

Regional outlook: Near East and North Africa

The *Outlook's* regional briefs highlight broad trends for the regions defined by the FAO in the implementation of its global work plan. Recognising the regional diversity, 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*. The assessments generally compare the end point of the *Outlook's* projection (2031) to the base period of 2019-21. This year, the large and diverse Asia Pacific region has been disaggregated into two separate briefs: Developed and East Asia, and South and Southeast Asia.

The impact of the COVID-19 pandemic, which is still playing out globally, and the response to it, differs across regions. While the briefs do not contain a specific quantitative assessment of the pandemic's impact, 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. Similarly, the impact of Russia's war against Ukraine may affect the various regions in the short term, but the briefs do not provide any quantitative analysis as to this impact. Consequently, the trends and issues presented in this chapter are those which are expected to underpin the *Outlook* as economies re-emerge from these recent unexpected shocks and assume that the effects on food, feed and fuel production, consumption and trade will gradually moderate.

Background

Rising demand amid supply constraints drives rising import dependence

The Near East and North Africa¹ region encompasses a range of countries with diverse income profiles that often face similar challenges related to the agricultural production environment. Land and water resource endowments are limited and less than 5% of total land in the region is classed as arable. All countries in the region, except for Iraq and Mauritania, face water scarcity, and for some countries this is extreme, at less than one quarter of sustainable levels on a per capita basis. Its already limited water resources make it particularly vulnerable to climate change.

Across the spectrum of least developed, middle- and high-income economies, the region includes many oil exporting nations in the Gulf. With oil as a major source of revenue, energy markets are highly important to economic activity and can impact significantly on demand prospects. In this respect, volatility in energy markets over the past two years, as well as the high oil prices projected in the short term, if sustained, will affect income levels more than any other region covered in this Outlook.

The challenging agricultural production environment has made the region one of the largest net food importing regions and self-sufficiency rates for most commodities are low, particularly so for cereals,

vegetable oils and sugar (Figure **Error! No text of specified style in document.**). Its dependence on imports makes it particularly vulnerable to trade-related uncertainties, such as those exposed in the global trade system by the COVID-19 pandemic, persistent logistical challenges as the pandemic continues to evolve and possible supply constraints from the Black Sea region where the ongoing war may affect export supplies of major commodities including wheat, maize and oilseed products. Russia and Ukraine have traditionally been the two biggest suppliers of wheat to the region, but even when sourced elsewhere, the sharp increase in imported cereal prices raises concern on affordability of basic foods in lower income regions. With average food expenditures around 15% of total household expenditures, and least developed countries at 33%, income and price shocks can have a significant impact on welfare.²

Historically, the region's limited resources have been stretched by policies that sought to stimulate production and reduce the reliance on trade in basic cereals. Such actions are designed to reduce trade dependence but may constrain growth as these cereals compete with higher value crops for limited water resources and result in reduced availability of fresh produce that could otherwise aid in improving dietary diversity. Geopolitical conflict in the region has further reduced investment and displaced populations, further hindering production.

Gross domestic product in the agriculture, forestry and fishery sector is currently about 5% of total GDP in the region, which is expected to decline to 4% by 2031. Egypt produces almost 30% of the net value of agriculture and fish production in the region, with a further 48% attributed to the rest of North Africa (14% from LDC's and 34% from other North African countries). These shares are expected to increase in the coming decade, such that North Africa will constitute almost 80% of net agricultural output value in the region by 2031.

Population growth is an important factor determining demand and is expected to slow only marginally from almost 23% over the past decade to 20% over the next ten years. This growth rate is second only to the SSA region and will see the region's population exceed 500 million people by 2031. Almost two thirds of the population is expected to reside in urban areas, which may encourage consumption of higher value products, including meat and dairy products, but also convenience products that often contain vegetable oil and sugar. Affordability will also be important, however, and the strong reliance on export revenue implies that economies in the region were amongst the worst affected by the COVID-19 pandemic in 2020, with per capita income contracting by over 7% and rebounding only modestly in 2021 by 1.3%. Even amid rising oil prices, economic activity is only expected to increase to 3.3% in 2022 and in the medium term will average 1.6% p.a. Consequently, it is unlikely to constitute a major driver of demand over the next decade. This is a concern in a region where healthy diets are unaffordable to more than half of the population (FAO et al., 2021^[4]).

