Regional brief: Sub Saharan Africa

The *Outlook's* regional briefs highlight broad trends for the regions defined by the FAO in the implementation of its global workplan. Recognising the diversity across the regions, the intention is not to compare results across regions. Instead, these briefs illustrate some of the latest regional developments, highlighting responses to global challenges and emerging trends within them and relating these to the main messages of the *Outlook* publication. The assessments generally compare the end point of the *Outlook's* projection (2030) to the base period of 2018-20. These briefs acknowledge that the impact of the COVID-19 pandemic, which is still playing out globally, and the response to it differs across the regions. The briefs do not contain a specific quantitative assessment of the pandemic's impact, but they reflect the latest available macro-economic projections and the extent to which the actions imposed to curb the spread of COVID-19 influenced this environment. Consequently, the trends and issues presented in this chapter are those which are expected to underpin the *Outlook* as economies re-emerge from the unexpected shock of the novel corona virus, assuming that its effects on food production, consumption and trade will gradually moderate.

This chapter proceeds in six sections, with text, tabular and graphic information for each region following a similar template. A background section provides the key regional characteristics and provides the setting from which the projection is described in the subsequent sections for production, consumption and trade. Each regional brief contains an annex to provide common charts and tables outlining the key aspects of the projection for the region.

Background

Among the six regions[1] presented in this chapter, the demographic and economic growth profile of Sub-Saharan Africa[2] stands out. Population growth is the highest and despite rapid progress, urbanisation remains by far the slowest among the regions. It is anticipated that SSA will add some 329 million people by 2030 compared to the 2018-20 base period, reflecting growth of 2.5% p.a. Although almost two thirds of that addition will be urban, 53% of the population will still live in rural areas by 2030. This makes it the only region with more than half of the population still residing in rural areas by 2030 and one of only two (along with Near East and North Africa) where the absolute size of the rural population is still expected to increase over the coming decade.

Economies in the region typically have a high dependency on resource-based commodities, such as agriculture, oil and metals. Agriculture, fish and forestry account for about 14% of GDP, and this is expected to decline to 12% by 2030. Economic growth, in per capita terms, is expected to be less robust than other emerging developing regions, expanding by 1.3% p.a. over the outlook period. This follows a contraction of 6% in 2020, followed by a recovery of merely 0.5% in 2021, reflecting the prolonged impact of economic restrictions to curb the spread of the pandemic, limited resources to support a recovery as well as a the strong reliance on commodity exports and tourism. Economic performance varies considerably within the region, with least developed economies growing faster, albeit from a lower base level. Average per capita incomes in the region are the lowest globally, at USD 1 675, and are assumed to rise to USD 1793 by

2030 in real 2010 terms; however, average per capita incomes in least developed countries (LDCs) of the region are expected to reach just USD 1 064 per year. Households in the region spend on average about 38% of their incomes on food, but this share varies considerably by country, from as low as 16% in South Africa to about 50% in Nigeria.[3] Per capita calorie availability in the region is significantly lower relative to most others, which implies that food security and economic welfare is particularly vulnerable to food price or income shocks. This also magnifies the impact of the COVID-19 pandemic, which has significantly impacted food affordability and, hence, food security in the region.

Sub-Saharan Africa houses 14% of the global population and is an agro-ecologically diverse, land abundant region that accounts for 15% of global crop land and 20% of pasture. In many countries however, high population density in rural areas has resulted in the agricultural sector facing land shortages. Much of the land still available in the region is concentrated in few countries and/or is largely under forest cover. The region thus produced only 7% of the global value of agricultural and fish production in 2018-20. By contrast, the large population with its high consumption requirement and unique dietary composition resulted in the region accounting for 37% of global roots and tuber consumption, compared to only 7% of global cereal consumption, and 6% of global sugar, vegetable oil and fish consumption. The region's comparatively small share in global meat (4%) and fresh dairy (5%) consumption reflects weaker purchasing power and poor dietary diversity. Overall, Sub-Saharan Africa's self-sufficiency for major food commodities is decreasing, as the region's population is expanding quickly, beyond the pace of growth in domestic supply.

