more effective partner to regional member countries, improving both the selection and delivery of our agricultural projects. We are working more closely with implementing agencies, and we seek to provide project and financial information in ways that enhance ownership by our clients and enable more effective partnerships.

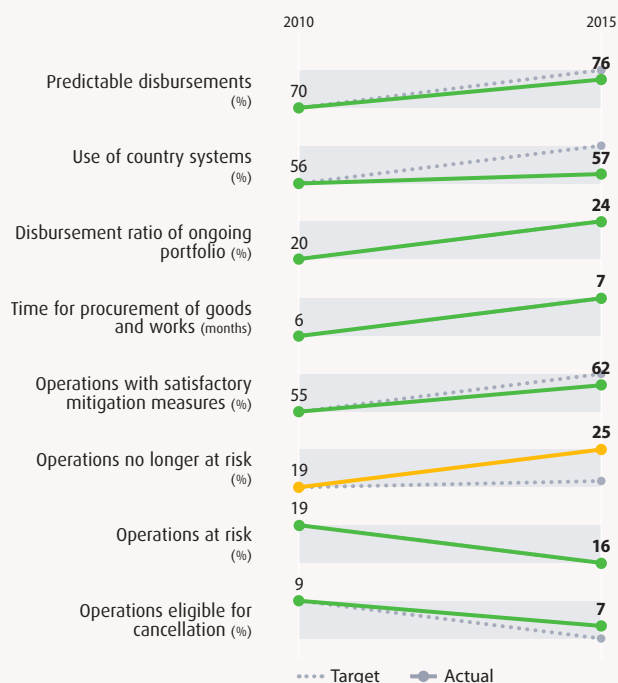
Engaging countries for greater performance

Our disbursement record for agriculture projects has improved. The **● disbursement ratio of our ongoing portfolio** reached our target of 24%, which is higher than for the Bank's overall portfolio and shows that agriculture sector projects are moving forward as planned. This reflects efficient implementation that is due in large part to good partnerships at country level.

In addition, we work toward predictable and reliable disbursement of our agriculture projects. Over 2010–2015, the proportion of **● predictable disbursements** increased from 70% to 76%, which was very close to our target. Increasing our **● use of country systems** to deliver projects and strengthening local financial and procurement capacity in regional member countries contribute to better resource allocation. These measures are in line with our commitments to the global aid effectiveness agenda, initiated in the 2005 Paris Declaration and taken forward most recently at Busan.

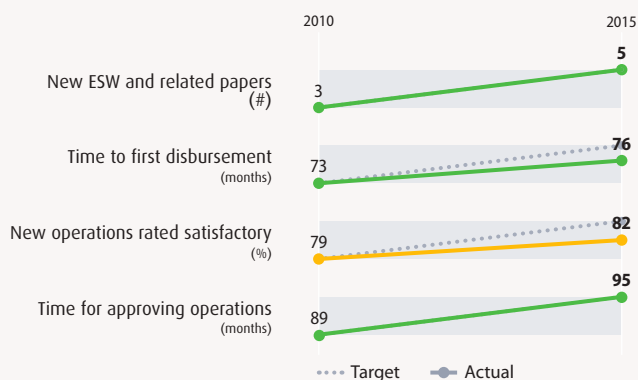
One key measure of efficiency is the average **● time for procurement of goods and works**. This was on target at 7 months, though slower than the 6 months we achieved in 2010. We have worked closely with local implementers in managing procurement processes, and many of our offices now have a procurement specialist supporting improved efficiency and quality in fiduciary and procurement processes.

Figure 3.3 Engaging countries for greater performance



We also focused on “cleaning up” the agriculture portfolio to reduce the number of non-performing projects. Of the projects previously identified as problematic, either because implementation was not progressing or the project seemed unlikely to achieve its objectives, 25% are **no longer at risk**² (see Figure 3.3). Indeed, the proportion of agriculture **projects at risk** has now decreased to 16%, which met our target. Fewer of our projects are

Figure 3.4 Informing agricultural choices through knowledge activities



² A yellow bullet indicates little progress has been made and we are at risk of not achieving our target.

eligible for cancellation, with an improvement from 9% to 7%. Our proactive approach to redesigning or cancelling projects frees up financial and staff resources for other interventions, helping us to achieve greater overall development impact.

