

Regional outlook: Near East and North Africa

The regional briefs in the *Outlook* highlight broad trends for the regions defined by the FAO in the implementation of its global workplan. Recognising regional diversity, the intention is not to compare results across regions. Instead, they illustrate some of the latest regional developments, highlighting responses to global challenges and emerging trends, and relating these to the main messages of the *Outlook*. The assessments generally compare the end point of the *Outlook*'s projection (2033) to the base period of 2021-23.

Agrifood systems globally have navigated multiple disruptions in recent years, including the COVID-19 pandemic, the impact of Russia's war against Ukraine, weather related supply fluctuations in several regions, surging energy prices, a cost-of-living crisis and spiralling inflation. The sharp rise in food prices impacted the cost and affordability of healthy diets as well as food security in several regions. Differences in resource endowments, economic structure, development and income levels mean that the magnitude of these impacts are not uniform in all regions. These briefs do not present a quantitative assessment of the impacts of these disruptions, though they do account for the latest expectations with respect to macro-economic developments as the world emerges from them. The trends and issues presented are those expected to underpin the *Outlook* in the medium term. They assume that the adverse effects on food, feed and fuel production, consumption and trade will gradually moderate, recognising that several uncertainties remain.

This chapter contains seven 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 providing common charts and tables outlining the key aspects for the region concerned.

Background

Rising import dependence amid resource constraints

The Near East and North Africa¹ region encompasses a range of countries with diverse income and socioeconomic profiles. Many face similar challenges with respect to the agricultural production environment and a fragile natural resource base. Less than 5% of total land is considered arable and water resources are constrained resulting in widespread water scarcity. In several countries this is extreme. In 2020, 19 of 22 Arab states fell below the threshold for renewable water scarcity with 13 states situated below the absolute water scarcity threshold (UN WWDR, 2022^[8]). The region's arid nature and already limited natural resource base places it amongst the most vulnerable to climate change and climate resilience is a distinct policy and investment focus.

Economic performance in the region reflects the significant impact of the various global disruptions since 2020. Spanning across least developed, middle-income, and high-income economies, the region encompasses numerous oil-exporting nations in the Gulf. These economies are closely intertwined with energy markets which shapes their economic landscape. Russia's war against Ukraine and associated disruptions in energy markets heightened volatility in these economies while many others were influenced by conflict within the region. The initial rebound from the pandemic-induced recession of 2020 was modest and while rising energy prices provided new impetus in 2022, the momentum was short-lived as the combination of persistent conflict, reduced oil production and tight monetary policy induced a further contraction in 2023. Medium term prospects remain highly uncertain. The global environment could become more accommodating as inflation continues to moderate but persistence or escalation of the war in Gaza or disruptions in the Red Sea bring ample downside risk. Per capita income growth is expected to average only 1.3% p.a. over the next ten years which is a concern in a region where food insecurity is rife and healthy diets are unaffordable to more than 40% of the population (FAO, 2023^[5]).

Another notable determinant of food demand is the rate of population expansion which is expected to average 1.6% p.a. towards 2033, a rate second only to Sub-Saharan Africa. This is sufficient for its total population to exceed 530 million people by 2033, with two thirds of them expected to reside in urban settings. Provided affordability allows, urbanisation would typically encourage consumption of higher value products including meat and dairy products as well as convenience products that often contain substantial quantities of vegetable oil and sugar. On the other hand, it is also notable that the rate of population growth and urbanisation implies that the absolute number of people in rural areas could still increase by 2033.

