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State of Food and Agriculture in Africa: Future Prospects and Emerging Issues

Executive Summary

The prevalence of undernourishment has seen little improvement since 2010 and the most recent estimates suggest a rise. The worsening situation is due to adverse climatic conditions, conflict and a difficult global economic environment. Looking forward, rapid population growth will add to the challenge of meeting the Sustainable Development Goal (SDG) 2 in Sub-Saharan Africa in the coming decades. Food production would need to increase considerably to meet rising demand, while climate change will exacerbate existing challenges. Addressing the root causes of migration and improving earning opportunities in rural areas is essential to fighting hunger and malnutrition.

At the same time, population and income growth, as well as migration, offer opportunities for the growth of domestic agriculture and agribusiness if farmers and entrepreneurs can respond to demand growth and shifts in consumer tastes. Exploiting opportunities will require investment in research and development to support sustainable intensification and investment in public goods that facilitate private investment across the entire value chain. Raising agriculture expenditure is important while the prioritizing of spending is just as important. An enabling regulatory environment will foster private investments and, combined with strategic public investments, will improve the functioning of markets and facilitate trade.

Matters to be brought to the attention of the Regional Conference

The conference is invited to consider challenges and priority areas of action related to the review of the state of food and agriculture in Africa:

- a) The trends in undernourishment and malnutrition in all its forms along with their key drivers, and the imperative to strengthen efforts to achieve SDG 2, building also on the opportunities provided by the Decade of Action on Nutrition.

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- b) The challenges and opportunities for the food system posed by rapid population growth, rising incomes, spreading migration and urbanization, and changes in diets.
- c) The importance, in the face of increasing land scarcity, of raising agricultural productivity through investment in research and development and other public goods for sustainable production growth and diversification.
- d) The importance of facilitating and strengthening private sector participation in transforming the food system to better reach development objectives, such as creating opportunities for smallholders to benefit from emerging value chains; generating employment opportunities for youth; and ensuring the quality of people's diets to prevent malnutrition in all its forms.

I. Progress towards SDG 2

A. Situation and trends in food security

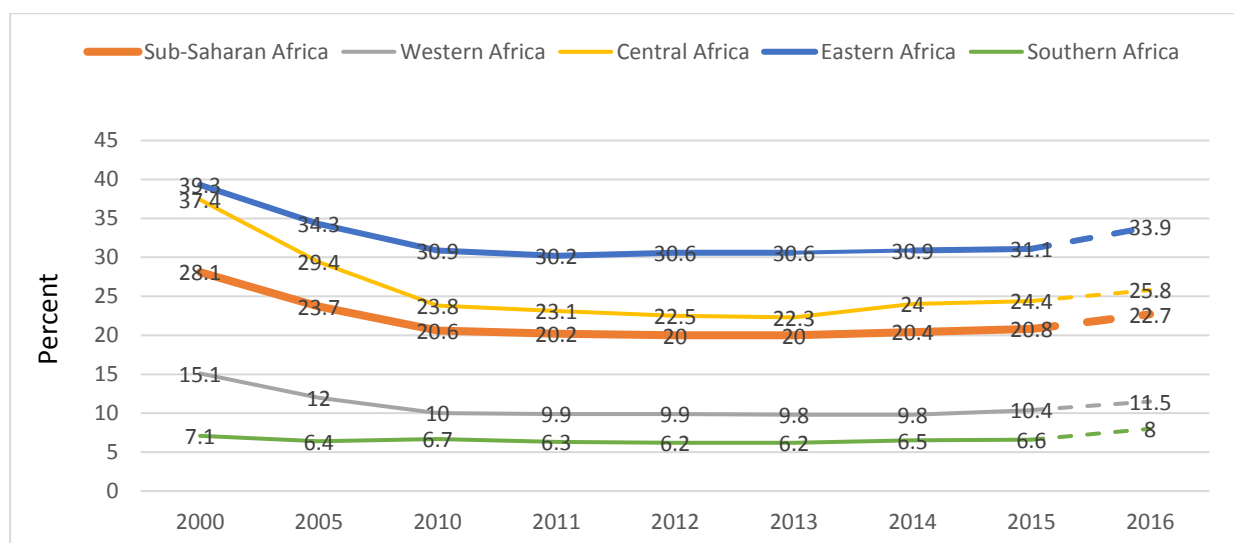
1. Food and agriculture are key to the vision of sustainable development as laid out in the 2030 Agenda and as reflected in SDG 2: “End hunger, achieve food security and improved nutrition and promote sustainable agriculture”. Progress towards SDG 2 Target 2.1, which focuses on ensuring access to food for all and SDG Target 2.2, which calls for putting an end to all forms of malnutrition is assessed using the endorsed indicators presented below.

SDG Indicator 2.1.1: Prevalence of undernourishment (PoU)

2. Between 2000 and 2010, Sub-Saharan Africa made sound progress in the fight against hunger (Figure 1). However, since 2010 the trend has been flat in all regions, and from 2015 to 2016, appears to have risen from 20.8 to 22.7 percent.

3. While the trends among subregions are uniform, the levels of the prevalence of undernourishment vary considerably. The prevalence of undernourishment in Southern and Western Africa is considerably lower than the regional average, and it is above average in Central Africa and much higher in Eastern Africa.

