

Regional brief: Europe and Central Asia

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.

Background

Europe and Central Asia is a diverse region that includes the European Union, United Kingdom, the Russian Federation (hereafter "Russia"), Ukraine, Turkey and Kazakhstan as the main agricultural producers. There is considerable variation across its countries in terms of stage of development, demographics, agricultural resources and public policies. Population dynamics also diverge – as a whole the region's population is expected to expand gradually, but it remains static in Western and Eastern Europe and grows at around 1% p.a. in Central Asia. The region is highly urbanised and by 2030 75% of its population will live in urban environments.

Average income in the region is over USD 26 000 per capita per year, but there are substantial differences across countries. While the economies of Western Europe are diverse, those in more eastern regions are focused on commodities, particularly in Russia where oil and gas are critical sectors. The continued spread of COVID-19 around the world presented challenges to economies across the region. However the extent of impact from the pandemic differs in line with the region's diversity, both in terms of economic structure and the actions taken to contain the virus. On average across Europe and Central Asia, per capita GDP declined by 7.4% in 2020 and is projected to recover by 4% in 2021, followed by average annual growth of 1.7% over the ten year period. The contraction in 2020 was most severe in Western Europe, at 7.8%. In Central Asia, where economic restrictions were less severe, the contraction was 3.3%. Across the region, the agricultural sector faced many challenges as a result of the pandemic, including logistical issues, workforce shortages and changes to demand, both in terms of quantity and product mix.

The share of primary agriculture, forestry and fish production in total GDP is low, ranging from just 1.6% in the European Union, to 9% in Ukraine. It is estimated that the share of food in household expenditures averaged about 11% in the region in 2018-2020 base period, ranging from around 5% for United Kingdom to around 19% in Central Asian countries such as Kazakhstan.¹

The region produces 16% of the global value of agricultural and fish production, a share which continues to decline by 2030, largely due to slow growth in Western Europe. Crop production averages about 55% of the net value of total production, fish about 8% and livestock the remainder of about 37%. Whereas the region accounted for 12% of the total growth in the global net value of agriculture and fish in the last decade, it constituted 35% of growth in global exports. This growing export orientation is largely driven by Eastern Europe where productivity levels in both the crop and livestock sectors have improved, but a fairly static population and relatively mature consumption levels mean demand growth has been weak. Trade within the region is affected by various factors, notably the future trading arrangements between the United Kingdom and the European Union, and the Russian embargoes on imports from the European Union that have been continuously renewed since 2014. Further uncertainty has been added by the short term restrictions imposed on exports from countries in the Black Sea region in order to safeguard domestic availability during COVID-19 related lockdown periods.

Relative to other regions, livestock and animal products are important, both from a production and consumption perspective. They constitute more than one third of the net value of agriculture and fish production and comprise 26% and 53% respectively of total calorie and protein availability. The European Union is a major producer, consumer and trader of milk and dairy products, and while its share of global milk production continues to decline, production and trade of high value products such as cheese and butter are growing. Per capita fresh dairy product consumption is one and a half times the world average, whereas cheese and butter are six times and three times higher respectively.

Within the European Union in particular, environmental sustainability is increasingly prioritised, both from a consumer and policy perspective. For instance, the Farm to Fork Strategy is a growth strategy seeking to promote fair, healthy and environmentally friendly food systems, accelerating the transition to environmental sustainability. In future, this may influence the demand structure, as well as the rate of productivity and production gains in the region. Technological progress, including digital technology, will be critical to achieve this.

Production

The net value of agriculture and fish production (net of feed and seed inputs) is projected to grow 8% by 2030 compared to the base period average of 2018-20, with Western Europe growing by less than 1% compared to growth in Eastern Europe of 15% and Central Asia of almost 30%. Eastern Europe's strong growth will be led by Russia and Ukraine at 12% and 22% respectively. While both crop and livestock sector growth is strong, the crop sectors are expected to grow faster than livestock in both countries. In Russia, the impact that import embargoes have had on domestic markets have stimulated local production of livestock products.

