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Working Party on Agricultural Policies and Markets

Aligning agricultural and rural development policies in the context of structural change

Contact: Dalila Cervantes-Godoy (dalila.cervantes-godoy@oecd.org)

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Note by the Secretariat

This work is mandated under the Expected Output Result (EOR) 3.2.1.2.1 of the 2021-22 PWB of the Committee for Agriculture (Policies to strengthen human capital and facilitate structural adjustment). A note with a draft roadmap for the work under the two elements of this IOR [TAD/CA/APM/WP/RD(2021)7] was presented to the July 2021 ad hoc session of the APM by the Secretariat.

This synthesis report considers the ways in which agricultural policies can be aligned with rural policies to meet sectoral objectives while promoting rural community development and well-being. The scoping paper for this report was presented at the July 2021 APM ad hoc session and a first draft was presented at the November 2021 APM session.

This synthesis report has benefited from co-operation with the Regional and Rural Policy Unit of CFE and was presented at the Working Party of Rural Policy (WPRUR) meeting in November 2021. The report was declassified at the 86th session of the APM on 17-19 May 2022.

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Key messages

- Rural regions in general terms and the agricultural sector in particular are being affected by a major adjustment process, characterised by a decline in agriculture's importance in the economy and employment, the rapid growth in non-agricultural activities, agricultural labour productivity gains, demographic changes such as ageing populations, closer urban-rural linkages, technological advances like mechanisation and digitalisation, land use change, urbanisation, farm land size concentrations, improved skills and access to education, the development of off-farm employment alternatives.
- A key challenge to accompany this adjustment process is to ensure coherence between sectoral agricultural policies and space-based rural policies. This requires coherence and co-ordination between the two types of policies, and with other economy-wide policies across different levels of government; as well as a better understanding of the areas of complementarity and trade-offs between the two policies, to ensure better integration and avoid overlaps.
- Areas of complementarity for agricultural and rural development policies include:
  - *Rural policies with transferable benefits for agriculture*. These include policies related to the provision of rural infrastructure, such as rural roads; digital connectivity; housing; and, public services, including for health and education and skills.
  - *Agricultural policies with wider rural benefits*. These consist of policies that provide general services or public goods to agriculture with impacts in the wider rural population, such as investments in agricultural innovation systems, extension services, the development of agricultural production technologies, policies that enhance resilience, and land and water management policies.
  - *Further synergies could be sought between agriculture and rural policies in the transition towards a diversified low carbon rural economy*. Potential measures include regulation for better governance of land use and water use; the use of circular economy models within rural regions; and the provision of wider environmental services in rural areas.

Executive summary

Agricultural adjustment is a continuous process with many facets, some of which are country specific, but many of which are universal. Some common elements of structural change can be seen in the agricultural sectors of all countries, irrespective of their stage of economic development. For instance, across countries, agriculture's importance in the overall economy tends to diminish over time, as does its share of employment. The driving factors behind agricultural and rural adjustment include more rapid growth in non-agricultural activities and labour productivity gains within agriculture. Other factors include demographic changes, such as ageing populations; closer urban/rural linkages; technological advances like mechanisation and digitalisation; land use change, including growing urbanisation; farm land size concentrations in some countries; human capital changes in the form of improved skills and access to education; off-farm employment alternatives; market structures; public policy; among others.

Agricultural households contribute to the rural economy through the employment and income generated by their agricultural and non-agricultural activities. Although the relative, but not absolute, importance of agriculture has decreased over time in most regions around the world, it is still a key part of the local rural economy. For instance, agriculture continues to be a provider of amenities, traditional landscapes, first and second stage processing of agricultural goods, culture, and other tourism-related activities. Some general characteristics of rural regions are a greater distance and cost of travel to the nearest major market; and weaker economic integration and connectivity. Several countries have rural regions that are lagging in terms of economic growth, with considerable heterogeneity among types of rural economies. Lagging rural regions are typically characterised by a declining and ageing population, being distant from markets, having limited access to public services such as education or health, and weak infrastructure, including digital connectivity.

Agricultural policies and rural development policies intervene mostly, but not exclusively, in the same spatial area, requiring coherence and co-ordination between them, as well as with other economy-wide policies, and across different levels of government. Both are concerned with land-use and the provision of environmental services, and with improving the well-being of the rural population. With a place-based, rather than sectoral, approach, rural development policies in OECD countries have been evolving over the past years from a focus on competitiveness towards wider goals of enhancing the quality of life and the overall well-being of the rural population. This has led to a different emphasis than for agricultural policy that has, over the past decades, incorporated objectives of productivity, sustainability and environmental protection, food security and resilience, and is increasingly taking a food systems approach.

Rural development and agricultural policies tend to differ in their scope of activity and in their objectives. Rural development policy is a territorial policy by design, targeting the needs of a specific area, whereas agricultural policy is largely dominated by sector-based goals. Nevertheless, despite the different objectives of both policies, there are important areas of complementarity.

There are a number of important areas of policy convergence that improve and support the enabling environment for both the development of rural regions and the agricultural sector. Some “first-best” policies for agricultural development will be agriculture-specific, such as investments in agricultural innovation systems, R&D, and extension and technical assistance services. However, other best practices for increasing agricultural productivity, sustainability, and resilience include a number of policies that are not rooted in the sector but in the area in which agriculture is produced. Examples of such policies include services or public goods that support agricultural activities like infrastructure (e.g. roads, physical protection from floods, digital connectivity, housing) or key services (such as education and skills training or health services), investments in innovation, provision of financial services for rural economic activities to overcome market failures, and other rural policies that improve the quality of life for the rural population.

Moreover, the agricultural sector is the largest user of land in most countries, and thus plays a key role in ensuring that natural resources are used sustainably and efficiently. The interaction between the coherent development of towns and cities and the productive and sustainable use of land for agricultural production is a key part of the challenge for rural development policy.

Lastly, a coherent alignment between agricultural and rural policies has an important contribution to make sustainable food systems. In particular, coherence will be required to address the “triple challenge” that food systems face in terms of ensuring food security and nutrition, providing livelihoods for farmers and others connected to the food chain

(including in rural areas), and enhancing the sector's contribution to sustainability. The sustainability aspect includes the contributions that agriculture and the rural economy will need to make in meeting targets for reducing greenhouse emissions, in particular through land use and land management, including carbon sequestration. Addressing the triple challenge effectively also means exploiting synergies and mediating trade-offs across different policy areas. Co-ordination between agricultural policies and rural development policies can help foster such improved coherence, leading to the better use of public financial resources and increased public awareness of the cost-effectiveness of public investments.

1. Introduction

1. Agricultural adjustment is a continuous process with many facets, some of which are country specific, but many of which are universal. Some common elements of structural change can be seen in the agricultural sectors of all countries, irrespective of their stage of economic development. For instance, across countries, agriculture's importance in the overall economy tends to diminish over time, as does its share of employment (Timmer, 1998[1]).

2. The drivers of agricultural adjustment include more rapid growth in non-agricultural activities and labour productivity gains within agriculture. Related determinants include demographics (e.g. ageing populations, closer urban/rural linkages); technological advances (e.g. mechanisation, digitalisation); changes in input and output prices; developments in human capital (e.g. skills, education accessibility); off-farm employment alternatives; market structures; and public policy. Agriculture has also witnessed a reduction in its share in employment (from 41.1% in 1995 to 26.7% in 2019 globally) and in GDP (from 7.6% in 1995 to 3.5% in 2019 also worldwide) (WDI-WB, 2021[2]), yet large shares of land typically remain under agricultural use (OECD, 2008[3]).

3. Agricultural households contribute to the rural economy through the employment and income generated by their agricultural and non-agricultural activities. Even if agriculture's economic importance has diminished over time in most regions around the world, it is still an important part of the local economy in some regions, for example, as provider of amenities, traditional landscapes, first and second stage processing of agricultural goods, culture, or other tourism-related activities (OECD, 2010[4]).

4. Rural regions in general have three economic characteristics: distance and cost of travel to the nearest major market; the degree of economic integration with the wider economy; and the extent of connectivity that presents trade opportunities. For some rural regions, trends in economic performance were converging with urban regions before the global financial crisis of 2008 but have diverged since the crisis (OECD, 2020[5]).

5. Several countries have rural regions that are lagging in terms of economic growth with considerable heterogeneity among types of rural economies (OECD, 2020[5]; OECD, 2008[3]). Lagging rural regions are primarily characterised by a declining and ageing population, being distant from markets, having limited access to public services (such as education or health) and weak infrastructure (including digital connectivity). Furthermore, the COVID-19 pandemic has to date had mixed impacts in different rural regions, with some suffering less severe impacts (e.g. due to relatively robust agricultural sectors, and the use of remote working or teleworking), but others losing in relative terms, due to increased vulnerability to economic downturns (OECD, 2020[5]; OECD/FAO, 2021[6]; OECD, 2021[7]). However, rural regions can also represent opportunities for economic

development. Many regions have untapped potential that could represent improvements in the well-being of its citizens (OECD, 2020[5]).

6. Agricultural policies and rural development policies mostly intervene in the same spatial area, requiring coherence and co-ordination between them as well as with the other economy-wide policies, and across different levels of government (OECD, 2021[7]). Both are concerned with land-use and the provision of environmental services, and with improving the well-being of the rural population. With a place-based rather than sectoral approach, rural development policies in OECD countries have been evolving over the past years from a focus on competitiveness towards enhancing the quality of life and the overall well-being of the rural population (OECD, 2020[5]). This has led to a different emphasis than for agricultural policy, where concerns have centred around multiple goals that include, among others, improving productivity and sustainability and environmental protection, as well as improving incomes and economic viability of farm operations, contributing to national and global food security, while meeting other expectations in areas such as food safety, resilience, nutrition and animal welfare and increasingly taking a food systems approach (OECD, 2021[8]; Diakosavvas, 2006[9]).

7. Areas of policy convergence are those cross-sectoral policies that jointly create the enabling environment for the development of rural regions and the agricultural sector. Examples of such policies are the general services or public goods provided to agriculture like infrastructure (e.g. roads, physical protection for floods), investments in innovation, and rural policies that improve the rate of adoption of new technologies (e.g. digitalisation) and the quality of life of rural population (public services, including health and education and skills training).

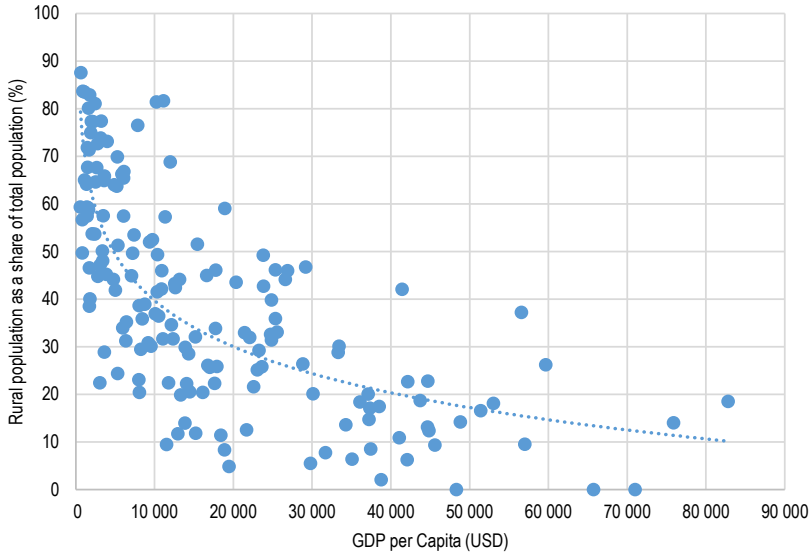
8. Moreover, the agricultural sector is the largest user of land in most countries, and thus performs a key role in ensuring that natural resources are used sustainably and efficiently. The interaction between the coherent development of towns and cities and the productive and sustainable use of land for agricultural production is a key part of the challenge for rural development policy. Lastly, a coherent alignment between agricultural and rural policies has an important contribution to make to delivering sustainable food systems and to addressing the triple challenge of food security, rural livelihoods and sustainability. Ensuring such coherence entails exploiting synergies and mediating trade-offs across different policy areas.

2. Structural pressures in agriculture and rural regions

Spatial and demographic shifts

9. Rural regions in general terms and the agricultural sector more specifically are being affected dramatically by demographic changes (OECD, 2020[5]). For example, there has been a steady and significant movement of people from rural to urban areas, from 2 billion people living in rural regions and 1 billion in urban areas in 1960 to 3.4 billion people in rural and 4.4 billion people in urban areas by 2020 (WDI-WB, 2021[2]). This has been accompanied by a spatial transformation from rural to predominantly urban economic activity that is not uniform across countries. Those countries with relatively low per capita income tend to have higher shares of their population living in rural areas (Figure 1).