FIGURE 1: PREVALENCE OF UNDERNOURISHMENT IN SUB-SAHARAN AFRICA AND SUBREGIONS, 2000 TO 2016

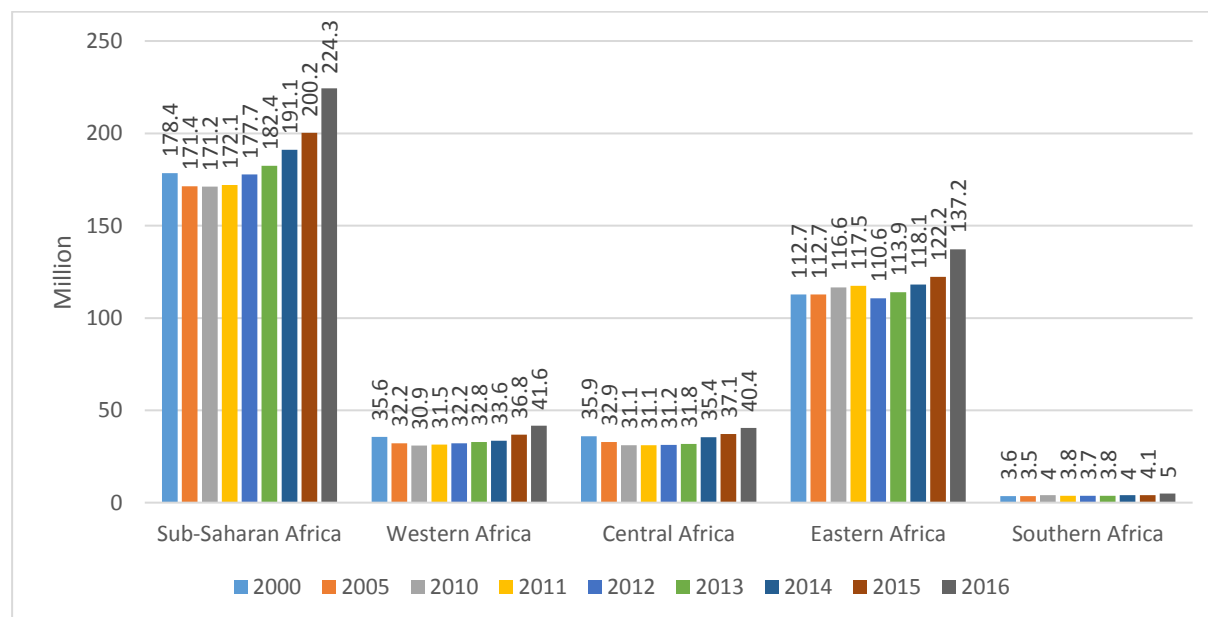


Source: FAO (2017)

4. A similar pattern holds for the number of people that are undernourished: a drop between 2000 and 2010, followed by a gradual rise that accelerates from 2013 (Figure 2). In 2016, there were about 224 million undernourished people in Sub-Saharan Africa, which is 53.1 million more than in 2010.

5. The bulk of the undernourished live in Eastern Africa while only a relatively small proportion live in Southern Africa. Of the increase in total numbers since 2010, Eastern Africa accounted for 39 percent, Western and Central Africa accounted for 20 and 18 percent, respectively, and Southern Africa accounted for under two percent.

FIGURE 2: NUMBER OF UNDERNOURISHED PEOPLE IN SUB-SAHARAN AFRICA AND SUBREGIONS IN 2000 TO 2016



Source: FAO

SDG Indicator 2.1.2: Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale¹

6. Table 1 shows the Food Insecurity Experience Scale (FIES) estimate of the prevalence of severe food insecurity within populations, i.e. the number of people living in households where at least one adult has been found to be severely food insecure, as a percentage of the total population. The FIES estimate corroborates the fear that food insecurity may be on the rise in Sub-Saharan Africa, the region that accounts for nearly one-half of all severely food insecure people in the world.

Table 1: PREVALENCE OF SEVERE FOOD INSECURITY (MEASURED USING THE FIES) IN THE WORLD AND IN SUB-SAHARAN AFRICA (2014–2016)

	Severe food insecurity – prevalence (percent)						Severe food insecurity – number of people (millions)					
	2014		2015		2016		2014		2015		2016	
World	9.2	(±0.5)	8.8	(±0.4)	9.3	(±0.4)	665.9	(±35.7)	645.1	(±31.7)	688.5	(±27.6)
Sub-Saharan Africa	28.3	(±1.0)	28.7	(±0.9)	31.0	(±0.8)	265.0	(±9.5)	275.7	(±8.6)	306.7	(±8.3)

Source: FAO, Voices of the Hungry project (2017).

¹ FIES is a tool that FAO has recently developed to complement the information provided by the PoU. The FIES is based on data collected directly from representative samples of individuals and it measures people's ability to obtain adequate food. The FIES can measure moderate and severe food insecurity, but in this document, only estimates of the prevalence of severe food insecurity are presented.

