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2018

IN BRIEF

AFRICA

**REGIONAL OVERVIEW
OF FOOD SECURITY
AND NUTRITION**

**ADDRESSING THE THREAT FROM
CLIMATE VARIABILITY AND EXTREMES
FOR FOOD SECURITY AND NUTRITION**





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Food and Agriculture Organization of the United Nations

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KEY MESSAGES

→ Africa is not on track to meet SDG 2. The prevalence of undernourishment continues to rise and now affects 20 percent of the population on the continent, more than in any other region. In Northern Africa, the rise is much less pronounced and the prevalence is 8.5 percent. In sub-Saharan Africa, the upward trend appears to be accelerating, and now 23 percent of the population is undernourished. The rise in the prevalence of undernourishment has been highest in Western Africa, followed by Central Africa.

→ There are today 821 million undernourished people in the world, 36.4 million more than in 2015. Of these 257 million are in Africa, of whom 237 million in sub-Saharan Africa and 20 million in Northern Africa. Compared to 2015 there are 34.5 million more undernourished in Africa, 32.6 million more in sub-Saharan Africa, and 1.9 million more in Northern Africa. Nearly half of the increase is due to the rise in undernourished people in Western Africa, while another third is from Eastern Africa.

→ At the regional level, the prevalence of stunting in children under five is falling, but only few countries are on track to meet the global nutrition target for stunting. Overweight in children under five continues to rise and is particularly high in Northern and Southern Africa. Progress towards meeting the WHO global nutrition targets is too slow at continental level to meet any of the targets.

→ The worsening food security situation was driven by difficult global economic conditions and weak commodity prices, in

particular for oil and minerals. In many countries, notably in Eastern and Southern Africa, adverse climatic conditions due to El Niño led to a decline in agricultural production and soaring staple food prices. The economic and climatic situation has improved in 2017, but some countries continue to be affected by drought or poor rainfall. In several countries, conflict, often in combination with adverse weather, has left millions of people in need of urgent assistance.

→ Youth employment is a fundamental challenge across the continent. Most youth work in the informal economy and 67 percent of young workers live in poverty. Agriculture and the rural economy will play a key role in creating jobs to absorb the millions of youth joining the labour market each year. Action to provide infrastructure, facilitating private enterprise development and youth specific skills training and access to land, financing, inputs, services and safety nets are essential.

→ Remittances from migrants play an important role in reducing poverty and hunger as well as stimulating productive investments. International remittances make up 3 percent of GDP in Africa and governments should strengthen their role in national development through reducing transfer costs and engaging the African Diaspora. At the same time governments must promote decent employment, inclusive growth and strengthened household resilience supported by strong, integrated social protection systems to avoid involuntary migration.

→ The signing of the African Continental Free Trade Area agreement is an opportunity to accelerate growth and sustainable development by increasing trade, including trade in agricultural products. Although agricultural intra-African exports rose from USD 2 billion in 2000 to USD 13.7 billion in 2013, they remain relatively modest and often informal. Much remains to be done to facilitate trade and reduce non-tariff barriers. Opening trade of food also carries risks to consumer and producer welfare, and governments should avoid using trade policy for multiple objectives but rather combine trade reform with additional instruments, such as safety nets and risk-mitigating programmes, to achieve food security and nutrition goals.

→ Climate change is a present and growing threat to food security and nutrition in Africa and is a particularly severe threat to countries relying heavily on agriculture. In general, reduced precipitation and higher temperatures are already impacting negatively on the yields of staple food crops, although there is some spatial diversity. By 2050, climate change will cause another 71 million people to be food insecure in the world, over half of whom will be in sub-Saharan Africa.

→ Climate variability and extremes are a key driver of the recent rise in food insecurity and one of the leading causes of the severe food crises that have affected the continent. They undermine, directly and indirectly, food availability, access, utilization and

stability with grave consequences for immediate and long-term nutrition outcomes, especially for children.

→ Climate resilience is key and must be built around climate risk assessments, science, proven technologies, and cross-sectoral collaboration. Greater action is required to strengthen or build institutional capacity for risk monitoring and early warning systems; emergency preparedness and response; vulnerability reduction measures; shock-responsive and long-term social protection; and planning and implementing resilience building measures.

→ The impacts of climate variability and extremes vary by gender and are often worse for women. Climate adaptation, mitigation, and resilience-building must, therefore, take a gender sensitive approach.

→ Africa lags in developing climate adaptation strategies and implementation. Greater efforts are needed in data collection, monitoring, and implementation of climate-smart agriculture practices. Continued efforts, through partnerships, blending climate change adaptation and disaster risk reduction, and long-term financing, are needed to bridge humanitarian and development approaches. In addition, actions across sectors must be scaled up to achieve greater resilience to climate variability and extremes.

FOREWORD

The *2018 Africa Regional Overview of Food Security and Nutrition* is co-published for the very first time with the United Nations Economic Commission for Africa. This new collaboration provides opportunities to broaden the technical scope, promote a wider dialogue and visibility of the findings and policy implications, and continue FAO's efforts to achieve closer collaboration on its flagship publications with the relevant UN agencies.

In 2017, FAO reported that the prevalence of hunger was on the rise in Africa, after many years of decline. The latest data, presented in this years' *Regional Overview*, confirms that this trend continues, with Central and Western Africa faring the worst. Today, a fifth of Africans are undernourished, representing a staggering 257 million individuals.

The worsening trend in Africa is due to difficult global economic and worsening environmental conditions and, in many countries, conflict and climate variability and extremes, sometimes combined. Economic growth slowed in 2016 due to weak commodity prices, in particular for oil and minerals. Food insecurity has worsened in countries affected by conflict, often exacerbated by drought or floods. For example, in Southern and Eastern Africa, many countries suffered from drought.

The deterioration of the food security situation and the lack of progress towards the WHO global nutrition targets makes it imperative for countries to step up their efforts, if they are to achieve a world without hunger and malnutrition by 2030. The call for greater action remains true even as the economic and climatic situation improves, offering hope of renewed progress in reducing food insecurity and malnutrition on the continent.

The need for greater efforts also emerges clearly from the findings of the inaugural biennial review of progress in implementing the goals of the Malabo Declaration. The evidence presented in the review indicates that countries committed to the values and principles of the Comprehensive Africa Agriculture Development Programme (CAADP), and that implement their National Agriculture Investment Plans, perform better. It is therefore imperative to strengthen commitments to the CAADP goals and to accelerate efforts toward formulating and implementing National and Regional Agricultural Investment Plans.

This year's *Regional Overview* also presents evidence from a number of countries that have successfully reduced food insecurity and malnutrition. Their experience shows that policies, when appropriately designed, and effectively coordinated and implemented, are important drivers of progress towards Sustainable Development Goal 2, i.e. end all forms of hunger and malnutrition by 2030. In addition to specific food security and nutrition policies, this year's report reviews four important cross-cutting topics, namely, youth employment, remittances, intraregional trade, and climate change. It highlights their interplay with the food system and their role in food security and nutrition.

Youth employment is a fundamental challenge across the continent and agriculture and the rural economy must play a key role in creating jobs to absorb the 10 to 12 million youth joining the labour market each year. However, the quality of jobs is equally important as most youth currently work in the informal economy and 67 percent of young workers live in poverty in sub-Saharan Africa. Rising incomes, urbanization and changing lifestyles pose challenges but also represent opportunities for the private sector to generate the growth and employment needed to provide decent jobs for our youth. Governments must step up efforts to help youth acquire skills, resources and the opportunity to participate in decision-making and policy dialogue.

International and internal migration affects millions of Africans, many of whom are youth, each year. The remittances they send home play an important role in reducing poverty and hunger as well as stimulating productive investments. International remittances amount to nearly USD 70 billion, about 3 percent of Africa's GDP, and present an opportunity for national development that governments should endeavour to strengthen. At the same time governments must promote decent employment, inclusive growth and strengthened household resilience to avoid involuntary migration.

The signing of the African Continental Free Trade Area agreement is an opportunity to accelerate growth and sustainable development by increasing investment and trade, including trade in agricultural products. Although agricultural intra-African exports rose from USD 2 billion in 2000 to USD 13.7 billion in 2013, they remain relatively modest and often informal. Considerably higher trade flows are expected once the barriers to investment and trade are removed. Opening trade of food also

carries risks to consumer and producer welfare, and governments should avoid using trade policy for multiple objectives but rather combine trade reform with additional instruments, such as safety nets and risk-mitigating programmes, to achieve food security and nutrition goals.

Climate variability and extremes, in part due to climate change, is a present and growing threat to food security and nutrition in Africa and is a particularly severe threat to countries relying heavily on agriculture. The effects of climate change, reduced precipitation and higher temperatures are already seen on the yields of staple food crops. Without climate change adaptation and mitigation, by 2050 an estimated additional 71 million people will be food insecure in the world, over half of whom will be in sub-Saharan Africa.

The 2017 edition of the Africa Regional Overview of Food Security and Nutrition reported that in many countries adverse climate conditions were among the reasons for rising levels of hunger. It is, therefore, timely that this year's edition's special focus is on presenting a broader evidence-based assessment of the threat posed by climate variability and extremes to food and nutrition security in the region. Many countries in Africa are at great risk to climate-related disasters and suffer from them frequently. Over the last ten years climate-related disasters affected on average 16 million people and caused USD 0.67 billion in damages across the continent each year. Greater efforts are needed to support rapidly growing insurance markets and establish strategic regional grain reserves to contain food price volatility and prevent food crises.