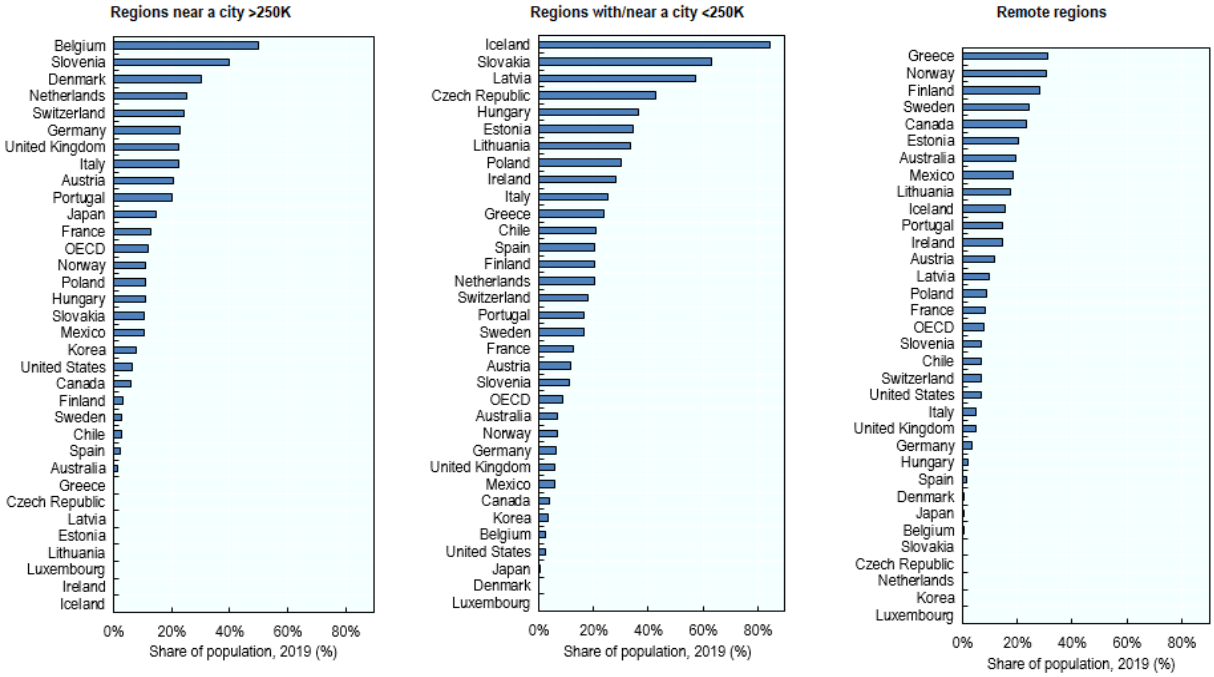
Figure 1. Share of rural population and GDP per capita, 2016



Note: 2016 PPP USD. Data collected from 195 countries.
Source: World Bank, World Development Indicators (2021[10]), https://databank.worldbank.org/source/world-development-indicators.

10. Moreover, a declining share of the world's population lives in rural regions, including in OECD countries. By 2019, 29% of the population in OECD countries lived in non-metropolitan regions, amongst which 12% lived in regions with access to metropolitan areas (city >250 000 inhabitants), 9% in regions with access to small and medium cities (cities <250 000 inhabitants), while only 8% of the OECD population lived in remote rural regions (Figure 2). Demographic trends in rural regions exhibit pressures of population decline and ageing populations, particularly in remote rural regions. Between 2003 and 2019, remote regions experienced the largest increases in elderly dependency ratios (Figure 3) (OECD, 2020[5]). Productivity levels and employment rates can be affected as more workers in rural areas exit the work force. Not only will these workers need to be replaced, but retired workers will also require more resources in the form of social services.

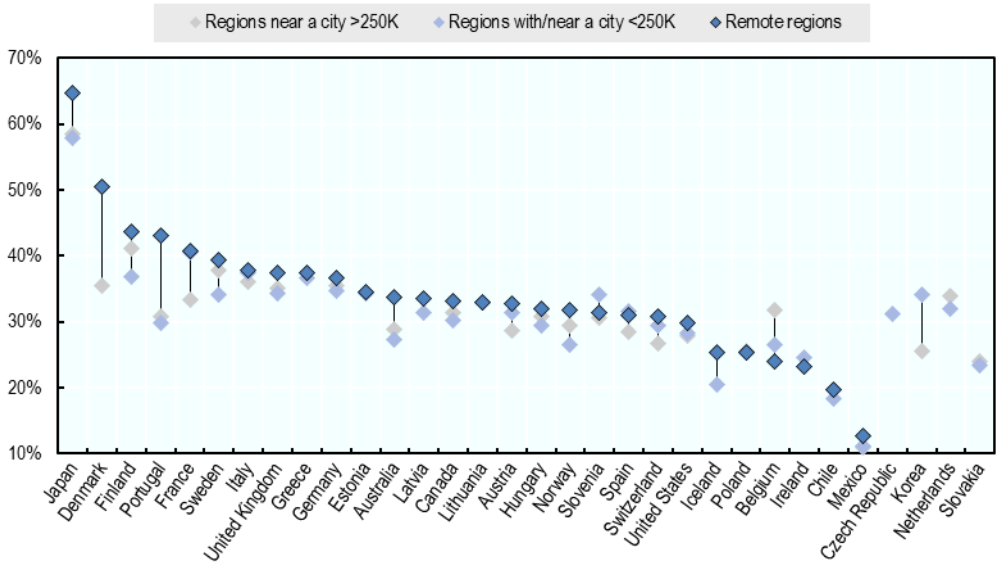
Figure 2. Share (%) of the population living in regions far from large cities in selected OECD countries, 2019



Note: City refers to a Functional Urban Area (FUA). 2018 values for Australia, Ireland, Japan, and United States.
Source: (OECD, 2020[5]), OECD Regional Statistics (database), http://dx.doi.org/10.1787/region-data-en. Used in Rural Well-being: Geography of Opportunities, https://doi.org/10.1787/888934176302.

Figure 3. Elderly dependency ratios in remote areas in selected OECD countries, 2019

Share of +65 population with respect to the working age population (15-64 years old)



Note: Based on available data for 2 147 TL3 regions.
Source: (OECD, 2020[5]), OECD Regional Statistics (database), http://dx.doi.org/10.1787/region-data-en. Used in 2020 Rural Well-being: Geography, https://doi.org/10.1787/888934176492.

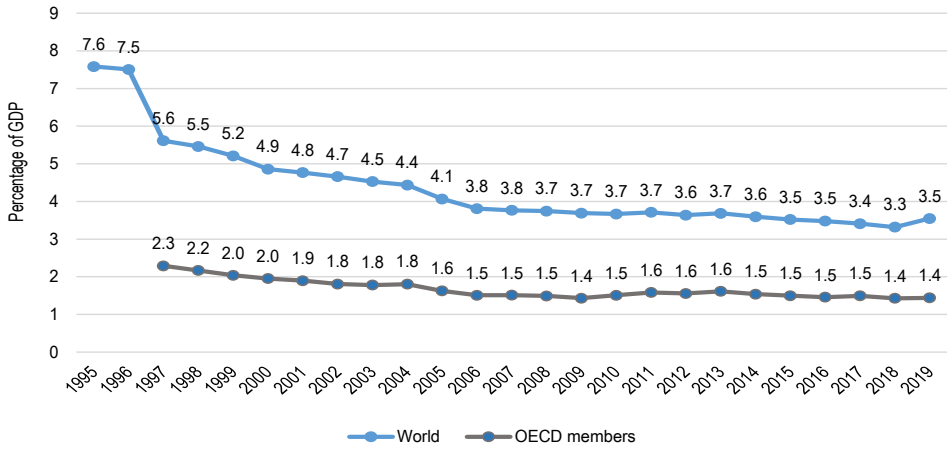
11. Additionally, the degree of remoteness at which agricultural practices are established affects farmers' economic decisions. Being too remote may hinder a farm in building or accessing human capital which would typically be more readily available closer to intermediate or densely populated areas (Langemeier and Boehlje, 2017[11]). Larger farms also have an advantage in this regard. Given their operation size and profitability, it is more affordable for them to invest in further expansion of their operations, often meaning that they are able to rent or acquire land that is better situated. At the same time, larger farms may require more human capital – sometimes with more technical skills, due to the complexity of the technology used in their operations (OECD, 2016[12]), and may also require more sophisticated standards of financial reporting, operations management, and/or personnel management (Langemeier and Boehlje, 2017[11]). The combination of inherent advantage and greater demand means that such farms often have better access to densely populated areas with more resources and services for both inputs and outputs (Langemeier and Boehlje, 2017[11]).

Economic and farm level shifts

12. In general, the process of economic development is characterised by the sectoral transition away from an economic structure based on agriculture to one dominated by manufactures and services. This structural change can be seen in all countries, irrespective of their stage of economic development. Other characteristics of this process include the spatial tendency towards increased urbanisation. Moreover, the rise of global value chains and digitalisation are driving factors putting both pressure and new opportunities, on agricultural activities and rural development (Timmer, 1998[1]; OECD, 2020[5]).

13. Across countries, agriculture's importance in the overall economy tends to diminish over time, while there is a strong inverse correlation between agriculture's share of GDP and GDP per capita (Figure 5). As countries develop, productivity improvements lead to rising agricultural value added. For instance, global agricultural value added increased from USD 1 trillion in 1970 to more than USD 3.5 trillion 2019 (FAO, 2019[13]); while the actual contribution of agriculture to GDP has fallen, decreasing from 7.6% in 1995 to 3.5% in 2019 worldwide, and from 2.3% in 1997 to 1.4% in 2019 for OECD countries (WDI-WB, 2021[2]) (Figure 4).

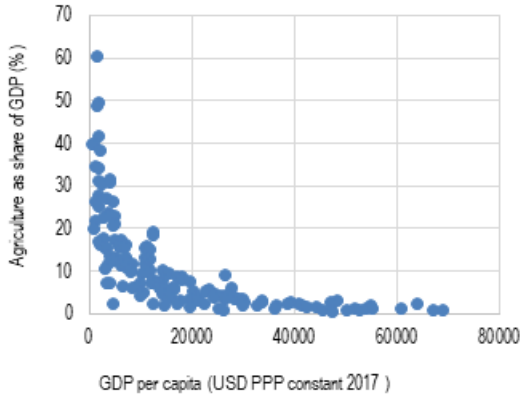
Figure 4. Agriculture, forestry, and fishing value added (% of GDP) 1995-2019



Source: World Bank, World Development Indicators (2021[10]), https://databank.worldbank.org/source/world-development-indicators.

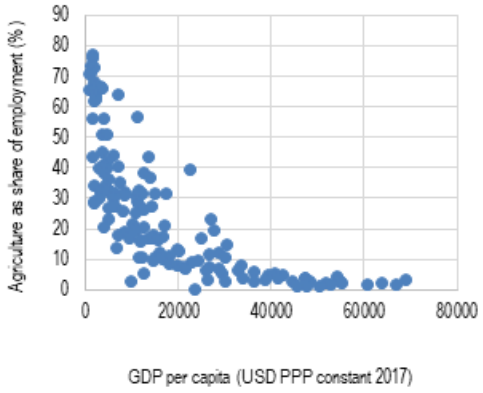
14. Productivity improvements also lead to a release of labour out of agriculture (see Annex A), with the share of labour in agriculture dropping from 8.6% in 1991 to 4.8% in 2019 in OECD countries (WDI-WB, 2021[2]). A characteristic of successful development is that this released labour is then absorbed in faster growing non-agricultural sectors. Moreover, with growing rural to urban migration and a consolidation of farm structures, agriculture's share in total employment declines while per capita incomes rise (Figure 6).

Figure 5. GDP per-capita and share of agriculture in GDP, 2017



Note: 2017 PPP USD. Data from 143 countries.
Source: World Bank (2021), World Development Indicators (World Bank, World Development Indicators, 2021[10]) https://databank.worldbank.org/source/world-development-indicators.

Figure 6. GDP per-capita and share of agriculture in employment, 2017



Note: 2017 PPP USD. Data from 137 countries.
Source: World Bank (2021), World Development Indicators (World Bank, World Development Indicators, 2021[10]) https://databank.worldbank.org/source/world-development-indicators.

15. Agricultural producers are constantly responding to pressures from changing economic, environmental and demographic conditions. For example, as agricultural market returns change, farmers generally respond by adjusting the activities in their farms and by expanding or reducing their involvement in the sector. These decisions affect farm size, scale, intensity, the nature and organisation of farming operations, as well as farm income diversity and engagement in non-farm income alternatives.

16. Structural change in agriculture encompasses all decisions made to regulate the scope and type of farming activities carried out by farmers. The causes for structural adjustment are numerous but can be grouped under three main types: 1) improvements in the yields and profitability of farms; 2) new actors entering agriculture; 3) farmers exiting agriculture due to retirement or career change. These changes are often incremental and competitive pressures can lead to a gradual reduction in the number of farmers and farm holdings (Cervantes-Godoy and Brooks, 2008[14]).

17. Economic development typically leads to an increase in farm sizes, yet worldwide the average size of farms has declined from a median of about 11 hectares in 1960, to around 5 hectares in 2000. This declining trend is mostly seen in developing countries. For example, farm sizes are increasing in OECD countries including Germany, France, the Netherlands, Spain, the United States, Canada, Australia, New Zealand; but declining in Africa, Asia and in some Latin-American countries (see Annex A for more details (Lowder, Skoet and Raney, 2016[15])

18. In the European Union, as well as in other regions of the world, there is a growing trend of land farm concentration that exerts pressure on middle-size farms that struggle to

compete, resulting in a dual system of large-scale farms and small-scale farms. This creates a split between the scale efficiencies in large farms, with portfolio diversification in small farms. Large-scale farms, for example, may have a competitive advantage that enables them to rent or acquire land from middle-size players which typically have more established production than small-scale farms[1] (Boehlje, 2013[16]; OECD, 2021[17]). Hence in the European Union, for example, the number of farms is continuing to decrease while the size of the farms increases, which is a further indication of the structural shift in the business model that dominates in the agro-food industry (Neuenfeldt et al., 2018[18]).