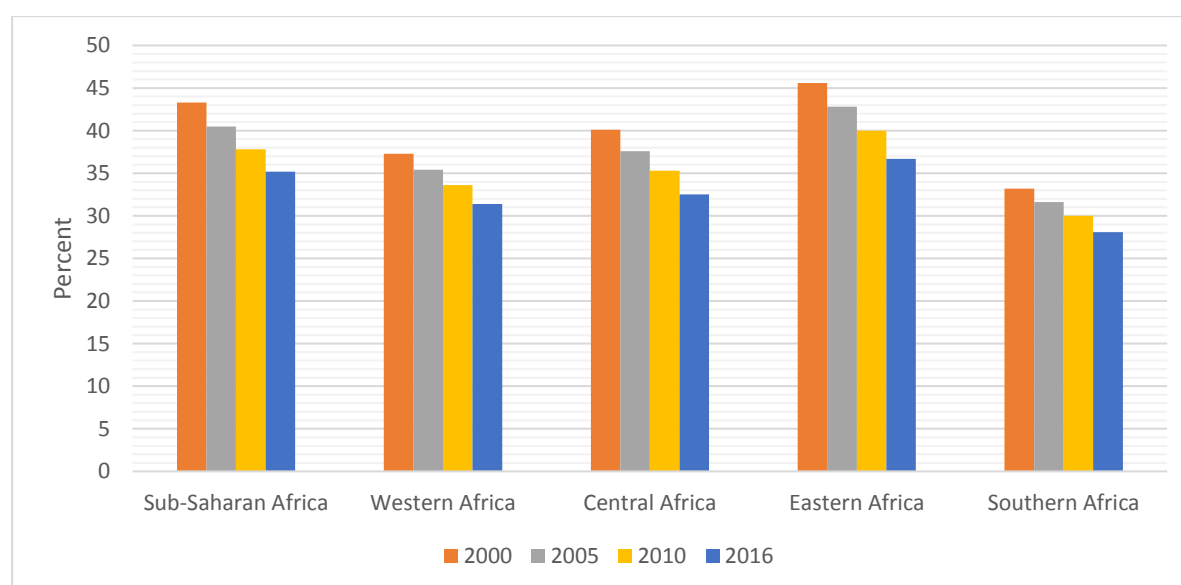
Notes: Number of people living in households where at least one adult has been found to be severely food insecure, as a percentage of the total population.
Margins of error are in parentheses.

B. Trends in multiple burdens of malnutrition in Africa²

SDG Indicator 2.2.1: Prevalence of stunting

7. Globally, there were 154.8 million stunted children under the age of five in 2015, and about 56.8 million of these children (34.1 percent) are in Sub-Saharan Africa. The highest prevalence is in Eastern Africa, where 36.7 percent of children under the age of five are stunted. Improvements have been steady, but modest (Figure 3). Overall, the prevalence in the region dropped by 8.1 percentage points over the past 15 years, a modest but steady improvement.

FIGURE 3: PROPORTION OF STUNTED CHILDREN UNDER FIVE BY SUBREGION IN 2000–2015



Source: UNICEF, WHO and World Bank. 2017. Joint Child Malnutrition Estimates 2017 (available at <http://www.who.int/nutgrowthdb/estimates/en/>)

SDG Indicator 2.2.2: Prevalence of wasting and overweight in children

1) Wasting in children

8. In 2016, globally 51.7 million children, or 7.7 percent, suffered from wasting. Of that figure 11.8 million wasted children are in Sub-Saharan Africa, where the prevalence rate is 7.3 percent. The burden is highest in Western and Central Africa.

2) Child overweight

9. Globally, there are about 40.6 million overweight children, representing 6 percent of all children under the age of five. Of these, about 6.4 million are in Sub-Saharan Africa. The regional prevalence of 3.9 percent is below the global average and has been flat over the past two decades.

² Data for stunting, wasting and overweight in children under five are from UNICEF, WHO and World Bank. 2017. Joint Child Malnutrition Estimates 2017 (available at <http://www.who.int/nutgrowthdb/estimates/en/>)

However, the situation in Southern Africa is quite different in that the rate is 11.8 today and the trend has been a steady increase. Southern Africa has the highest prevalence rate globally.

C. Key drivers of the food security and nutrition situation

10. In many countries, the worsening situation in 2015 and 2016 is due to adverse climatic conditions, often linked to the El Niño phenomenon, resulting in poor harvests and the loss of livestock. Conflict, in combination with drought or floods, also contributed to severe food insecurity in several countries. Lower export commodity prices and a difficult global economic environment has furthermore contributed to the worsening food security situation.

11. It may be difficult to comprehend the current situation in Sub-Saharan Africa where food security in terms of energy intake appears to be deteriorating while child undernutrition continues to fall and obesity is surging. However, nutrition outcomes reflect worsening food insecurity only with a delay. And rising trends in overweight and obesity are a reflection of rising incomes, urbanization and the associated changes in lifestyles experienced by parts of the population.

12. Recent estimates make it evident that the pursuit of efforts to eradicate poverty and hunger in the post-Millennium Development Goals era is confronted by significant challenges such as high population growth rates, climate change, gender inequality, acute social and economic imbalances and proliferation of conflicts. In the subsequent sections the focus is on the challenges and opportunities posed by rising demand and changing diets that come with rapid population growth, migration, urbanization and income growth.