In light of its resource limitations that constrain agricultural production, the region is amongst the largest net food importers in the world. High import dependency spans most commodities and implies that the region is vulnerable to disruptions in global markets and logistical systems. Such disruptions have been increasingly frequent in recent years due to the COVID-19 pandemic, Russia's war against Ukraine, the subsequent energy crisis, conflict along major maritime routes in the Red Sea and the Black Sea. With multiple shipping companies electing to reroute around the Suez Canal, the consequent increase in transit times and shipping rates could prolong inflationary pressure and the cost-of-living crisis. Food price inflation in the region averaged almost 12% from 2021 to 2023, more than double the 5.2% of the preceding five years. In a low-income growth environment, persistence of high inflation will strain the affordability of basic foods in lower income areas and that of healthy diets across the whole region. With average food expenditures around 14% of total household expenditures and 31% in the least developed countries, income and price shocks impact significantly on welfare.

Given its vulnerability to trade disruptions, policies have sought to stimulate domestic production and reduce import dependence. However, while reducing risk, such policies have also had the unintended consequence of limiting growth, with scarce water resources allocated to cereals at the expense of higher value crops. Consequently, the region's already limited resource base was further stretched and with rising cereal production, the availability of higher value fresh produce declined. Such produce might otherwise

have aided in improving dietary diversity and raised income generated from the same limited resources. Nevertheless, the extent of disruptions in global trade and logistics in recent years has heightened the focus on risk mitigation in the policy space. Climate change remains a major challenge and geopolitical conflict in the region has further reduced investment and displaced populations, hindering production growth.

Some of the greatest challenges facing the region relate to accessibility of affordable food products to a growing population. Such challenges have intensified amid weak income growth and escalating conflict in several countries. The limited endowment of productive resources suggests that import dependence is inevitable and increasingly important amid climate change risks. Despite vulnerability to disruptions in an increasingly fragile trade system, such imports contribute substantially to dietary diversity and efficient trade facilitation can propel progress toward the 2030 goal of eradicating hunger, food insecurity and malnutrition. The resilience of the trade environment can be improved by effective and adaptable policies and procurement practices, with active diversification of import sources, which has already accelerated as a result of Russia's war against Ukraine.

Production

Productivity led growth essential amid structural resource constraints

Agriculture, forestry and fisheries comprises less than 5% of economic activity in the region. While the value of agricultural production is expected to rise by 1.5% p.a., its share in the economy will likely decline further by 2033. North Africa's influence in this performance is strong, as Egypt accounts for 28% of total agricultural output value, with a further 45% attributed to the rest of North Africa. In terms of commodity groups, crop production comprises 32% of total value with a further 48% accruing to livestock and 21% to fisheries. Livestock production growth is expected to outpace crops and fisheries with its share in total output rising to 50% by 2033.

Dairy production is more prominent in the region than meat and is foreseen to grow by 1.7% p.a. over the *Outlook* period, less than the 2.5% p.a. expected for meat production growth. Of the 2 Mt of additional meat production by 2033 relative to the base period, more than 1.2 Mt is expected to be poultry, which is typically produced intensively in a controlled environment. Bovine and ovine meat production, which is more extensive in nature, could rise by 22% and 21% respectively by 2033. In the case of ovine meat, this represents an acceleration from the past decade, whereas for bovine meat it reverses an historic contraction. For all of milk, bovine meat and ovine meat, production growth is faster than that of inventories, highlighting the contribution of productivity gains in output growth.

Fish production remains an important subsector, with 70% coming from capture in coastal areas, but fish stocks are under pressure, so production growth slows to 0.3% p.a. over the *Outlook* period from 4% p.a. in the past. Aquaculture is growing in importance and with projected growth of 2.6% p.a., could account for 35% of total fish production by 2033. Its growth is mainly underpinned by Egypt, which is expected to account for 87% of the region's aquaculture and 37% of its total fish production by 2033.

Total agricultural land use remains fairly stable, expanding by only 0.4% to reach 455 Mha by 2033. Some shifts are expected in composition with a modest contraction in land used as pasture contrasting with a 4% increase in cropland, mainly in the Middle East. However, projected cropland comprises less than 10% of total agricultural land use by 2033 as most of the region is not conducive to large scale crop production. Despite this limitation, two thirds of total cropland is dedicated to cereals, mainly coarse grains and wheat. The share of both these products is expected to rise marginally by 2033 as more than three quarters of the additional land allocated to crop production will be dedicated to them.