Informing agricultural choices through knowledge activities

An important part of our work is developing high-quality knowledge products that help our partner countries strengthen their agriculture strategies. As a development bank, we are able to provide a range of knowledge activities to increase understanding about policy and practice, enabling policymakers and practitioners to make informed choices.

Over the period, we have met our target of delivering four **new economic and social work and related papers** on such topics as agricultural biotechnologies and better natural resource management.

In addition to preparing documents and policy notes, we also finance workshops and conferences on particular themes. For example, in October 2015, the Bank organised the Dakar High-Level Conference on Agricultural Transformation. The conference, titled “Feeding Africa”, examined ways to transform African agriculture, learning from successes across the continent and particularly focusing on linking farmers into agricultural value chains and investing in agribusiness. The Dakar conference produced an action plan, informed the preparation of the Agricultural Transformation Agenda to be implemented over the next ten years.

We also promote knowledge sharing and best practice through our support to multi-stakeholder knowledge platforms, which engage large numbers of people and organisations. These include TerrAfrica on sustainable land management, the Climate for Africa’s Development Programme, the Alliance for a Green Revolution in Africa, and the Land Policy Initiative Consortium.

We place considerable emphasis on learning from our own agriculture projects. Project Completion Reports (PCRs) are a valuable tool through which we can capture experiences and lessons to inform new programming. We seek to complete PCRs promptly, so that lessons can be learned quickly and we can maximise the impact of our resources. Of agriculture projects closed in 2014, **a timely PCR** was produced for 95%, which met our target. In the PCRs 76% of **completed operations were rated satisfactory**, which was an increase from 2010 but lower than our target of 78%. Eighty-two percent of our **completed operations had sustainable outcomes**,² also an improvement but short of our target of 85%.

Conclusion

Our agriculture portfolio is in robust shape. Our indicators of management efficiency show that good progress is being made across the board. Our efforts to ensure high-quality design are paying off, with the rigorous application of our quality-at-entry tool and the use of our comprehensive Integrated Safeguards System to ensure that we meet demanding environmental and social standards. With our increased emphasis on integrating gender and climate resilience into our projects, these cross-cutting issues are becoming increasingly mainstreamed across our agriculture portfolio.

Our efforts to engage country partners more closely in the development and delivery of our projects are leading to more efficient implementation and better project performance. We provide knowledge and advice to our clients through our economic and social work, including workshops and conferences. We will continue to work on all these fronts to achieve continuing improvement over the coming years.

To further improve its effectiveness, we are streamlining business processes to fast-track disbursements while promoting efficiency. This work is conducted in line with the Bank's new business development and delivery model to improve our ability to scale up work in the five priority areas of its Ten-Year Strategy. It also builds on the Bank's second Presidential Directive issued in 2015 that concerns the design, implementation and cancellation of public sector operations. This Directive aims to strengthen the design and implementation of Bank projects, including through reducing the time for project approval, and ensuring timely execution and pro-active management of operations. Presidential Directive that aims to strengthen the implementation and design of Bank projects, including through reducing the time for project approval, and ensuring timely execution and pro-active management of operations. This redesign of the operating model is aimed at improving proximity to clients, becoming more cost-efficient, increasing revenue and accelerating development impact on the ground. ■



Boosting employment with support to poultry

Making agriculture a business spurs job creation, particularly for the youth. By developing its poultry industry, Côte d'Ivoire expanded its workforce, lifted consumption and contributed to reconciliation efforts after the war.

Level 4: Efficiency in supporting agriculture operations

Level 4 of our Development Effectiveness Review assesses how well we manage our own organisation to deliver high-quality agriculture projects. We use 15 indicators to track our performance. We check our cost-efficiency in preparing, supervising and implementing projects to determine whether we are achieving value for money. We also assess how well we are deploying and managing our staff to deliver agriculture projects. In particular, we look at progress in decentralising agriculture project management and specialised technical and business staff to our country offices.

A dynamic organisation providing the right mix of instruments

The Bank is well equipped to deliver our agricultural project assistance and professional advice to African governments. We structured and staffed our Agriculture and Agro-Industry Department (OSAN) to deliver against our 2010–2014 agriculture sector strategy. OSAN has responsibility for all our agriculture projects as well as a continent-wide remit for natural resource governance, including for water, land, soil, forests and fisheries. It also leads on the Bank's response to climate change.

