



**OECD Eurasia**  
Competitiveness Programme



**SECTOR COMPETITIVENESS STRATEGY  
FOR UKRAINE – PHASE III**

**Review of Agricultural  
Investment Policies of  
Ukraine**

**Project Report  
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## **UKRAINE SECTOR COMPETITIVENESS STRATEGY – PHASE III**

The OECD project “Sector Competitiveness Strategy for Ukraine” was launched in 2009. During the initial phase, the project prioritised and defined sector-specific sources of competitiveness and policy barriers for improved investment promotion, particularly in the key sectors of agribusiness, machinery and transport equipment manufacturing, renewables and energy efficiency. The second phase of the project aimed to address specific policy barriers to focus on short-term results through practical and effective measures. The project is currently in Phase III, which aims to put in place the mechanisms for a sustainable reform process and support the Government of Ukraine in implementing them effectively. It does so by sharing OECD expertise and methodologies, identifying remaining policy challenges to private sector competitiveness in the target sectors, consulting closely with the private sector, and organising capacity-building events to strengthen government institutions. The project’s Phase III will conclude in December 2015, and is **co-financed by the European Union and the Government of Sweden.**

[www.oecd.org/countries/ukraine/ukrainesectorcompetitivenessstrategy.htm](http://www.oecd.org/countries/ukraine/ukrainesectorcompetitivenessstrategy.htm)

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## ABBREVIATIONS

AACU	Association of Agricultural Carriers of Ukraine
ASTI	Agricultural Science and Technology Indicators
CIS	Commonwealth of Independent States
CSR	Corporate Social Responsibility
DCFTA	Deep Comprehensive Free Trade Agreement
ECU	Eurasian Customs Union
ESIA	Environmental and Social Impact Assessment
EPZ	Export Processing Zone
EU	European Union
FAO	United Nations Food and Agriculture Organization
FDI	Foreign Direct Investment
FEU	Federation of Employers of Ukraine
FiBL	Research Institute of Organic Agriculture
FTA	Free Trade Agreement
FY	Fiscal Year
GDP	Gross Domestic Product
GMO	Genetically Modified Organism
IFOAM	International Federation of Organic Agriculture Movements
IWPLR	Institute of Water Problems and Land Reclamation
MAPF	Ministry of Agrarian Policy and Food
MEDT	Ministry for Economic Development and Trade
MES	Ministry of Education and Science
MFI	Microfinance Institution
MNE	Multinational Enterprise

MT	Metric Tonne
NAAS	National Academy of Agrarian Sciences
NBU	National Bank of Ukraine
NGO	Non-Governmental Organisation
NTM	Non-Tariff Measure
OECD	Organisation for Economic Co-operation and Development
O&M	Operations and Maintenance
RBC	Responsible Business Conduct
R&D	Research and Development
SALR	State Agency on Land Resources
SEE	State Economic Enterprise
SEZ	Special Economic Zone
SMEs	Small and Medium Enterprises
US	United States
USD	United States Dollar
USSR	Union of Soviet Socialist Republics
VET	Vocational Education
WB	World Bank

## REVIEW OF AGRICULTURAL INVESTMENT POLICY OF UKRAINE

Private investment in agriculture is crucial to tap into the enormous potential of Ukraine's agricultural sector<sup>1</sup> and enhance economic growth and development. This review highlights key policy challenges to private investment in the sector, drawing from the OECD Policy Framework for Investment in Agriculture. It provides policy recommendations to attract more and better investment. The first and second chapters provide an overview of Ukraine's investment policy in the agricultural sector as well as the land and water tenure system. The third to the sixth chapters examine specific sector policies that can encourage investment in agriculture, namely trade, infrastructure development, financial sector development, human resource development and innovation. Finally, the last chapter identifies key challenges to promote environmentally-friendly investment in agriculture.

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<sup>1</sup> Agriculture refers to crop and livestock production.

## ASSESSMENT AND POLICY RECOMMENDATIONS

### Assessment

#### *Ukraine offers a huge agricultural potential*

The agricultural sector plays a major role in the Ukrainian economy. Ukraine has approximately 43 million hectares (ha) of agricultural land, including 32 million ha of arable land, an area equivalent to one-third of the arable land in the European Union (EU). Half of it is black soil, the highest productive soil type in the world and a commodity in such demand that an illegal market has developed in selling it. While Ukraine has some of the largest farms in the world, covering up to 500 000 ha, small-scale farmers<sup>2</sup> produce about 50% of agricultural output.