Production

Agricultural and fish production in SSA is expected to grow by 23% over the next ten years in net value added terms, implying that per capita production in the region will continue the decline that that has been ongoing since 2015. Crop production is projected to account for over 72% of total output by 2030, while the share of livestock products will advance to 20% and the share of fish production decline to 7%. Food and feed staples, namely cereals, pulses, roots and tubers, will be the main sources of growth for the region. In all of these commodities, the region's global market share will rise over the outlook period. By 2030, the SSA region may account for almost 40% of global roots and tubers output, 21% of pulses production and 6% of cereal output. Area expansion in West Africa, coupled with support to the cotton sector, will sustain cotton production at regional level of nearly 22% by 2030, to comprise 7% of global production.

Total area harvested is expected to expand by almost 6 Mha by 2030. Due to cropping intensification this net growth is expected despite a smaller 4 Mha rise in agricultural land use. Intercropping with beans and cereals occurs in many countries. Double-cropping is also prevalent in tropical regions with bimodal rainfall, as well as irrigated systems in Southern Africa, where soybeans and wheat are often produced consecutively in a single year. The expansion of rice cultivation in the region, notably in Nigeria, is also expected to be based upon multiple harvests per year.

In other parts of the region, the ongoing expansion of agricultural land use is constrained by various sources of uncertainty, including land fragmentation trends, conflict in land abundant countries, and the presence of other competing uses such as mining and urban sprawl.

Average cereal yields across the region are projected to grow 21% over the outlook period, a similar rate to the past decade. Continued yields gains for most major crops stem from investments in locally adapted, improved crop varieties, and better management practices. Yield growth for most crops exceeds the rates projected at a global level, but occurs from a base which is typically less than half of the global average. Consequently, the region's substantial gap relative to yields achieved in the rest of the world will narrow, but still remain significant by 2030. Although productivity improvements will be central to output growth in

the medium term, efforts to fully close the yield gap are challenged by the limited use of inputs, irrigation and farm infrastructure.

The net value of livestock production is projected to expand by 26% over the next ten years, with the fastest increases coming from poultry and milk production. The region will add 2.9 Mt of meat output by 2030, comprising almost 1.3 Mt of poultry, 740 Kt of bovine meat, 650 Kt of ovine meat and 260 Kt of pig meat. Bovine and ovine production systems in the region remain fairly extensive and growth in the coming decade is fuelled by herd expansion more than productivity gains. In the 2018-2020 base period, SSA accounts for 7% of global bovine meat output, but 17% of the global bovine herd. The region's share in the global bovine herd is projected to expand to almost 20% by 2030. Similarly, the region constitutes 14% of global ovine meat output, with 24% of the global ovine herd. Ovine meat production is expected to increase by 30% in the coming decade, allowing SSA to grow its share of global output to 15%. These herd expansions will occur despite land used for pasture purposes remaining almost unchanged by 2030. While extensive poultry production systems are still common in the region, a greater degree of intensification has been evident in this sector, particularly in countries such as South Africa, that produce surplus feed grains. Feed intensity is expected to continue increasing in the broader SSA region as supply chains modernise in countries such as Zambia and Tanzania. This increase comes from a small base and many smaller producers continue to use non-grain, often informally procured feed inputs. In countries that already use feed more intensively, genetic improvements and better feed conversion over time reduce the amount of feed required per animal. At the regional level, this results in feed use growing marginally slower than meat production. Some feed use also accrues to fish production, which is expected to increase 13% by 2030. The projected expansion of 28% in the aquaculture sector is faster than that of captured fisheries at 12%, but occurs from a small base and by 2030, aquaculture will represent only 9% of the fish production in the region, compared to 8% in the base period.

Based on these production projections, direct greenhouse gas (GHG) emissions from agriculture are expected to grow by 16% by 2030 compared to the base period. Sub-Saharan Africa will account for 62% of the global increase in direct emissions from agriculture and will reach a share of 16% of global direct emissions by 2030.

Consumption

The SSA region concentrates most of the world's poor. Similarly, the prevalence of undernourished individuals in the region is the highest in the world. Poor food security in the region was further exacerbated by the COVID-19 pandemic. Supply chain disruptions, particularly in informal sectors, influenced accessibility, while income and employment shocks weakened affordability. Food security and undernourishment will likely remain a challenge and even as income levels start to recover, a sustained recovery will require improvements in the availability, accessibility, affordability and utilisation of food supplies in the future.