OSAN takes responsibility for special initiatives and multilateral and bilateral trust funds for agriculture and natural resources. It manages the Agricultural Fast Track Fund, which provides grants for initial project development costs, and the ClimDev Special Fund, which finances investment activities that generate and use climate information for climate-resilient development. OSAN also hosts the Congo Basin Forest Fund, which builds capacity to preserve and manage forests, and the Africa Fertiliser Financing Mechanism, which promotes access to affordable fertiliser.

As we are scaling up our effort to transform agriculture in Africa, we are reorganising ourselves to deliver on our High5 priorities. A new business model of the Bank has been approved by the Board of Directors in 2016. The Bank has established a new Vice Presidency for Agriculture, Human and Social Development, as part of which two departments will take forward the Bank's overall commitment in the sector. These will focus respectively on agriculture & agro-industry, and agricultural finance & rural development.

Greater business efficiency through value for money

We continually seek to improve the value for money of all our agriculture operations. A key aspect of this is to keep the costs of project design and supervision under constant scrutiny, to ensure they are at levels appropriate to delivering a high-quality agriculture portfolio.

Figure 4.1 Greater business efficiency through value for money



This is achieved through delivering greater cost-efficiency. Our **administrative cost per UA 1 million disbursed**¹ in the sector has increased to UA 58.5. Even in the context of the return to the Bank's Abidjan headquarters, our **work environment cost per seat** decreased from UA 5100 to UA 3700, against our target of UA 3400.

Our **cost of preparing a lending project**, increased slightly from UA 155 500 to UA 160 400, and we are still some way from our target of UA 100 000.

Twice-yearly supervision missions monitor that a project is being implemented with due diligence according to its objectives. The

¹ A yellow bullet indicates a little progress has been made and we are at risk of not achieving our target.

Table 4: How efficient is the Bank in supporting its agriculture operations? (Level 4)

This table presents the Bank's progress in achieving its 2015 targets for organisational performance.

- Good progress has been made and we are on track to meet our target
- Little progress has been made and we are at risk of not achieving our target
- No progress has been made or we have moved even further away from our target
- Data are not available to measure performance.

INDICATOR	BASELINE 2010	LATEST 2015	TARGETS 2015
A DYNAMIC ORGANISATION PROVIDING THE RIGHT MIX OF INSTRUMENTS			
Greater business efficiency through value for money			
● Administrative costs per UA 1 million disbursed (UA '000)	37	58.5	..
● Cost of preparing a lending project (UA '000) ^a	155.5	160.4	..
● Cost of supporting project implementation (UA '000) ^a	14.13	25.56	..
● Work environment cost per seat (UA '000)	5.1	3.7	..
● Share of users satisfied with IT service delivery (%)	96	95	>97
● Number of projects per task manager	3	2	2
MANAGING OUR STAFF TO DELIVER QUALITY AGRICULTURAL SUPPORT			
A skills mix adapted to the needs of a complex sector			
● Employee engagement index (%)	(2013) 64	(2015) 72	71
● Leadership index (%)	(2013) 33	(2015) 40	34.6
● Operations professional staff (%)	65	80	80
● Share of women in professional staff (%)	25	28	40
● Share of management staff who are women (%)	22	28	30
● Time to recruit new staff (days)	174	150	160
Bringing staff closer to clients			
● Operational staff based in field offices (%)	30	40	45
● Projects managed from field offices (%)	40	70	65
● Connecting to field offices (% successful videoconferences)	90	95	95

.. = Data not available; UA = Units of Account.

^a Both the cost for project preparation and the cost for project implementation are still based on estimates

Source: African Development Bank

missions determine whether any problems have arisen, recommend any changes, consider risks and risk management strategies, and at the end of the project prepare the Project Completion Report. Our total ● **costs of supporting project implementation**² have increased from UA 14 100 per project to UA 25 600 over the period.

We aim to ensure that project management staff manage an appropriate number of projects, to maintain quality engagement. The ● **number of projects per task manager** has decreased

from 3 to 2, in line with our target (see Figure 4.1). Our use of technology both reduces costs and improves collaboration, particularly among those in different locations, and we continue to have near 100% of ● **users satisfied with IT services**.