Ukraine is the third largest world exporter of grain after the US and the EU. In 2014, it produced 64 million tonnes of grains, 2.4% more than in 2013 even excluding occupied Crimea (MAPF, 2015). It has a comparative advantage in grain production due to high soil fertility, low production costs, and a strategic location. Its potential is estimated at 100 million tonnes (Hervé, 2013). Ukraine is also the largest producer and exporter of sunflower, the third largest exporter of maize, the fourth of barley, the sixth of soybean, and the seventh of poultry (MAPF, 2015). Wheat, barley and maize represent 60% of the crop area. Crop production has doubled over the last decade and the production of some livestock products has also significantly increased in recent years.

While agriculture has fallen from 25.6% to 9.3% as a share of gross domestic product (GDP) and from 19.8% to 17.2% as a share of employment between 1990 and 2012 (WB, 2015a), it was the only economic sector that displayed positive economic growth in 2014, i.e. 7% against -10% for the industry and for services (EIU, 2015b). Agricultural exports remain a key engine of the Ukrainian economy, representing almost 20% of the value of exports. By lowering trade barriers, the recent conclusion of several bilateral trade agreements offers additional opportunities for export growth.

#### *Domestic and foreign investment in agriculture has been increasing*

Both domestic and foreign investment in agriculture has increased over the last decade, although agricultural investment as a share of total investment remains low. European countries represent the main source of foreign direct investment, with large European and American agribusiness companies planning to significantly increase their investments in the coming years, despite political uncertainty. Investors from China and the Gulf countries are also starting to invest heavily in the sector. While Ukraine has rapidly improved its rank in business climate rankings, it could improve further in some areas, such as state regulation. The recently developed ‘Strategy for Agriculture and Rural Development 2015-20’ should help Ukraine leverage its potential, including by furthering its integration with the EU.

#### *The regulatory framework for investment policy and promotion remains unpredictable*

While investors are attracted by the country’s enormous agricultural potential, they continue to face significant obstacles to investment, apart from the current political tensions and economic downturn. The rapidly changing political environment leads to short-term and volatile policies and unpredictable regulatory changes, as illustrated by frequent policy changes on the exemption of value-added tax on grain

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<sup>2</sup> Small-scale farmers refer to households that are generally small and largely subsistence-oriented. In contrast with corporate and peasant farms, they are not registered legal entities.



exports. Numerous licensing and permit requirements, burdensome inspections, pervasive corruption, are often cited as major impediments for all investors. State intervention through intermittent control of food prices and export restrictions discourages investment in grain production. Investment incentives are often granted on an ad hoc basis without clear objectives, depending on the available budget. This creates uncertainty for investors, thereby hindering long-term investment.

Many procedures, that provided fertile ground for corruption, are being streamlined following the adoption of the *Law No. 191-VIII on amending some legal acts of Ukraine to streamline conditions for doing business* (Deregulation) in early 2015. Ongoing institutional arrangements for investment policy may also help address the above-mentioned challenges.

### ***Accessing agricultural land is a time-consuming process***

Most land property rights have been officially registered by granting state acts of land ownership with clear delineation to farmers, and a land cadastre is under development. However, the moratorium on the sales of agricultural land hinders the exercise of property rights. Whereas it aimed at protecting small landowners, it mostly benefitted large producers. It reduces land value, makes land valuation difficult, increases transaction costs to access land, and limits access to finance as land cannot be used as collateral. It impedes investment in infrastructure, especially irrigation infrastructure, and reduces incentives for maintaining soil fertility.

In practice, however, agricultural companies have been able to access agricultural land through leasing. The procedures for registering land leases have recently been simplified to facilitate access to land. Institutional arrangements for land management may also need to be reformed to reduce the monopolistic position of the State Agency on Land Resources (SALR) that is perceived as a corrupt organisation whose discretionary power facilitates the imposition of extra-judicial levies.