II. Population growth, migration, urbanization and income growth – rising and changing food demand

13. Some of the greatest challenges to eliminating poverty and hunger facing Sub-Saharan Africa derive from the rapid population growth and the changing demographic structure that the continent will face over the next decades. Between now and 2050 the population in the region will grow from 969 million in 2015 to 2 168 million in 2050.³

14. The rise in population and growth in GDP per capita will drive significant growth in demand for agricultural products. In response, the agricultural output would need to more than double by 2050 to meet increasing demand.⁴ Overall the agriculture and agribusiness markets are estimated to grow from USD 313 billion today to about USD 1 trillion in 2030.⁵

15. Demographic shifts, structural transformation and rural out-migration and urbanization are leading to changes in food systems in the region, and pose new challenges to traditional means of improving food security and nutrition. Migration is inherent to structural transformation and part of the process of development. However, rural-urban migration is not the only reality and most of the migration in Sub-Saharan Africa is rural-rural.⁶

16. Not only will demand for food expand significantly, but, with rising incomes, lifestyle changes and greater female participation in the workforce, also the composition of diets will change substantially. There will be a disproportionate rise in consumption of non-grain products, such as fruit,

³ UN. 2017. World Population Prospects 2017. New York, USA, UN Department of Economic and Social Affairs, Population Division. Available at: <http://www.un.org/en/development/desa/population/>

⁴ FAO. 2017. The Future of Food and Agriculture. Trends and Challenges. Rome.

⁵ World Bank. 2013. Growing Africa. Unlocking the potential of agribusiness. World Bank, Washington, DC.

⁶ Rural-rural migration represents about 80 percent of migration in Nigeria and Uganda, 50 percent in Kenya and Senegal, and 38 percent in Burkina Faso. For more information see Mercandalli, S. & Losch, B. Eds. 2017. Rural Africa in motion. Dynamics and drivers of migration South of the Sahara. Rome, FAO and CIRAD.

vegetables, meat, fish, eggs, milk, and edible oils, compared with coarse grains, root crops and legumes.⁷

17. There will also be a significant shift in the type and quality of products demanded. For example, premium rice makes up 30 percent of total rice consumption in rural areas, but 70 percent in urban areas.⁸ In addition, there will also emerge a greater reliance on processed foods that provide convenience through easy transport, storage and preparation. The demand for packaged food is also growing.⁹

18. This growth and change in demand is also an opportunity for the continent. Evidence shows that although the balance of trade in agricultural products has worsened for Sub-Saharan Africa, domestic production has met most of the increase in demand over the past 50–60 years.¹⁰ On average, only about 10 percent of food consumed on the continent is imported,¹¹ although that figure is on the rise¹² and is much higher for some countries. The transformation of the food system provides opportunities to farmers and agribusiness to expand and diversify their activities (see section IV). Taking advantage of the coming opportunities will be particularly important for 330 million youth who will join the labour force in the next 15 years.¹³

19. For example, migration can translate into reduced pressure on local labour markets and increased wages in agriculture, while remittances can relax liquidity constraints and provide insurance in case of shocks. In the longer term, migrants' remittances and diaspora investments, as well as acquired skills, knowledge and social network can have a profound impact on rural areas in terms of food security, nutrition and investments in agriculture and non-agricultural activities.

20. However, there are also challenges inherent in the transformation. Smallholder farmers, and in particular women farmers, face constraints in access to finance, markets and transport, as well as barriers created by standards on quality, traceability and certification. As a result, they may struggle to participate in the emerging integrated value chains and will need support if they are to benefit fully from emerging opportunities. Greater emphasis on a post-farmgate sector that is growing in importance is needed to ensure food safety, help reduce waste and increase profits along the value chain.

21. In addition, while the consumption of more nutritious foods, such as fruit, vegetables, wholegrains and seafood, has increased worldwide in recent decades, there has been a parallel, and more rapid, increase in the consumption of highly processed foods, such as sugar-sweetened beverages and processed meat.¹⁴ One implication is that policy-makers should consider the need to ensure the quality of people's diets and to prevent malnutrition in all its forms.

⁷ FAO. 2017. *The Future of Food and Agriculture. Trends and Challenges*. Rome.

⁸ AfDB (African Development Bank Group). 2016. *Feed Africa Strategy for agricultural transformation in Africa 2016-2025*. Abidjan.

⁹ Acquaye, D. 2012. *The roles and opportunities for the private sector in Africa's agro-food industry*. UNDP African Facility for Inclusive Markets. UNDP, New York, USA.

¹⁰ Vorley, B. & Lançon, F. 2016. *Food consumption, urbanisation and rural transformation: the trade dimensions*. Working Paper. London, International Institute for Environment and Development.

¹¹ Reardon, T. & Timmer, C.P. 2007. Transformation of markets for agricultural output in developing countries since 1950: how has thinking changed? In R. Evenson & P. Pingali, eds. *Handbook of agricultural economics*, pp. 2807–2855. Elsevier.

¹² Manitra A. Rakotoarisoa, M.A., Iafate, M., & Paschali, M. 2011. *Why has Africa become a net food importer? Explaining Africa agricultural and food trade deficits*. Trade and Markets Division, Food and Agriculture Organization of the United Nations Rome.