Leveraging Bank instruments to deliver our agriculture agenda

Our support to the agriculture sector increasingly requires us to use a mix of financial instruments. To deliver projects

² A green bullet indicates a good progress has been made and we are on track to meet our target.

that provide widespread higher returns to agriculture and agribusiness, encourage higher yields and production, and/or address key constraints across the agricultural supply chain, we must carefully select the most appropriate financing mechanisms.

We draw from our wide range of financial instruments — project loans, grants, lines of credit, equity participation, guarantees, and programme-based operations. To achieve our strategic objectives, we work to attract additional resources into the agriculture sector, particularly from the private sector. To expand private sector activity across the sector, we use financial instruments that can reduce the risks perceived by private sector investors.

This in turn calls for close collaboration between our public- and private-sector teams, so as to pool knowledge, expertise and resources from initial project concept through the whole project cycle. Already we are delivering joint business planning, which provides the framework for working together on agriculture operations, in line with our One Bank approach.

Managing our staff to deliver quality agricultural support

As a development bank, we provide knowledge and expertise along with our financial assistance. Our support to the agriculture sector requires staff who are skilled, productive and motivated. Thus we strive to recruit and retain people of the highest calibre and ensure that they continue to develop their skills and expertise. In addition, we must offer them rewarding career paths and both financial and professional incentives, to encourage retention and ensure that they perform at their best.

To strengthen the Bank's position as the employer of choice in Africa for those working on African growth and development, we are pressing ahead with implementing our People Strategy (2013–17). This strategy focuses on strengthening leadership, improving employee engagement and communications, enhancing performance and accountability and creating the “workforce of the future”. We undertake regular staff surveys to measure our progress and make any adjustments needed.

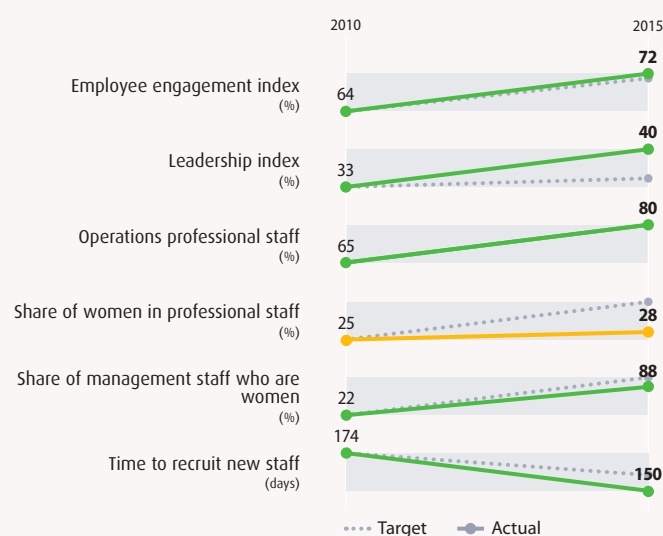
The feedback from 2015 survey respondents indicates that we are making strong progress. For agriculture staff, the ● **employee engagement index** improved from 64% in 2013 to 72%, above our target of 71%. This index measures the views of staff about the AfDB as an employer — whether they are treated appropriately and are motivated to continue working for the Bank. In addition, our ● **leadership index** has increased from 33% in 2013 to 40%, exceeding our target of 34.5%.

We have streamlined our recruiting processes, so that they are more efficient. We reduced the ● **time taken to recruit new staff** from 174 to 150 days, which was better than our target of 160 days.

A skills mix adapted to the needs of a complex sector

We have looked closely at the skills we need to implement our agriculture strategy, as we focus more on agribusiness and take a more business-oriented approach to agricultural supply chains. We require in-depth, technical understanding of the agriculture, forestry and fisheries sectors, along with the private-sector expertise to facilitate business development across the sector, including dealing with legislative and supply chain issues.

Figure 4.2 A skills mix adapted to the needs of a complex sector



With sustainability also a key priority, we need specialists in environment, resource efficiency and climate change. This expertise is particularly important as we promote crop intensification to increase agricultural production and yields. We have also recently recruited staff with expertise in agribusiness, youth and nutrition, since these three areas are all critical to our future assistance to the agriculture sector.