Average income levels recover slowly following the economic contraction in 2020, thus population growth remains the biggest driver of rising food consumption. This combination of rapid population growth and gains in per capita calorie availability, make the region one of the largest sources of additional demand for the global agricultural sector in the coming decade. The region's share in global food calorie consumption is anticipated to rise from 10% in the base period to 11% by 2030.

The contribution of staples to total calorie availability is higher in SSA than any other region and per capita consumption of food staples is set to increase further by 2030. For most other commodity groups, including meat, dairy, fish, sugar and vegetable oils, per capita consumption levels are currently the lowest in the world. With the exception of fish, per capita consumption of all of the aforementioned commodity groups will increase over the coming decade, resulting in substantial growth in total consumption, but dietary diversification remains slow and staples still contribute the bulk of total calorie intake by 2030.

Gains of 61 kcal/day over the outlook period enables the region to reach an average calorie availability of almost 2 500 kcal/capita per day by 2030. This is well below the global average of 3 025 kcal/day and implies that calorie intake in the region will still be the lowest in the world by 2030. An increasing share of calories will come from cereals and sugar, and while meat consumption will increase marginally, this is more than offset by the decline in per capita fish consumption over the next decade, limiting gains in vital nutrients.

Roots and tubers, followed by cereals, are the main sources of feed for the region's livestock sector. However, total feed use in the region is low, accounting for less than 4% of global feed consumption.

Trade

Most basic food commodities in the region are produced for domestic consumption rather than exports as the region as a whole increasingly relies on imports to close the gap between domestic production and consumption. At the same time, many countries benefit from counter seasonality in the northern hemisphere and competitive labour costs, enabling net exports of high value fresh produce.

The region's trade deficit in major food items is anticipated to widen over the coming decade. Evaluated at constant (2014-16) global reference prices, the deficit is anticipated to grow from about USD 7 billion to USD 18 billion by 2030.

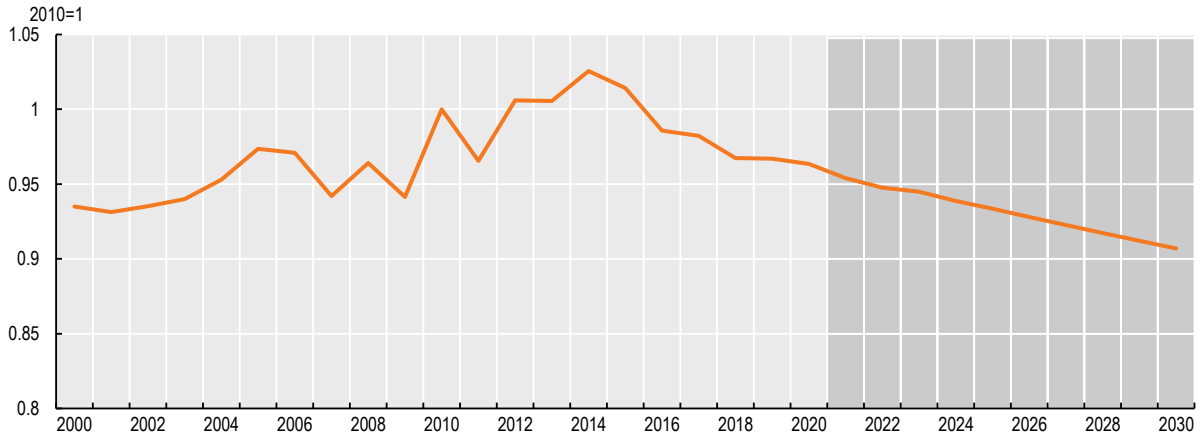
Amidst the pandemic related challenges in 2020, cereal and vegetable oil import volumes increased, while meat and sugar imports declined. At the height of the pandemic's first wave, intraregional trade in particular faced many logistical challenges, causing long delays at land border posts (Njiwa and Marwusi, 2020[1]). Over the course of the next decade, import volumes of cereals, meat, fish, sugar and oils rise substantially, at a faster rate than production. Apart from cereals and fresh produce, export volumes tend to decrease over time. The region as a whole is not self-sufficient in basic food staples and its import dependence is expected to deepen over the next ten years.