19. Rural regions experienced the fastest rate of growth compared to metropolitan areas at the beginning of 2000s; however, the 2008 financial crisis led to an economic shock from which some never fully recovered (OECD, 2020[5]). In fact, regional inequality measured in GDP per capita in OECD countries increased significantly following the 2008 crisis (OECD, 2020[5]), which suggests that an economic recession can be particularly detrimental for vulnerable rural regions. Such has been the case with the COVID-19 pandemic and the consequent stress it put on the global economy (OECD, 2020[5]).

20. Farm households often rely on diversified income from both farm and non-farm sources. When an economic crisis hits, it usually tends to create job losses and cuts in wages specifically in the non-farm sectors, which undermines this strategy. Moreover, in some cases, more restrictive conditions in the agricultural credit market, exacerbated by the crisis, can further compound these impacts. But in other cases, agriculture can also be a buffer to wider economic downturns (Csáki and Buchenrieder, 2011[19]; Hertz et al., 2014[20]).

Technological advances

21. Earlier trends in technological development have resulted in the prevalent forms of automation used in the agro-food sector today. The use of tractors and other forms of mechanisation in farming have increased the productivity and profitability of farms. Additionally, research on genetics and plant breeding has also developed significantly over the years to facilitate crop growth, plant variety, and sustainability regardless of the seasons (OECD, 2015[21]). This has paved the way for further experimentation with innovative technologies that make the future of farming more autonomous and efficient.

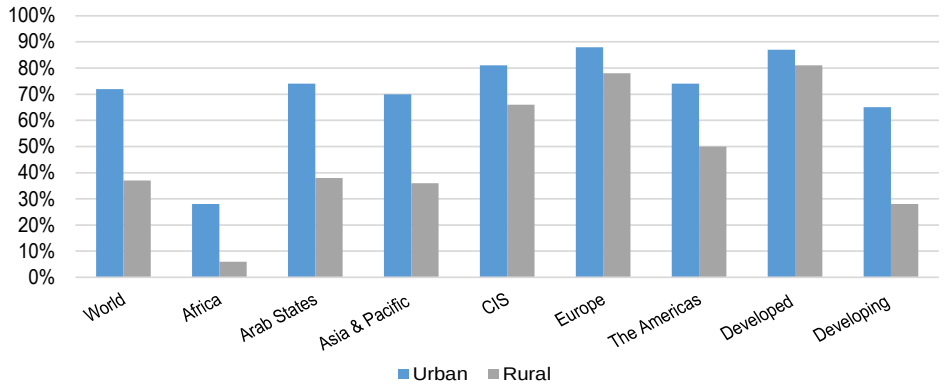
22. Technology and the digitalisation of agricultural processes are perhaps the main form of structural change that has and is continuing to reshape the future of the sector. Initiatives in agriculture have moved towards the adoption of more sustainable and productive farming systems (Glover et al., 2019[22]). Technological changes have a direct effect on other factors in the sector. For example, advances in technology mean that the education and training levels needed for workers to use technology also increase (OECD, 2019[23]).

23. Connectivity has been improved due to significant enhancements in both transportation and communication resources. For example, signal coverage range and ICT

[1] The overlap between family farms and small-scale farms is hard to determine, due to the diversity of family farms depending on the regional context. Family farms can have vastly different sizes and scopes of operation. For example, a family farm could be a large farming industry with corporate models that typically involves a single business entity that owns many agricultural operations, including but not limited, to farms (Boehlje, 2013[16]). Conversely, a family farm can also be characterised by a very small-scale operation that produces for auto-consumption or/and sells its supply excess to the market (Lowder, Sánchez and Bertini, 2021[70]; Cervantes-Godoy, 2015[61]). This context is particularly relevant when making targeted agricultural or rural policy.

provide a farm with the ability to conduct business in real time and be connected to nearby urban areas (OECD, 2020[5]). With access to computers and internet connections, farm workers can order supplies, arrange shipments, contact clients or business partners, all while working remotely. However, access to high speed internet connections is often limited in rural regions in both developed and developing countries, but particularly in the latter (Figure 7). In 2017, there was a 36 percentage point difference between cities and rural areas in fixed broadband speeds across 32 OECD countries; moreover, using the degree of urbanisation, there was a 50 percentage point difference between cities and rural areas in fixed broadband speeds across the same 32 OECD countries for the same year (OECD, 2018[24]). Although public investments in ICT infrastructure have made internet access available in many rural areas in OECD countries, the availability of high-speed internet is significantly lagging (Figure 8).

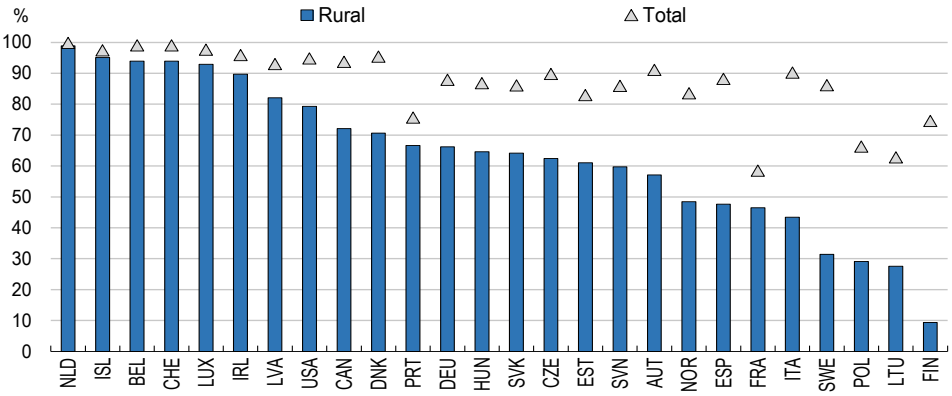
Figure 7. Households with internet access worldwide, 2019



Source: ITU-UN (2020[25]), https://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx.

Figure 8. Access to high-speed in rural areas in selected OECD countries

Percentage of households with access to Internet >30Mbit/s in 2019 or latest available year, at the rural and national levels



Note: 2019, or latest available year: EU countries (2018). Internet access is expressed as the percentage of households (population, for the United States) with access to fixed broadband technologies with download speed greater than 30Mbit/s (NGA technologies, for the EU). For EU countries, rural areas are those with a population density lower than 100 inhabitants per square kilometre. For Canada, rural areas are those with a population density less than 400 per square kilometre. For the United States, rural areas are those with a population density less than 1 000 per square mile or 386 people per square kilometre.
Source: (OECD, 2021[26]).

24. Adoption of technological advancements has also contributed to the streamlining of crop production processes and has increased farms' potential to capitalise on opportunities of economies of scale (Langemeier and Boehlje, 2017[11]). Additionally, precision farming technologies have made it easier for productivity to grow significantly, as has the introduction of monitoring and process control technologies (Boehlje, 2013[16]). Hence, several countries have greatly invested in digital infrastructures. For example, in the United States, the Infrastructure Investment and Jobs Act was signed into law in November 2021. It mobilises USD 65 billion in funding to provide high-speed internet that will improve connectivity in rural and underserved communities (White House, 2021[27]).

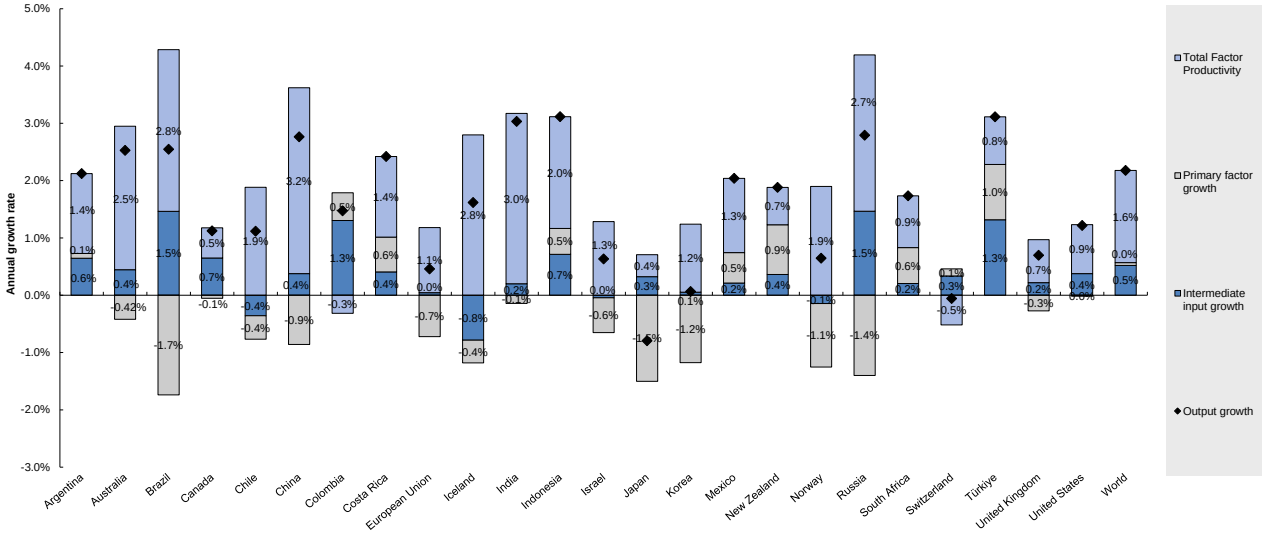
25. Nevertheless, the achievement of innovative farming processes depends on adequate training programmes for the workers who will be operating the new machines and technologies (OECD, 2015[21]). Indeed, the growing mainstreaming of technology in agriculture has resulted in structural change in the labour market. For example, there is less demand for physically demanding jobs or for low-skilled workers, but there is higher demand for semi-skilled operators (OECD, 2019[28]).

26. Automation and digitalisation will continue to be major contributing factors to productivity growth in the agricultural sector. As such, the sector can demand more middle-skilled occupations, such as operators of digital technologies. The People's Republic of China (hereafter "China") has seen strong growth in the share of middle-skilled occupations, partly due to the growing mechanisation of agriculture. This thus requires educational institutions to design and create programmes with skills that are needed for such middle-skilled jobs (OECD, 2019[28]).

27. The COVID-19 pandemic has created a sense of urgency for digitalisation and ICT infrastructure to be developed further in order to accommodate the growing demand for working and learning from home (Paunov and Planes-Satorra, 2021[29]; OECD, 2020[30]). This could potentially slow or even reverse the process of outmigration from rural to urban regions as more individuals are afforded the freedom to work and study remotely (OECD, 2021[31]). These effects might also be experienced unevenly amongst rural regions, with some rural regions containing better pre-existing conditions to attract remote workers (e.g. digital connectivity, proximity to urban centres, public services, and natural amenities) (OECD, 2020[5]). Furthermore, governments can encourage investment in connectivity to help with regional integration, which would counter the trend of depopulation of rural areas.

28. Progress in technology and the optimisation of socio-economic and environmental factors tend to boost levels of productivity in agriculture. Improving sustainability outcomes in agriculture also tends to improve productivity of food production processes over time, although productivity growth is not always achieved sustainably. In many OECD countries and emerging economies, total factor productivity (TFP) growth in agriculture has been positive over the past 15 years (see light blue bars in Figure 9). This suggests that streamlining the production process and improving farming skills can contribute significantly to the future growth of agricultural productivity and improve the use efficiency of natural resources (OECD, 2021[32]). These in turn are key to establishing optimal trading conditions with clear price signals, improving the standard of living of farmers, and securing the availability of food and jobs in the agro-food sector.

Figure 9. Composition of agricultural output growth, selected countries, 2007-2016



Note: Primary factors comprise labour, land, livestock and machinery.
The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
Source: USDA Economic Research Service Agricultural Productivity database.

Environmental pressures

29. Some advances in technology and industrialisation, coupled with the pressures of increasing population worldwide, have taken a toll on the environment and long-term sustainability. Additionally, the climate-related effects of increased agricultural production remain a challenge. Consequently, there are more potential areas where help can be extended to rural regions with their transition into low-carbon economies without jeopardising the full potential of their development.

30. However, some farmlands and forests that make up rural areas are key to natural carbon capture and storage. Moreover, investments in reforestation of these areas help countries to stay on track with their carbon emission reduction while maximising the potential of rural development initiatives. Specifically, investing in renewable energy and capitalising on positive externalities of sustainable ecosystem services addresses the urgency of transitioning to a low carbon economy. The *Rural Agenda for Climate Action* calls for rural polices to take a more prominent role in the transition to a zero carbon economy (OECD, 2020[5]).

31. Farmers stand to be the most affected by changes in temperature and weather conditions since their livelihoods are based on agricultural yields highly vulnerable to climatic shifts. Preserving the diversity of resources in different rural areas, in terms of biodiversity and water supplies, will require safeguarding measures to be put in place by governments and organisations. The push for increased agricultural production has often been associated with negative externalities. These include deforestation, the deterioration of wildlife habitat, and over usage of fresh water sources, amongst others. Policies and technologies that encourage the sustainable intensification of agricultural production need to be enhanced and scaled. (OECD, 2019[33]; Gruère and Shigemitsu, 2021[34]).