Amid severe constraints in availability of arable land and water resources, productivity gains are paramount. Such gains have been instrumental in past growth, as evidenced by persistent improvements

of 2.4% p.a. in the value generated per hectare of land used for crop production over the past decade. While slower, this trend is expected to continue with growth of 1.5% p.a. towards 2033. Such gains reflect a combination of intensification, yield gains and crop mix developments. The projected expansion of 1.8 Mha in crop area harvested is only marginally more than the 1.7 Mha expansion in land use, suggesting that yields gains will have a more pronounced impact. Both wheat and coarse grain yields remain well below global norms, but gains of 1% p.a. and 1.8% p.a. respectively are sufficient to narrow this gap by 2033. This is supported by increased use of synthetic fertiliser, which is expected to rise by 9% over the ten-year period, further complemented by technological improvement and evolving farming practices. The region's scarce resource base has prompted widespread adoption of technology to optimise production prospects and improve resilience.

By 2033, direct GHG emissions from agriculture in the region are expected to be almost 8% higher than in the 2021-23 base period, mainly on account of the livestock sector, which is larger than crop production. Emissions from crop production increase by 0.1% p.a., whereas livestock-based emissions are set to rise by 0.7% p.a. in line with animal inventories but substantially slower than ruminant production growth. This clearly illustrates that productivity gains are imperative to contain emissions. Such gains also imply that the historic decline in GHG emissions per unit value of output is set to continue. This year's *Outlook* features a scenario that simulates the impact of halving food losses along supply chains and food waste at the retail and consumer levels by 2030 (SDG 12.3). The scenario projects that total agricultural emissions in the region could be reduced by 4.2% relative to the baseline, while calorie intake improves. This implies that by 2030, agricultural GHG emissions could increase by only 1.3% from the average level in the 2021-23 base period.

Consumption

Food security concerns increasing amid persistent affordability challenges

Despite historic progress in reducing food insecurity and the prevalence of undernourishment, which was supported by subsidies, the economic challenges over the past decade led to a deterioration in the situation. This deterioration accelerated from 2020 as disruptions such as the COVID-19 pandemic, Russia's war against Ukraine and the cost-of-living crisis exacerbated existing challenges. Amid persistently high food price inflation and conflict in several countries, the prevalence of undernourishment increased again in 2022 despite accelerated income growth. Despite policy actions by a number of countries including additional subsidies, value added tax reductions and export controls on selected commodities², calorie availability declined further in 2023 as income and affordability pressure intensified. Given ongoing conflict in several countries and weak economic growth expectations in the short-term, broad-based support will be critical to stabilise the situation and ultimately build resilience to improve both calorie intake and dietary diversity.

Per capita calorie availability in the region is expected to increase only marginally to reach 2900 kcal/person/day by 2033, just 2% below the world average. Accounting for household food waste estimates implies that total calorie intake could be around 2 140 kcal/person/day. Calorie availability has declined over the past decade and the limited gains expected by 2033 suggests that it fails to surpass levels already observed in 2010. Many factors contribute to this trend. The prevalence of conflict in many countries in the region has severely hampered efforts to improve food security. Sharp increases in food price inflation in recent years in a low growth environment constrained affordability and while agricultural commodity prices are expected to decline over the *Outlook* period, income growth remains slow, limiting large scale improvement in affordability for lower-income consumers. Amongst the least developed countries in the region, calorie intake remains 12% below the world average. The high share of total income spent on food in these countries further magnifies the impact of affordability challenges. However there is great diversity within the region and while food insecurity is a major challenge, there is also growing awareness of healthy eating among more affluent consumer groups, further contributing to limited calorie gains on average.