Greater urgency in building resilience of households, communities and countries to climate variability and extremes is needed. A myriad of challenges must be faced to building institutional capacity in designing, coordinating and scaling-up actions for risk monitoring and early warning systems, emergency preparedness and response, vulnerability reduction measures, shock-responsive social protection, and planning and implementing resilience building measures. Strategies towards climate change adaptation and disaster risk reduction must be aligned as well as coordinated with interventions in nutrition and food systems across sectors.

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Vera Songwe

Executive Secretary
Economic Commission for Africa



ETHIOPIA

Consecutive climate shocks have resulted in back-to-back droughts, which have caused hunger to soar and malnutrition rates to rise to alarming levels
©FAO/Michael Tewelde

REGIONAL OVERVIEW OF FOOD SECURITY AND NUTRITION

TRENDS IN FOOD SECURITY IN AFRICA

The *Regional Overview* reports annually, starting from 2017, on progress towards the Sustainable Development Goal (SDG) 2: “End hunger, achieve food security and improved nutrition and promote sustainable agriculture”. In the following sections progress towards SDG Targets 2.1 and 2.2 are assessed, as well as progress made towards the six WHO global nutrition targets for 2025.

Last year’s edition of the *Africa Regional Overview of Food Security and Nutrition* reported that the food security situation on the continent appeared to be

worsening. The latest available data presented in the 2018 report confirms this trend. The worsening situation in Africa is due to difficult global economic conditions and, in many countries, conflict and climate-related disasters, sometimes in combination. Economic growth slowed in 2016 due to weak commodity prices, in particular for oil and minerals. Food insecurity has worsened in countries affected by conflict, often exacerbated by drought or floods, and in Southern and Eastern Africa, many countries have been adversely affected by prolonged drought. Notably, several countries have achieved sustained progress in reducing food insecurity in the face of challenging circumstances.

Prevalence of Undernourishment (PoU)

Globally, the prevalence of undernourishment has risen slightly each year, from 10.6 in 2015 to 10.9 percent in 2017 (Table 1 and Figure 1)¹. Today there are 821 million undernourished people in the world. For Africa, 20.4 percent of the continent's

population – 257 million people – are undernourished, up from 19.7 in 2016 – 241 million people. In sub-Saharan Africa, there are 237 million undernourished in 2017, up from 222 million in 2016. The greatest deterioration between 2015 and 2017 has occurred in Central and Western Africa.

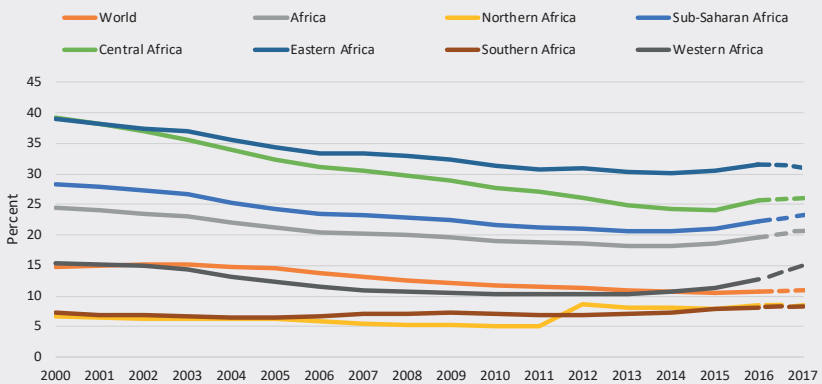
TABLE 1
UNDERNOURISHMENT IN THE WORLD, AFRICA AND ITS SUBREGIONS, 2005–2017

Region/Year	Prevalence (%)					Number (millions)				
	2005	2010	2015	2016	2017	2005	2010	2015	2016	2017
World	14.5	11.8	10.6	10.8	10.9	945	820.5	784.4	804.2	820.8
Africa	21.2	19.1	18.6	19.7	20.4	196	200.2	222	241.3	256.5
Northern Africa	6.2	5.0	8.0	8.5	8.5	9.7	8.5	18.1	19.5	20
Sub-Saharan Africa	24.3	21.7	21.1	22.3	23.2	176.7	181	203.9	221.9	236.5
Central Africa	32.4	27.8	24.1	25.7	26.1	36.2	36.5	37.1	40.8	42.7
Eastern Africa	34.3	31.3	30.5	31.6	31.4	113.5	119.1	121.4	129.6	132.2
Southern Africa	6.5	7.1	7.9	8.2	8.4	3.6	4.2	5	5.2	5.4
Western Africa	12.3	10.4	11.4	12.8	15.1	33.0	31.9	40.4	46.3	56.1

Source: FAO

¹ Prevalence at regional and subregional level are single-year estimates, while country estimates are based on three-year averages.

**FIGURE 1
PREVALENCE OF UNDERNOURISHMENT IN THE WORLD, AFRICA AND ITS
SUBREGIONS, 2005–2017**

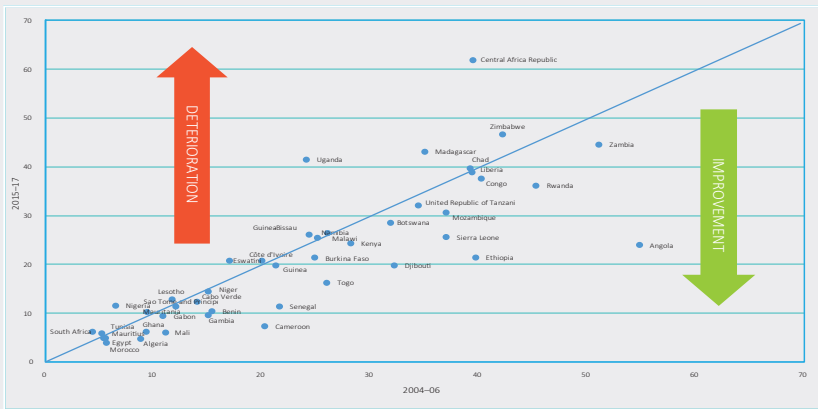


Source: FAO

Country-level estimates of the prevalence of undernourishment for 2004–06 and 2015–17 are shown in Figure 2. Two-thirds of the 43 countries for which data are available were within 5 percent of the 2004–05 estimate, and 10 countries

saw a change of 1 percent or less in either direction. Of the latter group, most have a prevalence of undernourishment that is already below the sub-Saharan Africa average, and progress may be more incremental.

FIGURE 2
CHANGE IN THE PREVALENCE OF UNDERNOURISHMENT IN AFRICAN COUNTRIES FROM 2004–06 TO 2015–17*



Source: WHO

*No data were available for Burundi, Comoros, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Libya, the Seychelles, Somalia, South Sudan and Sudan.

Between 2004–06 and 2015–17, the prevalence of undernourishment rose most in the Central African Republic, Uganda, Madagascar, Nigeria, and Zimbabwe, and for each country the worsening of the food security situation occurred in the last 5 years or less.

In the Central African Republic, food insecurity has increased dramatically due to conflict which disrupted production and caused food price

inflation, leaving 687 000 people internally displaced in early 2018, a rise of over 70 percent since January 2017. In the case of Uganda, the number of undernourished has been inflated by the influx of over 1.4 million migrants and refugees, of which about 1 million alone came from South Sudan. In addition, poor rainfall and crop and livestock pests and diseases reduced production and contributed to record high maize prices in 2016–17. The food

security situation in Madagascar has deteriorated following several years of extreme weather. By the end of 2016 parts of the country had endured 3 years of consecutive drought leaving about 1.5 million people in the southern and southeastern part of the country in need of humanitarian assistance. The food security in Nigeria was adversely affected by deteriorating commodity prices and a depreciating currency, leading to high inflation, also reflected in food prices, in particular rice, rising sharply in the second half of 2016. In addition, in northeastern Nigeria civil conflict left millions in need of urgent assistance. Zimbabwe also suffered the effects of prolonged drought. Cereal production fell substantially in 2016 and higher prices reduced people's access to food. In 2017 production improved considerably.

Although not always reflected in the three-year averages, climatic shocks in 2016 created exceptional food production shortfalls and/or widespread lack of access to food and left millions of people in Djibouti, Eswatini, Ethiopia, Lesotho, Kenya, Madagascar, Malawi, Mozambique, Somalia, Uganda and Zimbabwe in need of urgent assistance in early 2017. While

2017 saw an improvement, climatic shocks, sometimes localized, continued to leave millions in need of urgent food assistance in Djibouti, Eswatini, Ethiopia, Lesotho, Kenya, Madagascar, Malawi, Mozambique, Somalia and Zimbabwe.

Additionally, millions of persons were in need of urgent food assistance due to conflict in early 2017 in the Democratic Republic of the Congo, the Lake Chad Basin, South Sudan, and Sudan. By early 2018, millions of individuals continued to be in need of urgent assistance in the same countries. In addition, civil insecurity and localized conflict caused for heightened food insecurity in Burundi, the Central African Republic, Chad, Libya, Mali and Niger.

Notably, several countries also made significant progress in the fight against hunger, even under difficult circumstances. In particular, Angola, Ethiopia, Cameroon, Djibouti, Sierra Leone, and Senegal reduced the prevalence of undernourishment by more than 10 percent between 2004–06 and 2015–17.