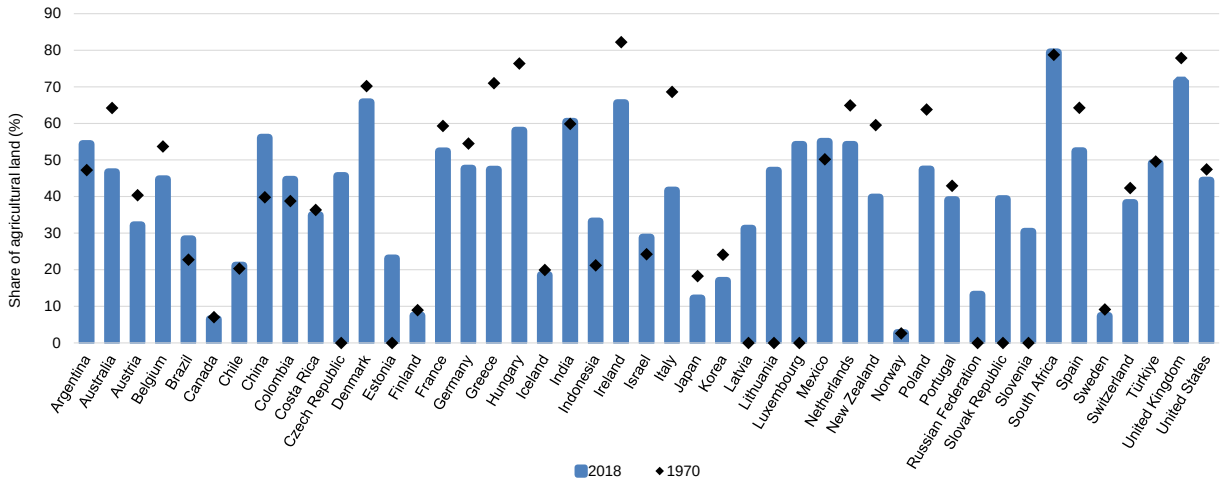
32. Negative externalities may be tackled by natural climate solutions such as carbon sequestration and by encouraging forest conservation and afforestation. Cutting down

fewer trees and planting more can be mutual objectives of both agricultural and rural development policies. Contributing to the reduction of the carbon dioxide (CO_2) concentrations could make agriculture and rural regions more prosperous and key players in climate change mitigation. Improving a country's forest carbon sequestration potential may require specific agricultural environmental policies (Henderson et al., 2022[35]) (OECD, 2021[32]; Grafton et al., 2021[36]).

Land-use changes

33. Figure 10 shows that for some OECD countries, there has been pressure to reduce land usage for agricultural purposes in favour for urbanisation, conservation or protection. This is also indicative of improvements in productivity as less land is used for agriculture. For other countries, in particular some emerging economies, the share of total land use in agriculture has increased, in some cases at the expense of native forests or jungle. These changes in emerging economies are taking place while they also encounter urbanisation pressures.

Figure 10. Percentage of land area used for agriculture (1970 and 2018)



Source: World Bank, World Development Indicators (2021[10]), https://databank.worldbank.org/source/world-development-indicators

34. Moreover, land conversion pressure is more evident in the urban-rural fringe. In more remote areas, land may be converted from agriculture through abandonment if the extensive margin is reduced, but at the urban-rural fringe, land is often converted from farming to residential and commercial activities. Land that is paved is unlikely to ever return to farming. This irreversibility makes the conversion decision more significant (OECD, 2009[37]; Diakosavvas, 2006[9]).

3. Agricultural policy and rural development policy

35. Agriculture is important to rural economies because farming is typically the dominant land-use in almost all rural regions and is a significant form of economic activity in a large number of rural regions, even when it is not the main occupation of the local population. Agricultural households contribute to the rural economy through the

employment and income generated by their agricultural and non-agricultural activities. Even if agriculture's economic importance has diminished over time globally, it is still an important part of the local economy in some regions, for example, as provider of amenities, traditional landscapes, first and second stage processing, culture, or other tourism-related activities.

36. Agriculture's role in land use and the provision of environmental services has led to the use of a broader range of policy instruments to achieve economic, social and environmental sustainability in rural regions. Nevertheless, for those who still obtain their livelihood from the agricultural sector, agricultural policy instruments continue to be important (Cervantes-Godoy and Brooks, 2008[14]).

37. A relative decline in the economic importance of agriculture in rural regions does not itself imply that rural regions are in economic decline; indeed, it may mean faster economic growth and a reduced gap with urban regions. Some rural regions have high rates of employment growth, particularly those with good transportation links or proximity to urban centres, or that are near to other endogenous economic activities like mining or manufacturing.

38. Common characteristics of rural regions are low density, remoteness from markets, lack of economies of agglomeration, higher reliance on tradable goods and a less diversified economic base than more densely populated places. As a result, the performance of rural regions varies more than the growth of metropolitan regions and they tend to experience higher vulnerability to economic shocks. For example, rural regions in the OECD were converging the decade before the 2008 global financial crisis, but since then have been falling behind on average. The effects of the current pandemic may will also amplify existing gaps, leaving a number of rural regions behind (OECD, 2020[5]).

39. Lagging rural regions, which tend to face higher demographic pressures of declining and ageing populations and greater distance from markets, can suffer the effects of cumulative decline. When economic activity declines, people move out of the region which reduces the tax base and increases the unit costs to deliver public services (such as education or health), reducing further the attractiveness of the rural region and inducing even more people to move out (OECD, 2020[5]; OECD, 2009[38]).

40. A place-based, rather than sectoral, approach is needed for rural development policies to address these complex dynamics and can encompass actions designed to enhance the quality of life and the overall well-being of the rural population. Several rural regions, however, have been able to overcome the barrier of distance by unlocking local assets, such as tourist attractions, natural endowments (e.g. mining, forestry) or even distinctive production processes or environmental services.

41. From this perspective, policies need to be broader in scope than agricultural policy, although agricultural policies address objectives that go beyond rural development, such as food security, food safety, and broader food systems objectives. Additionally, as economic activities become more diverse in rural regions (e.g. tourism, mining, forestry, manufacturing, etc.), agricultural households diversify their economic activities and increase their links with the broader rural economy. Diversified activities can be closely related to farm work (e.g. processing of agricultural products, production of handicrafts, on-farm tourist activities) or be completely non-farm activities, such as services, mining, manufacturing, forestry, or rural tourism sectors, etc. (OECD, 2010[4]).

42. Rural off-farm economic activities are likely to contribute to improved income stability. In general, small-scale farms tend to rely more on off-farm income than their larger farm counterparts. Off-farm income is less important if farm income is high;

however, the availability of off-farm options provides income stability to farming families and mitigates the unpredictability of single-sourced farming income.

43. A significant percentage of farm households draw on off-farm income in several OECD countries (Bokusheva and Kimura, 2016[39]). For example, in 2019, 96% of farm households in the United States derived a portion of their income from off-farm sources, contributing to up to 82% of total income (USDA, 2021[40]). In Canada, 99% of farming families draw some of their income from off-farm sources, with four out of five households reporting employment income (Statistics Canada, 2020[41]). This off-farm income creates opportunities for synergies between promoting rural development and promoting the well-being of farm households.

44. In general, policies that promote off-farm opportunities have the potential to benefit both farm households and other rural households, whereas agriculture-specific policies have a narrower focus (Cervantes-Godoy and Brooks, 2008[14]). Many OECD countries have tried to encompass this broader view of rural development; for instance, under the EU's Common Agricultural Policy (CAP), while the first pillar addresses income support, the second pillar is dedicated entirely to supporting rural development, rural infrastructure and the environment (European Parliament, 2021[42]).

45. Policies that encourage diversification (both on-farm and off-farm) have been put in place in many countries; however, some regulatory measures can act as a disincentive to diversification (OECD, 2009[38]). Both agricultural policies and rural development policies intervene in the same spatial area, requiring coherence and co-ordination between them and with the other sectoral policies, and between different levels of government; particularly on land-use and environmental services, and in policies that seek to improve the well-being of the rural population (OECD, 2017[43]).

46. Some policies enable farmers to take advantage of the rising opportunities offered by agricultural development, while others protect farmers unable to adjust to competitive pressures. Productivity growth puts pressure on the incomes of less competitive farmers, due to declining real prices which are not fully offset by a decline in production costs. Improving agricultural productivity therefore inevitably implies that some less productive farmers that are unable to adjust will need to leave the sector. If less productive farmers have access to viable economic alternatives in non-agricultural sectors, income support may not be necessary and indeed may hamper the transition out of agriculture. If viable alternatives do not exist, then transitional assistance to another economic activity may be more effective than income support (OECD, 2010[4]).

Agricultural development frameworks within the wider rural context

47. Over the years, the OECD has carried out extensive work on different aspects of agriculture, including productivity, innovation, sustainability, food security, risk, resilience, water management, and food systems, among others. An earlier OECD strategic framework for strengthening agricultural incomes (OECD, 2008[3]; Cervantes-Godoy and Brooks, 2008[14]), suggested the need to make a distinction between different development pathways for farmers, distinguishing between those who potentially have a competitive future in the sector and those who do not. The premise of the strategic framework is that different types of agriculture-dependent households will have different potential pathways to improved incomes over the long term, and correspondingly different policy requirements.

48. Development pathways and policy instruments are described in Table 1. The development pathways are described in the columns and the policy instruments in the rows. Note that the development pathways (columns) are not mutually exclusive: for example,

one household member can enhance the farm's competitiveness while another provides off-farm income. The policy instruments (rows) do not exhaust all possible policies.

Table 1. Strategic framework for an inclusive agricultural development

Policy instrument	Development Pathway				
	Help farmers become more competitive within agriculture	Diversify income sources		Leave the sector for off-farm work	Safety nets for those unable to adjust
		Within agriculture	Outside agriculture		
Price policies and distorting subsidies	Treats symptoms of un-competitiveness rather than causes	Impedes the adjustment process			
Credit and financial services (e.g.crop insurance)	Should focus on correcting markets failures	Indirect impacts			
Risk management and resilience policies	Should focus on correcting markets failures and catastrophic risks	Indirect impacts			
Investing in human capital	Minor effects of formal education for this generation; technical training more appropriate for productivity	Can help farm family members and rural workers move into skilled jobs	Important for farm family members and rural workers	Important for managing inter-generation change	
Investment in infrastructure	Helps with the market integration	Helps improve local job opportunities		Can ease migration decisions for offspring	
Investment in R&D and extension	Public and private sector important; gains from adoption and adaptive research	Can expand agricultural employment			
Labour market reforms	Important for raising employment opportunities and wage incomes				
Cash transfers				May complement investments in school	An important policy for those unable to adjust (e.g. aged farmers, poor farmers)
Regional/rural policies	Important for improving market integration	Expanded non-farm activity would raise farm wages	Important for building a diversified rural economy with wider job opportunities		
Development of producer associations	Reduce transaction costs and help exploit economies of scale	Indirect impacts			
Land policies and property rights	Incentives for farm investments; encourages rental and purchasing land markets		Changes in land use that develop non-farm jobs		
Environmental care	Sustainable farm systems, circular economy models, land and forest conservation				

Source: Adapted from (OECD, 2008[3]).

49. Agricultural policies would benefit from trying to facilitate adjustment, acknowledging that in the long-term the future for the majority of farmers are unlikely to exclusively lie in farming. Hence, there is a continued need for policies that enhance farmers' opportunities outside the sector as well as within it. Moreover, to improve both agricultural competitiveness and the prospects for non-farm income, policies should expand their focus beyond the agricultural sector, encompassing notions of farmers' well-

being and that of the wider rural population. It is therefore important that policies are framed in an economy and rural-wide context, with agricultural policies a component of the overall policy mix (OECD, 2008[3]). The specific role for agricultural policy would then lie in providing public goods and correcting the sector's externalities, as opposed to providing market distorting support, which tends to impede adjustment.

50. The process of facilitating adjustment to structural change may initially be based on the provision of safety nets. Cash transfer programmes have been employed towards assisting vulnerable communities that have difficulty adapting to economic changes. There are also similar programmes that focus on transferring services rather than cash. The United States, for example, has implemented programmes such as the Supplemental Nutrition Assistance Program (SNAP) and Medicaid to help vulnerable populations, based on eligibility that measures the incomes and or assets falling below a pre-determined threshold (Institute for Research on Poverty, 2022[44]). In the European Union, several programmes providing monetary transfers to vulnerable populations have been in place for several decades. There are also examples of emerging economies that have similar programmes; this includes Mexico, Brazil, Chile, South Africa, Türkiye, Morocco, among others (World Bank, 2022[45]).

51. Many of the policies required to improve farmers' incomes are non-agricultural. They include investments in education and healthcare; infrastructure such as roads, rail and broadband connectivity; sound macroeconomic management; developed institutions; property rights; and governance (Brooks, 2012[46]). Labour market and rural development policies can facilitate the absorption of labour into other sectors, including downstream processing sectors. Social safety nets (e.g. cash transfers) can be an effective means for providing income support while ensuring equal treatment between agricultural and non-agricultural households (OECD, 2008[3]).