Amid the multitude of disruptions, the prevalence of undernourishment in the region has risen to its highest level in more than 20 years. This is not only a matter of calorie availability but also of dietary composition where improvements are projected to remain limited. By 2033, 50% of calories are still expected to come from cereals, well above the global average of 42%. Similarly, the region's share of calorie intake derived from sugar will be 10%, compared to a global average of 7%. While substantial diversity exists across countries, this calorie dense and nutrient poor dietary composition is often associated with a rising incidence of over-weight and obesity as well as chronic diseases such as diabetes. At the same time, the growing prevalence of undernourishment as well as high levels of stunting and wasting in young children in lower income and conflict affected countries suggests that the “triple burden” of malnutrition (undernutrition, overweight and micronutrient deficiency) will be a key policy challenge over the medium term. Food quality is central to a solution. However, affordability remains a major constraint to the adoption of healthier, higher quality diets.

A key factor to mitigate availability and affordability challenges is a reduction in food waste and losses. The share of food wasted or lost in the North Africa and Near East region is the highest amongst those covered in this chapter, 58% above the world average. Cereals constitute almost 60% of total calories lost or wasted in the region with a further 12% contribution from fruit and vegetables (Figure 3). In the *Outlook* scenario where food waste and losses would be halved by 2030, as envisioned in SDG targets, calorie intake in the region would be increased by 9.5% relative to the baseline and the number of undernourished people in the region would decline by 19%, while at the same time, reducing GHG emissions. This implies that by 2030, calorie intake would increase by 10.5% relative to the average level in the 2021-23 base period, while there would be almost 4 million fewer undernourished people in the region.

The average level of protein availability in the region is projected to reach 84 g/day in 2033, only 0.1 g more than in the base period. While the bulk of protein consumption is still derived from plant-based sources, growth by 2033 is driven by animal protein which is set to increase by 2.9% while plant-based protein consumption reflects a modest decline. Despite this shift, more than two thirds of total protein intake will still be derived from plant-based sources by 2033. Per capita consumption of poultry, bovine meat, fish, and most dairy products is set to rise but typically by 1% p.a. or less and from a low base.

On account of expected growth in livestock, particularly poultry, production, feed use is foreseen to increase 20% by 2033. This growth is slower than the 23% expansion in meat production, reflecting the impact of efficiency gains and improved feed conversion. Maize and other coarse grains constitute more than half of total feed materials with a further 16% attributed to protein meal. In an environment with very limited production potential, food crop production is typically prioritised and so the feed industry will remain highly reliant on imported raw materials. By 2033, maize and protein meal imports are expected to rise by 31% and 12% to reach almost 30 Mt and 7 Mt respectively by 2033.

Trade

Import bill continues to rise

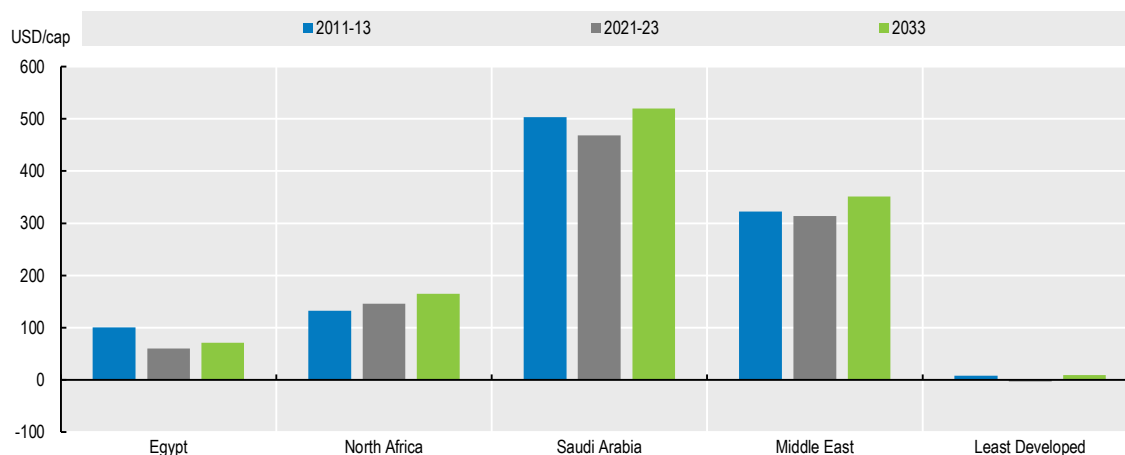
The region's dependence on global markets is expected to deepen over the coming decade, owing to the combination of strong population growth and severe limitations in production capacity. By 2033, the region's net imports of food products are expected to be second only to the Developed and East Asia region but on a per capita basis will be the largest amongst the regions covered in this chapter. Within the region, food imports per person are highest in Saudi Arabia and the Other Middle East area which includes the Gulf States (Figure 1).