¹³ Losch B., Fréguin-Gresh S. & White, E. 2011. *Rural Transformation and Late Developing Countries in a Globalizing World. A Comparative Analysis of Rural Change*. Final Report of the RuralStruc Program, Revised Version. Washington, DC, World Bank. This issue is addressed in greater depth in ARC/18/4 on "Leveraging youth employment opportunities in agriculture and rural sectors in Africa."

¹⁴ FAO. 2017. *The Future of Food and Agriculture. Trends and Challenges*. Rome.

22. The success of meeting rising demand will depend on the availability of new land and the intensification of farming in the region (see section III) as well as the capacity to make the required investments in the post-production value chain. Raising yields will include increased use of fertilizer, water, pesticides, drugs, new crop varieties and animal breeds and innovative agriculture practices. However, expanding land use and intensification also comes at a high cost to society and to the environment. Overfishing, soil degradation, and higher greenhouse gasses aggravating the threat of climate change are some of those costs.¹⁵

23. The sustainable increase in production requires answering some difficult questions, such as: how to produce more on land already cultivated without encroaching on forests, how to build efficient value chains, how to reduce post-harvest losses and waste, and how to mitigate and adapt to changing climatic patterns? The climate change impacts on Sub-Saharan agriculture are, in some cases and regions, large and negative.¹⁶

24. Throughout the supply chain, substantial improvements in resource-use efficiency and gains in resource conservation must be achieved to meet growing and changing food demand, and halt and reverse environmental degradation. In addition, in rainfed systems, which account for 95 percent of farmland in Sub-Saharan Africa, expansion of irrigation and better management of rainwater and soil moisture is key to raising productivity and reducing yield losses during dry spells and periods of variable rainfall.

25. Moreover, there is the need to recognize the interrelations between migration, food security and agriculture and rural development. Migration can contribute to the achievement of the SDGs, only if it is safe and regular, and not a necessity. However, migration in the region is primarily caused by poverty, food insecurity and lack of employment and livelihood opportunities. It is vital to improve evidence on rural migration patterns, drivers and impacts and to strengthen policy coherence between migration, food security and agricultural and rural development policies, including towards the adoption and implementation of the Global Compact on Migration at the regional and national level.

III. Raising agricultural productivity for sustainable growth

26. Population and income growth will require that agricultural output in sub-Saharan Africa would need to more than double by 2050. Over the past decades, such output growth was achieved mostly through an expansion of land under cultivation, while yields remain low.¹⁷ However, today land is scarce and about 91 percent of the remaining unused but arable land is located in only 6 to 9 Sub-Saharan African countries, and in four of these surplus land is under forest cover.¹⁸

27. Agricultural output growth in the coming years will require a change from a strategy based on area expansion to one based on investment in activities, notably research and development (R&D) and extension, which enhance total factor productivity (TFP) growth. Overall TFP is lagging in the region although it appears to have improved in some countries in recent years.¹⁹

28. International research can spill over, and international organizations such as the International Institute of Tropical Agriculture (IITA) and the Africa Rice Centre (WARDA) produce important new technologies. However, there is room for strengthening relationships with the Consultative Group on

¹⁵ Climate change is discussed in ARC/16/6 “Climate Change and its impact on the work and activities of FAO.”

¹⁶ FAO. 2016. The State of Food and Agriculture. Climate Change, Agriculture and Food Security. Rome.

¹⁷ AfDB (African Development Bank Group). 2016. Feed Africa Strategy for agricultural transformation in Africa 2016-2025. Abidjan.

¹⁸ Jayne, T.S. & Traub, L.N. 2016. Megatrends Transforming Africa’s Food Systems. Getting Ahead of the Puck on Policymaking. Foreign Affairs, Special Issue.

¹⁹ Yu, B. & Nin-Pratt, A. 2011. Agricultural Productivity and Policies in Sub-Saharan Africa. IFPRI Discussion Paper 01150. Washington, DC, International Food Policy Research Institute.

International Agricultural Research (CGIAR) and other international partners through, for example, greater South-South Cooperation.

29. National agricultural research and development capability is essential to adapt new technologies to local conditions and to promote locally relevant crops and livestock that otherwise receive little attention. Agricultural expenditure on R&D grew by only 0.6 percent in 1980-1990 and -0.5 percent in 1990-2000, but then rose strongly between 2000 and 2014, from USD 1.7 billion to USD 2.5 billion (in 2011 Purchasing Power Parity prices).²⁰ However, three-quarters of this growth occurred in Ethiopia, Ghana, Nigeria, South Africa and Uganda.

30. Despite rising expenditures on agriculture, the New Partnership for Africa's Development (NEPAD) target of agricultural R&D expenditure of 1 percent of agricultural GDP is reached in only very few countries.²¹ Stronger collaboration among African national agricultural research systems through joint research programmes and regional centres of excellence is one approach to leverage public expenditures.

31. Growth of private research, notably in the seed industry, is occurring in some countries. Private companies have been particularly active and successful in introducing maize hybrids. However, small markets, a difficult business environment, including competition with government corporations and weak intellectual property rights, among other constraints, are hindering private sector investment in R&D.²² Private research, outside of South Africa, is still limited and the public sector must take the lead in R&D, especially in areas of market failure.