Some of the greatest challenges for the region over the *Outlook* period relate to ensuring access to affordable food products to a growing population in a low-income growth environment. Import dependence is inevitable given limitations to production and natural resource endowment, but in an increasingly volatile global market, nimble policies and procurement practices will be required to ensure food security as during the coming decade, self-sufficiency rates for most major commodities are expected to decline further.

Production

Higher productivity needed to confront severe resource constraints

Agricultural and fish production in the region is projected to expand by 1.6% p.a. over the next ten years, similar to that of population growth. The region's dependence on global markets will continue to increase (Figure). Crop production constitutes the bulk of total value and average growth of 1.4% p.a. is sufficient to sustain its share in total value at 60% by 2031. Livestock production growth is stronger at 2.1% p.a., with its share in total net value increasing to 28% by 2031.

Fish production is an important contributor to total production value, but growth of just under 1% p.a. will see its share decline marginally to 11.2% by 2031. In the recent past, growth has been driven by capture in coastal areas, but fish stocks are under pressure, resulting in a significant slowdown over the Outlook period. The contribution of aquaculture to total fish production is growing, with Egypt the major contributor.

Total agricultural land use is expected to remain fairly stable, but a small decline is expected in cropland use by 2031. This occurs mainly in Saudi Arabia, where conditions are not conducive to large scale cropping, and the least developed countries of North Africa. By 2031, almost 38% of total cropland may be allocated to cereal production, up from 34% in the base period. This increase comes primarily from coarse grains and wheat, which is expected to contribute 59% and 38%, respectively, to total land used for cereals by 2031.

Productivity gains are imperative in a region constrained by arable land and water availability. Total factor productivity grew by a modest 1.2% p.a. in the decade to 2019, driven largely by increased capital inputs.³ The value generated per hectare land used for crop production has increased consistently by 1.4% p.a. over the past decade and this is expected to accelerate over the next ten years to 1.6% p.a. This trend encapsulates multiple factors, including higher crop intensity, as reflected in the maintenance of crop area harvested, despite a reduction of 2.8 Mha in cropland use, together with considerable yield gains. Yield improvements are expected across all major crops, with wheat rising by 0.8% p.a., maize 0.5% p.a., other coarse grains 1.5% p.a., rice 1.5% p.a. and pulses 1.0% p.a. on average over the next ten years. This will leave wheat yields at roughly 78% of the global average, while other coarse grains will only reach 47% of the global average.

Growth in meat production will largely be derived from poultry, which far outpaces all other meat types with growth of 3.1% p.a. over the coming decade, but significantly slower compared to the past. Some progress is also expected in bovine meat production, with growth of 1.6% p.a., following a contraction in the past. Ovine meat production will remain largely unchanged by 2031.

Direct GHG emissions from livestock activities in the region will expand by 3.8% by 2031 compared to 2019-21, which contrasts with the growth of 28.6% and 24.2% for meat and dairy production, respectively, reflecting the importance of productivity gains in containing emissions. With crop emissions expected to rise by 2.2%, total direct emissions from agriculture are projected to expand 3.4% by 2031. The historic decline in emissions produced per unit value of agricultural output is set to continue.

Consumption

Achieving a shift to healthier and more diverse diets is a challenge

Food policies in the region have traditionally focused on food security by supporting consumption of basic foodstuffs, primarily cereals, thus entrenching staple-based diets. In recent years, policies have been expanded to include animal products. Nevertheless, the prevalence of malnourishment and the absolute number of undernourished people has increased in recent years, even prior to the COVID-19 pandemic, which accelerated this trend in 2020. Total calorie availability in the region is expected to increase somewhat to 3020 kcal/person/day by 2031- slightly below the global average. This reflects both the prolonged nature of the economic recovery, which only foresees per capita income exceeding pre-pandemic levels by 2025, and increasing awareness of healthy eating, underscored by reduced calories from products like vegetable oil and sweeteners. There is, however, great diversity within the region – for instance calorie availability in LDCs remains low and will only reach 2 594 kcal/person/day, roughly 15% below the global average.