Imports have been affected by various disruptions over the past few years, including the economic and logistical challenges of the COVID-19 pandemic, Russia's war against Ukraine and associated shipping disruptions in the Black Sea, and most recently the war in Gaza and subsequent challenges in the Red Sea that is affecting passage through the Suez Canal. The latter is particularly relevant given geographical

proximity of major importers in the region. These disruptions brought significant volatility in the cost and volume of imports into the region and influenced sourcing strategies with reduced volumes from Ukraine, but increases from Russia, Europe and North America. This implies that the shipping delays and cost increases associated with disruptions on major maritime routes such as the Suez and Panama Canals could pose further challenges to the region in the short term. Some mitigating actions have already been taken to enable alternatives in the Red Sea and Mediterranean region, so as to ensure availability of supplies. The regions total import bill bottomed out in 2020 at the height of the COVID-19 pandemic, but by 2023 had increased almost 10% to well above pre-pandemic levels. It is expected to rise further in the medium term despite softer agricultural commodity prices and by 2033 could be 28% higher than in the 2021-2023 base period.

The region's vulnerability to disruptions is underscored by the high share of imports in domestic consumption as well as its high share in global markets for a number of commodities. These characteristics are expected to become more pronounced over the *Outlook* period. Imports are expected to rise for almost all commodities but fruit, vegetables, dairy products, wheat, rice, poultry and sugar will account for the greatest share of import growth. The region's share in global trade is also rising for most products and by 2033 will be significant for sheep meat (29%), wheat (26%), poultry (22%), sugar (22%), dairy products (21%) and maize (14%). By implication, significant developments in either global or domestic markets could have broad food security implications in the Near East and North Africa.

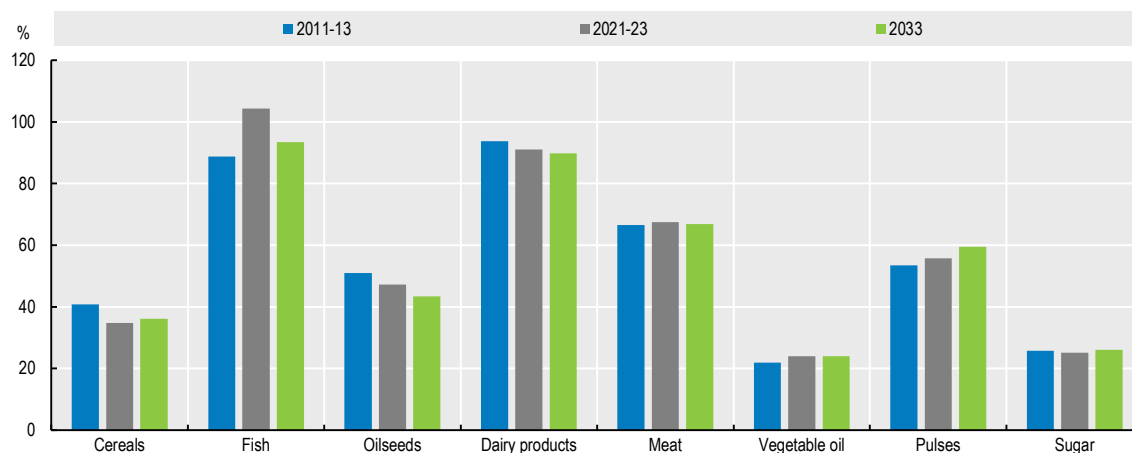
Figure 1. Value of net food imports per capita in Near East and North Africa (including processed products)