Rural development policy frameworks

52. Over the past decades, the main objectives of rural development policy have usually been the enhancement of the quality of life of the rural population and improvement of the overall competitiveness of rural regions; while those of agricultural policy have, more commonly, been the improvement of productivity, sustainability, resilience, farmers' incomes and food security (OECD, 2010[4]). Rural development policies are normally framed in a context of horizontal and vertical co-ordination, that includes many different departments, and the co-operation between, and attribution of tasks to, all administrative levels, as well as the inclusion of stakeholders, non-governmental organisations and private actors is required to achieve successful policy performance. This is in contrast to agricultural policy which, being sectoral, still tends to be developed and delivered by one ministry and to focus, in general terms, mostly on sectoral objectives (OECD, 2019[47]; Diakosavvas, 2006[9]). That said, agriculture ministries continue to lead rural development policies in 60% of OECD countries.

53. The Centre for Entrepreneurship, SMEs, Regions and Cities (CFE), and specifically the Regional and Rural Policy Unit has developed extensive work on rural development and has created a rural policy framework that has evolved over time (Table 2). The Centre has recently published "Rural Well-being: Geography of Opportunities" and the "OECD Principles on Rural Policies", both of which provide the basis for rural good public policy practices (OECD, 2020[5]; OECD, 2019[47]). The resulting framework is people-centred, placing the well-being of citizens at the forefront, while providing a greater understanding of rural regions and their diverse and complex socio-economic systems.

Table 2. Evolution of rural development policy framework

	Old paradigm (1998)	New Rural Paradigm (2006)	Rural Well-being: Geography of Opportunities (2020)
Objectives	Equalisation	Competitiveness	Well-being considering multiple dimensions of: 1) the economy; 2) society; and 3) the environment
Policy focus	Support for a single dominant resource sector	Support for multiple sectors based on their competitiveness	Low-density economies differentiated by type of rural area
Tools	Subsidies for firms	Investments in qualified firms and communities	Integrated rural development approach – spectrum of support to the public sector, firms and third sector
Key actors and stakeholders	Farm organisations and national governments	All levels of government and all relevant departments plus local stakeholders	Involvement of 1) public sector –multi-level governance; 2) private sector –for profit firms and social enterprise; and 3) non-governmental organisations and civil society
Policy approach	Uniformly applied top-down policy	Bottom-up policy, local strategies	Integrated approach with multiple policy domains
Rural definition	Not urban	Rural as a variety of distinct types of place	Three types of rural 1) within a functional urban area (FUA); 2) close to an FUA; and 3) remote or far from FUA

Source: (OECD, 2020[5]).

54. The Rural Well-being Framework (2020) suggests that a number of factors need to be studied and measured prior to being incorporated into a policy of rural development (OECD, 2020[5]). Rural regions tend to have economies with higher degrees of specialisation that are linked to natural resources. Despite having more social capital due to their interdependence, their reliance on external markets makes them more sensitive to changes in the economy and environment. Both the population density and the level of accessibility to a rural region are important. The degree of remoteness relative to the nearest urban centre determines how connected and interdependent rural and urban areas are. Often, rural-urban links are multi-faceted in their levels of interdependence. Economic, social, and environmental connectedness is relatively stronger the closer a rural region is to an urban centre (OECD, 2020[5]) (FRSSL-BGFRS, 2021[48]).

55. Rural regions in closer proximity to urban centres benefit greatly from infrastructure development and transportation that allows them more access to human capital, external markets, and a wide array of services and environmental amenities. As such, the interactions between rural and urban regions flow in both directions, but the stakes are higher for the rural areas due to their stronger level of dependency, coupled with limited intra-region connectivity. This often results in higher costs of transportation, infrastructure development, and amenity provision, thereby affecting the general well-being of rural populations (OECD, 2020[5]).

56. In this context, rural places have "low-density economies", specialised in niche markets or those linked to natural resources (e.g. agriculture, tourism, mining, forestry, etc.). Geographical features and settlement patterns set rural areas apart from urban areas, as they differ in terms of local workforce size, sensitivity to transport costs, level of competition with similar regions, and reliance on innovations developed elsewhere (OECD, 2020[5]). Because of their size and reliance on external markets, rural economies may be more vulnerable to external changes affecting economic and natural conditions.

57. Moreover, differences in the levels of interaction and connectedness of rural and urban areas greatly influence the outcomes of public policy. These differences can be depicted using a spectrum that takes into consideration location, proximity, and population density of the variously concentrated rural areas. It is important to note that the path of development for rural areas does not have the end-result of becoming urban. Rather, it is

to have the most fully functional form of rural production for goods and services that can be produced there.

58. Additionally, the centre of economic vitality in remote regions is located in rural areas in the same manner as in urban areas, i.e. in cities. Therefore, this dynamic is imperative to note when considering the desired outcomes of policy-making (OECD, 2020[5]). The Rural Well-being Framework has defined three types of rural areas with different features and policy requirements:

a) *Rural within a functional urban area (FUA)* – These types of rural places are part of the catchment area of the urban core and their development is fully integrated into the metropolitan strategy. The main challenges for these types of rural places are accessibility of services within the FUA, matching of skills to the wide range of supply and managing land use policy brought by increasing pressures from the urban core.

b) *Rural close to cities* – The main challenges in these types of places are improving two-way connectivity and accessibility between the cities and rural territory; building short supply chains that link urban and rural firms; balancing population growth while preserving quality of life and green spaces; and enhancing the provision of secondary goods and services.

c) *Remote rural* – Remote places depend largely on the primary activities of the area. Growth relies on absolute and comparative advantage, improving connectivity to export markets, matching skills to areas of comparative advantage and ensuring the provision of essential services (e.g. tourism, mining). In more densely settled but remote regions where farms are distributed across the open countryside, some small cities and towns serve the farm population as market points (OECD, 2020[5]).

59. The Framework also suggests that the effective creation and implementation of policies for rural development requires the involvement of many stakeholders and the pooling of various resources and capabilities. Multi-level governance allows for collaboration and co-operation at different levels of society to foster a collective state of well-being for rural regions.

60. Development policies need to be adapted prior to their application taking into consideration the smaller differences and factors that significantly affect the outcome of a policy (OECD, 2020[5]). This underscores the importance of designing rural policies through a place-based approach. This is a step beyond "rural proofing" (i.e. the application of a rural lens to help adapt sectoral or national policies to rural places) that recognises the inefficiency of non-coordinated policy making. Instead, policy design must be conducted with specific places in mind, considering the assets and leading industries for each, limits to labour mobility and linkages to cities that make each place unique.

61. Rural development faces new opportunities and challenges as a result of the major demographic, technological, economic, and environmental trends that are transforming the world. These trends include a number of factors. For one, increased economic interdependence between countries has amplified the need for specialisation according to comparative advantage.

62. Policies for rural development now place higher value on rural-well-being and the improvement of standards of living for rural residents. Digital technologies have increased the connectedness of rural-urban regions and created opportunities for new policies to derive value from the exchanges and communications between the two types of regions (OECD, 2020[5]). Technological advances and digitalisation have also created important

new opportunities for productivity growth, job creation, and value maximisation for rural regions. In addition to improving the work-life balance of workers, remote working has been a driving force in the redistribution of wealth and resources as more workers take advantage of the mobility to relocate outside cities (OECD, 2021[31]). This situation has been accelerated by the COVID-19 pandemic, when remote working was shown to be possible at large scale, which makes access to high-speed internet services in rural regions particularly important. Yet policies also need to be more effective in addressing demographic changes to keep up with the ageing populations, migration trends, and general population decline in rural areas. Social innovations and encouraging different age groups to participate in society is vital to maintaining the well-being and liveliness of rural communities.

63. Lastly, rural communities are in the front line on biodiversity and are essential to its preservation and that of the general environment. Consequently, climate change policies encouraging the transition to low-carbon economies must consider rural areas as key stakeholders in developing effective methods of targeting climate objectives (OECD, 2020[5]). The ultimate goal of all of these policies is to maintain the well-being of rural regions over the long run, taking into account the economic, social, and environmental factors that affect that well-being.

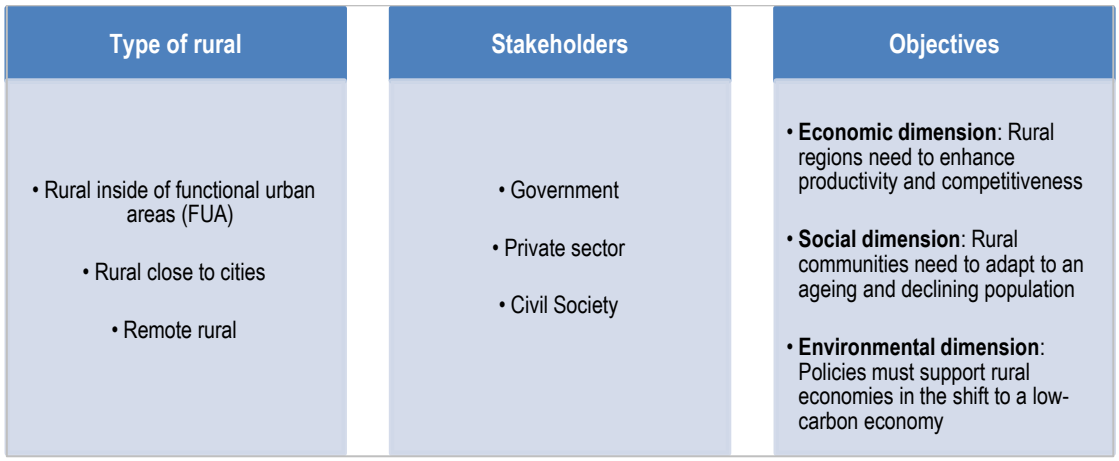
64. Economic factors take into consideration how specialisation and innovation are key to value creation. In particular, many efforts are currently aimed at better understanding how innovation unfolds in rural regions and how policy can support and enhance this (OECD, 2018[49]). They also aim at increasing trade options through expansion into national markets and international markets, in addition to investing in training and education to enhance productivity, and reforms to enhance the business environment. This also means providing alternative funding sources in addition to the existing ones available. Finally, encouraging collaboration between different entities is important to sustain the level of skills that is needed for the future needs of rural regions, including the needs of agro-food sector for digital literacy skills for recruitment, reskilling, and upskilling.

65. Social factors include the development of education, health and family care services and ICT infrastructure. This is better implemented when coupled with the use of sustainable services, cutting costs and improving access by using technological solutions, and employing economies of scale and scope and other policy responses (OECD, 2021[50]). Better promotion of the benefits of living in rural areas to retain the population helps if there are more opportunities for training and leadership for rural youth. In addition, policies should aim to improve amenities that alleviate elderly dependency on the working population, while encouraging investment in social innovation that deals with the pressures of social change trends.

66. Environmental factors, led by the need to invest in renewable energies, the bio- and circular economies, cleaner forms of mobility, and eco-system service, and fostering methods of benefiting from positive externalities are key to the promotion of sustainable land and resources use and repurposing. This would be even more effective if other stakeholders are encouraged to invest in low-carbon emission transportation infrastructure.

67. In summary, the Framework defines a multidimensional view of rural policies with three types of rural – rural inside FUAs, rural close to cities, and remote rural. The Framework also categorises the interactions between rural places and cities under three objectives – economic, social, and environmental. In turn, these objectives have their corresponding policy instruments that involve three different stakeholders – the government, the private sector, and civil society. This results in a model that outlines the intersectional nature of rural regions (Figure 11 and Table 3).

Figure 11. Multidimensional approach of the Rural Well-being framework



Source: (OECD, 2020[5]).