Prevalence of severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)

The recent trend in undernourishment is confirmed by the rise in the prevalence of severe food insecurity within the population, 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 population (Table 2). The rise in severe food insecurity as measured by the FIES also appears to be accelerating. This is true for Africa and is driven by developments in Western and Central Africa, while in Eastern and Southern Africa the rise in FIES has slowed, as it has in Northern Africa.

TABLE 2
PREVALENCE OF SEVERE FOOD INSECURITY (MEASURED USING FIES) IN THE WORLD, AFRICA AND ITS SUBREGIONS, 2014 TO 2017

Region	Prevalence of severe food insecurity			
	2014	2015	2016	2017
World	8.9	8.4	8.9	10.2
Africa	22.3	22.4	25.4	29.8
Northern Africa	11.2	10.0	11.7	12.4
Sub-Saharan Africa	25.0	25.2	28.6	33.8
Central Africa	33.9	34.3	35.6	48.5
Eastern Africa	25.9	25.4	29.7	32.4
Southern Africa	21.3	20.4	30.8	30.9
Western Africa	20.7	21.9	23.8	29.5

Source: FAO

TRENDS IN MALNUTRITION

Prevalence of stunting in children under 5 years of age

Globally, there were 151 million (22.2 percent) stunted children under the age of five in 2017, of which nearly 59 million (30.3 percent) are in Africa and just under 54 million (32.6 percent) in sub-Saharan Africa (Table 3). While the prevalence continues to slowly

decline, the number of stunted children slowly increases each year.

Prevalence of wasting and overweight in children under 5 years of age

In 2017 about 7.5 percent of children under five (50.5 million) suffered from wasting worldwide. In Africa, the number was 13.8 million, or 7.1 percent, and most of these wasted children were in Eastern and Western Africa (9.1 million) (Table 4).

TABLE 3
PREVALENCE AND NUMBER OF STUNTED CHILDREN UNDER THE AGE OF FIVE IN THE WORLD, IN AFRICA AND ITS SUBREGIONS, 2017

Region	Prevalence (%)	Number (million)
World	22.2	150.8
Africa	30.3	58.7
Northern Africa	17.3	5.0
Sub-Saharan Africa	32.6	53.8
Central Africa	32.1	9.3
Eastern Africa	35.6	23.9
Southern Africa	29.1	2.0
Western Africa	29.9	18.6

Source: UNICEF, WHO & World Bank. 2018. Joint Child Malnutrition Estimates 2018 (available at <http://www.who.int/nutgrowthdb/estimates/en/>).

Globally, overweight affected 38.3 million children under the age of five (5.6 percent) in 2017, and their number is steadily rising. Of these, 9.7 million children are in Africa, and the continental prevalence rate, at 5.0 percent is quite similar to the global one. At the subregional level, the prevalence is below the continental average in Central Africa, Eastern Africa, and Western Africa, while it is much above the average in Northern Africa and Southern Africa. In the latter regions the trend is clearly upwards.

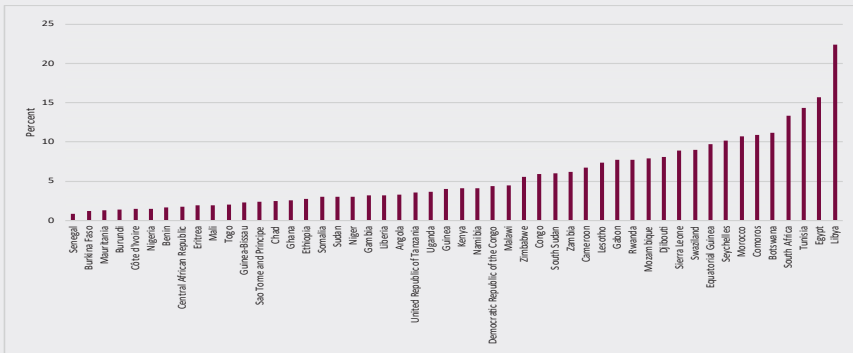
Although the prevalence in Southern Africa is the highest in the world, the average reflects an especially high prevalence in South Africa (13.3 percent). The prevalence in Namibia and Lesotho is much lower at 4.1 and 7.4 percent respectively. The highest levels of child overweight are observed in Tunisia (14.3 percent), Egypt (15.7 percent) and Libya (22.4 percent) (Figure 3).

TABLE 4
PREVALENCE AND NUMBER OF WASTED CHILDREN UNDER THE AGE OF FIVE
IN THE WORLD, AFRICA AND ITS SUBREGIONS, 2017

Region	Prevalence (%)	Number (million)
World	7.5	50.5
Africa	7.1	13.8
Northern Africa	8.1	2.3
Sub-Saharan Africa	6.9	11.5
Central Africa	7.1	2.1
Eastern Africa	6.0	4.0
Southern Africa	4.0	0.3
Western Africa	8.1	5.1

Source: UNICEF, WHO & World Bank. 2018. Joint Child Malnutrition Estimates 2018 (available at <http://www.who.int/nutgrowthdb/estimates/en/>).

FIGURE 3
PREVALENCE OF OVERWEIGHT IN CHILDREN UNDER FIVE IN AFRICAN COUNTRIES (MOST RECENT YEAR AVAILABLE)



Source: WHO

Progress towards the WHO Global Nutrition Targets

Progress in achieving the SDGs, in particular SDG 2, is closely related to progress made in achieving the global nutrition targets which were adopted by WHO member states in 2012. The six, interlinked, targets for 2025 are:

- ➔ Achieve a 40 percent reduction in the number of children under 5 years who are stunted;
- ➔ Achieve a 50 percent reduction of anaemia in women of reproductive age;
- ➔ Achieve a 30 percent reduction in low birth weight;

- ➔ Ensure that there is no increase in overweight;
- ➔ Increase the rate of exclusive breastfeeding in the first 6 months up to at least 50 percent; and
- ➔ Reduce and maintain childhood wasting to less than 5 percent.

Overall progress remains poor and is too slow at the continental level to achieve any of the targets by 2025. At the national level, data gaps for many countries and targets make it impossible to determine whether any progress has been made. However, no single country is on course to meet all five of the global targets that are being tracked. Only Kenya, Lesotho and São Tomé and Príncipe are on course to meet four of the targets.



**DEMOCRATIC REPUBLIC
OF CONGO**

A man harvesting celery.
FAO has provided farmers with
improved-variety seeds and has
rehabilitated irrigation and
flood prevention infrastructures
©FAO/Olivier Asselin

POLICIES AND PROGRAMMES TO SUPPORT FOOD SECURITY AND NUTRITION

The evidence presented in Part One showed that in Africa the prevalence of undernourishment had fallen steadily until 2010 but had remained flat thereafter and started rising in 2014. Some of the factors that determine food security are beyond governments' control, but forward-looking policies for food security and nutrition are needed because, as is argued in Part Two, they can make an important difference.

REGIONAL POLICY DEVELOPMENTS

Africa's vision for development is driven by the African Union's (AU) Agenda 2063, a central part of which is ending hunger and halving poverty by 2025, goals that are closely aligned with SDG 1 and 2. These goals were reaffirmed in the 2014 Malabo Declaration. The Malabo Declaration also reaffirmed the principles and values of the Comprehensive Africa Agriculture Development Programme (CAADP), the continental strategic framework for agricultural sector transformation.

After ten years of CAADP implementation, political leaders committed to strengthen mutual accountability, inter alia, through a biennial Agricultural Review Process that aims to track, monitor and report on progress in implementing the goals of the Malabo Declaration. The inaugural biennial review, presented at the African Union Assembly held in January 2018, assesses performance towards the seven Malabo goals. The biennial review indicates some areas of good progress as well as areas of much concern. In general, countries that have adopted the CAADP values and principles and are implementing their National Investment Plans, performed better in the Biennial Review. Countries also recognized the importance of country data systems and statistics to monitor and evaluate progress and allow for timely and informed action. The Review underscored the importance of the Regional and National Investment Plans, and the need to refresh these and to, where they do not yet exist, formulate them using the results of the Biennial

Review. Finally, funding remains a key constraint and it is vital that new and innovative financing mechanisms are explored.

NATIONAL POLICY EXPERIENCES

The regional strategies and policies inform national policy frameworks and investment plans and it can be instructive to review country experiences in reducing food security and malnutrition to highlight what drives success. As reported in Part One, Angola, Ethiopia, Cameroon, Djibouti, Sierra Leone, and Senegal, made substantial progress in reducing the prevalence of undernourishment by 10 percentage points or more over the 2004–06 to 2015–17 period. In addition, Kenya has made considerable progress towards meeting the WHO global nutrition targets. Below some of the reasons for these countries success are reviewed.

In **Angola**, progress in reducing undernourishment has been driven by relatively high rates of economic growth, averaging 4.1 percent between 2005 and 2016. Per capita food production as well as cereal imports rose strongly. This growth of food production is reflected in a rise of the index of average dietary

energy supply adequacy from 100 to 120 between 2004–06 and 2014–16. Despite such progress, serious concerns remain. High rates of inflation undermine access to food and other necessities. Economic growth has not been inclusive and extreme poverty has fallen little between 2000 and 2008, and remains high at about 30 percent. In addition, the rate of stunting has worsened over time and, at 38 percent, remains one of the highest in sub-Saharan Africa.