The long term decline in agricultural land use is expected to continue in future, albeit slowly, suggesting that further growth in the sector will be underpinned by productivity gains. By 2030, crop and pasture land use are expected to decline by 1.3 Mha and 2.6 Mha respectively. In relation to changes in land use, direct GHG emissions from agriculture are projected to decline 1.2% over the next decade.

The value of crop production in the region is expected to expand by 11% over the next ten years, accounting for almost 75% of the region's growth in agricultural and fish production. This expansion will be largely due to rising cereals and oilseeds output in the Black Sea region. Russia and Ukraine are projected to sustain robust growth in maize, wheat, soybean and other oilseeds to increase their share in regional production to 40% for maize, 38% for wheat and 54% for all oilseeds. Maize production grows the fastest of all crops in Russia, whereas wheat production growth outpaces others in Ukraine. Yield improvements will drive the bulk of production growth in all these commodities, though total area harvested is still projected to expand in both countries by 2030.

Livestock production growth is slower at 0.34% p.a. over the next decade. Western Europe accounts for the bulk of livestock value in the region, but as the transition to environmental sustainability continues, a minor contraction over the coming decade will see its share diminish from 64% in the base period, to 61% by 2030. Stronger growth in the rest of the region still sees the total value of livestock production expand by 4% over the ten year period. Growth will be based predominantly on intensified production resulting in higher carcass weights. Growth in the total volume of poultry production is expected to be robust across the region, increasing by 10% by 2030 relative to the 2018-20 base period. Most poultry will be produced to supply the domestic market and per capita consumption will rise by 1.5 kg/capita to an average consumption of 24 kg/capita per year. Fish production is expected to grow by 7% over the coming decade. Despite a 14% growth of aquaculture compared to 6% for capture fisheries, aquaculture will still represent only 20% of the total fish production in the region by 2030.

Production of dairy products is expected to remain strong. Positive growth is anticipated across the region, and while the rate of expansion slows slightly relative to the past decade in Western Europe and Central Asia, growth of 0.7% p.a. in Eastern Europe represents an acceleration from the past decade. Across the region, domestic food demand for dairy products will remain strong, contributing 12% of daily calorie intake by 2030 and 19% towards daily protein availability. However, the dairy output expansion will increasingly feed international demand, as an increasing share of the region's butter, cheese and milk powders is expected to be exported over the next decade. The region as a whole will account for 44% of global dairy product exports by 2030. The bulk of the region's dairy product exports accrue from the European Union, which will grow its share in total regional exports of dairy products to 72% by 2030. Shaped by the transition towards environmental sustainability, the European Union's share of global milk production will however decline to 16% by 2030, compared to 18% in the base period.

Consumption

Although most of the region constitutes a fairly mature market, consumers were not spared from the impact of the COVID-19 pandemic (De Vet et al., 2021^[1]) (FAO, 2020^[2]) (OECD, 2020^[3]). This impact entails shorter term affordability implications, particularly in countries where consumers spend a larger share of total income on food products and where income support measures were less comprehensive, as well as changes in product mix and procurement channels. Retail sales increased and more food was consumed at home, while consumers tended towards local products with shorter supply chains, as well as products with a longer shelf life. The pandemic further accentuated consumer trends that had been evident before, such as rising awareness of healthy eating habits.

Average daily calorie availability per capita in the region is well above the global average and is projected to increase by a further 83 kcal/day to exceed 3460 kcal/day. This increase is mainly attributed to increased consumption of cereals, pulses and dairy products. Food demand for sugar is projected to continue to contract as consumers in Europe seek to curb high consumption levels amid increasing health consciousness. Western Europe's sugar consumption per capita is projected to fall by 1.5 kg per year by 2030, but will remain almost 50% higher than the world average.