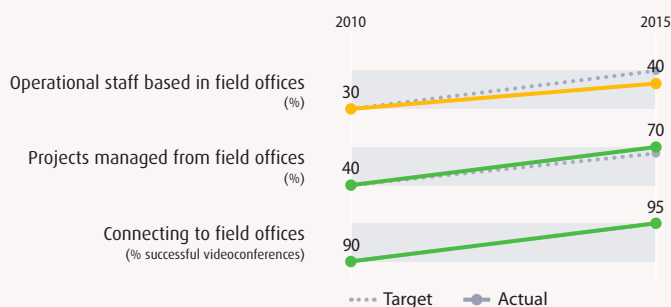
Since 2010, we have increased the proportion of ● **operations professional staff** from 64% to 80%, exceeding our target of 75%. The ● **share of women in our professional staff** increased from 25% to 28%, but is still short of our target of 30%. The ● **share of management staff who are women** was on target, increasing from 22% to 28%. In line with our Gender Strategy, we will continue to give special attention to staffing and diversity to ensure that both women and men have equal access to available positions, including senior appointments.

Bringing staff closer to clients

In line with our Bankwide Decentralisation Roadmap, which is decentralising staff and functions to our 34 field offices, we are transferring portfolio management and agricultural specialists to our country offices. This helps meet our regional member countries' demand for closer engagement. For our agriculture

projects, our presence in country is helping us build stronger working relationships with our clients and keep close to our rural projects. This facilitates joint supervision of projects and helps us deliver more effective and responsive service to our clients.

Figure 4.3 Bringing staff closer to clients



The percentage of agriculture **● projects managed from field offices** has increased from 40% in 2010 to 70%, which is major progress and well ahead of our target of 65%. We now also have 40% of our agricultural **● operational staff based in field offices**, compared to 30% in 2010, although this is still below our target of 45%.

Our decisions about allocating agriculture staff to field offices are based on the individual country portfolios. Our Mali office, for example, now has three professional staff, bringing skills in agronomy, rural civil engineering and agricultural economics, reflecting the needs of our agriculture projects. Our Abuja and Nairobi offices each have two agriculture professionals.

With our specialists in different locations, we take special care to create systems to share knowledge and lessons from our projects across the agricultural professional cadre and with our headquarters. We use a range of methods to promote knowledge management, including extensive use of communication technologies, in particular regular videoconferencing. **● Connecting to field offices** is increasingly straightforward: 95% of videoconferences take place without any technical problems.

Conclusion

Overall, the Bank is becoming increasingly effective at supporting African agriculture. We have become more cost-efficient in our business practices, which helps achieve better value for money. Importantly, there is increased collaboration between our public- and private-sector teams. This enables us to implement our new business-oriented approach across the agriculture sector, drawing on a wide range of financial instruments. The Bank will keep building on these improvements to further reduce the costs of preparing a lending project and supporting its implementation.

We are likewise making good progress in staff recruitment, management and development in line with our People Strategy, and we are developing a high-quality cadre of staff with the diverse skills needed for our agriculture projects. We are decentralising staff to country offices to achieve the right fit between the skills profile and our agriculture portfolio in each country. In addition, we are active in facilitating the exchange of good practice and lessons among our agriculture specialists, which is particularly important as we take forward our more private-sector-oriented approach to developing African agriculture. ■



Building rural roads to increase access to markets

Smallholder farmers frequently lose their harvests by reaching markets too late. In Côte d'Ivoire, the Bank supported the development of feeder roads in the Indénié-Djuablin area, reducing transportation costs and increasing farmers' incomes.

Conclusion and outlook

Agriculture is the main driver of inclusive growth across Africa. Whilst Africa's high economic growth rates over the last decade have been unprecedented, the rural population has been left behind. Crop yields are low relative to yields in comparable regions of the world. Achieving higher agricultural productivity and output in a sustainable way will directly address rural poverty by improving the returns to farmers, creating jobs and encouraging investment in the sector. At the same time, expanded food production is needed to improve food security and nutrition, particularly in the face of increased demand caused by urbanisation and population growth. Creating a dynamic agriculture sector across Africa is the key to generating inclusive economic growth and lifting more Africans out of poverty.