In **Ethiopia**, the poverty rate has fallen from 67 percent in 1995 to just under 27 percent in 2015, while the prevalence of undernourishment fell from 39.7 percent in 2005–05 to 25.7 percent in 2015–17. Public investments and growth in services and agriculture led to high and consistent per capita GDP growth, averaging 7.4 percent over the 2005 to 2016 period. Importantly this growth was broad based and in particular growth in agriculture was inclusive, contributing significantly to poverty reduction. Per capita food production grew strongly, with cereal production growing at a rate of 12.5 percent per year between 2004 and 2016. Interventions in other sectors were also important, leading to improved health, education and general living standards. In addition, the Government of Ethiopia managed to

reduce poverty through the Productive Safety Net Programme (PSNP), a social protection programme established in 2005. While much remains to be done, the country is an example of the power of political will and coherent and effective policies and interventions.

Cameroon experienced a steady decline in undernourishment until about 2014, after which there was no further progress, and then saw a small increase in 2016. The improvement is mainly due to strong growth in per capita cereal production of about 5.1 percent per year from 2004 to 2016. However, extreme poverty remains high at 24 percent in 2014, down only 5 percentage points from 2007. Similarly, the prevalence of stunting remains high at 32 percent in 2014, down from 36 percent in 2006. The country struggles with high levels of spatial and social inequalities and did not meet any of the Millennium Development Goals (MDGs), with the exception of the MDG on primary school enrolment.

Sierra Leone's civil war ended in 2002 and the country has experienced strong growth in per capita food production and relatively robust growth in GDP per capita. Progress has been made in

reducing food insecurity but extreme poverty, although reduced, remains very high at 52 percent. Maternal, infant and under five mortality rates have fallen but remain amongst the highest in the world. Finally, food security remains precarious, with over half the population food insecure in 2015.

Senegal has seen poverty rates fall from 68.4 percent in 1991 to 38 percent in 2011, while the prevalence of undernourishment fell from 21.6 percent in 2004–05 to 11.5 percent in 2015–17. Progress in Senegal appears to have been driven less by economic and agricultural growth than by good governance and effective policies and interventions. Per capita GDP growth averaged a modest 1.1 percent between 2005 and 2016 and per capita food production is no higher today than it was in 2004. However, although the country depends on rainfed agriculture and faces unfavourable climatic conditions, growth in cereal production was robust and rice production expanded dramatically. However, while the country has achieved success in reducing poverty and food insecurity, poverty remains relatively high and undernutrition is widespread.

Djibouti achieved a reduction in the prevalence of undernourishment from 32 percent in 2004–2005 to 19.7 percent in 2015–2017. This improvement was due to rising cereal imports, facilitated by robust growth driven by investments in infrastructure, especially ports. However, most other indicators of social welfare, such as poverty, health, education and malnutrition are poor and much work remains to be done. The country's economic prospects are buoyed by large inflows of foreign direct investments into ports, roads and hotels. At the same time unemployment, in particular that of youth and women, is high and the country is vulnerable to environmental shocks.

Kenya has had remarkable success in reducing undernutrition. Today, Kenya is the only country that is on track, or made some progress, in five of the WHO global nutrition targets. This achievement is based on strong government leadership, coordination and partnerships that has led to effective implementation of the National Nutrition Action Plan (NNAP) 2012–17 which focuses, inter alia, on maternal and child health and nutrition, recognizing and emphasizing the importance of interventions in the first 1 000 days of a child's life. The achievements have also been due to

Kenya's well developed social protection systems. A key constraint to the country's fight against malnutrition is a lack of funding. Other challenges are gender and spatial inequalities in nutrition outcomes, and capacity building of community health workers. In addition, although female secondary school enrolment has expanded steadily, greater efforts are needed to further raise educational attainments of women as well as effectively diffuse nutrition knowledge.

The country-level policy experience shows that effective food system and nutrition policies and their implementation can be an important driver of progress in achieving SDG 1 and 2. However, food security and nutrition are also affected by developments and policies in other sectors which are linked with the food system. In the subsequent sections of Part Two, four inter-related and cross-cutting issues of central importance to meeting the goals of the Malabo Declaration, as well as achieving the SDGs, are discussed in more detail: youth employment, migration, intra-African trade and climate change. The discussion highlights the importance of considering food security and nutrition also in policy design in other sectors.

YOUTH EMPLOYMENT IN AGRICULTURE

Addressing youth employment is one of the most pressing challenges facing African policy-makers. Between now and 2050 the population in the region will grow from 969 million in 2015 to 2 168 million in 2050. There are about 420 million youth (15–35) in Africa today, a number expected to double by 2050.

SITUATION AND TRENDS IN YOUTH EMPLOYMENT IN AFRICA

Over the 2000–08 period, about 16 million 15–24 year olds found employment. However, most non-student youth work is in the informal economy. These youth typically earn low wages in casual or seasonal employment, and often face unsafe, exploitive working conditions with very limited opportunities for skills development. Yet many youth, even when they have found work, often struggle to meet basic needs, including food. In sub-Saharan Africa, the number of youth in working

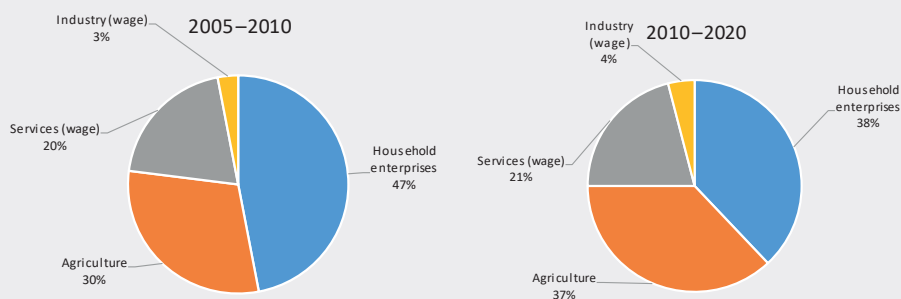
poverty rose dramatically from about 7 million a decade ago, to about 58 million today, meaning nearly 67 percent of all young workers are living in poverty.

Creating employment for the millions of labour market entrants in the coming years will be a tremendous challenge. About 10–12 million youth join the labour market but only 3 million formal jobs are created each year. If youth employment rates remain unchanged then nearly 50 percent of all non-student youth will be unemployed by 2025.

AGRICULTURE IS KEY TO CREATING EMPLOYMENT FOR YOUTH

Survey data from 28 of 47 countries in sub-Saharan Africa, covering about 75 percent of the 2010 labour force to show that most new entrants between 2005 and 2010 found work in household enterprises and in agriculture (Figure 4). For 2010–2020, they predict that most new entrants will continue to work in those sectors, showing the continued importance of agriculture for future employment.

FIGURE 4
ESTIMATES OF THE CURRENT AND FUTURE STRUCTURE OF EMPLOYMENT
IN SUB-SAHARAN AFRICA: 2005–2010 AND 2010–2020



Source: Fox, L., Haines, C., Muñoz, J.H. & Thomas, A. 2013. *Africa's Got Work to Do: Employment Prospects in the New Century*. IMF WP/13/201. Washington, DC, International Monetary Fund.

Agriculture holds considerable promise in terms of growth and jobs. The rise in population and growth in GDP per capita will drive significant growth in demand for agricultural products. Overall, agriculture and agribusiness markets are projected to grow from USD 313 billion today to about USD 1 trillion in 2030.

However, it is not a given that domestic supply can meet rising food demand and 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. Furthermore, many processed products are still imported.

Taking advantage of the opportunities in agriculture is essential to eradicate poverty and hunger. Although a challenge, with the right incentives and enabling environment, farmers and

agribusiness do respond to opportunities. Furthermore, beyond on-farm jobs, there is also significant potential for job creation in rural non-farm economic activities around food value chains linked to sustainable agriculture, agribusiness development and related support services.

CHALLENGES AND AREAS OF INTERVENTION

Youth lack skills, and access to information and education, in particular training for relevant skills. Nearly 80 percent of youth aged 25–34 working in agriculture have primary schooling or less, including 40 percent with no education at all. Another major challenge is accessing vocational education. Access to land is also a serious constraint, and in addition, youth have inadequate access to financial services, markets and involvement in producers' groups and in policy dialogue. In addition, enhancing youth participation requires a role in decision-making and policy dialogue.

The private sector is key for inclusive growth and the creation of decent jobs creation in Africa. The large and dynamic private sector, often informal, accounts for 70 percent of production, more than 65 percent of investment, and 90 percent

of African jobs, so it is unsurprising that the livelihoods of so many Africans depend on it. The private sector has also been a major driver of the continent's fast economic growth over the past 15 years. While the number of young Africans grows rapidly, progress towards job creation has not kept pace. Tackling youth unemployment and underemployment cannot be done by the private sector alone. Solving the problem requires input from multiple actors, including the youth themselves, governments, non-governmental organizations, donors and the research community.

POLICY INITIATIVES

The recognition of agriculture as a sector of opportunity for young people has resulted in multiple promising initiatives. At the international level, the G20 launched the G20 Africa Partnership, which includes in particular the G20 Initiative for Rural Youth Employment. The ILO-led Global Initiative on Decent Jobs for Youth, with a strong focus on Africa, is the first UN system-wide effort to scale up action in support of youth employment.