The projections for the average diet in the region indicate about 54% of calories will come from cereals by 2031, well above the global average of 44%. A similar phenomenon applies to sugar, where the region's share of total calorie consumption derived from sugar will be 9% compared to a global average of 7%. The

diet, which relies on starchy foods and sugar, is calorie dense but nutrient poor and often associated with a rising incidence of over-weight and obesity, and various chronic diseases such as diabetes. At the same time, the prevalence of undernourishment, as well as stunting and wasting in young children is high in some countries, particularly those affected by conflict. This suggests that the “triple burden” of malnutrition will be a policy challenge that will need to be addressed over the medium term. However, affordability remains a major constraint to the adoption of healthier diets.

The average level of protein availability in the region is projected to reach 85 g/day in 2031, barely higher than the base period. A fall in protein from plant-based foods is expected to be more than offset by higher quality meat and fish protein sources.

The growth of the livestock sector, particularly poultry, will increase feed use by 20% over the coming decade. Commodities such as maize, barley and protein meals are expected to account for over 75% of the total feed use. The bulk of feed materials will continue to be imported, with maize imports, for example, reaching 34 Mt by 2031 compared to 27 Mt in the base period. This trend reflects policies that prioritise the production of food crops over feed crops in an environment that has very limited production potential.

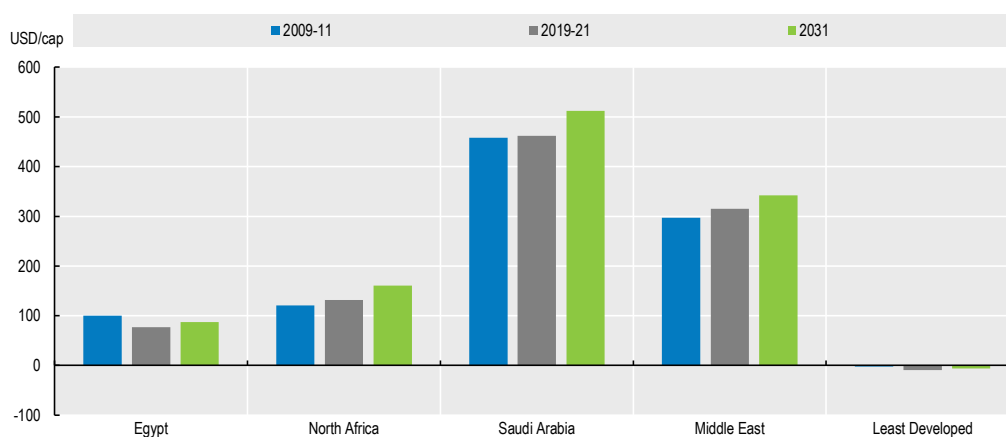
Trade

Food and feed imports will continue to rise

The region’s strong population growth together with limited production capacity will continue to drive higher food imports over the next decade. The region is expected to be the second largest net importer of food by 2031, following the Developed and East Asia region, but on a per capita basis will be the largest. Within the region, food imports per person are highest in Saudi Arabia and the Other Near East area which include the Gulf States (Figure).

Amidst the logistical and economic challenges of the pandemic, the region’s total import bill, expressed in real terms, declined in 2020 relative to 2019. Following a modest increase in 2021, it is expected to rise sharply in 2022 in line with economic recovery. By 2031, the region’s import bill is expected to increase by 29% relative to the base period. Imports are expected to rise for almost all commodities, albeit at a slower rate relative to the past decade. Imports by the region will maintain high shares of global markets for many commodities by 2031, including wheat (26%), sugar (22%) and maize (17%). The region will also account for high shares in global trade for sheep meat (33%), cheese (19%) and poultry (18%) by 2031. In most instances, these shares are unchanged at their current high levels. Given the region’s important role in global markets, and the important role of imports in domestic markets, developments in either markets have broad food security implications.