African agriculture is now high on the political agenda. In 2014 African leaders confirmed their commitment to the sector, with pledges of increased public spending. Both public and private investment is needed throughout the sector, to expand infrastructure and markets and improve agricultural inputs, systems and technologies. Developing agro-industries, from smallholder agribusiness to large-scale industry, and connecting farmers to regional and global agricultural value chains, will revitalise and develop the sector. Strengthening climate resilience and natural resources management is also essential, to protect farmers living on marginal lands and contribute to Africa's climate and sustainability commitments.

Our Agricultural Sector Strategy (2010–2014) set out the framework for the AfDB's contribution to these goals. Under that strategy, we have helped to raise production levels and increase food security through our investments in transport corridors, feeder roads and local agricultural infrastructure. We have helped farmers directly by providing inputs such as seeds and fertiliser, introducing new technologies for land and water use, and strengthening the delivery of credit and other services. Our agribusiness and natural resource management projects have produced a range of tangible results. Throughout all our work, institutional capacity building and training have been central to our achievements.

We have been rapid and flexible in responding to food crises, including those resulting from volatile global commodity markets. Besides providing short-term relief through fast-tracked procedures and redirecting our finance towards those affected by crises, we have invested heavily against future food shocks, which has helped contain food prices and led to better harvests and enhanced food security. Nonetheless, we recognise that much more needs to be done.

Looking forward, the AfDB aims to bring Africa's transformational agenda into the agriculture sector. This is one of the High5 priorities set by the Bank's President to deliver real changes in the lives and livelihoods of Africans by 2025. Our "Feed Africa" priority builds on the October 2015 "Feeding Africa" conference in Dakar, which led to an 18-point action plan to accelerate investment in agribusiness, including establishing a new facility at the Bank to provide funding and

guarantees to African women in agribusiness and projects addressing youth unemployment. Other action points vital to Africa's agricultural transformation which were identified during this conference and are now part of the Feed Africa strategy included the need to accelerate the deployment of financing, as well as to scale-up the number of agricultural commodity exchanges and production of African fertilizers.

Our Agriculture Transformation Agenda is ambitious and inclusive, covering all agro-regions in Africa. It will particularly support women farmers, youth, and marginalised groups, and will account for potential risks due to climate change. It seeks to address four overarching goals over the next 10 years: eradicating extreme poverty, eliminating hunger, turning the continent into a net food exporter, and moving Africa to the top of global agricultural value chains, where it has a comparative advantage. We will achieve these goals through implementing our new blueprint for the sector: the 2016-2025 Strategy for Agricultural Transformation in Africa.

The Agriculture Transformation Agenda will work in combination with the other High5s: Light up and Power Africa, Integrate Africa, Industrialise Africa, and Improve the Quality of Life of Africans. Agriculture will interact with, be supported by, and amplify the impact of the other High5s. Combined, the five Bank priority areas have the potential to lead to complete continental transformation by 2025.

Our Feed Africa agenda focuses on promoting agricultural value chains, along areas which are key to the continent's transformation, including: rice self-sufficiency, cassava intensification, food security in the Sahel,

revitalisation of tree plantation and promoting horticulture. Bank's operations will target select enablers to achieve results. Increased productivity, value addition, nutrition and agricultural finance are among those enablers. The Bank will invest \$2.4 billion annually to contribute to this agenda until 2025 and work with partners to leverage financing.

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

In particular, we will link farmers and agribusinesses more closely to local, regional and global agricultural value chains, to ensure they have reliable and expanded markets for their produce. We will focus on expanding smallholder agribusiness and larger scale agro-industry, creating vertically integrated value chains to increase outputs and create jobs. Our close engagement with the private sector will encourage increased investment, including private equity, in the sector. In addition, we plan to establish regional commodity exchange platforms, building on the lessons learned from Ethiopia. Farmers, small agribusinesses and large-scale private sector agro-industries will all benefit from greater access to markets through reduced local, regional and global barriers to trade. For young people, these approaches will create a wide range of employment opportunities, both in farming and in associated businesses. Our support to agriculture will attract young people to work in the sector, including those who will bring the entrepreneurial skills and innovation that are needed. We will also tackle the systematic obstacles facing women, which constrain their ability to farm at a larger scale and create successful businesses in the sector. In particular, we will ensure that women are increasingly empowered to own and control land and to access credit and other services, so that they can become successful farmers and agricultural entrepreneurs.