In contrast to basic food crops, the bulk of cotton production is sold on global markets and almost 90% of cotton production from the region will be exported by 2030. Most of this comes from the least-developed countries of the region. The region's share in global exports is expected to remain fairly constant over the outlook period.

Improving internal trade in the SSA region is an important policy objective. The African Continental Free Trade Agreement entered into force on 30 May 2019 and after initial delays due to the pandemic, trade under the agreement officially started on 1 January 2021. The ambition of the agreement was for 90% of tariff lines to be phased to zero in a linear form over a period of ten years for LDC's and five years for others. In reality however, rules of origin agreements have only been reached on 81% of tariff lines and while trade has officially started based on this 81%, many countries have not yet submitted tariff reduction offers. Furthermore, in some customs unions, all members of the union have not ratified the agreement, thus prohibiting the union from trading under preferential terms unless concessions can legally be implemented on individual basis. Despite the slow start and the need to conclude further engagements regarding rules of origin, the agreement will ultimately only exclude three percent of tariff lines and therefore has significant potential to increase intra-Africa trade in the medium term. According to recent estimates by the UN Economic Commission for Africa, the agreement is projected to increase intra-African trade of agriculture and food products by 20-35% (or USD 10-17 bln). Intra-trade gains are expected to be particularly pronounced for meat products, fish, milk and dairy products, sugar, beverages and tobacco, vegetables/fruit/nuts and paddy and processed rice. However, trade within the region is hampered by high non-tariff barriers and while the agreement includes a mutual recognition of standards and licences, as well as the harmonisation of sanitary and phytosanitary (SPS) measures, many non-tariff barriers remain more difficult to remove or reduce. A major contributor in this regard is the high cost of road transportation, which emanates from poor infrastructure, as well as inefficiencies at border posts. This increases costs

and weakens logistical performance, as illustrated by the presence of only six SSA countries in the top half of the World Bank's logistical performance index ranking, which covers 160 countries in total. Further to the logistical performance, the imposition of discretionary export controls weakens market integration. Based on the regulations implemented to date and the need to finalise tariff reduction schedules and sensitive product lists, no discernible impact was included in the baseline projection this year.

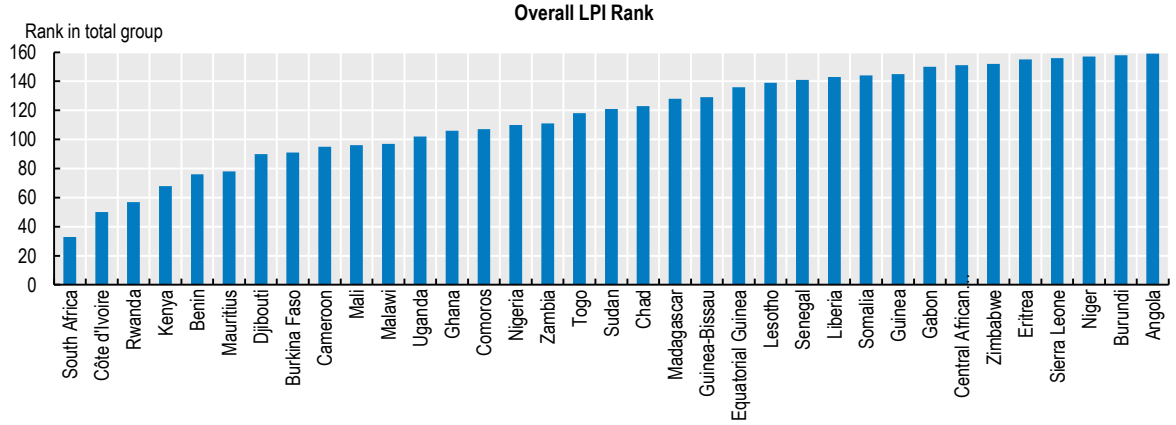
Figure 1. Per capita net value of agriculture and fish production in Sub Saharan Africa



Note: Estimates are based on historical time series from the FAOSTAT Value of Agricultural Production domain which are extended with the Outlook database. Remaining products are trend-extended. The Net Value of Production uses own estimates for internal seed and feed use. Values are measured in constant 2014-2016 USD.
Source: FAO (2021). FAOSTAT Value of Agricultural Production Database, http://www.fao.org/faostat/en/#data/QV; OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-outl-data-en.