Protein availability per capita in the region is projected to increase by 3 g/day to 105 g/day by 2030, which is roughly 7% higher than the world average of 98 g/day. Pulse consumption, which has been rising rapidly from a low base in the last decade given its positive health image, is projected to rise 27% to 5.5 kg per capita by 2030. Per capita meat consumption may rise slightly to 59 kg/capita per year, largely due to higher poultry meat consumption, which is anticipated to be the fastest growing meat item, reaching 24 kg per capita. Bovine and pig meat consumption per capita is anticipated to decline over the period, by 2.2% and 2.5% respectively. By contrast, fish consumption is expected to rise slowly to reach 16 kg per capita per year by 2030 – almost 3kg below the global average. Significant differences occur across the region, with central Asia reflecting very low fish consumption, whereas consumption levels in Western Europe are

well above the global average. Dairy product consumption is expected to rise faster than meats, adding 8% to current levels by 2030.

Owing largely to the importance of animal products, the region consumes almost a quarter of global protein feed. With slower growth projected for the livestock sector, which includes a positive contribution for poultry and sheep meat, but declining pig meat and bovine sectors, feed use is anticipated to increase only 4% by 2030 over the base period. Maize feed use is expected to expand faster than wheat, reflecting stronger meat production growth in Eastern Europe relative to a minor decline in Western Europe.

Non-food demand for vegetable oil is expected to contract as its role in biofuel production in the European Union will diminish. The region is decreasing its demand for diesel, with an ongoing shift towards electric vehicles. The region's production of biodiesel is therefore projected to contract 7% by 2030, reducing its share of global biodiesel production from 34% to 30%.

Trade

The European and Central Asian region has seen a substantial shift in trade patterns over the past decade. Traditionally the region was one of the largest net importers. Over the past decade, rapid growth in exports has seen Eastern Europe move to a net export position. The bulk of export growth originated from Russia and the Ukraine, where the combination of rising productivity and slow domestic demand growth resulted in an ever increasing exportable surplus. With a large land base, both Eastern Europe and Central Asia have a comparative advantage in cereal and oilseed production. Across the total Europe and Central Asian region, growth in total exports outpace growth in imports over the projection period, resulting in a substantial improvement in its net trade balance by 2030. In light of already high consumption levels and a stagnant population, the trend of rising exports is set to persist.

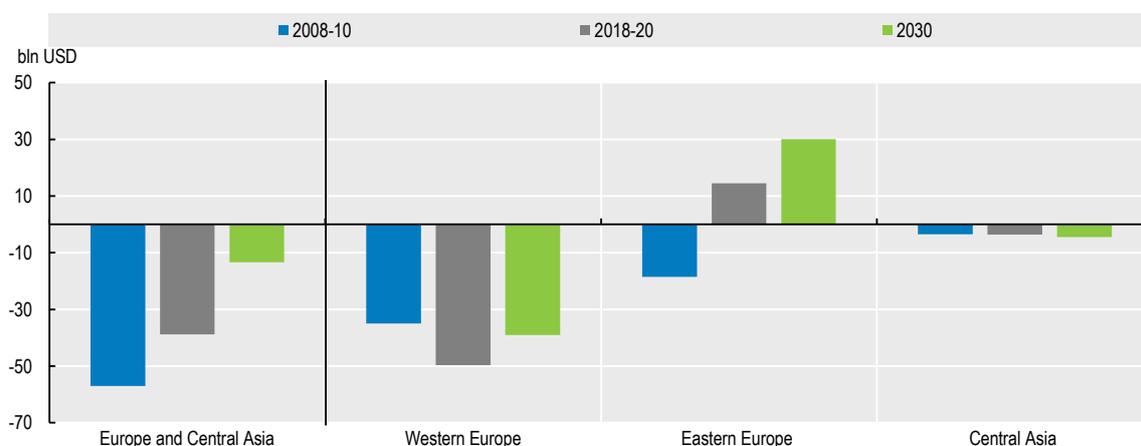
The total value of exports from the region are set to expand 21% by 2030 relative to the base period, underpinned by a 25% expansion in crop exports and a more subdued 14% expansion in animal product exports. The region's cereal exports will grow from 161 Mt in the base period to 209 Mt in 2030, an increase of 30%, with the Near East and North Africa region as a major importer. This will see its global market share increase from 36% in the base period to 39% by 2030, its highest share ever. Similarly, the region will add almost 28 Mt to its wheat exports by 2030, to grow its share in the global market to 57% by 2030, from 54% in the 2018-20 base period. From an import perspective, the requirement for soybean and protein meal imports is anticipated to decline by 5% and 7% respectively by 2030, which still leaves it as one of the major importers of these products globally. The region also remains a net importer of sugar, but this requirement is set to contract 29% by 2030.