With this Agricultural Transformation Agenda, the Bank aims for the continent to become a net exporter of agricultural commodities, representing the substitution of \$110 billion worth of imports. Undernourishment will be part of the past: 320 million additional people will enjoy access to adequate calories and nutrients. 130 million people, or a quarter of the people currently living below the poverty line, will be lifted out of poverty. Finally, in pursuit of increased value addition, Africa will double its share of market value for select processed commodities.

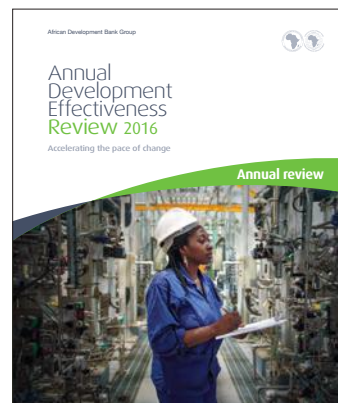
We will build on our considerable experience in renewable natural resource management. Given the major losses occurring to Africa's ecosystems, forests, fisheries, and soil and water resources, which are being compounded by climate change, the sustainable use and management of the continent's natural resources is critical for current and future generations. All our projects will be climate-smart, improving the resilience of the sector by introducing new technologies and approaches, stronger institutions, conducive policies and appropriate financing mechanisms.

In managing our assistance to agriculture, we will constantly work to raise the quality of our design and supervision of projects, meet rigorous social and environmental standards and engage closely with our partners to ensure that projects meet priority needs and perform well. This review demonstrates that our agricultural portfolio is in robust shape. As we take our new approaches forward, we will continue to put emphasis on learning lessons from our projects and experience across the sector, so we can deliver effective development results.

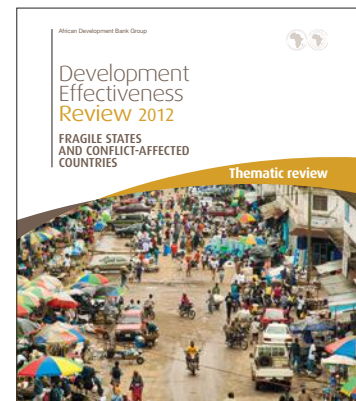
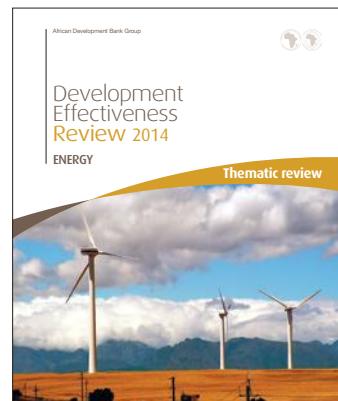
In this way, the AfDB will assist African governments to achieve more effective and efficient activity throughout the agriculture sector, promoting profitable farming and businesses in a dynamic and growing sector. This will result in more jobs, higher sustainable agricultural production, greater food security, and an economic growth pathway that is inclusive for both men and women. ■

The Development Effectiveness Review series of the Bank

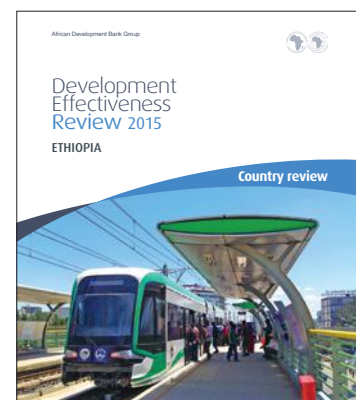
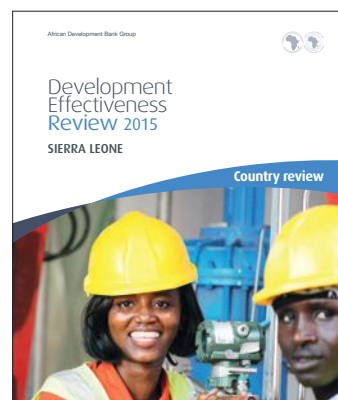
Annual reviews