StatLink https://stat.link/ulic9j

Figure 2. World Bank Logistical Performance Index – Few SSA countries in the top half (80) of the global sample



Source: World Bank.

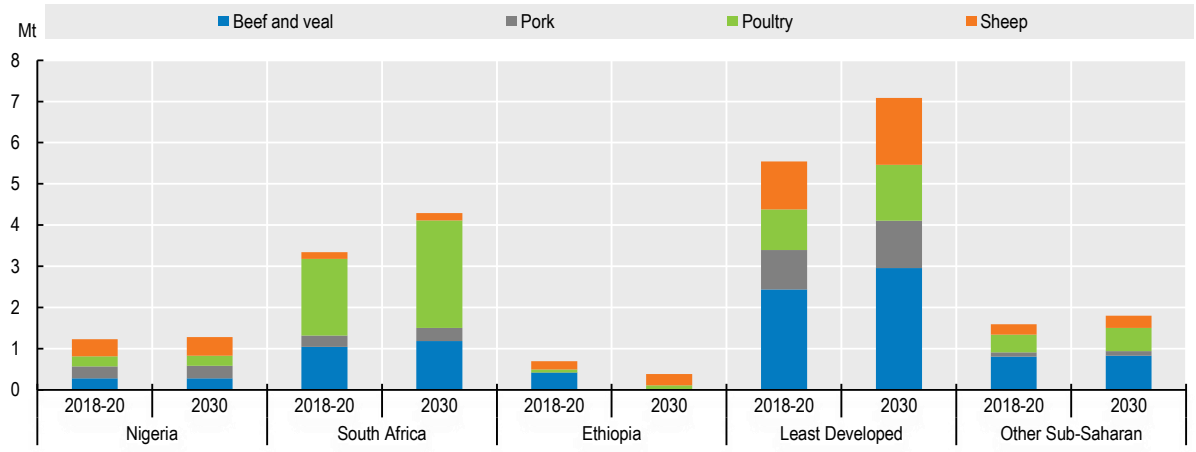
StatLink https://stat.link/1b5xw9

Figure 3. Change in area harvested and land use in Sub Saharan Africa

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-outl-data-en.

StatLink https://stat.link/xq03ja

Figure 4. Livestock production in Sub Saharan Africa



Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-outl-data-en.