In terms of livestock, the region is a major exporter of meat and dairy products. The region accounts for 42% of global pig meat exports and 29% of global poultry exports. This is mostly attributed to the European Union, which accounts for 90% of the region's pig meat exports and 55% of the region's poultry meat exports. The Central Asian region is a net importer of meat products and extensive trade occurs within the broader region. In this respect, the movement controls imposed through the pandemic induced lockdown period in 2020 posed unprecedented challenges to logistical systems, but the sector showed resilience to keep products available. In light of the importance of intra-regional trade, the future status of Russia's import embargo will affect trade within and outside the region, while any recurrence of the short term export controls imposed through the COVID-19 lockdown could have a substantial influence on markets.

The region is the most important dairy product exporter in the world, with a current share of 41% in the global trade of dairy products. Much of this is attributed to the European Union, which accounts for 29% of global dairy product trade. For cheese, the region as a whole constitutes 60% of the global market, with the European Union contributing 41%. For all dairy products, the European Unions and the region as a whole's share in global trade is set to rise. By 2030, the European Union will contribute 46%, 33%, 35% and 14% respectively of global exports for cheese, butter, SMP and WMP.

Led by Russia and Norway, the region is also one of the most important exporters of fish. Russian exports are set to expand by 33% over the ten year projection period, supporting growth of 13% for the Europe and Central Asian region.

Figure 1. Net exports of agriculture and fish products from Europe and Central Asia (including processed products)