Table 3. Specific policy instruments in each dimension of the rural policy objectives

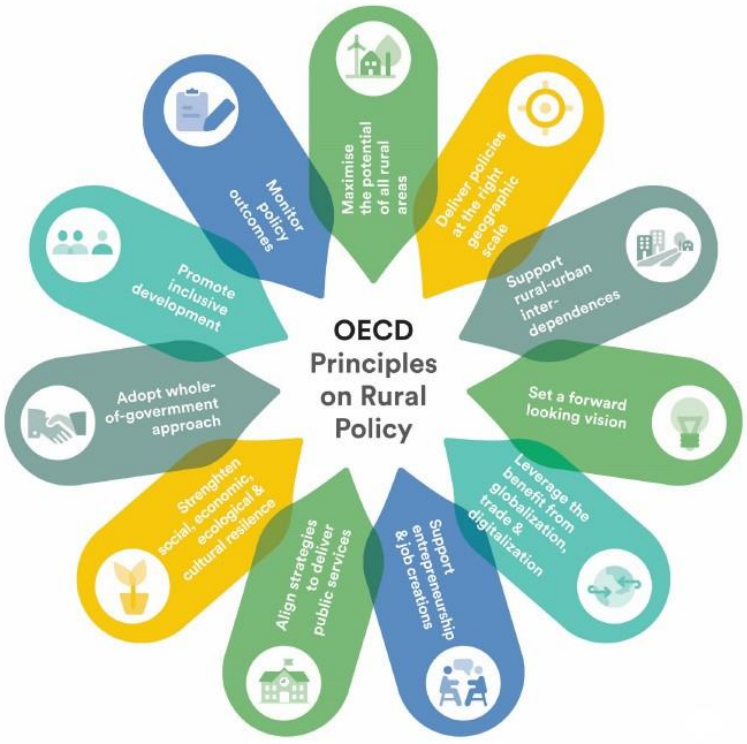
Economic dimension	Social dimension	Environmental dimension
• Adding value to tradeable activities by deepening smart specialisation strategies in rural regions and promoting innovation. • Internationalising small- and medium-sized enterprises (SMEs) and expanding into national markets by improving networks and connections with urban, national and external markets. • Supporting productivity in rural firms by improving the local and regional business environment and facilitating training for entrepreneurs and SMEs. • Facilitating traditional and innovative sources of financing for rural firms. • Retaining more value in rural communities by ensuring competitive regulation for local economies and promoting local benefit-sharing policies (monetary and non-monetary), including capacity-building activities for local firms, promoting quality standards and training programmes. • Strengthening rural skills by improving collaboration between public authorities, local businesses and not-for-profit organisations, to ensure local education and training matches the current and future needs of rural firms.	• Enhancing the quality and availability of information and communication technology (ICT) and developing services related to maternal health, childcare and integration. • Designing sustainable services that take the long-term view, make use of economies of scope and scale where possible, and use technology to overcome higher per-unit cost where possible. • Improving communications about the benefits of rural amenities, such as lower cost of living and proximity to nature, to facilitate the recruitment of skills and retention of youth. • Providing special teaching and leadership to young rural populations. • Developing "silver" services that address challenges faced by the elderly population and providing pathways for older people to continue to make contributions to rural communities. • Investing and supporting social innovations that help to find solutions to societal challenges. • Developing targeted immigration programmes that help promote rural life to newcomers	• Facilitating the development of renewable energies that can benefit rural economies. • Identifying ways to capture the value of positive externalities such as ecosystem services. • Promoting sustainable land use and resource extraction as part of the bio- and circular economies. • Rethinking transportation for rural dwellers, including a focus on alternative and technological innovations to reduce emissions as well as infrastructure development. • Working with regions dependent on carbon-intensive sectors to develop new economic opportunities and managing social consequences

Source: (OECD, 2020[5]).

68. The Rural Well-being Framework fall under the overarching umbrella of good rural policy practices set out in the OECD Principles on Rural Policy (Figure 12), also developed by the Regional and Rural Policy Unit of CFE. These principles are targeted to ministries of OECD Members and Partner countries dealing with rural regions, rural policies, and sustainable development, notably ministries responsible for regional development. They

also seek to target subnational levels of government and stakeholders involved in or affected by rural policy such as civil society, the private sector, academia or financial institutions (OECD, 2019[47]).

Figure 12. OECD Principles on Rural Policy



Source: (OECD, 2019[47]).

69. The Principles are based on the premise that place-based policies should:

1. Deliver well-being to all.
2. Be underpinned by sound multi-level governance and community-led development.
3. Prepare rural areas for technological, demographic and environmental change.
4. Address the diversity of challenges and opportunities facing rural areas.
5. Be informed by sound evidence and data at the right scale.

70. The OECD Principles on Rural Policy includes eleven principles and policy instruments or sub-principles, classified in three broader areas: a) targeting policy actions for all types of rural areas; b) adopting integrated and effective strategies to build smart, sustainable and inclusive rural areas fit for the future; and c) engaging stakeholders in policies for rural areas (Table 4).

Table 4. OECD Principles on Rural Policy

Broader areas	Principles	Policy instrument or sub-principle
Targeting policy actions for all types of rural areas	Principle 1. Maximise the potential of all rural areas	• Leveraging the unique assets of each rural area to adapt and respond to emerging mega-trends (digitalisation, globalisation and trade, climate change, population ageing, and urbanisation). • Adapting policy responses to different types of rural regions including rural areas inside functional urban areas (cities and their commuting zones), rural areas close to cities and rural remote areas.
	Principle 2. Organise policies and governance at the relevant geographic scale	• Implementing rural policies at different scales that match with functional relationships (e.g. local labour markets, food chains, environmental services and amenities) based on current and future needs. • Ensuring that there are effective government mechanisms at the relevant scale to realise rural policy objectives. • Encouraging the efficient and effective provision of public services and infrastructure (e.g., shared services, integrated service delivery, e-services) in order to maintain quality and accessibility, address market failures, and respond to emerging needs, especially in underserved rural communities.
	Principle 3. Support interdependencies and co-operation between urban and rural areas	• Leveraging the spatial continuity and functional relationships between rural and urban areas in order to inform public investment and programme design. • Carrying out joint strategies and fostering win-win rural-urban partnerships, as appropriate, to promote an integrated development approach.
Adopting integrated and effective strategies to build smart, sustainable and inclusive rural areas fit for the future	Principle 4. Set a forward looking vision for rural policies	• Improving well-being for rural dwellers across economic, social and environmental objectives. • Ensuring that responsibilities and resources across levels of government are clearly defined and effectively aligned with national targets and strategies, place-specific needs, and the Sustainable Development Goals. • Ensuring that rural policy objectives benefit from foresight studies, are measureable at different scales (administrative and functional) and connect to policy levers. • Providing access to data tools such as geographic information databases, smart data and small area data and strengthening capacity building in order to help national and sub national governments involved in rural policy-making prepare for demographic change, climate change and the transition to a low-carbon economy, digitalisation and the next production revolution. • Promoting integrated spatial planning that considers such factors as environmental quality, waste management, natural resources development, community attractiveness, climate change mitigation and adaptation and population ageing and out-migration.
	Principle 5. Leverage the potential of rural areas to benefit from globalisation, trade and digitalisation	• Creating an enabling environment for rural areas to identify and invest in their areas of competitive advantage such as tradeable activities and adding value to rural assets; • Investing in digital connectivity to enable the use of next generation technologies in rural areas such as cloud computing, artificial intelligence, the internet of things, and blockchain technologies among others. • Facilitating the decentralisation of production (e.g. renewable energy and 3D manufacturing) through supportive policies and regulations.
	Principle 6. Supporting entrepreneurship to foster job creation in rural areas	• Enhancing technological innovation and diffusion in order to overcome the barriers of physical distance and lower density such as higher transportation costs and thin labour markets present in rural areas; • Promoting innovation and value-added activities in established (e.g. agricultural and industrial production, logistics) and emerging (e.g. bio-economy, renewable energy, biotechnology, tourism) sectors; • Supporting the integration of local SMEs into global value chains and the scope for diversification of rural economies through investments in entrepreneurial skills, infrastructure, and cluster initiatives; • Supporting entrepreneurs and SMEs in rural areas to access capital (e.g. through finance support schemes, lending to microbusinesses). • Connecting rural people and firms with lifelong educational training opportunities and skills upgrading in universities, research centres,

Broader areas	Principles	Policy instrument or sub-principle
		manufacturing extension centres, agricultural advisory services and vocational institutions.
	Principle 7. Align strategies to deliver public services with rural policies	• Assessing the impact of key sectoral policies (e.g. transportation, health, education) on rural areas and diagnosing where adaptations for rural areas are required (e.g., rural proofing); • Recognising where policies and regulations create additional barriers to the provision of public services in smaller places and responding with innovative solutions; • Incentivising innovative practices such as flexible models of service delivery and leveraging advances in digital technologies to deliver e-services (e.g. e-health and remote education). • Developing smart rural villages and towns by promoting digitalisation complemented by training for public sector personnel and residents to navigate and use e-services.
	Principle 8. Strengthen the social, economic, ecological and cultural resilience of rural communities	• Ensuring the sustainable management of natural capital, land-use and enabling the creation of value from ecosystem services (e.g. flood protection services, increasing biodiversity on agricultural lands). • Supporting a comprehensive approach to climate change adaptation and mitigation for rural areas (e.g., food production, soil management, water use), and developing robust systems for disaster response and recovery. • Decarbonising the energy sector by taking advantage of renewable energy opportunities and supporting the shift to a circular economy (e.g. bio-waste, sustainable mining practices). • Valuing, promoting, and preserving tradition, heritage and cultural assets. • Ensuring that rural areas have institutional capacity, good governance and funding to fulfil their roles and deliver high quality of life for residents, from youth to seniors.
Engaging stakeholders in policies for rural areas	Principle 9. Implement a whole-of-government approach to policies for rural areas	• Engaging with all sectors and levels of government to integrate national policies that improve the well-being of rural areas. • Identifying and addressing the barriers to policy coherence across ministries, public agencies and levels of government. • Setting incentives, regulations and coordination mechanisms to mitigate conflicts, manage trade-offs (e.g., land use, mining, agriculture, energy and water). • Maximising policy complementarities across sectoral strategies through integrated and coordinated rural policies (e.g. co-ordinating transportation investments with health and education services).
	Principle 10. Promote inclusive engagement in the design and implementation of rural policy	• Engaging a diversity of stakeholder voices, including those that are underrepresented and/or marginalised, in the policy process and empowering local and regional stakeholders to be partners in policy elaboration. • Engaging with the private and not-for-profit sectors and leveraging their expertise and resources to deliver better outcomes for rural areas. • Harnessing innovative mechanisms and digital technologies to develop new ways of disseminating public information, generating and using data, and consulting and engaging citizens in decision-making (e.g. participating budgeting, rural observatories).
	Principle 11. Foster monitoring, independent evaluation and accountability of policy outcomes in rural areas	• Evaluating rural policy initiatives and outcomes and communicating progress in meeting them in an ongoing manner in order to improve policy design and implementation. • Developing outcomes indicators in order to assess and benchmark rural well-being through economic, social, environmental and other performance indicators. • Providing accessible data that is easy-to use in order to help rural communities and stakeholders identify priorities and monitor progress. • Exploring innovative methods of data-collection that address the challenges of confidentiality that are inevitably part of small-area analysis. • Assessing the process and outcomes of different steps of public engagement in order to learn, adjust and improve accordingly.

Source: (OECD, 2019[47]).

4. Complementarity between agricultural and rural policies

71. Rural development and agricultural policies tend to differ in their scope of activity and their objectives. Rural development policy is a territorial policy by design targeting the needs of a specific area, whereas while agricultural policy is largely dominated by sector-based goals. Although in several OECD countries agricultural policy has long included underlying objectives of rural development, it remains largely dominated by sectoral approaches. For example, in broad terms, a major objective of rural development policy had been job creation in rural regions; while agricultural policy often focused on increasing production and farmers' incomes (OECD, 2010[4]).

72. Yet, both agricultural and rural policy objectives have evolved over time in response to new challenges. Agricultural policy has, over the past decades, incorporated objectives of productivity, sustainability and environmental protection, food security, and resilience, and moved towards wider food systems approaches; while rural policy has widened its reach and focused on enhancing the quality of life or level of well-being of rural citizens and improving the overall competitiveness of rural economies. Nevertheless, despite the different objectives of both policies, there are important areas of complementarity (OECD, 2020[5]).

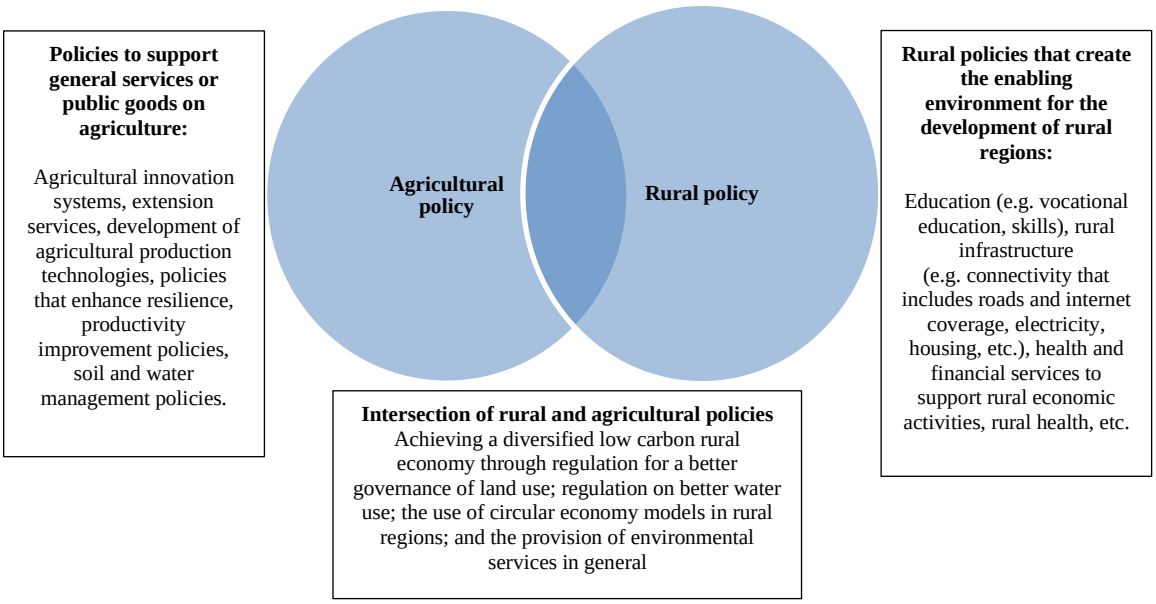
73. Rural policy can be considered as policies for rural citizens and the rural economy, who may or may not work in agriculture. When agriculture is the dominant economic activity in rural regions, agricultural policies can play an important role in increasing and sustaining productivity growth. For broader objectives such as improving the quality of life or well-being of rural citizens, rural policy is the principal tool.