At continental level, there are various initiatives to support youth employment in different ways. For example, the

African Union has developed the Continental Education Strategy for Africa (CESA 16–25) and the Technical and Vocational Education and Training (TVET) Strategy to foster Youth Employment, both of which provide policy advice that can be aligned to national needs and priorities.

In addition, the African Union Commission, NEPAD, KfW Development Bank and the Deutsche Gesellschaft fuer Internationale Zusammenarbeit (GIZ) developed the Skill Initiative for Africa (SIFA) that aims to promote and replicate successful practices and African solutions to contribute to decent employment, skill development and youth participation in entrepreneurship. Part of SIFA is the African Skills Portal for Youth Employment and Entrepreneurship (ASPYEE) knowledge platform which serves as a knowledge repository and enables the sharing of national approaches. Also relevant is the African Development Bank (AfDB) flagship programme “Empowering Novel Agribusiness-Led Employment for Youth” (ENABLE Youth) which is a loan facility that aims to help youth without tertiary education to gain skills, and establish and run agribusinesses.

MIGRATION, REMITTANCES AND FOOD SECURITY AND NUTRITION

In recent years, migration has become a key priority for policy-makers, including those from Africa. As highlighted by the African Union, issues of key concern for the continent are, inter alia, the exodus of skilled individuals, facilitating the free movement of people within the continent, improving border governance, reducing the costs of remittances, reducing irregular migration and people smuggling, improving the quality of data on remittances and migration, and engaging the African Diasporas to contribute to the sustainable development of the continent.

Globally, international migration accelerated in the 2000–2015 period and then slowed a little in 2015–2017, reaching 258 million people in 2017. Although it receives less attention, internal migration, i.e. migration within a country, is estimated at about 763 million in 2005, nearly four times the number of international migrants. For Africa, this figure is 114 million. Table 5 provides some summary statistics about international migrants hosted in and originating from Africa. The volume of emigrants from sub-Saharan

Africa are more than two times higher than those from Northern Africa, i.e. 25.1 million versus 11.2 million. While about 90 percent of migrants from Northern Africa migrate to other continents, sub-Saharan African migrants mostly move within the continent. Many international migrants leave home because of conflict or

persecution and when they cross a border are referred to as refugees. Today there are about 5.3 million refugees in sub-Saharan Africa, with most – 4.8 million – hosted in the region, mainly in Central and Eastern Africa. In addition, conflict or persecution has left 8.9 million persons internally displaced.

**TABLE 5
SELECTED STATISTICS ON INTERNATIONAL MIGRANTS (STOCK), REFUGEES AND REMITTANCES
IN AFRICA AND ITS SUBREGIONS BY 2017**

	Africa	Northern Africa	Sub-Saharan Africa	Central Africa	Eastern Africa	Southern Africa	Western Africa
Number of international migrants hosted in ¹	24 650 223	2 410 056	22 975 988	7 591 799	3 539 697	4 338 205	6 770 466
Number of international migrants hosted as proportion of the population ¹	2.0	1.0	2.3	2.2	1.8	6.7	1.8
Proportion of international female migrants hosted ¹	47.1	41.9	46.8	46.2	47.7	46	47.1
Number of international migrants originating from ¹	36 266 428	11 175 732	25 090 696	4 099 426	10 533 239	1 586 875	8 871 156
Number of refugees hosted in ²	5 530 987	743 836	4 787 151	1 293 406	3 023 522	95 541	374 682
Number of refugees originating from ²	5 997 367	686 700	5 310 667	1 074 578	3 672 683	2 216	561 190
Internally displaced persons (due to conflict) ³	12 603 700	3 704 500	8 899 200	2 960 000	3 484 000	0	2 455 200
Personal remittances as percentage of GDP in 2017 ⁴	3.1	4.4	2.5	0.1	1.7	0.4	5.5
Personal remittances in millions of USD in 2017 ⁴	69 470	31 623	37 847	318	5 688	1 490	30 351

Sources: (1) UN (2017b), (2) UNHCR (2017), (3) IDMC (2017), (4) World Bank (2018). NB: Refugees include people in refugee-like situations.

REMITTANCES IMPACT ON FOOD SECURITY

International and internal migrants are of importance to policy-makers also because they remit substantial amounts of money and goods to their families. Remittance inflows to Africa were about USD 69.5 billion in 2017, of which USD 38 billion went to sub-Saharan Africa (Table 5).

The available evidence indicates that a significant part of remittances support food consumption as well as education, health and better nutrition. By increasing access to more and more diverse food, remittances directly improve food security. In addition, several studies found that remittances can reduce underweight in children under 5 years of age, but there is only very limited evidence showing that they can reduce stunting and low birth weight. On the other hand, some studies showed a link between overweight and remittances.

Although the focus is typically on cash remittances, survey data from Southern Africa show that a substantial quantity of goods, much of it food, are also regularly sent back home, especially among internal migrants.

Several studies find that remittances reduce poverty, i.e. increase access to food. Both international and internal remittances reduce poverty, but in

general the former have a larger impact. However, while internal remittances are smaller than international remittances they may reach more households and are more likely to reach the poor. While several studies show a poverty reducing impact, others find no impact and there remains some debate on the issue. In part, this may be because a significant number of households receiving remittances from abroad are in the top income/consumption quintiles.

Whether migration improves the welfare of the migrant-sending household ultimately depends on whether remittances can compensate for the loss of the migrant's contribution to economic activities prior to their move. In the short run, when a member that contributes to the productive activities of a farming household emigrates, food production will probably decline. However, in the longer term, remittances can have a positive impact on food availability by stimulating investment in productive resources.

Even if remittances do not lead to investment directly, they may promote investment by providing liquidity and removing or relaxing binding credit and savings constraints. When remittances are regular and predictable they partly substitute for insurance against economic downturns, natural disasters and serious health shocks, and allow households

to make investments and take advantage of economic opportunities that they would otherwise consider too risky.

Finally, remittances can help households avoid coping strategies that may have a negative impact on food production. It is important to realize that remittances may not only have an impact on receiving households, but on non-receiving households as well. When households spend cash on local products the benefits spreads to non-receiving households, leading to a multiplier effect. On the other hand, in countries where remittances are high relative to GDP the remittances can also lead to inflation and currency depreciation, resulting in lower purchasing power for all households. At the same time, international remittances are a relatively stable inflow of foreign exchange, facilitating the import of food, an important factor for countries that rely more heavily on imports.

ENHANCING THE IMPACT OF REMITTANCES ON FOOD SECURITY, NUTRITION AND RURAL DEVELOPMENT

In areas where remittances are an important source of income policy-makers should consider leveraging these transfers, but few policy interventions

currently exist to do so. An important area of intervention is that of reducing the cost of transfers. Currently these costs are high in sub-Saharan Africa, at about 12 percent, compared to 8 percent in other developing regions. Apart from reducing the cost of transfers, financial institutions should create tailored financial products to leverage remittances and allow for productive investment. Efforts should also be made to enhance the financial literacy of migrants and their households. In this regard it is relevant to note that The African Institute for Remittances (AIR), a Specialised Technical Office of the African Union, became operational in 2015. The AIR is focused on reducing the cost of remitting money to and within Africa, and improving the regulatory and policy frameworks within which remittances transfers take place.

INTRAREGIONAL TRADE AND FOOD SECURITY AND NUTRITION

Regional integration, including through greater trade in goods and services, is one of the key aspirations of the African Union's Agenda 2063. Within this context, establishing the African Continental Free Trade Area (AfCFTA), a flagship program of the Agenda, is expected to significantly accelerate

growth and sustainable development through a doubling of overall intra-African trade by 2022, and a tripling of trade in agricultural goods by 2023.

The AfCFTA would create a single market of up to 1.2 billion people and a GDP of nearly USD 2.2 trillion in 2016, which could generate substantial economic gains. By one estimate, based on the best-case scenario of the elimination of all tariffs on intra-African trade, the long-term gains would be approximately USD 16 billion annually.

Agricultural trade will also benefit significantly. The creation of a single market will generate economies of scale that are essential for a more efficient and commercial farming sector. Moreover, according to the World Bank, removing barriers in accessing input and output markets, which are worse for farmers in Africa than for farmers in other regions of the world, offers African farmers the opportunity to benefit from the growing demand due to rapid population growth, urbanization and income growth.

SITUATION AND TRENDS IN INTRAREGIONAL TRADE

Most of Africa's trade is with countries outside the region. Overall intra-African trade is about 10 to 20 percent of the

total and this share has grown only slowly over time. Of the total intra-African exports, about 19 percent are agricultural. Intraregional trade in agricultural products has grown strongly in some areas, expanding, for example, from USD 305 million in 2005 to USD 635 million in 2007 in ECOWAS countries. Officially recorded agricultural intra-African exports were USD 13.7 billion in 2013 (the latest year for which data is available), a considerable increase from the USD 2 billion and USD 6.9 billion exported in 2000 and 2010, respectively.

Although intraregional trade is low, and has grown only slowly, there has been some progress with Regional Economic Communities (RECs) fostering trade through various programmes and initiatives. However, many African countries continue to impose high tariffs, quantitative restrictions and non-tariff barriers on imports from neighbouring countries. To date, there remains a comprehensive gap between legislation and implementation.