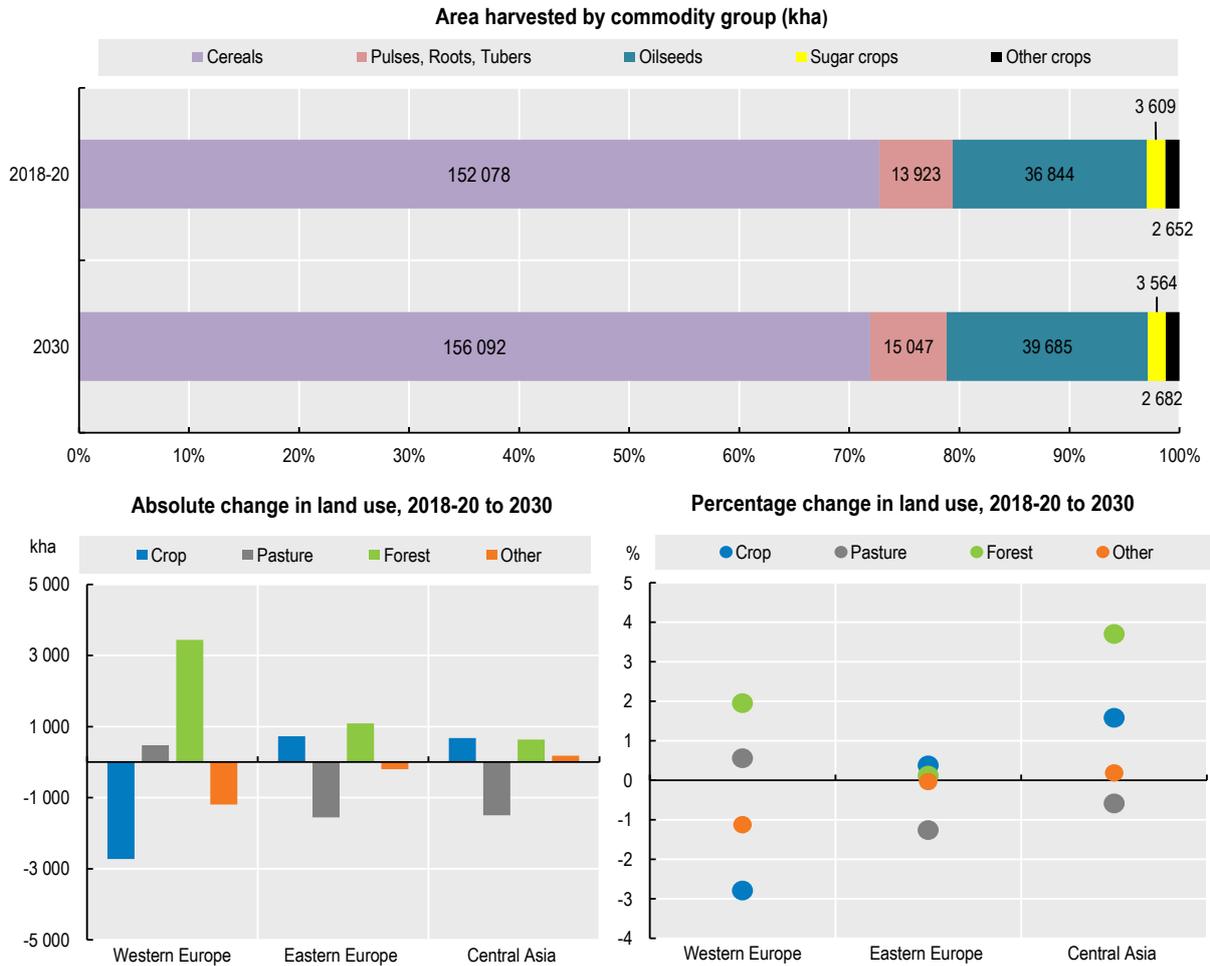


Note: Estimates are based on historical time series from the FAOSTAT Trade indices domain which are extended with the *Outlook* database. Products not covered by the *Outlook* are extended by trends. Total trade values include also processed products, usually not covered by the *Outlook* variables. Trade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

Source: FAO (2021). FAOSTAT Trade Indices Database, <http://www.fao.org/faostat/en/#data/TI>; 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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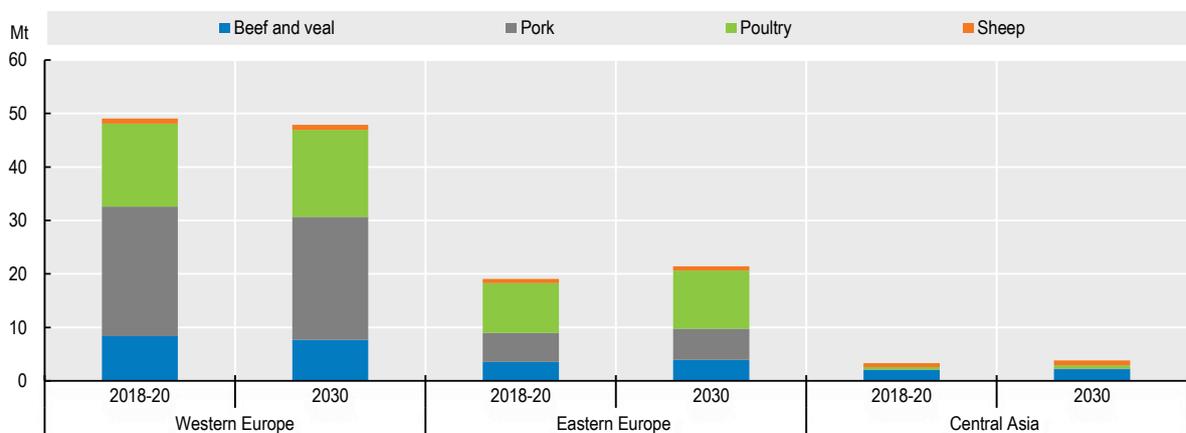
Figure 2. Change in area harvested and land use in Europe and Central Asia