### ***Agricultural trade has been liberalised over the last decade***

Following Ukraine's accession to the World Trade Organisation (WTO), tariffs significantly decreased for all goods. The conclusion of several regional and bilateral trade agreements, including the Deep and Comprehensive Free Trade Agreement (DCFTA) with the EU, has lowered tariffs even further for specific partners. However, non-tariff measures,<sup>3</sup> including quotas, licenses and health and customs-related barriers, remain prevalent for agricultural goods, particularly grain exports. Several measures have been taken recently to reduce the number of such measures and facilitate trade but some further efforts would be needed to remove remaining regulatory and administrative barriers to trade.

### ***Further investment in infrastructure, particularly grain transportation and storage facilities, is needed***

While Ukraine has improved its ranking in terms of logistics performance, the availability and quality of its physical infrastructure, including transportation, storage, energy and irrigation infrastructure, remain inadequate.

The capacity to transport, load and reload grain would need to increase by 70% to meet future demand. Indeed, the rapid expansion of demand for grain transport has not been met by a corresponding increase in supply, mainly due to the monopolistic position of the state-owned rail company. Despite an impressive increase of private investment in grain storage facilities, further investment would be needed to meet future needs for storage, i.e. to double the existing capacity by 2020.

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<sup>3</sup> Any trade restriction that is not a tariff.

While the agricultural sector relies on natural gas and electricity as energy sources, access to gas is at risk due to the political tensions and access to electricity is a time-consuming process. The government seeks ways to diversify its energy sources and expand beyond the reliance on Russia by promoting efficient energy use and alternative energy sources, particularly biomass, that can allow producers to access cheaper and more efficient energy supplies.

As a result of the absence of private water rights and fragmented land tenure, irrigation infrastructure is inadequate and the area under irrigation is well below potential. In fact, it has significantly decreased since 1990, leading to significant water losses.

### ***Access to finance remains a major obstacle to agricultural investment***

Access to finance remains limited, especially for small and medium enterprises. In the 2013-14 Global Competitiveness Report, 16.7% of respondents identified access to finance as the first obstacle to doing business (in a single choice survey), ahead of corruption and inefficient public administration. The events of 2014 that reduced liquidity and increased external risks have hindered access to financial resources even further.

As the banking sector represents 95% of the assets of the financial sector, large input suppliers, producers, retailers and exporters most often use bank loans to access finance, although high and volatile interest rates and the lack of information on borrowers' creditworthiness hinder the growth of bank lending. Several alternative financing mechanisms are increasingly used, including leasing schemes, promissory notes, and state financing via forward purchases by the State Agrarian Fund. In contrast, most small-scale enterprises cannot access finance through these various instruments due to a lack of collateral. Thus, their investments are severely constrained, even if credit unions grant them some loans, but usually at high interest rates.

### ***Adequately skilled workers are scarce***

Agricultural investors face a real challenge in hiring adequately skilled workers due to a mismatch between the skills provided by the education system and the skills needed on the labour market. Production technicians, such as agronomists and veterinarians, are severely lacking. Such mismatch results from the lack of co-operation between the agricultural education and training system and the private sector, outdated and theoretical curricula that do not offer practical training, and the widespread corruption that undermines the quality of education. Recent institutional and legal reforms may help strengthen the involvement of the private sector in designing curricula that respond to existing needs.

### ***Weak extension services limit farmers' access to technical advice and innovation***

The almost non-existent public funding of extension services and the low public funding of agricultural research and development hinder farmers' access to technical advice and innovation. In addition, agricultural co-operatives are under-developed due to the distrust caused by the legacy of previous co-operatives, tax disincentives, and the limited availability of start-up capital. Ukraine could draw from the models of extension services developed in some OECD member countries to improve farmers' access to new technologies.

### ***Soil erosion is one of the major environmental risks in the agricultural sector***

The agricultural sector is facing and contributes to severe environmental risks, including soil erosion, water pollution through nutrient and wastewater run-off, increased levels of potentially harmful pesticides, and climate change impacts. In addition to the 1.1 million ha of agricultural land still contaminated by radioactive Caesium 137 after Chernobyl disaster in 1986, soil erosion constitutes a major environmental

challenge in the sector, with around 60% of the land being already eroded. Several factors can explain rapid soil erosion, including the very high proportion of arable land, poor land management practices, such as crop cultivation on steep slopes, undefined land ownership, and short-term land leases. The value of eroded soil each year would reach around one-third of the agricultural GDP. The top-down and legislative approach taken by environmental policy has not succeeded in mitigating environmental risks.