32. New technologies are essential, but do not blossom without complementary investments. For example, adoption rates of improved seed for all varieties except for rice have risen significantly since 2000, yet yields remain low. This is because there has not been a concomitant increase in use and adoption of inputs such as fertilizer and improved crop management. Fertilizer use in Sub-Saharan Africa is low, with average consumption in 2009-2012 at 14 to 9.7 kg/ha in the Common Market for Eastern and Southern Africa (COMESA), 20.2 kg/ha in the Southern African Development Community (SADC), and 11.5 kg/ha in the Economic Community of West African States (ECOWAS) (excluding South Africa and Mauritius), compared to 159 kg/ha in Latin America and 396 kg/ha in Asia.²³

33. The adoption of modern inputs depends on their profitability, which is enhanced through investments in extension, roads, communications, electricity and irrigation. Poor infrastructure reduces competitiveness. A comparative analysis of fertilizer costs in several Sub-Saharan African countries and Thailand concluded that improvements in domestic transportation systems would generate the single largest fertilizer price reduction in the African countries.²⁴

²⁰ Beintema, N. & Stads, G.-J., 2017. A Comprehensive Overview of Investments and Human Resource Capacity in African Agricultural Research. ASTI Synthesis Report. International Food Policy Research Institute, Washington, DC.

²¹ Goyal, A. & Nash, J. 2017. Reaping Richer Returns: Public Spending Priorities for African Agriculture Productivity Growth. Africa Development Forum series. World Bank, Washington, DC. World Bank. doi:10.1596/978-1-4648-0937-8.

²² Lynam, J., Beintema, N., Roseboom, J. & Badiane, O. 2016. Agricultural Research in Africa. Investing in Future Harvests. International Food Policy Research Institute, Washington, DC.

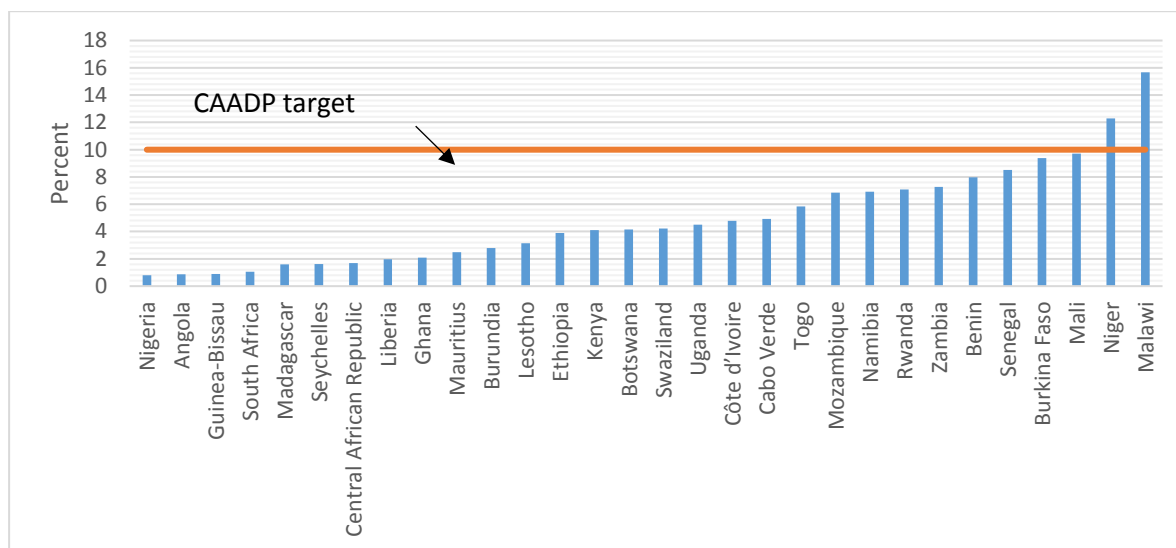
²³ Delve, R., Benfica, R., Keizire, B.B, Rusike, J., Harawa, R. Bigirwa, G., Muhhuku, F., Ininda, J., & Wakiumu, J. 2016. Agricultural Productivity through Intensification and Local Institutions. Chapter 5 in Africa Agriculture Status Report 2016: Progress towards Agricultural Transformation in Africa. Nairobi, Alliance for a Green Revolution in Africa.

²⁴ IFDC (International Fertilizer Development Center) and Chemonics International. 2007. Fertilizer Supply and Costs in Africa. IFDC, Muscle Shoals.

34. In addition, increased investment in irrigation can raise land productivity and improve stability of yields. The rising uncertainties that climate change brings, especially for rainfed agriculture, make such investment more urgent.

35. There are very substantial challenges facing Sub-Saharan Africa in achieving sustained productivity growth. Achieving the Comprehensive Africa Agriculture Development Programme (CAADP) target of 10 percent of public expenditure to agriculture is an important step in addressing those challenges. However, many countries fall below this threshold (Figure 4). At the same time, it is just as important to prioritize public investments effectively.

FIGURE 4: SHARE OF AGRICULTURE IN TOTAL EXPENDITURE (PERCENT), 2014



Source: IFPRI (International Food Policy Research Institute). 2017. 2017 Global Food Policy Report. International Food Policy Research Institute, Washington, DC.
<https://doi.org/10.2499/9780896292529>.