74. There are a number of important areas of policy convergence that can improve and support the enabling environment for the development of rural regions and the agricultural sector. Some best practice policies for agricultural development will be agriculture specific, such as investments in agricultural innovation systems, R&D and extension and technical assistance services. Other best policy practices for increasing agricultural productivity, sustainability, and resilience will include a number of policies that are not rooted in the sector but in the area in which agriculture is produced. Examples of such policies include services or public goods that can support agricultural activities like infrastructure (e.g. roads, physical protection from floods, digital connectivity, and housing), key services (such as education and skills training or health services), innovation, financial services for rural economic activities that overcome market failures and other rural policies that improve the quality of life of rural populations (Figure 13).

75. An enabling environment for developing agriculture in a sustainable manner that would ensure its long term viability also requires policies that can exploit untapped potential for value added within the sector. Policies that aim to add value might also simultaneously be designed to reduce risk and vulnerability of sector. For example, many rural economies are dependent on extractive activities and first or second stage processing of commodities and natural resources. Due to decreased level of diversification, these livelihoods are more susceptible to changes that affect the agricultural sector, therefore the development of more value added stages could benefit these livelihoods (OECD, 2020[5]).

76. Although this document focuses on areas of complementarity between agricultural and rural policies, it is important to acknowledge the potential trade-offs between the two. For example, as the importance of off-farm income increases, policies that promote off-farm opportunities are likely to benefit not only rural households but also farm households. However, in some cases, sectoral policies promoting only agriculture may not necessarily benefit rural households.

Figure 13. Rural and agricultural policies



Land-use, environment, and resilience

77. Despite the decline in overall agricultural land use in recent decades, agriculture continues to be the primary user of rural land across OECD member countries, and hence is central to ensuring environmental sustainability. The interaction between the expansion of towns and cities and the productive and sustainable use of land for agriculture is at the heart of rural development policy. This has significant consequences for the development of rural areas and their economies outside of agriculture (OECD, 2009[37]).

78. The use of land in one sector can affect development in another. For example, growth in large-scale agriculture could affect the availability of rural landscape that can be used for tourism. Land use decisions of one community could directly affect its neighbours. Therefore, planning the spatial integration of landscapes is critical in ensuring that the co-dependence on land does not become a barrier for one or more of the sectors that require it as an input (OECD, 2017[51]). However, land use regulation in most OECD countries is highly segmented and requires the buy-in of different levels of government (municipal, regional, national, etc.) and stakeholders (different ministries), which complicates flexibility in adaptation of land use policies (OECD, 2017[43]).

79. There are some specific environmental issues attributed to agriculture (e.g. soil or water pollution), but also wider environmental aspects related to land use. For example, agriculture is an important determinant of the landscape and a main rural amenity provider; and in terms of rural and agricultural policies, there is an overlap between land use policies affecting agriculture (e.g. conservation, agri-environmental schemes, and rewilding) and rural planning, investments in infrastructure and other drivers of rural resilience.

80. Conflicts that pertain to land-use and how it is divided between rural development purposes and/or agricultural purposes usually stem from the perceived trade-offs that one use implies for the other. Accordingly, policies would benefit from taking into consideration the specificity of the agricultural sector, in addition to the economic, social, and environmental costs and benefits that are involved in deciding how the land is used. (OECD, 2009[37]).

81. Policies could usefully focus more on targeting landscape provision, wildlife habitat, and the preservation of ecosystems in areas that make up or surround areas where agriculture takes place. The main goal of farmland preservation is to protect resources and wildlife habitat in regions where farms exist. In order to foster coherence between the goals of rural development policies and agricultural policies, it is important to better understand the areas of complementarity and trade-offs to ensure better integration between the two and avoid overlaps.

82. Analysing the efficiency and effectiveness of various policies in influencing farmland conversion requires a clear definition of how rural land-based amenities can also be provided by non-agricultural uses of rural land. In general, agricultural land management could usefully be supported by measures of agri-environmental policy. This includes programmes to protect farmland from conversion to non-agricultural uses, and programmes to evaluate whether certain public goods and amenities are produced more efficiently by non-agricultural uses of land (OECD, 2019[33]).

83. Agriculture's role in land use and the possible conversion of agricultural land for other purposes is dependent on the impacts of environmental policy measures. This, therefore, determines whether land is simply abandoned, or converted to other uses that are deemed more environmentally conscious (OECD, 2019[33]). Additionally, there are some specific agri-environmental issues, but also wider environmental issues related to land use. Generally, policies that incentivise shifts towards lower-intensity forms of agricultural land use have a negative impact on productivity and profitability, and do not necessarily lessen the environmental costs (Guerrero, 2021[52]) .

84. Sectoral agricultural policies focus on measures that support the long-term productivity and sustainability of the farming sector, while space-based rural policies focus more attention on revitalising the types of accessible amenities and improving rural quality of life. In the case of environmental sustainability and building resilience, there is an overlap between land use policies affecting agriculture (conservation, agri-environmental schemes) and rural planning. The basis of building rural resilience lies in investments in different forms of infrastructure and other services that help farmers and rural residents mitigate the risks associated with uncertainty (OECD, 2020[53]; OECD, 2019[23]).

85. Diversification of production and specialising in areas of competitive advantage and niche markets are vital for building the resilience of rural regions as they transition to the digital and green economy, especially following the COVID-19 crisis. Sustainable and effective changes are those that support the strengthening of local communities, which increases the appeal of rural areas as a place to live and conduct economic activities (Chmieliński et al., 2021[54]). For example, local communities have highlighted the benefits of a circular economy in which reusing, recycling, repairing, and repurposing have created more wealth and value than disposal (Salvia, Andreopoulou and Quaranta, 2018[55]). The circular economy has the potential to be transformational in the agro-food systems, reducing losses, wastes, and preventable environmental damage. Increasing resilience through diversification is also crucial to address vulnerability to market fluctuations, natural disasters, and climate change (Chmieliński et al., 2021[54]). Some forms of diversification result in added value of production.

86. Rural regions can be key enablers of an environment that facilitates the transition to a circular economy. Implementation of a circular economy model could enhance the potential for rural regions to contribute to the conservation of biodiversity and mitigation of climate change effects. The circular economy model could also lead to opportunities for new jobs and income generation in rural areas (OECD, 2020[56]; OECD, 2020[57]). This would help to reverse the effects of outmigration trends and stimulate the rural economy by attracting new residents and therefore economic activities (Salvia, Andreopoulou and

Quaranta, 2018[55]). Several regions in OECD countries have started to incorporate circular economy objectives and reducing food waste into their rural and regional development strategies (OECD, 2020[56]).

Farm income diversification and social protection

87. Structural changes and periodic economic shocks affect rural regions and the agricultural sector. Structural changes include increases in land farm concentration and shifts in land use. As a consequence, labour is released from the sector that needs to be otherwise used in rural or urban regions. For labour to remain in rural regions, governments can invest in improving the enabling environment for the rural economy and improving the attractiveness of rural regions. Job opportunities can be in agriculture but also in other sectors of the economy like tourism, mining, gas and oil, forestry, manufacturing, etc. Additionally, some agricultural households may need to diversify their economic activities and increase their engagement in the broader rural economy (e.g. mining, industry or services sectors) (OECD, 2009[38]; Moreddu and Poppe, 2004[58]; OECD, 2003[59]).

88. For some OECD countries and emerging economies income diversification for rural households is particularly significant. Given the importance of off-farm income to farm households, policies that promote increased off-farm opportunities are likely to benefit not only rural households but also farm households. However, the opposite may not always be the same, and sectoral policies that only promote agriculture may not necessarily benefit rural households. These potential trade-offs need to be identified and taken into account at the moment of policy design.

89. Diversified activities can be closely related to farm work (e.g. processing of agricultural products, production of handcrafts, on-farm tourist activities) or dependent on off-farm activities, such as working in non-agricultural industries such as mining or activities in the services sector. Some activities within the agricultural sector already offer some opportunities for diversification and some farms may benefit from capitalising on what they do well, whether it be product or process comparative advantage, and use that to adjust their income sources as they see fit. (OECD, 2009[38]; Moreddu and Poppe, 2004[58]; OECD, 2003[59]).

90. The wide variety of geographical characteristics of rural land in OECD member countries contributes to diversifying the use of land beyond agriculture, but also to the development of economic activities like rural tourism. Rural tourism allows the country and regions to utilise local resources of land beyond the production of agro-food products to induce more economic and social benefits. These benefits include opportunities for job creation, developing rural businesses, growing public funds through taxes, developing services and facilities in rural areas, revival and sharing of cultural characteristics, and protecting and investing in nature and rurality. It is important that both agricultural policies and rural development policies are mindful of rural landscapes and what makes them attractive for the purposes for which they are used. Rural tourism, for example, can be supported by government policies that encourage investment and protection of its many facets from ecological uniqueness to distinctive activities, cultural attraction, serenity of remoteness, and the general well-being of the countryside (Ayazlar and Arslan Ayazlar, 2015[60]).

91. Policies designed to encourage diversification include investments in broader areas like health, education (e.g. vocational education, skills), and rural infrastructure (e.g. roads, electricity, internet coverage, etc.). In this way, rural policies can contribute to agricultural growth; by providing the rural population with the foundations for overall development, while adapting to the constant changes structural transformation can bring. A further area

where rural policy can contribute to income diversification is through the creation and enabling of conditions for adding value to the primary agricultural sector and the food system (OECD, 2021[8]). The development of upstream and downstream agricultural value chains can be an opportunity for rural development policy to provide services and infrastructure that agricultural policy cannot (OECD, 2008[3]; Cervantes-Godoy, 2015[61]; OECD, 2021[8]).

92. Moreover, given the importance of global supply chains it is important to create synergies between agricultural and rural policies. Reducing tariffs and encouraging foreign direct investment could increase producer participation in global supply chains (OECD, 2020[62]). Additionally, several policies that foster an enabling environment for the agro-food sector to thrive are also related to rural policy, such as rural transport infrastructure, education and training programmes, and agricultural research and development initiatives, which also lead to more domestic value added creation and participation in global supply chains (OECD, 2020[62]).

93. Rural and agricultural households that cannot cope with structural change and are unable to adjust have frequently been supported by social protection measures like cash transfers for vulnerable populations (e.g., poor households or elderly). These measures were widespread during the COVID-19 health crisis. However, across a range of developed and developing countries, population-wide social safety nets have been implemented with relative effectiveness at supporting the incomes of rural and farm households alike (OECD, 2008[3]). Some transfer programmes that channel cash to generally poor households are conditional (e.g. school enrolment for children), while others are not. Other social protection measures have been implemented to support retiring farmers unable to continue working on the farm. These policy instruments are usually not agricultural support but form part of a society-wide measure.

Innovation, skills and digitalisation

94. Agriculture-oriented innovation systems are usually geared towards improving productivity and food security, while keeping the sector alive and thriving. At the same time, agricultural innovation systems can enhance value added and contribute to sustainable production with lower GHG emissions. Rural development policies employ technology and innovation systems to encourage placed-based innovation. On the other hand, product and process innovations at the farm level aim to boost economic growth and increase productivity, but most still require better management of natural resources and environmental externalities. Moreover, actors and stakeholders working in areas using the innovation systems need to have the necessary skillset to use them to their full potential (OECD, 2020[63]) .

95. In addition to innovation systems and digitalisation, investments to improve skills, and promote entrepreneurship and SME growth can also support rural development policy and economic growth in general. These policies can also help farmers to update their processes in response to changes in productivity and environmental challenges. Production and innovation systems are constantly evolving, and with that comes the need to have a steady inflow of funds dedicated to maintaining the level of farm workers' skills. Moreover, training and vocational education can build transferrable skills that can be used in other subsectors of the economy benefiting the rural economy more widely (OECD, 2019[64]).

96. Innovation in rural areas is of a different nature than that in urban centres due to rural economies' remoteness to markets and proximity to resources. For example, a significant portion of research and development is produced in universities, which often tend to be located in cities. Rural regions and agricultural activities can benefit from

extension services and other technical assistance tools that disseminate innovation and research (OECD, 2020[5]). Additionally, it is key to highlight the importance of creating the means of exchanging knowledge and peer learning through established networks between farmers in rural regions and leading entities in research and innovation. This can be achieved through a specialised system such as the "agricultural knowledge and information systems" (AKIS), which encourages the development of ideas to support innovation, knowledge transfer, and information exchange (OECD, 2012[65]).

97. Digitalisation has been a major catalyst in rural regions' development and their degree of connectedness. Digital technologies have created new roles or responsibilities for different stakeholders residing in rural areas, including the creation of jobs in areas such as developing infrastructure for ICT, transportation, etc. Overcoming the digital divide is thus a key area to better prepare rural regions for the opportunities of the future. Despite the higher bottlenecks to deploy quality broadband in rural regions, there are a number of policy levellers to close the gap (OECD, 2021[66]). Rural digitalisation emphasises that these regions have as much to offer as urban centres, all while promoting the remote working culture that has the potential to attract more people and opportunities to rural regions and further boost their growth and prosperity.

98. In the context of agriculture, some policies can further encourage the adoption of production and monitoring technologies at the farm level, and farmers can focus on new areas of maximising the potential uses of digital technologies. For example, high-quality satellite imagery provides a cost-effective solution for agricultural monitoring purposes. This also introduces the opportunity for governments to evaluate compliance with environmental policies based on the observed outcomes in a more targeted manner (OECD, 2019[23]; Jouanjean, 2019[67]; Jouanjean et al., 2020[68]; OECD, 2018[24]). Further investment in and development of rural broadband connectivity and its quality and speed could be a very important factor in increasing the benefits of living in rural regions (OECD, 2021[26]).