### **Policy recommendations**

Ukraine offers an enormous agricultural potential, particularly due to its vast and fertile arable land, part of which is currently idle, and its comparative advantage in grain production owing to low production costs and a strategic location. As the global demand for food increases driven by growing populations, higher incomes, and changing diets, Ukraine's agricultural potential attracts a rising number of investors, both foreign and domestic. Indeed, private investment has increased over the last decade and Ukraine has now some of the largest farms on earth. Large multinational agri-food companies are planning to invest heavily in the sector in the coming years. However, several policy issues should be addressed to attract further domestic and foreign investment, channel it to the areas where it is most needed, and maximise its positive impact.

The set of policy reforms suggested below are derived from the analysis undertaken in the review and are designed as key building blocks to support increased agricultural investment, competitiveness and sustainable development. These recommendations are not exhaustive and should be interpreted as a starting point for government consideration, refinement and elaboration. In particular, choices will need to be made across this wide range of recommendations as to which policy actions should and could be implemented quickly, and which might be acted upon more gradually.

#### ***Continue simplifying administrative procedures and enhance the predictability of investment policy***

Numerous permits and licenses and the associated corruption, as well as the unpredictability of the regulatory framework for investment policy and promotion, such as the frequent policy changes related to the exemption of value-added tax on grain exports, increase costs and create uncertainty, thereby deterring agricultural investment, which often takes between 7-20 years to even reach a break-even point. The numerous and deep institutional changes undertaken as regards investment promotion and facilitation add to this uncertainty. The State Agency for Investment and National Projects was dismantled in 2015. Its responsibilities related to investment facilitation have been transferred to MEDT, within the newly created Investment Department.

Significant efforts have already been made to reduce administrative procedures, particularly through the *Law No. 191-VIII on Deregulation* passed in February 2015. As planned by the Ministry of Agrarian Policy and Food (MAPF) in its 2015-20 strategy, these efforts should be continued. Furthermore, tax and customs policies need to be established on a multi-year plan and not changed annually, ideally by maintaining the lowest minimum unified duties. This multi-year plan could draw from a public financial management exercise to determine optimal duties on agricultural goods and integrate agricultural taxation into a medium-term expenditure framework.

Finally, ongoing institutional arrangements for investment policy should aim to strengthen administrative capacity, reinforce the implementation of the legislation, and improve collaboration with the private sector. Setting up a permanent well-functioning institution for investment promotion and facilitation with a clear mandate would help attract further private investment from new investors and ensure that existing investors continue to invest in Ukraine.

***Repeal the moratorium on the sales of agricultural land once the necessary legal and institutional conditions are in place***

The moratorium impedes the development of a free market of agricultural land with well-functioning property rights, thereby hindering agricultural investment. While it should be lifted as soon as possible, the legal and institutional conditions for an effective land market should be in place first. Lifting it as early as currently planned, in early 2016, would not provide sufficient time to appropriately mitigate related risks in a context of weak institutions and under-developed legislation.

If the moratorium is lifted, large companies may not have the financial capacity nor be willing to take the risks of buying agricultural land. Thus, smallholders may sell or even be forced to sell their land at low prices. Land prices may be lowered even further by the fact that smallholders have low bargaining power with large agribusiness companies. In addition, they would be deprived of an asset that could play the role of insurance and that they could use as collateral to access loans. The removal of the moratorium may lead to rapid land consolidation in the hands of a few wealthy land owners. Furthermore, the current system of registration of land transactions would be overwhelmed with the sales and mortgage transactions. As the cadastral records are incomplete, fraudulent transactions and land related disputes would be highly likely.

Thus, prior to lifting the moratorium, the various possible scenarios following the opening of the land market and the related risks should be thoroughly analysed, considering in particular the fact that existing land rights are still not well defined due to the lack of a unified land cadastre. Several critical issues should be debated and clearly defined: the process to be followed to sell land, any possible size limit of the land that can be sold, any minimum price at which the land can be sold, to whom such land can be sold, any pre-emptive rights, and instruments to prevent speculation.