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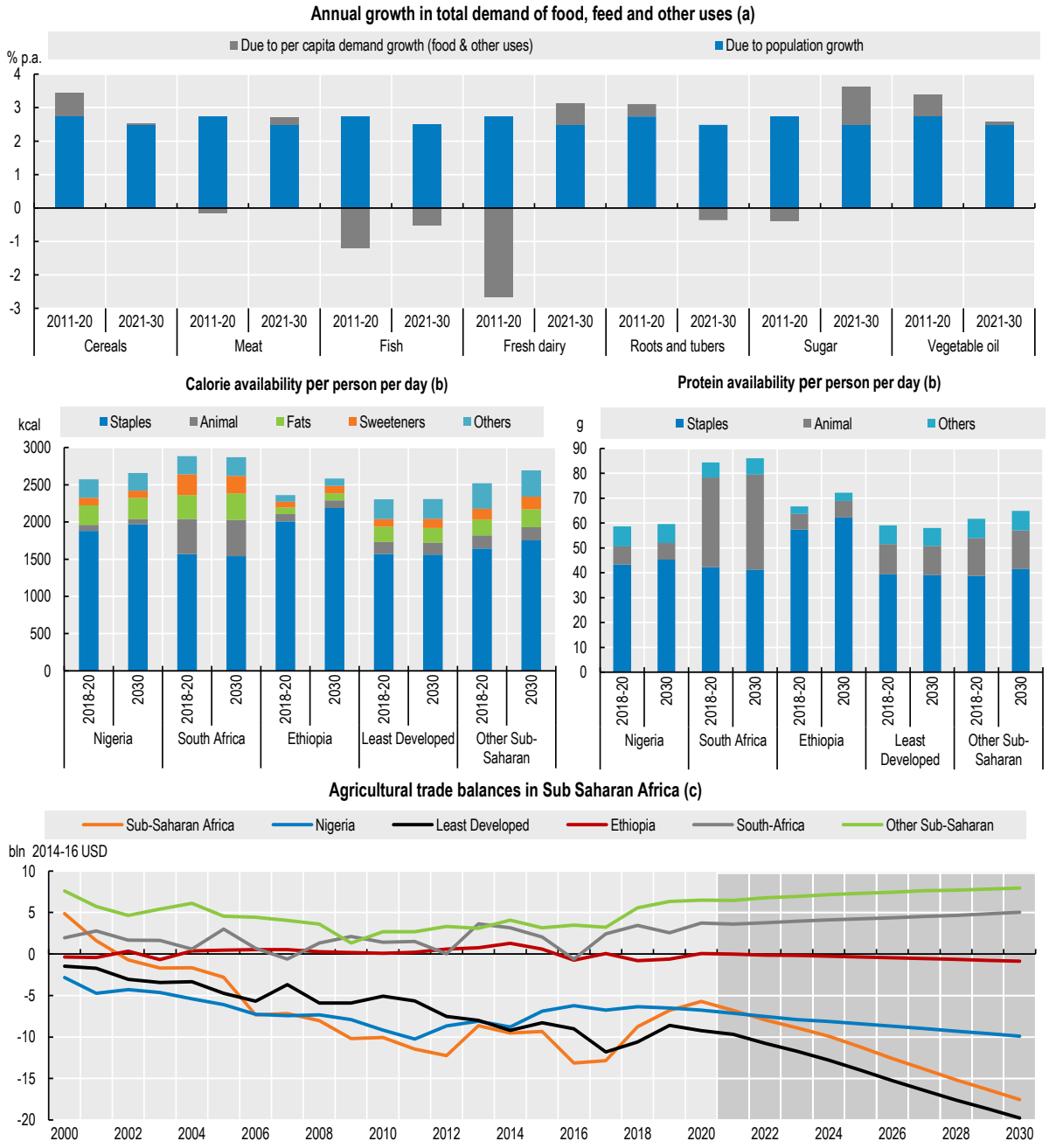
Figure 5. Demand for key commodities, food availability and agricultural trade balance in Sub-Saharan Africa



Notes: Estimates are based on historical time series from the FAOSTAT Food Balance Sheets and trade indices databases and include products not covered by the *Outlook*. a) Population growth is calculated by assuming per capita demand constant at the level of the year preceding the decade. b) Fats: butter and oils; Animal: egg, fish, meat and dairy except for butter; Staples: cereals, oilseeds, pulses and roots. c) Include processed products, fisheries (not covered in the FAOSTAT trade index) based on outlook data.
Source: FAO (2021). FAOSTAT Value of Agricultural Production Database, http://www.fao.org/faostat/en/#data/QV; OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-outl-data-en.