Figure 1. Value of net food imports per capita in Near East and North Africa (including processed products)

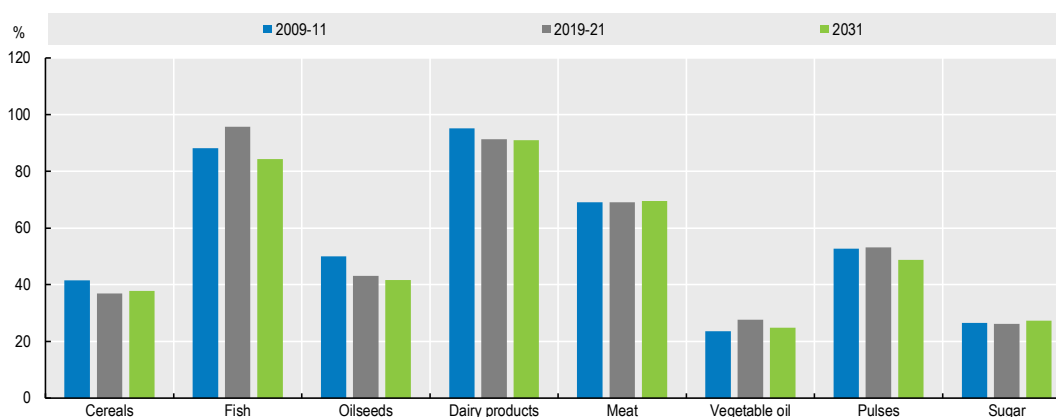


Note: Estimates are based on historical time series from the FAOSTAT Trade indices domain, which are extended with the *Outlook* database. Products not covered by the *Outlook* are extended by trends. Total trade values include also processed products, usually not covered by the Outlook variables. Trade values are measured in constant 2014-2016 USD and trade values for fisheries (not available in the FAOSTAT trade index) have been added based on Outlook data.

Source: FAO (2022). FAOSTAT Value of Agricultural Production Database, <http://www.fao.org/faostat/en/#data/QV>; OECD/FAO (2022), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>

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Figure Error! No text of specified style in document.. Self-sufficiency ratios for selected commodities in Near East and North Africa