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 (2024). FAOSTAT Value of Agricultural Production Database, <http://www.fao.org/faostat/en/#data/QV>; OECD/FAO (2024) "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

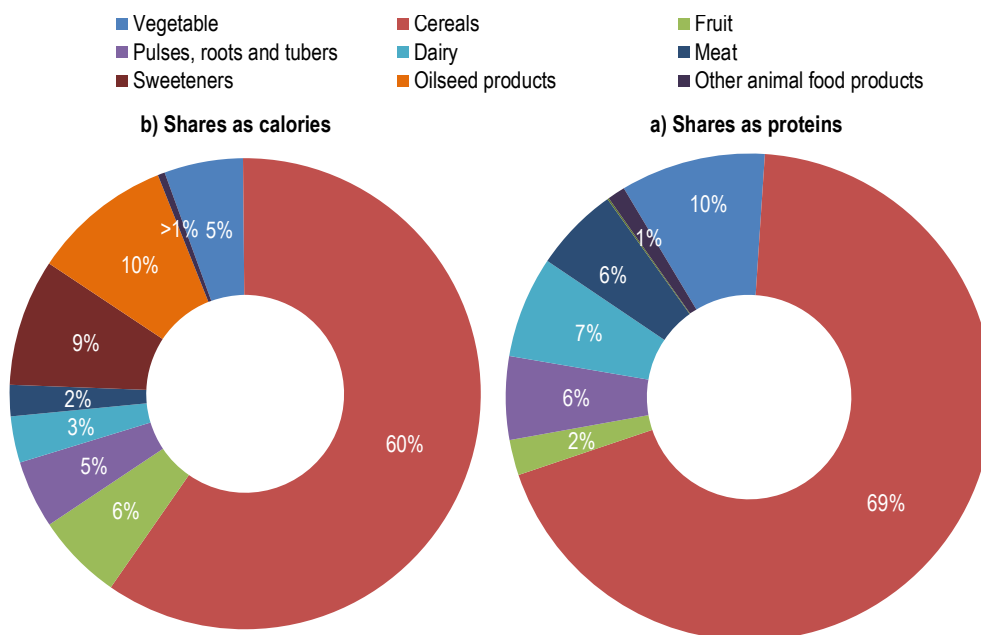
Figure 2. Self-sufficiency ratios for selected commodities in Near East and North Africa



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

Source: OECD/FAO (2024), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

Figure 3. Distribution of food waste and losses in Near East and North Africa in terms of calories and proteins, 2021-2023