36. An innovative approach to leveraging public investments are public-private partnerships (PPPs) that bring together business, governments and civil society. They are relatively new in agriculture but have the potential to modernize the sector and contribute to sustainable and inclusive agricultural development.²⁵ However, PPPs are complex, involve high transaction costs and are best suited for situations of market failure. A robust institutional and regulatory framework is critical in attracting private investment for infrastructure projects.²⁶

37. It is also essential to formulate public policies and programmes, and to exchange approaches, tools, best practices and lessons learned on harnessing the contribution of migrants and displaced people to all dimensions of sustainable development.

IV. Private sector opportunities and challenges

38. Urbanization and income growth will lead to a substantial expansion in agriculture and agribusiness posing a considerable opportunity for private business, with domestic farmers and businesses already supplying 80, 74 and 63 percent of the food market in Eastern, Western, Southern

²⁵ FAO. 2016. Public-private partnerships for agribusiness development – A review of international experiences, by Rankin, M., Gálvez Nogales, E., Santacoloma, P., Mhlanga, N. & Rizzo, C. Rome.

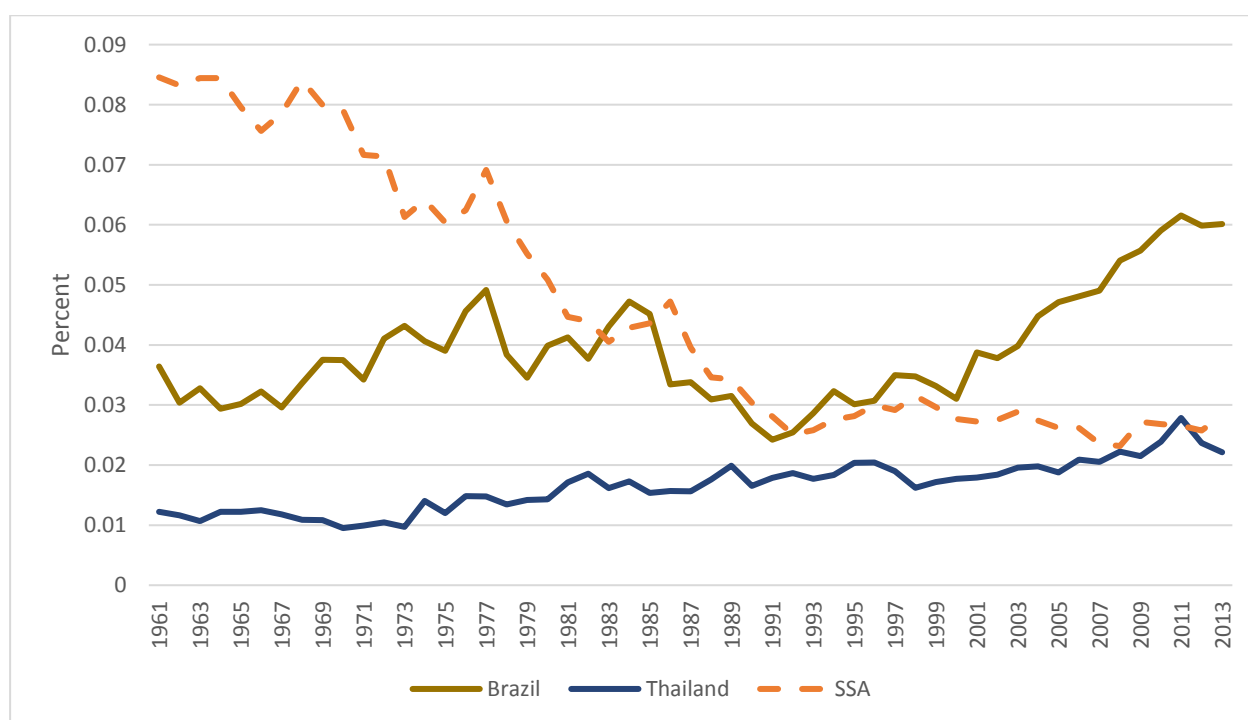
²⁶ World Bank. 2017. Africa's Pulse. An analysis of issues shaping Africa's economic future. World Bank, Washington, DC.

Africa, respectively.²⁷ For example, the Nigerian poultry industry is expected to grow 20 percent annually from 2010 to 2020.²⁸

39. However, it is not a given that domestic supply can meet rising food demand as for several products imports have been rising steadily. For Sub-Saharan Africa as a whole, the value of rice, wheat, sugar (refined and raw), palm oil, chicken meat and maize imports amounted to about USD 21.3 billion in 2013.²⁹ Furthermore, many processed products are imported.