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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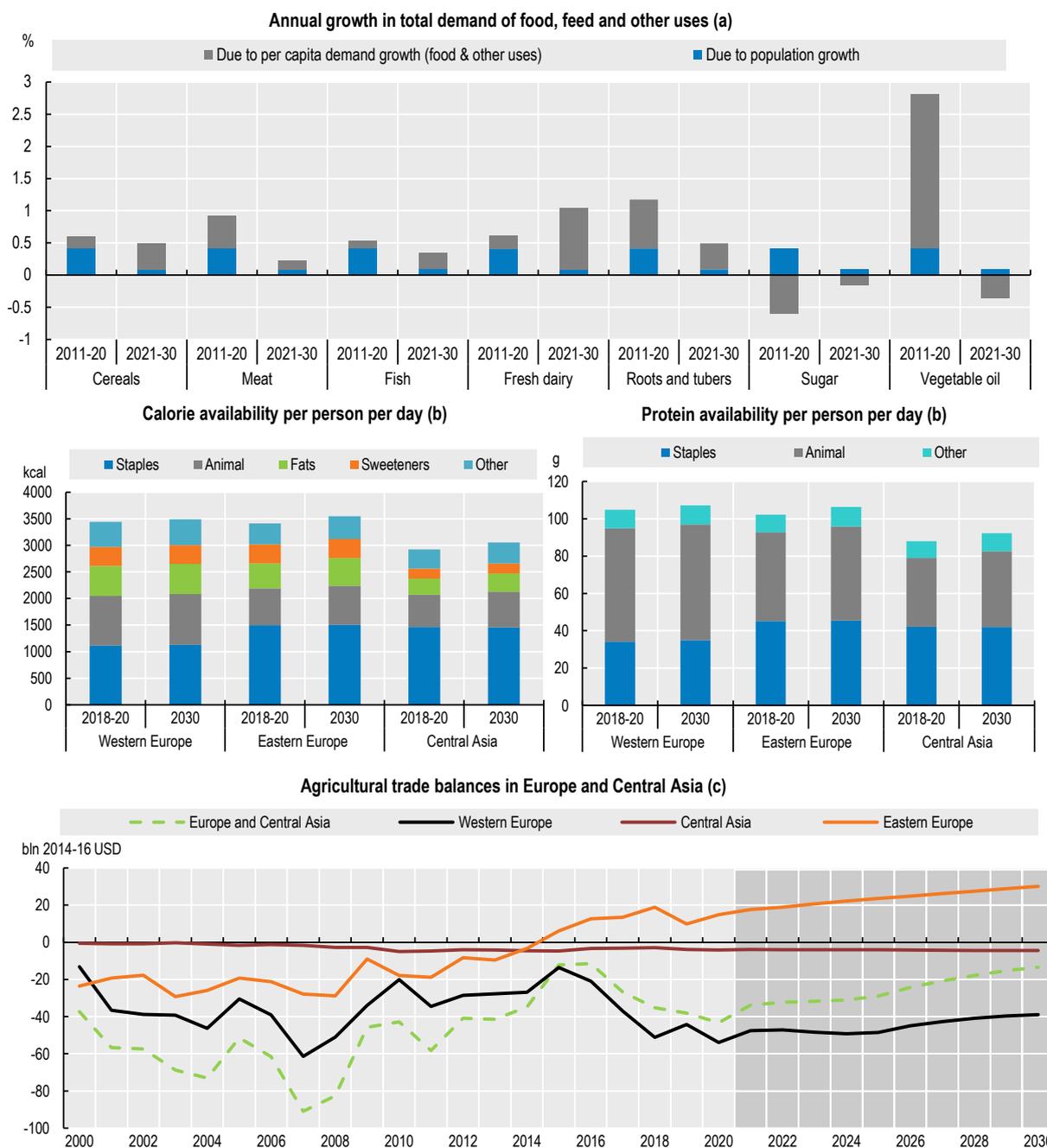
Figure 3. Livestock production in Europe and Central Asia



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 4. Demand for key commodities, food availability and agricultural trade balance in Europe and Central Asia



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>.