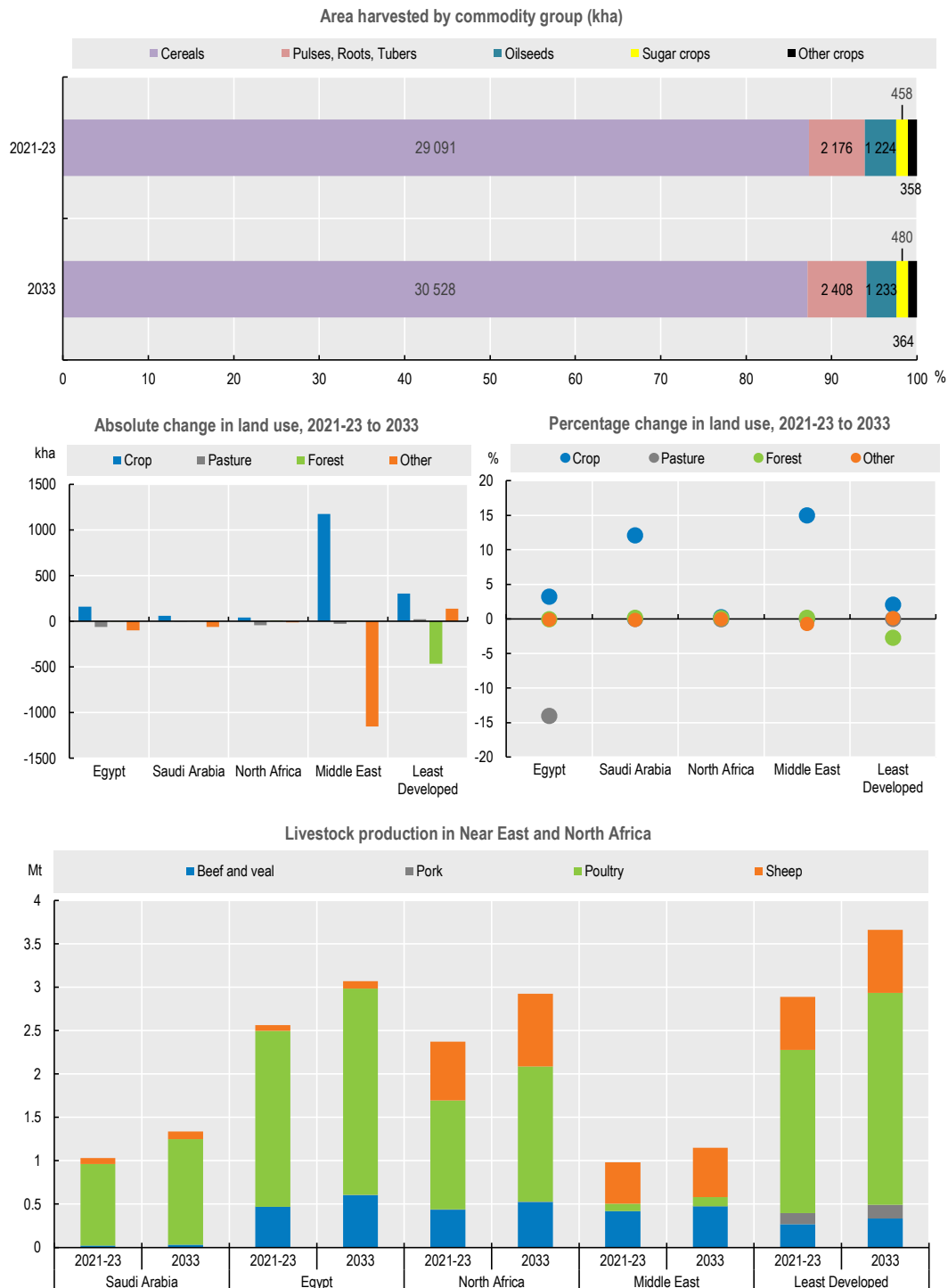


Note: Other animal food products include egg and fish.

Source: OECD/FAO (2024), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

StatLink 2 <https://stat.link/lxk6q>

Figure 4. Land use change and livestock production in Near East and North Africa



Source: OECD/FAO (2024), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

StatLink 2 <https://stat.link/vjgwpb>

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 and tubers. c) Include processed products, fisheries (not covered in the FAOSTAT trade index) based on outlook data.