StatLink https://stat.link/4jl0za

Table 1. Regional indicators: Sub Saharan Africa

	Average			%	Growth [2]	
	2008-10	2018-20 (base)	2030	Base to 2030	2011-20	2021-30
Macro assumptions						
Population ('000)	800 857	1 050 243	1 379 515	31.35	2.74	2.48
Per capita GDP[1] (kUSD)	1.57	1.67	1.79	7.08	-0.09	1.25
Production (bln USD)						
Net value of agricultural and fisheries[3]	208.8	273.0	336.6	23.33	2.34	1.91
Net value of crop production[3]	147.2	197.0	243.9	23.77	2.54	1.92
Net value of livestock production[3]	45.4	54.0	68.0	26.00	1.48	2.19
Net value of fish production[3]	16.2	22.0	24.8	12.75	2.73	1.07
Quantity produced (kt)						
Cereals	115 275	153 779	190 157	23.66	3.47	1.77
Pulses	13 338	18 246	23 141	26.83	3.08	2.23
Roots and tubers	58 798	88 322	110 487	25.09	2.82	2.16
Oilseeds[4]	7 081	8 253	9 120	10.51	1.01	0.89
Meat	9 568	12 391	15 323	23.66	2.51	2.01
Dairy[5]	3 325	3 582	4 783	33.53	0.29	3.10
Fish	5 784	7 878	8 887	12.81	2.78	1.08
Sugar	6 455	7 565	9 854	30.26	0.90	2.73
Vegetable oil	4 909	7 213	8 277	14.76	2.67	1.23
Biofuel production (mln L)						
Biodiesel	0.04	0.04	0.07	49.87	0.00	4.02
Ethanol	541	766	948	23.82	3.50	2.39
Land use (kha)						
Total agricultural land use	858 750	886 843	890 984	0.47	0.24	0.03
Total land use for crop production[6]	206 447	226 437	229 332	1.28	0.54	0.07
Total pasture land use[7]	652 303	660 406	661 652	0.19	0.14	0.01
GHG Emissions (Mt CO2-eq)						
Total	628	739	857	15.94	1.38	1.43
Crop	199	185	187	1.05	-1.29	0.07
Animal	429	553	669	20.95	2.42	1.85
Demand and food security						
Daily per capita caloric availability[8] (kcal)	2 395	2 429	2 489	2.51	-0.05	0.32
Daily per capita protein availability[8](g)	60. 444	61. 65	62. 206	. 903	-0.09	0.18
Per capita food availability (kg)						
Staples[9]	177.5	193.3	197. 565	2.21	0.21	0.26
Meat	10.7	10.8	10. 965	1.07	-0.31	0.29
Dairy[5]	4.6	3.7	3. 829	4.06	-2.38	0.54
Fish	8.2	7.8	7. 446	-5.02	-1.12	-0.35
Sugar	10.4	10.4	11. 626	11.32	-0.59	1.12
Vegetable oil	7.7	8.7	9. 172	5.87	0.03	0.61
Trade (bln USD)						
Net trade[3]	-9.43	-7.09	-17.54	147.5	..	..
Net value of exports[3]	28.61	48.64	64.23	32.05	4.78	2.40
Net value of imports[3]	38.04	55.72	81.77	46.73	2.93	3.78
Self-sufficiency ratio[10]						
Cereals	84.8	82.7	77.5	-6.3	-0.02	-0.64
Meat	88.9	86.4	81.8	-5.4	-0.03	-0.70
Sugar	75.8	64.9	60.4	-7.0	-1.29	-0.81
Vegetable oil	58.9	54.7	47.8	-12.7	-0.14	-1.25

Notes: 1. Per capita GDP in constant 2010 US dollars. 2. Least square growth rates (see glossary). 3. Net value of agricultural and fisheries data follows FAOSTAT methodology, based on the set of commodities represented in the Aglink-Cosimo model valued at average international reference prices for 2014-16. Projections for not included crops have been made on the basis of longer term trends. 4. Oilseeds represents soybeans and other oilseeds. 5. Dairy includes butter, cheese, milk powders and fresh dairy products, expressed in milk solid equivalent units. 6. Crop Land use area accounts for multiple harvests of arable crops. 7. Pasture land use represents land available for grazing by ruminant animals. 8. Daily per capita calories represent availability, not intake. 9. Staples represents cereals, oilseeds, pulses, roots and tubers. 10. Self-sufficiency ratio calculated as Production / (Production + Imports - Exports) * 100.

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-outl-data-en.

Reference

Njiwa, D. and K. Marwusi (2020), *Improving the Functioning of Regional Food Supply Chains and Trade amidst the COVID-19 pandemicin East and Southern Africa*, https://agra.org/wp-content/uploads/2020/08/Improving-Functioning-of-Regional-Food-Supply-Chains.pdf. [1]

Notes

[1] For mentioned regions, see Summary table in the full publication for regional grouping of countries.

[2] More detailed regional information may be found in *OECD-FAO Agricultural Outlook 2016-25.*

[3] Source OECD-FAO interpolated for 2018-20 from the database of the Global Trade Analysis Project (GTAP) 2011, using food expenditure and GDP data used in this *Outlook*.