40. Taking advantage of the opportunities is essential to eradicate poverty and hunger, but will be a challenge. A rough indicator of Sub-Saharan Africa's lack of competitiveness in agricultural products is the relative decline of its share of world agricultural exports (Figure 5). However, with the right incentives and enabling environment, farmers and agribusiness do respond to opportunities. For example, in Kenya horticultural exports rose from 21 billion Kenyan Shilling in 2000 to 97 billion Kenyan Shilling in 2014. In Ethiopia, floriculture exports rose from 13 million USD in 2005 to 550 million USD in 2016.³⁰

FIGURE 5: BRAZIL, THAILAND AND SUB-SAHARAN AFRICA'S SHARE OF WORLD AGRICULTURAL EXPORTS



Source: FAO. 2017. FAOSTAT. Online statistical database (available at <http://faostat.fao.org>).FAO (2017) Based on an original graph from World Bank. 2013. Growing Africa. Unlocking the potential of agribusiness. World Bank, Washington, DC.

41. Important constraints to commercial activity are high transport and transactions costs and there is a clear need to improve logistics, freight procedures and lower non-tariff barriers in Sub-

²⁷ Diao, X., Hazell, P., Resnick, D., & Thurlow, J. 2006. The role of agriculture in development: Implications for sub-Saharan Africa. Research report 153. Washington, DC, International Food Policy Research Institute.

²⁸ Sahel Capital. 2015. An Assessment of the Nigerian Poultry Sector. Sahel Newsletter. 11, June. Sahel Capital Partners & Advisory Limited, Lagos, Nigeria.

²⁹ FAO. 2017. FAOSTAT. Online statistical database (available at <http://faostat.fao.org>).FAO (2017)

³⁰ AfDB (African Development Bank Group). 2016. Feed Africa Strategy for agricultural transformation in Africa 2016-2025. Abidjan.

Saharan Africa³¹ Yet, region wide there has only been limited improvement in logistics performance over the past ten years.³²

42. The rapid evolution of information and communication technologies – about 75 percent of Africans own a mobile phone – can offer new forms of farmer extension, help improve market integration, reduce transportation costs, provide better price information and facilitate market exchange. Also regional farmer federations such as the Panafrikan farmers' organization (PAFO) and the associated subregional platforms play an important role in facilitating the transfer of production technology, helping farmers reach scale and advocating for supportive government policies. Farmer organizations can also ensure that smallholder farmers benefit from joining value chains by helping negotiate fair contracts with processors and traders as well as helping farmers meet food safety and quality standards. Support to farmers, and in particular youth and women farmers, is essential to ensure an inclusive growth and transformation of the food system.

43. A further major constraint, and opportunity, in Sub-Saharan Africa are natural resources. The continent accounts for half the world's agriculturally suitable but unused land (see section III). However, the lack of secure and transferrable land-rights is a serious constraint to private investment in agriculture. The continent also has largely untapped water resources and an irrigation potential of about 37 million ha.³³

44. In addition, spreading soil degradation, with about 494 million ha affected, is a growing concern in Sub-Saharan Africa.³⁴ Sustainable intensification will require greater use of fertilizer but also striking the right balance between managing soil organic matter, fertility and moisture content and the use of such fertilizers.³⁵ Innovative techniques are needed to produce more, while safeguarding the environment, enhancing soil organic matter, managing pests and plant disease and adapting agriculture to climate change. Government also plays a key role in providing relevant agro-economic data on agroclimatic trends, soil types, soil maps, and prices for private investors to assess risks and make investment decisions.

45. Policy and programme interventions aimed at developing rural areas – including the migration-prone areas – must also focus on improving financial inclusion; providing formal and non-formal education to rural people, especially women and youth; promoting access and inclusive management of natural resources; extending social protection coverage; and targeting investments in rural infrastructure and agricultural technologies. Particularly, efforts should be directed at scaling up on-farm and off-farm jobs which have good career prospects, and supporting capacities of young entrepreneurs to develop viable business plans along the selected agricultural value chains.

46. Private sector investment is essential all along the chain from input suppliers, agroprocessors, traders, exporters, wholesalers and retailers. Youth organizations, farmers' associations, migrants and diaspora associations should be an integral part of the discussions. Governments play an important role in facilitating this private sector investment in the food system. There is a need for policies, legal frameworks, information and infrastructure that enable investors to compete on a level playing field and in an enabling environment. The business regulatory environment has shown some progress over the 2010 to 2016 period, but many countries continue to experience a weak business regulatory environment.³⁶

47. There is also a need to reduce trade and non-trade barriers and build infrastructure to open up intraregional trade which currently is only about USD 1 billion, compared to USD 25 billion overall

³¹ World Bank. 2013. Growing Africa. Unlocking the potential of agribusiness. World Bank, Washington, DC.

³² World Bank. 2017. CPIA Africa. Assessing Africa's Policies and Institutions. World Bank, Washington, DC.

³³ FAO. 2005. Irrigation in Africa in figures. AQUASTAT Survey – 2005. FAO Water Reports 29. Rome.

³⁴ FAO. 2015. Status of World's Soil Resources. Technical Summary. Rome.

³⁵ The Montpellier Panel. 2013. Sustainable Intensification: A New Paradigm for African Agriculture. London.

³⁶ World Bank. 2017. CPIA Africa. Assessing Africa's Policies and Institutions. World Bank, Washington, DC.

food imports. However, trade facilitation in Africa lags behind that of the best global performers and improvements in trade policy regimes and trade facilitation have stagnated.³⁷

³⁷ World Bank. 2017. CPIA Africa. Assessing Africa's Policies and Institutions. World Bank, Washington, DC.