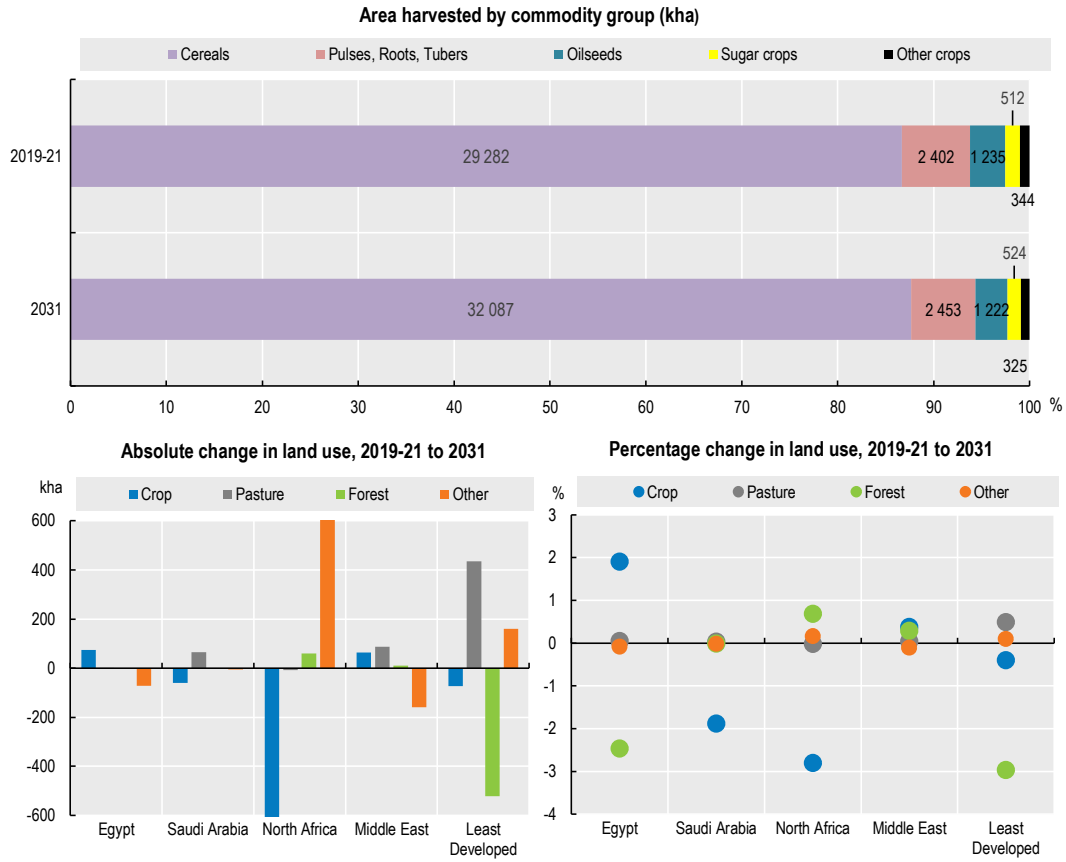


Note: Self-sufficiency ratio calculated as $(\text{Production} / (\text{Production} + \text{Imports} - \text{Exports})) * 100$

Source: OECD/FAO (2022), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>

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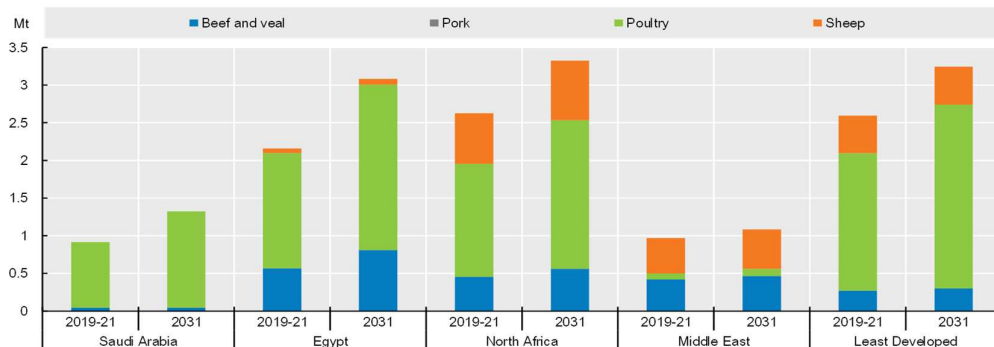
Figure 3. Change in area harvested and land use in Near East and North Africa



Source: OECD/FAO (2022), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>

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Figure 4. Livestock production in Near East and North Africa



Source: OECD/FAO (2022), "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 Near East and North 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 (2022). FAOSTAT Value of Agricultural Production Database, <http://www.fao.org/faostat/en/#data/QV> ; OECD/FAO (2022), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>

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Table 1. Regional indicators: Near East and Northern Africa