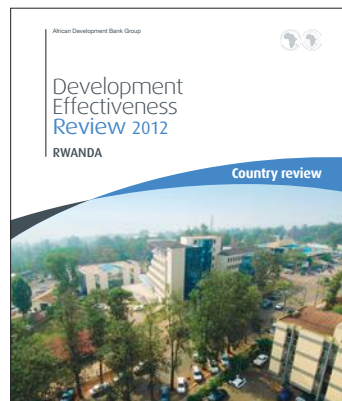
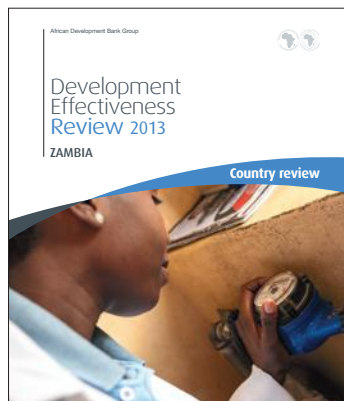
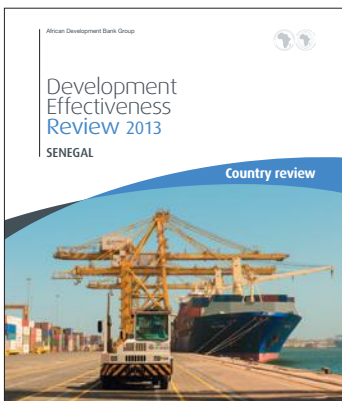
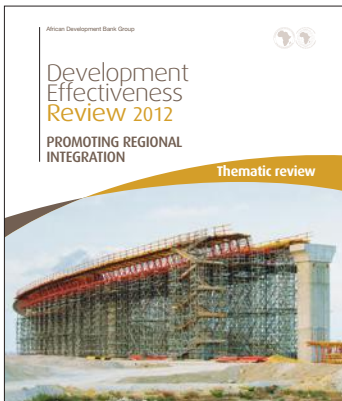
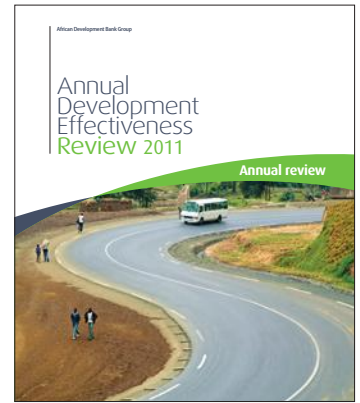
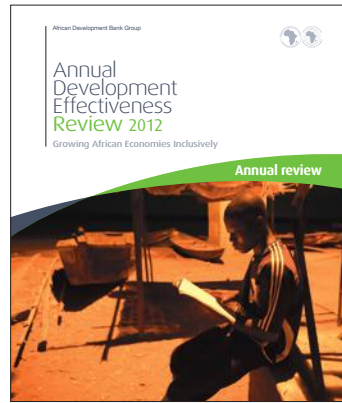
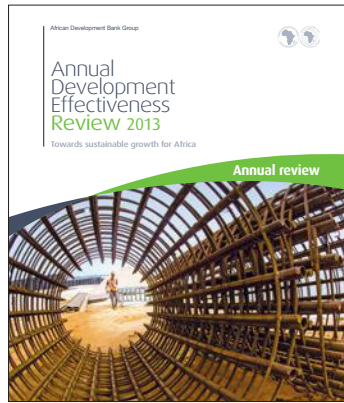


Thematic reviews



Country reviews







www.afdb.org

About this publication

The 2016 Thematic Development Effectiveness Review on Agriculture is a comprehensive report on the performance of the African Development Bank (AfDB) in the agriculture and rural development sectors. The report reviews agricultural and agribusiness development trends across the continent and explores how AfDB's operations have contributed to Africa's results over the past five years. It also looks at how effectively AfDB manages its operations and its own organisation. This report complements AfDB's flagship publication — the Annual Development Effectiveness Review —, which focuses on all sectors and thematic areas.

About the African Development Bank Group

The AfDB Group is a multilateral development bank whose shareholders include 54 African countries and 26 non-African countries. The AfDB Group's primary objective is to contribute to the sustainable economic development and social progress of its regional members, individually and jointly. It does this by financing a broad range of development projects and programmes through public sector loans, including policy-based loans, and through private sector loans and equity investments; by providing technical assistance for institutional support projects and programmes; by making public and private capital investments; by assisting countries with development policies and plans; and by supplying emergency assistance.



African Development Bank

Avenue Joseph Anoma - 01 B.P. 1387 Abidjan 01, Côte d'Ivoire

www.afdb.org