INFORMAL CROSS-BORDER TRADE

The picture of intraregional trade in Africa would not be complete without including informal cross-border trade (ICBT) which available evidence indicates

is of considerable significance for many countries and individuals. For example, in Southern Africa, ICBT accounts for 30–40 percent of total intra SADC trade amounting to perhaps as much as USD 17.6 billion a year. In Eastern Africa the informal cattle trade made up 85 percent of the total in 2011. Finally, in Nigeria, ICBT accounts for between 20 percent of GDP in Nigeria to 75 percent in Benin. However, even if ICBT is included, the total level of intra-African trade is not likely to be more than 20 percent of the total.

Informal cross-border trade is, in most cases, especially important for women. Trade between the Democratic Republic of the Congo and its Great Lakes neighbours is dominated by women, and two-thirds of respondents indicated that cross-border trade was their main source of income. The available evidence indicates that women make up between 60 to 70 percent of informal cross-border traders.

ICBT is widespread because of weaknesses in institutional capacities related to taxation, regulation and private property rights. To address these issues, governments need to simplify legislation and regulations governing trade, educate

traders on formal procedures and tackle corruption. On the other hand, informality leaves traders exposed to officials who often solicit bribes, harass and sexually abuse traders and confiscate goods, holding back the contribution that the informal sector makes to economic development. In addition, ICBT is very often seen as unfair competition to domestically produced goods and the source of significant revenue losses for the government.

TRADE AND FOOD SECURITY

Trade affects each of the four dimensions of food security through its impact on incomes, prices and inequality, stability of supply, food safety, as well as variety and quality of food products, all of which help determine the food security and nutrition of individuals. Because the nature of the impacts depend on the specific context, and because often trade reforms are introduced alongside other reforms, it has been difficult to establish a consistent link between trade liberalization and food security.

Economic growth has been essential for driving down poverty rates and although it is difficult to establish a clear link

between trade and income growth, many agree that economies that are more open tend to grow faster. Opening the trade of food can increase availability and access, although it also carries potential risks. However, while, agriculture and food trade might displace domestic production or lead to a move to greater cash crop production, it has generally been found to result in higher domestic production. The available evidence shows that the relationship between trade, export crops and food security is, with some exceptions, a positive one.

Often governments use trade policy inappropriately to achieve multiple objectives. While the longer-term benefits of trade are well recognized, the political realities are such that governments try to protect consumers from price volatility. A more effective solution would be to combine trade reform with safety nets and risk-mitigating programmes.

NON-TARIFF BARRIERS TO TRADE

Although there is political will at the highest level, implementation of agreements often lags their adoption and many hurdles to free trade continue

to exist, adding costs to crossing borders in Africa. Average delays in customs clearance are 12.1 days, much higher than in other regions. Also domestic transportation costs are high, accounting for between 50–60 percent of marketing costs in the region. Adding to the cost of transport are frequent roadblocks.

Specific to agriculture, NTBs, such as sanitary and phytosanitary measures (SPS), have become relatively more important compared to tariffs, although non-compliance with existing tariff liberalization commitments is also common. Sanitary and phytosanitary measures have the legitimate and critical function of protecting countries from risks to public health and to animal and plant life and health. However, weak capacities to enforce SPS measures can result in a country's exclusion from key markets, and poorly applied procedures can add unnecessary costs to the trading system. Moreover, food safety and SPS regulations vary across countries even though agro-ecological conditions for pests and diseases are shared. Promoting intraregional trade will mean reducing these barriers to trade, which today often push traders towards using informal channels, thus avoiding compliance with SPS measures entirely and defeating the intended purpose of the SPS measures. Governments can facilitate

cross-border trade by investing in physical infrastructure, simplifying procedures, harmonizing standards, streamlining licensing procedures and certificates of origin requirements, improving market information and finance, and improving professionalism of customs officers. An area of urgent action is that of improved trade data, the absence of which may lead to inconsistent policymaking.

CLIMATE CHANGE AND FOOD SECURITY AND NUTRITION

Climate change is a fundamental challenge that African policy-makers must address. African ecosystems are already being affected by climate change and future impacts are expected to be substantial. The African continent is particularly vulnerable to the effects of climate change, in part because of the heavy reliance on climate sensitive activities and in part because of the high levels of poverty and food security that exist. Climate change amplifies the adverse impacts of non-climate stressors on food security and nutrition, while some of these stressors, such as land use change and land degradation will amplify climate change.

THE IMPACT OF CLIMATE CHANGE ON AGRICULTURE, FISHERIES AND FORESTRY

Climate change is already negatively affecting food availability through adverse impacts on crop yields, fish stock, and animal health, and the effects are anticipated to be more severe in sub-Saharan Africa and South Asia. Lower food supplies in turn means higher prices, which lowers the purchasing power of urban and non-farm rural households. Also poor smallholder family farmers are affected because many are net buyers of food. In addition, greater climate variability will trigger or contribute to more frequent price spikes.

Although not all impacts are negative, in the longer-term, negative impacts, in particular due to reduced water availability, will dominate, and, by 2050, potential mean production losses for sub-Saharan Africa are predicted to be 22, 17, 17, 18, and 8 percent for maize, sorghum, millet, groundnut, and cassava, respectively. In addition, more frequent and more intense dry spells and droughts will reduce forage and crop production for animals. Heat waves and a hotter environment will damage animal health, reproduction and biodiversity, and reduce meat, milk and egg production.

CLIMATE CHANGE IS EXPECTED TO WORSEN FOOD SECURITY AND NUTRITION

Globally, with no climate change, about 406 million people would be at risk of hunger in 2050 and with climate change another 71 million people would be at risk. Among the developing regions, Southern Asia and Africa would be the most exposed to an increased risk of hunger. For the latter region, predictions are that 157 million people will be at risk of hunger by 2050 without climate change and 196 million with climate change. Indeed, about 54 percent of the predicted increase in the number of undernourished will be in Africa, and in particular in sub-Saharan Africa.

WORKING TOWARDS ADATATION AND MITIGATION OF CLIMATE CHANGE

The threat of increasing poverty and hunger make climate change adaptation (CCA) and mitigation in the food and agriculture sectors a priority for African policy-makers. However, addressing climate change is important also because agriculture, land use change and land degradation is responsible for about 21 percent of total global greenhouse gas emissions.

Climate-Smart Agriculture (CSA) is an integrated approach to managing cropland, livestock, forests and fisheries that addresses the interlinked challenges of food security and climate change, and is providing a guiding framework at international, regional and country level for climate-smart adaptation and mitigation planning. CSA interventions are not determined a priori but based on a process of building evidence and dialogue. Good practice should be guided by the need for sustainable intensification of agricultural production to raise productivity while conserving natural resources.

ACTION AT INTERNATIONAL, REGIONAL AND NATIONAL LEVEL IS REQUIRED

At global level, the 2015 Paris Agreement on Climate Change, the United Nations Framework Convention on Climate Change (UNFCCC) and the Sendai Framework for Disaster Risk Reduction (DRR) 2015-2030 in Africa, adopted in January 2017, are key policy frameworks/agreements that guide policy formulation and design of interventions. In particular the UNFCCC, through which the 2015 Paris Agreement was negotiated, offers the policy architecture to support CCA.

At a continental level, the Malabo declaration and the implementation guide of the CAADP are expected to provide renewed impetus and to stimulate decisions and actions.

Africa's flagship programme to combat the effects of climate change and desertification, the Great Green Wall for the Sahara and the Sahel Initiative (GGWSSI), was launched by the African Union in 2007. The Action Against Desertification (AAD) project builds on GGWSSI and supports local communities, governments and civil society organizations. Other major Africa-based climate initiatives with focus on agriculture are the Africa Climate-Smart Agriculture Alliance (ACSA), the Agricultural and Food system Resilience: Increasing Capacity and Advising Policy programme (GCRF-AFRICAP), the R4 Rural Resilience Initiative, the Agricultural Climate Resilience Enhancement Initiative (ACREI), and the Promotion of Smart Agriculture towards Climate Change and Agro-ecology transition in West Africa (Agriculture Intelligente pour le Climat-AIC).

Despite progress, Africa lags in developing climate adaptation strategies and implementation, and policies need considerable strengthening. Weaknesses

also exist in collecting relevant data and in monitoring regional adaptation policies. Finally, funding remains a considerable constraint. The African Climate Policy Centre (ACPC) is an effort to address the need for greatly improved climate information and to strengthen the use of such information for decision making, by improving analytical capacity, knowledge management and dissemination activities. In addition, the Climate Research for Development (CR4D) initiative is aimed at strengthening links between climate science research and climate information needs in Africa and to improve access, quality, and usability and mainstreaming of climate information into development planning in Africa.

An important area of action is the provision of climate information services. In Africa significant gaps exist in location specific, reliable, and user-friendly weather forecast information. There are less than 300 weather stations, corresponding to only one-eighth of the required density to meet the WMO observation standards, and funding and commitment are needed to modernize hydrology and meteorology services. The AfDB, the World Bank, the Global Facility for Disaster Reduction and Recovery (GFDRR), the WMO, the French Development Agency (AFD), WFP, and

the UNDP are collaborating to implement a program that modernizes hydrology and meteorological services at national, subregional and regional levels. These efforts are backed by the European Union, the multilateral Climate Risk Early Warning System (CREWS) initiative, and the Government of Japan.