Source: FAO (2024). FAOSTAT Value of Agricultural Production Database, <http://www.fao.org/faostat/en/#data/QV>; OECD/FAO (2024) "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

StatLink 2 <https://stat.link/471e8o>

Table 1. Regional indicators: Near East and North Africa

	Average		2033	%	Growth ²	
	2011-13	2021-23 (base)			2014-23	2024-33
Macro assumptions						
Population ('000)	366 685	445 474	531 326	19.27	1.88	1.58
Per capita GDP ¹ (kUSD)	6.33	6.41	7.39	15.24	-0.28	1.26
Production (USD bln 2014-16)						
Net value of agricultural and fisheries ³	67.7	82.9	101.1	21.98	2.15	1.61
Net value of crop production ³	25.0	26.3	32.8	24.69	1.01	0.95
Net value of livestock production ³	31.7	39.5	49.8	26.04	2.07	2.30
Net value of fish production ³	10.9	17.1	18.5	8.39	4.42	1.03
Quantity produced (kt)						
Cereals	53 060	47 451	60 547	27.60	-1.29	1.19
Pulses	1 634	2 098	2 824	34.60	3.26	2.74
Roots and tubers	2 998	4 113	5 038	22.50	3.12	1.66
Oilseeds ⁴	1 092	1 104	1 150	4.14	-0.26	0.20
Meat	6 990	8 803	10 800	22.68	2.50	2.54
Dairy ⁵	3 454	3 385	4 002	18.23	0.02	1.67
Fish	3 887	5 976	6 451	7.94	4.21	1.02
Sugar	3 148	3 302	4 482	35.72	-0.94	1.13
Vegetable oil	1 519	2 145	2 486	15.88	4.78	0.92
Biofuel production (mln L)						
Biodiesel	0.00	0.00	0.00	-41.30	0.00	1.53
Ethanol	487	538	661	22.83	0.44	1.98
Land use (kha)						
Total agricultural land use	464 775	453 750	455 322	0.35	-0.04	0.01
Total land use for crop production ⁶	44 231	42 369	44 048	3.96	-0.27	0.10
Total pasture land use ⁷	420 544	411 381	411 274	-0.03	-0.02	0.00
GHG emissions (Mt CO ₂ -eq)						
Total	182	184	198	7.62	-0.12	0.57
Crop	26	25	28	9.21	0.57	0.10
Animal	156	158	170	7.38	-0.23	0.65
Demand and food security						
Daily per capita caloric food consumption ⁸ (kcal)	2 852	2 844	2 899	1.93	-0.12	0.31
Daily per capita protein food consumption ⁸ (g)	81.6	83.7	83.8	0.08	0.2	0.3
Per capita food consumption (kg/year)						
Staples ⁹	205.8	201.7	205.7	1.99	-0.24	0.15
Meat	17.5	17.1	18.2	6.02	-0.59	0.70
Dairy ⁵	11.4	10.1	10.4	3.17	-1.17	0.25
Fish	11.5	11.3	11.8	4.04	-0.63	0.44
Sugar	30.4	28.7	30.4	5.91	-0.97	0.45
Vegetable oil	10.9	11.1	11.4	2.49	-0.74	0.25
Trade (bln USD 2014-16)						
Net trade ³	-69	-78	-106	35.38
Value of exports ³	22	35	39	11.68	3.49	1.17
Value of imports ³	91	113	145	28.12	0.71	2.18
Self-sufficiency ratio (calorie basis) ¹⁰	42	38.6	39.0	1.04	-0.26	-0.37

Notes: 1. Constant 2010 USD. 2. Least square growth rates (see glossary). 3. Follows FAOSTAT methodology, based on commodities in the Aglink-Cosimo model. 5. Milk solid equivalent units. 6. Area accounts for multiple harvests of arable crops. 7. Land for grazing. 8. Food availability, not intake. 9. Cereals, oilseeds, pulses, roots and tubers. 10. Production / (Production + Imports - Exports)*100.

Sources: FAO (2024). FAOSTAT Food Balance Sheets and trade indices databases, <http://www.fao.org/faostat/en/#data>; OECD/FAO (2024), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

Notes

¹ Middle 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: FAO (2023) Food Policy Monitoring in the Near East and North Africa Region. 2nd Quarter 2023, Bulletin. Cairo. (<https://www.fao.org/3/cc9189en/cc9189en.pdf>)