99. Digital literacy, fluency, and mastery are becoming increasingly vital for workers in rural regions. Policies for education and training should take this three-tier approach as a trajectory to achieve the desired level of proficiency in digital skills depending on the sector of development (Chetty et al., 2018[69]). In the case of agriculture, for example, investing in digital skills not only allows workers to operate farming technologies more effectively, but also opens new doors for furthering their career paths in different directions within and outside the agro-food sector (OECD, 2019[23]).

100. The rapid adoption of remote working in recent years brought by confinement measures implemented during COVID-19 may bring new opportunities to rural regions. This can help both the workforce and companies alike in increasing efficiency by reducing time spent in transportation and costs associated with in-office presence. Additionally, the shift has presented new opportunities for regions outside large cities to attract new inhabitants, revitalise their economies and communities, all while helping to reduce greenhouse gas (GHG) emissions and air pollution. That said rural regions have fewer jobs that are amenable to teleworking when compared to cities and metropolitan areas (OECD, 2021[31]).

Food systems and agricultural and rural policies

101. Food systems and the activities and components that comprise them have important economic, wellness, and environmental consequences. The "triple challenge facing the food system" refers to the system's ability to ensure food security and nutrition for a

growing population, support the livelihoods of farmers and workers in the agro-food sector, and do so in an environmentally sustainable way (OECD, 2021[8]).

102. Policies that target GHG emissions, structural adjustments in farming, and food-related health concerns are linked to both agricultural development and rural development. It is important to align their objectives and create synergies that would be cost-saving time-efficient, and could potentially yield better outcomes. Policies can achieve more or better results if issues are pinpointed and treated using effective measures that can be applied easily and across the board (OECD, 2021[8]). Creating synergies and co-ordination between actors in policymaking matters; different policy instruments working independently can do relatively less than in co-ordination. Many policy instruments still fail in achieving sought objectives over the long run (OECD, 2021[8]).

103. Consequently, finding the right policy mix that takes into consideration the "triple challenge" is often a challenging task that requires co-operation between policy makers and involvement of stakeholders and civil society in the agro-food sector. A food systems perspective suggests that policy makers from different areas should take an holistic view on the set of objectives and coordinate to avoid incoherent policies (OECD, 2021[8]). Coherent agricultural and rural policies can contribute to this holistic view and subsequently to sustainable food systems.

Co-ordination and coherence

104. Co-ordination between agricultural policies and rural development policies contributes to the better use of public financial resources and increases public awareness of the cost-effectiveness of public investments. The potential impacts on agriculture of rural policies will depend on the size and importance of a country's national rural development policy, which can vary considerably. Concerning agriculture, the extent of its impacts will also depend on the importance of agricultural policy interventions within overall rural development policy. The consistency of these interventions with a country's agricultural policy is then crucial (Diakosavvas, 2006[9]).

Moreover, each region has to find its own competitiveness profile, identifying the main assets on which it can construct a development strategy and a comparative advantage. Agriculture may (or may not) be one of these assets, depending on the nature of a particular territory. In some territories, agriculture can be important, supplying quality products specific to the region; in other, more agro-industrial or industrial regions, it can be an important link in the food chain; while in other regions the main asset is the environment in itself. A coherent set of both rural and agricultural policies can help different region profiles to emerge (OECD, 2021[8]; OECD, 2010[4]). To foster coherence between the goals of rural development policies and agricultural policies, it is important to better understand the areas of complementarity and trade-offs to ensure better integration between the two and avoid overlaps.

Conclusions

105. Rural and agricultural development policies mostly intervene in the same spatial area, requiring coherence and co-ordination between them as well as with the other economy-wide policies, and across different levels of government. Both are concerned with land-use and the provision of environmental services, and with improving the well-being of the rural population. Policy convergence areas are those cross-sectoral policies that jointly create the enabling environment for the development of rural regions and the agricultural sector. Examples of such policies are the general services or public goods provided to agriculture like infrastructure (e.g. roads, physical protection for floods),

investments in innovation, and rural policies that improve the rate of adoption of new technologies (e.g. digitalisation) and the quality of life of rural population (public services, including health and education and skills training).

106. Without rural development, the potential for facilitating agricultural adjustment could be limited. Equally, agriculture can be an important contributor to rural development, although rural development can in some cases proceed without an agricultural base. Furthermore, any potential trade-off that arises between rural and agricultural policies needs to be acknowledged and taken into account to the extent possible, given that in some cases, agricultural policies that benefit farm households may not generally benefit rural households and vice versa. Lastly, institutional arrangements to situate sectoral agricultural policies effectively alongside space-based rural development policies need to engage a range of stakeholders including agricultural ministries, other ministries (e.g. tourism, mining, economy, etc.), agricultural and rural interest groups, local and national political parties and local communities (OECD, 2010[4]).

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Annex A.

Table A A.1. Average farm size worldwide, 1960 and 2010

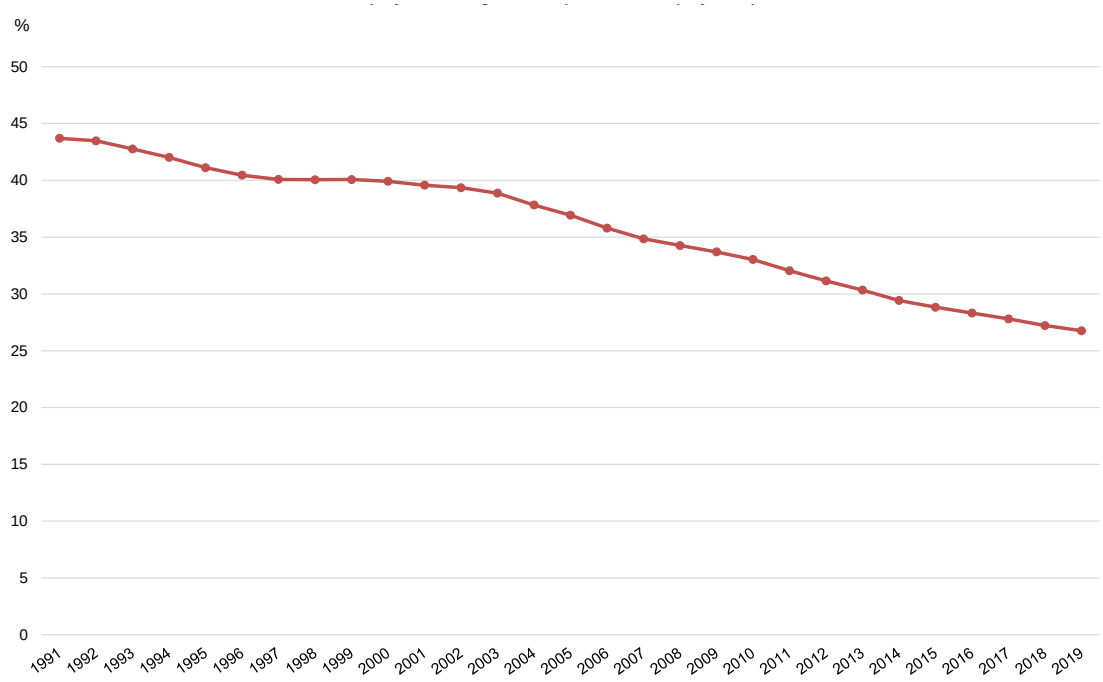
Country	1960*	2010**	Absolute change	Relative change
Argentina	371.30	620.3	249.0	67%
Australia***	1 843.60	3 243.2	1 399.6	76%
Austria	19.40	19.2	-0.2	-1%
Bangladesh	1.40	0.6	-0.8	-57%
Belgium	6.60	31.7	25.1	380%
Belize***	23.20	23	-0.2	-1%
Brazil	74.90	64.5	-10.4	-14%
Canada	145.20	314.8	169.6	117%
Cape Verde***	1.50	1	-0.5	-33%
Central African Republic***	1.90	0.9	-1.0	-53%
Chile	118.50	123.2	4.7	4%
China****	0.68	0.7	0.0	3%
Colombia***	22.60	25.1	2.5	11%
Congo	1.40	1.6	0.2	14%
Costa Rica***	41.00	38.3	-2.7	-7%
Cote d'Ivoire***	5.00	3.9	-1.1	-22%
Cyprus[1]	4.50	3	-1.5	-33%
Democratic Republic of Congo***	2.30	0.5	-1.8	-78%
Denmark	15.90	62.9	47.0	296%
Dominican Republic***	5.10	9	3.9	76%
Ecuador***	15.30	14.7	-0.6	-4%
Egypt	1.60	1.7	0.1	6%
El Salvador	7.00	2.4	-4.6	-66%
Ethiopia	1.40	1.2	-0.2	-14%
Finland	41.20	35.9	-5.3	-13%
France	18.80	53.9	35.1	187%
French Guiana	3.30	4.2	0.9	27%
Germany	12.10	55.8	43.7	361%
Greece	3.20	4.8	1.6	50%
Guatemala***	8.30	4.5	-3.8	-46%
Honduras***	13.50	11.2	-2.3	-17%
Hungary	9.30	4.6	-4.7	-51%
India	2.70	1.2	-1.5	-56%
Indonesia	1.20	0.9	-0.3	-25%
Iran	6.00	4.9	-1.1	-18%
Iraq***	31.80	9.7	-22.1	-69%
Ireland	16.10	35.7	19.6	122%
Israel***	13.40	14.2	0.8	6%
Italy	6.20	7.9	1.7	27%
Jamaica	4.40	1.4	-3.0	-68%
Japan***	1.20	1.2	0.0	0%
Jordan	7.00	3.3	-3.7	-53%
Kenya***	11.70	2.5	-9.2	-79%
Lebanon	2.40	1.4	-1.0	-42%

Country	1960*	2010**	Absolute change	Relative change
Lesotho	2.20	1.1	-1.1	-50%
Libya***	26.60	10.2	-16.4	-62%
Luxembourg	17.80	59.3	41.5	233%
Madagascar***	1.00	0.9	-0.1	-10%
Malawi	1.50	1	-0.5	-33%
Mali***	4.40	3.3	-1.1	-25%
Malta	1.50	0.9	-0.6	-40%
Mexico	123.90	20.2	-103.7	-84%
Morocco***	9.80	5.8	-4.0	-41%
Myanmar	2.40	2.5	0.1	4%
Nepal	1.00	0.7	-0.3	-30%
Netherlands	8.80	26	17.2	195%
New Zealand	231.30	247.9	16.6	7%
Nicaragua	37.30	24.3	-13.0	-35%
Pakistan	3.50	6.4	2.9	83%
Panama	19.00	10.9	-8.1	-43%
Paraguay	108.70	107.3	-1.4	-1%
Peru	20.40	17.1	-3.3	-16%
Philippines	3.60	1.3	-2.3	-64%
Poland	6.40	9.4	3.0	47%
Portugal	6.10	12	5.9	97%
Saudi Arabia***	6.70	16.7	10.0	149%
Senegal***	3.60	4.3	0.7	19%
Sierra Leone***	1.80	1.6	-0.2	-11%
Slovenia	5.80	6.4	0.6	10%
South Korea***	2.10	1.1	-1.0	-48%
Spain	14.80	24	9.2	62%
Sri Lanka	1.60	0.6	-1.0	-63%
Suriname	6.60	6.3	-0.3	-5%
Swaziland***	19.50	11.8	-7.7	-39%
Sweden	65.40	43.4	-22.0	-34%
Switzerland***	8.50	11.8	3.3	39%
Syria***	9.00	6.5	-2.5	-28%
Tanzania	1.30	2.5	1.2	92%
Thailand	3.50	3.1	-0.4	-11%
Tunisia***	15.40	10.5	-4.9	-32%
Uganda	3.30	1.1	-2.2	-67%

Country	1960*	2010**	Absolute change	Relative change
United Kingdom	40.70	78.6	37.9	93%
United States	122.60	175.6	53.0	43%
Uruguay	195.30	365.3	170.0	87%
Venezuela***	81.20	60	-21.2	-26%
Vietnam***	0.50	0.7	0.2	40%
Yemen***	2.00	1.10	-0.90	-45%

Note: Number based on agricultural census data. Area is measured in hectare (ha) 1960* Data from 1960 or earliest available year following 1960. 2010** Data from 2010 or latest available year following 2000. *** Countries with 2000 data. China**** Data available from 2000 and 2010.
1. *Note by Türkiye*: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Türkiye recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Türkiye shall preserve its position concerning the "Cyprus issue".
Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Türkiye. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.
Source: (Lowder, Skoet and Raney, 2016[15]). The number, size, and distribution of farms, smallholder farms, and family farms worldwide. World Development, 87, 16-29.

Figure A A.1. Employment in agriculture (% of total employment)



Note: Employment is defined as persons of working age who were engaged in any activity to produce goods or provide services for pay or profit, whether at work during the reference period or not at work due to temporary absence from a job, or to working-time arrangement. The agricultural sector consists of activities in agriculture, hunting, forestry and fishing, in accordance with division 1 (ISIC 2) or categories A-B (ISIC 3) or category A (ISIC 4).
Source: (World Bank, World Development Indicators, 2021[10]).