	Average			%	Growth ²	
	2009-11	2019-21 (base)	2031		Base to 2031	2012-21
Macro assumptions						
Population ('000)	341 456	418 698	503 315	20.21	1.97	1.64
Per capita GDP ¹ (kUSD)	6.16	6.27	7.36	17.40	-0.39	1.64
Production (bln 2014-16 USD)						
Net value of agricultural and fisheries ³	107.8	132.4	157.1	18.71	1.89	1.56
Net value of crop production ³	66.7	80.7	95.0	17.77	1.93	1.44
Net value of livestock production ³	31.0	35.7	44.5	24.75	0.65	2.07
Net value of fish production ³	10.0	16.0	17.6	9.96	4.86	0.95
Quantity produced (kt)						
<i>Cereals</i>	50 494	52 882	66 234	25.25	-0.39	1.09
<i>Pulses</i>	1 520	1 804	2 116	17.33	2.32	1.25
<i>Roots and tubers</i>	2 723	3 902	4 857	24.47	2.62	2.09
<i>Oilseeds⁴</i>	1 011	1 046	1 136	8.63	-0.36	1.14
<i>Meat</i>	6 755	8 350	10 740	28.61	2.40	2.38
<i>Dairy⁵</i>	3 550	3 232	4 017	24.29	-0.63	2.13
<i>Fish</i>	3 544	5 655	6 219	9.98	4.86	0.95
<i>Sugar</i>	2 970	3 540	4 439	25.41	1.10	1.59
<i>Vegetable oil</i>	1 467	2 377	2 621	10.25	6.50	1.05
Biofuel production (mln L)						
<i>Biodiesel</i>	0.02	0.02	0.04	115.85	0.00	0.69
<i>Ethanol</i>	626	614	771	25.47	1.92	1.87
Land use (kha)						
Total agricultural land use	461 914	430 551	430 464	-0.02	0.00	0.00
Total land use for crop production ⁶	59 411	62 799	62 199	-0.96	0.03	-0.11
Total pasture land use ⁷	402 503	367 752	368 266	0.14	-0.01	0.02
GHG Emissions (Mt CO₂-eq)						
Total	217	242	250	3.44	0.80	0.42
Crop	47	57	58	2.15	2.55	0.12
Animal	171	185	192	3.84	0.31	0.52
Demand and food security						
Daily per capita caloric availability ⁸ (kcal)	2 988	3 005	3 020	0.50	-0.29	0.18
Daily per capita protein availability ⁸ (g)	84.3	84.7	85.3	0.72	0.0	0.0
Per capita food availability (kg/year)						
<i>Staples⁹</i>	220.4	218.6	219.5	0.44	-0.25	0.06
<i>Meat</i>	24.1	24.2	25.7	6.08	-0.31	0.51
<i>Dairy⁶</i>	12.8	10.8	11.4	5.44	-2.07	0.53
<i>Fish</i>	9.7	10.7	11.8	10.46	0.43	0.84
<i>Sugar</i>	32.6	32.1	32.1	-0.07	-0.35	0.06
<i>Vegetable oil</i>	11.7	12.5	13.7	9.20	-0.51	0.85
Trade (bln 2014-16 USD)						
Net trade ³	-59	-74	-99	34.01
Value of exports ³	22	33	39	17.12	5.54	1.26
Value of imports ³	81	107	138	28.76	1.55	2.35
Self-sufficiency ratio¹⁰						
<i>Cereals</i>	40.6	38.2	37.7	-1.29	-1.34	-0.67
<i>Meat</i>	68.0	68.8	69.6	1.18	0.76	0.21
<i>Sugar</i>	26.6	27.6	27.3	-0.80	-0.15	-0.08
<i>Vegetable oil</i>	23.2	27.6	24.8	-10.01	3.8	-1.0

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. Oilseed 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/protein represent availability per capita per day, not intake. 9. Staples represent cereals, oilseeds, pulses, roots and tubers. 10. Self-sufficiency ratio calculated as $\text{Production} / (\text{Production} + \text{Imports} - \text{Exports}) * 100$. Sources: FAO (2022). FAOSTAT Food Balance Sheets and trade indices databases, <http://www.fao.org/faostat/en/#data> ; OECD/FAO (2022), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>

¹ Near East: Saudi Arabia and Other Western Asia. Least Developed: North Africa Least Developed. North Africa: Other North Africa. For mentioned regions, see Summary table for regional grouping of countries.

² Source OECD-FAO interpolated for 2019-21 from the database of the Global Trade Analysis Project (GTAP) 2011, using food expenditure and GDP data used in this Outlook

³ (Fuglie, 2015_[12]) (updated to 2019, USDA, regional aggregation of countries).