Efforts are also being made to improve the availability, access and use of climate information. For example, the “Enhancing National Climate Services” (ENACTS) initiative is implemented by National Meteorological and Hydrological Services and Regional Climate Centres in Africa with the support of the International

Research Institute for Climate and Society (IRI) and other partners. However, much work remains to be done to improve user awareness of specific climate information, improve data access, and strengthen user input to improve the relevance of data for users.

Finally, climate change adaptation and disaster risk reduction (DRR) are separate, but overlapping, concepts and policy frameworks that must be aligned as well as coordinated with interventions in nutrition and the food system.



NAROK, KENYA

Maasai pastoralists having
their herd vaccinated

©FAO/Luis Tato

ADDRESSING THE THREAT FROM CLIMATE VARIABILITY AND EXTREMES FOR FOOD SECURITY AND NUTRITION

Last year's Africa Regional Overview of Food Security and Nutrition reported that in many countries climate-related disasters were among the reasons for rising levels of hunger. In sub-Saharan Africa the extremely strong 2015–16 El Niño caused record-breaking warming and widespread drought that left millions food insecure. It is therefore timely that this year's edition presents a broader evidence-based assessment of the threat posed by climate variability and extremes to food and nutrition security in the region. The evidence presented shows that more numerous and more frequent occurrences of climate extremes and a rise in climate variability are threatening to erode gains made towards ending hunger and malnutrition.

SITUATION AND TRENDS

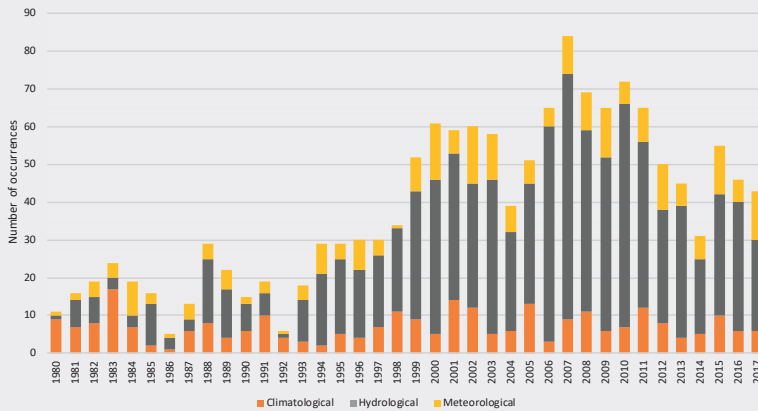
Observed trends

The Intergovernmental Panel on Climate Change finds that, globally, there is strong evidence of an increasing trend over recent decades of some types of extreme weather events, including their frequency, intensity and duration. For Africa, for most areas with data, there has been an increase in the frequency of warm days and nights and a decrease in

cold days and nights and an increase in extreme temperatures. For heavy precipitation in Africa, the confidence in trends is low to medium due to a lack of data and studies. Some regions appear to have seen an increase in heavy precipitation, while others a decrease. For droughts, Africa is one region that has experienced an increase in overall dryness, but although there was a continent wide drought in 1983–84, no apparent continent-wide trends in rainfall have been observed in the 20th century. Some regional variation to trends in drought occurrences has been observed.

The Intergovernmental Panel on Climate Change assessments for historical extreme temperature and heavy rainfall trends over most of Africa is provided with low to medium confidence due to a partial lack of data and studies. This qualifier should be borne in mind when interpreting Figure 5, based on the International Disasters Database (EM-DAT) data, and which show that extreme events, in particular hydrological events, appear to have increased dramatically in frequency after 1998.

FIGURE 5
NUMBER OF EXTREME METEOROLOGICAL, HYDROLOGICAL AND CLIMATOLOGICAL DISASTERS IN AFRICA, 1980–2017*



Source: EM-DAT

*EM-DAT classifications are: climatological includes droughts and wildfire; meteorological includes storms and extreme temperatures; hydrological includes landslides and floods

Economic losses as measured in GDP are higher in developed countries than in developing countries, however when they are expressed as a percentage of GDP they are higher in developing countries and are particularly high in Small Island Developing States (SIDS). Climate extremes cause deaths, displace people and leave many destitute and hungry. Over the last 10 years, climate extremes

affected an average of 16 million people and caused USD 0.67 billion in damage in Africa, each year. Between 1970 and 2008 over 95 percent of deaths from natural disasters happened in developing countries. Globally, the Intergovernmental Panel on Climate Change finds that economic losses from extreme weather has increased, although there is high inter-annual and spatial variability.

PROJECTED CHANGES

Across the globe, changes in extreme climate patterns have been observed since the 1950s. However, while it is unequivocal that the climate system is warming, there is much uncertainty pertaining to changes in climate variability, especially with regard to spatially more refined projections.

HEAT WAVES

It is considered highly probable that by the end of the century the summer average temperature in the tropics and subtropics, will exceed the hottest summer on record between 1900 and 2006. Although a partial lack of data and studies means that there was only a low to medium confidence in historical extreme temperature trends over most of Africa, there is nevertheless high confidence that the number of warm days will increase, and the number of cold days will decrease in all parts of Africa and that heat waves become more frequent and/or last longer.

DROUGHT/DRYNESS

An assessment of future drought risk, incorporating drought disaster frequencies, drought severity and levels

of production, management and irrigation found that Africa has the highest Disaster Risk Index value. While the International Panel on Climate Change reports low to medium confidence in increased dryness in Africa, projections show that all rainfed agriculture in Southern Africa below 15 °C is likely to fail one out of two years. In Eastern Africa and Southern Africa, except for the eastern part of the latter, greater dryness is anticipated with medium confidence, with southwestern parts of Southern Africa predicted to be at high risk of severe droughts.

RAINFALL/EXTREME WET DAYS

There is low to high confidence in an increase in heavy precipitation across the region. For Western Africa there is low to medium confidence in increased heavy precipitation, with some parts predicted to receive more extreme rainfall days during May and July, while the other parts are expected do see an increase in intensity and frequency of extreme rainfall. There is high confidence for increased heavy precipitation and the number of extreme wet days for Eastern Africa. For Southern Africa there is low confidence in predictions although there is some evidence of increased heavy precipitation in the southeast. Finally, predictions for tropical cyclone activity in the southeast of Southern Africa remain highly uncertain.

THE IMPACT OF CLIMATE VARIABILITY AND EXTREMES ON FOOD SECURITY AND NUTRITION

In sub-Saharan Africa's semiarid and subhumid areas, droughts and floods are the main causes of short-term fluctuations in food production. If such extreme events become more frequent and severe, they will threaten the stability of food supplies and thus food security. The available evidence, reviewed below, shows that extreme climate events will adversely affect food security and nutrition through a number of channels, ultimately impacting all four dimensions of food security.

FOOD AVAILABILITY

Droughts can have devastating effects on agricultural output and temperatures exceeding certain thresholds, even for short periods, during the developmental stage are likely to damage yields. Estimates show that droughts and extreme temperature events reduced national agricultural production by, on average, 9–10 percent across the world and that recent droughts had a larger effect than earlier ones.

An increased frequency and intensity of storms, hurricanes and cyclones will harm aquaculture, mangroves and coastal fisheries. The production from inland fisheries and aquaculture is threatened by changes in precipitation and water management, increased stress on freshwater resources, and the frequency and intensity of extreme climate events.

Over time, heat stress increases animals' vulnerability to disease, thereby reducing fertility as well as meat and milk production. Climate change will also modify the prevalence of livestock parasites and diseases.

ACCESS TO FOOD

Crop and livestock production are immediately affected by climate shocks, but the impacts can lead to widespread 'entitlement failure' by destroying livelihoods and inflating prices and, without large-scale public interventions, hunger and famine follow. Regular droughts have been shown to have a strongly negative impact on households' ability to access food.

To alleviate production shortfalls and dampen price rises countries typically increase imports of staple foods. For

Africa, agricultural imports following a natural disaster are typically lower, and sometimes much lower, than the drop in domestic production. In part this is compensated for by humanitarian responses but in part it is reflected in lower food availability.

Droughts in particular can threaten food security at a variety of scales, from local to regional. When such events threaten staple food production in globally significant producers it may threaten food security also in countries not directly affected by drought.

UTILIZATION

In the absence of insurance, rural households that experience shocks may reduce consumption or sell assets. Reducing consumption to preserve productive assets in the short run can irreversibly harm long-term physical and cognitive development of the youngest and most vulnerable members of a household. Households may also change their eating habits to adjust to changes in food availability, income or price rises. If prices rise, consumers tend to maintain their level of staple food consumption by switching to cheaper, less diverse and nutritionally inferior diets.

BUILDING RESILIENCE TO EXTREME CLIMATE EVENTS

Climatic shocks push many households into poverty with long-lasting impacts. Households may adopt negative coping strategies, such as selling cattle or other assets, reducing consumption or switching to cheaper foods, taking children out of school, borrowing and even begging. Households first engage in reversible coping strategies, such as switching to cheaper foods and reducing meals, but as these become exhausted they have to engage in strategies that can be difficult to reverse, such as selling assets and exploiting natural resources in an unsustainable manner. As a consequence individual's and household's livelihoods may be undermined for the longer term, even trapping them in chronic poverty.