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Table 1. Regional indicators: Europe and Central Asia

	Average		2030	%	Growth ²	
	2008-10	2018-20 (base)			Base to 2030	2011-20
Macro assumptions						
Population ('000)	891 851	929 872	942 601	1.37	0.41	0.09
Per capita GDP ¹ (kUSD)	23.82	26.10	30.27	15.99	0.94	1.71
Production (bln USD)						
Net value of agricultural and fisheries ³	592.7	679.7	736.0	8.28	1.35	0.73
Net value of crop production ³	324.9	374.4	416.6	11.27	1.44	1.00
Net value of livestock production ³	220.6	252.4	262.6	4.05	1.22	0.34
Net value of fish production ³	47.2	53.0	56.8	7.33	1.40	0.63
Quantity produced (kt)						
<i>Cereals</i>	516 835	582 818	648 737	11.31	1.55	0.88
<i>Pulses</i>	7 728	10 304	13 349	29.54	3.51	2.50
<i>Roots and tubers</i>	26 770	30 284	32 089	5.96	1.07	0.57
<i>Oilseeds⁴</i>	47 283	68 581	80 453	17.31	3.37	1.67
<i>Meat</i>	59 203	71 442	73 103	2.32	1.90	0.18
<i>Dairy⁵</i>	24 632	29 077	32 449	11.60	1.68	1.10
<i>Fish</i>	16 940	18 931	20 303	7.25	1.39	0.62
<i>Sugar</i>	24 776	28 680	30 049	4.77	0.18	0.66
<i>Vegetable oil</i>	22 994	34 515	38 774	12.34	3.89	1.31
Biofuel production (mln L)						
<i>Biodiesel</i>	9687.52	15965.57	14921.01	-6.54	4.33	-1.08
<i>Ethanol</i>	6 006	7 694	8 104	5.33	0.69	0.22
Land use (kha)						
Total agricultural land use	802 064	798 983	795 092	-0.49	-0.05	-0.04
Total land use for crop production ⁶	337 322	333 826	332 512	-0.39	-0.05	-0.04
Total pasture land use ⁷	464 743	465 157	462 580	-0.55	-0.05	-0.04
GHG Emissions (Mt CO₂-eq)						
Total	665	691	682	-1.22	0.54	-0.11
Crop	190	205	205	0.31	0.92	-0.06
Animal	458	466	458	-1.73	0.35	-0.13
Demand and food security						
Daily per capita caloric availability ⁸ (kcal)	3 331	3 380	3 463	2.46	0.20	0.23
Daily per capita protein availability ⁸ (g)	100	102	105	2.9	0.2	0.3
Per capita food availability (kg)						
<i>Staples⁹</i>	167.5	168.1	170.6	1.48	0.09	0.14
<i>Meat</i>	54.7	57.8	58.9	1.90	0.49	0.16
<i>Dairy⁵</i>	26.7	29.3	31.6	8.07	0.95	0.90
<i>Fish</i>	16	16	16	2.26	-0.48	0.20
<i>Sugar</i>	36	35	34	-1.69	-0.48	-0.11
<i>Vegetable oil</i>	20	25	25	1.14	2.77	0.43
Trade (bln USD)						
Net trade ³	-48.9	-38.8	-13.4	-65.5
Net value of exports ³	411.5	530.4	644.1	21.43	2.5	1.73
Net value of imports ³	460.4	569.3	657.5	15.49	2.4	1.24
Self-sufficiency ratio¹⁰						
<i>Cereals</i>	110.2	121.6	128	5.5	0.84	0.42
<i>Meat</i>	98.0	106.8	106	-0.8	0.92	-0.03
<i>Sugar</i>	81.5	87.4	93	6.0	0.65	0.78
<i>Vegetable oil</i>	79.6	91.5	104	13.8	1.05	1.64

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>

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Note

¹ 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*.