INFORMAL SAFETY NETS ARE NOT ENOUGH

Individuals, households and communities have to have three capacities to cope and adapt to climatic (and other types) shocks and their impact:

- ➔ adaptive capacity, i.e. coping strategies, risk management, and savings;

- ➔ absorptive capacity, i.e. use of assets, attitudes/motivation, livelihood diversification and human capital; and
- ➔ transformative capacity, i.e. governance mechanisms, policies/regulations, infrastructure, community networks and formal social protection.

Needless to say, poor households are often lacking in these capacities and in institutional supports, and they remain particularly vulnerable. Households across Africa use burial and funeral societies and informal credit and savings schemes to avoid consumption shocks. However, there is substantial evidence that shows that such informal arrangements are more effective for idiosyncratic shocks, such as illness, that affect individual households, than covariate shocks, such as drought or flooding, that affect entire communities. In general, they offer only partial insurance to the poor. Government programmes are required to support the most vulnerable in obtaining the necessary capacities noted above.

SHOCK-RESPONSIVE SOCIAL PROTECTION NEEDED

While informal safety nets are critical supports for households experiencing either sudden shocks or protracted

challenges, governments play a critical role in providing basic social protection entitlements to the most vulnerable. The immediate concern is to protect household food consumption and avoid negative coping strategies that have long term implications for the household's livelihood, asset base and welfare.

Social protection interventions, such as cash or food transfers, have been shown to be effective at reducing food insecurity and poverty. In addition, social protection can play an important role in positively shifting behaviours around household investment decisions. First, social protection can help households manage risk if transfers are available at regular levels and predictable intervals. Second, social protection programmes that provide cash relieve binding constraints that cause poor agricultural households to engage in suboptimal use of assets and inputs. Third, the impact of social protection programmes is also felt in the communities and local economies in which these programmes are implemented.

Social protection programmes in Ethiopia, Ghana, Kenya, Malawi and Uganda show that regular long-term cash transfers can help households absorb the negative impacts of shocks and are protective against households falling deeper into poverty. However,

although the transfers help individuals and households mitigate against certain risks and manage shocks as they occur, social protection programmes are not usually designed to support community level resilience building, shock mitigation, or shock responsive enough to react quickly in a crisis to support in recovery. However, the importance of shock-responsive social protection is a growing field of inquiry and more countries and stakeholders are looking to build effective social protection systems that include early warning systems and shock responsive instruments.

INVESTING IN RESILIENCE

While African governments must invest more of their national budgets into social protection as a central element in increasing food security and building resilience from climate-related disasters for the poor, it is not a panacea and other actions are needed to build resilience throughout the food system.

The free movement of food products can help transfer produce from surplus to deficit areas, reducing output fluctuations and dampening price spikes. In general, production shocks are less pronounced at the regional level than

at the country level and it is more efficient to pool regional resources through trade than to maintain stocks in each country.

Some governments intervene directly to stabilize prices through state marketing boards and food reserves. However, countries with the most active interventions in maize markets do not necessarily experience lower price volatility compared to countries that make less effort to manage prices. Buffer stocks or an emergency food reserve can help stabilize domestic food prices, however they are expensive to maintain.

Over the longer term, investing in infrastructure, such as irrigation and the management of dams and rivers in river basins, is necessary to strengthen the resilience to drought of farming communities, and the rural and urban communities more generally. Also restoring degraded land is an important part of strengthening the resilience of communities. Increasing the level of organic carbon in soils improves nutrient and water intake by plants, possibly countermanding some of negative impacts of extreme events, and it reduces soil erosion and increases water retention. Soil and water conservation helps increase soil water content and maintain humidity during soil spells

through improved soil structure. Trees provide shade and biomass and add a source of income during the dry season.

Research and Development will play a fundamental role in helping farmers adapt to climate change. Greater emphasis must be placed on crops which do well under hot and dry growing conditions, or which are more drought resistant. Greater climatic variability and extremes will also raise the incentive to adopt climate-smart practices, such as drought tolerant seeds. In addition, insurance is another important element that can shield farm households from the adverse effects of climate-related extreme weather events.

STRONGER, COORDINATED EFFORTS ARE NEEDED

Following the International Decade for Natural Disaster Reduction, disasters are not anymore seen as temporary disruptions that should be dealt with through humanitarian assistance and specific interventions. Rather, it is recognized that sustainable development is not possible without coherent and effective Disaster Risk Reduction (DRR) strategies.

At the international, regional and country level, DRR is guided by the Sendai Framework (SF). Adopted in 2017, it commits all countries to prepare national and local disaster risk reduction strategies by 2020. The African Union's Programme for Action (PoA) for the Implementation of the SF for DRR 2015–30 in Africa was adopted in 2017 at the Africa Regional Platform for DRR. The PoA gives strategic direction to integrate DRR into regional climate change adaptation strategies, to mobilize domestic resources, and to accelerate implementation of the SF global targets.

Understanding disaster risk means being able to better predict when and what type of disasters strike and who and what are vulnerable. Formulating strategies and decision making rely on accurate data that can establish a baseline and allow for the monitoring of the agreed global targets of the Sendai Framework.

Regional and national level prediction of climate shocks is essential, but significant gaps in data collection exist, making short- and long-term predictions and projections difficult. Building capacity to collect, analyze and disseminate the relevant information and data is essential for informed decision making at all levels.

A recent initiative to generate and communicate early warnings about dangerous hydrometeorological and climate risks in least developed countries and small island developing states is the Climate Risk and Early Warning Systems (CREWS). Also cooperation at subregional level is essential as often weather events outside a country impacts farmers within that country. In the late 1990s the WMO, National Meteorological and Hydrological Services (NMHSs), regional institutions and other international organizations, initiated Regional Climate Outlook Forums, which bring together national, regional and international climate experts to produce regional climate outlooks.

Emergency preparedness and response is a further important element of DRR. Important aspects of emergency preparedness are early warning, contingency planning, setting up humanitarian response mechanisms, strategic reserves of food and seeds, safe storage facilities, livestock shelters, etc. It also includes building knowledge and capacities of governments and organizations, communities and individuals to anticipate, respond and recover. This includes shock-responsive

social protection, which can also be designed to bridge the humanitarian response/development divide that exists, especially within the context of protracted crisis.

GREATER COHERENCE AND COORDINATION BETWEEN CLIMATE CHANGE ADAPTATION AND DISASTER RISK REDUCTION POLICIES IS NEEDED

Climate change in combination with poor development planning, poverty and environmental degradation increases the risk of a climate event becoming a disaster. A collective approach that combines climate change adaptation (CCA) with disaster-resilient development is an opportunity to address climate and disaster risks within the context of broader development goals.

While CCA and DRR originated from different disciplines they are converging in their approaches and will continue to do so as the focus on resilience to climate change and disasters is growing. Efforts to integrate and build coherent CCA and DRR policies are ongoing and



**DEMOCRATIC REPUBLIC
OF THE CONGO**

Women and a child carrying
farm products to the market
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the 2030 Agenda recognizes the need to strengthen partnerships through improved information flows and the sharing of responsibility in an effort to link humanitarian responses with longer-term strategies to build food system resilience, improve food security and nutrition and foster CCA.

Policy-makers must work towards scaling-up actions to strengthen the resilience of people's livelihoods, food systems and nutrition to climate variability and extremes through context specific integrated DRR and CCA policies, programmes and practices that are also nutrition-sensitive.



KENYA

Emergency livelihood response
to support drought-affected
pastoralists.

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REGIONAL OVERVIEW OF FOOD SECURITY AND NUTRITION

ADDRESSING THE THREAT FROM CLIMATE VARIABILITY AND EXTREMES FOR FOOD SECURITY AND NUTRITION

This year's edition of the *Africa Regional Overview of Food Security and Nutrition* reports that the food security situation on the continent continues to worsen. For Africa, 20.4 percent of the continent's population – 257 million people – are undernourished, up from 19.7 in 2016 – 241 million people. In sub-Saharan Africa, there are 237 million undernourished in 2017, up from 222 million in 2016.

The worsening situation in Africa is due to difficult global economic conditions and, in many countries, conflict and climate-related disasters, sometimes in combination. Economic growth slowed in 2016 due to weak commodity prices, in particular for oil and minerals. Food insecurity has worsened in countries affected by conflict, often exacerbated by drought or floods, and in Southern and Eastern Africa many countries have been adversely affected by prolonged drought. Notably, several countries have achieved sustained progress in reducing food insecurity in the face of challenging circumstances.

The deterioration of the food security situation and the lack of progress towards the WHO global nutrition targets makes it imperative for countries to step up their efforts, if they are to achieve a world without hunger and malnutrition by 2030. The need for greater efforts also emerges clearly from the findings of the inaugural biennial review of progress in implementing the goals of the Malabo Declaration. In addition to specific food security and nutrition policies, this year's report reviews four important cross-cutting topics, namely, youth employment, remittances, intraregional trade, and climate change. It highlights their interplay with the food system and their role in food security and nutrition.

The thematic part of the report presents an evidence-based assessment of the threat posed by more frequent occurrences of climate extremes and rising climate variability to food security and nutrition in the region. Climate change in combination with poor development planning, poverty and environmental degradation increases the risk of a climate event becoming a disaster. A collective approach that combines climate change adaptation with disaster-resilient development is an opportunity to address climate and disaster risks within the context of broader development goals.



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