The land moratorium could be lifted gradually, starting in selected areas having advanced cadastral records and strong political will for reforms. This would allow focusing on careful design and adjustment of the new market institutions and concentrating resources for recording land on limited areas. The limited supply of land would also stimulate the establishment of a fair land price. Gradually, other regions could join the market with one or two years lag.

The creation of a unified land cadastre should be accelerated to better delineate land rights and smooth land transactions. Alternative land dispute resolution mechanisms could be supported as more effective and faster ways to address land disputes. They can bring land issues into a more civil and less contentious proceeding than formal courts. Finally, the State Agency on Land Resources (SALR) should be downsized and transformed into a modern cadastral service. Its discretionary power should be reduced and its operations decentralised.

***Continue removing regulatory and administrative barriers to trade***

As Ukraine has set itself on a path of trade reform, most notably by harmonising with EU legislation, remaining barriers to trade relate more to administration than tariffs. The cost of trading across borders remains expensive for many exporters, while the time involved is far too long for sensitive products such as agricultural commodities. The movement towards a regulatory guillotine<sup>4</sup> would facilitate trade within and across borders, as it has in Croatia and other transition economies.

Furthermore, the customs service should be reformed. Customs valuation decisions, for example, should be publicly available, to ensure that valuations are in line with actual shipments. Progress towards

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<sup>4</sup> The guillotine concept involves that each ministry lists of business regulations and licenses and those that cannot be justified for retention are rescinded.

risk-based inspections of agricultural shipments must continue to lessen the number of shipments that are actually subjected to inspection as well as help conserve the precious resources of the agency to combat the highest-risk items. Corruption, long described as a difficulty in the customs process, must be rooted out, not just by official means but by actively involving traders. While the stop-card<sup>5</sup> introduced in 2004 has been ineffective, the introduction of joint customs operations with the EU could lessen the incidence of corruption and increase the capacity of the customs administration. Ensuring the success of the full change-over to electronic VAT administration will also be crucial in reducing the opportunities for rent-seeking and creating predictability in both filing and refunds.

### ***Shift away from distortive policies***

Existing trade restrictions, including quotas and licenses, distort the markets and prices for grain. They are not necessary to ensure food availability given the enormous surplus production. The vacillations seen in 2010-12 in regards to grain exports created much uncertainty for producers and exporters. Progress was made to move away from ad hoc grain export restrictions with the introduction of a framework agreement between the government and business to regulate grain exports. Future policies should avoid licensing and quotas, allowing for producers to reach their maximum potential in both domestic and export markets.

Similarly, while the State Agrarian Fund was set up to regulate grain prices, its activities have only subsidised grain producers and created a political market for distribution of flour to selected bakeries. While a state reserve of grain is a prudent precaution, the state involvement in the distribution of grain or flour distorts the market and increases the reliance of small producers on the state while putting pressure on the state budget. The Fund should ensure that its interventions do not distort the market.

### ***Further encourage the participation of the private sector in infrastructure development***

The state remains heavily involved in infrastructure development, but its role has been hampered by perverse incentives, fluctuating state budget, and administrative leakages, and has hindered the involvement of the private sector. The private sector could participate in providing infrastructure, drawing from international best practices to fashion effective public-private partnerships (PPPs). Such co-operation would include rigorous project design from the government side with balanced risk allocation and clearly-defined dispute resolution mechanisms. Many transition economies have already taken steps to bring the private sector into all facets of infrastructure: by 2003, Poland had outsourced 46% of its waste management and half of all storage and sorting facilities while Estonia had fully privatised railways (EBRD, 2004).

### ***Improve access to finance, particularly for small and medium enterprises***

Enhancing access to bank loans economy-wide requires, among others: supporting the growth of long-term deposits; enforcing the legislation on disclosure of the ultimate beneficiaries of banks; consolidating information on credit histories; and reducing the costs of access to the State Registry of Encumbrances over Immoveable Assets.

In order to enhance access to credit by small-scale enterprises that operate in the agricultural sector and cannot secure bank loans due to their lack of collateral, a credit guarantee scheme (CGS) could be established. It would stimulate bank lending to small enterprises through a risk-sharing mechanism that would provide partial guarantee on loans granted by participating banks. In case of default, banks could

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<sup>5</sup> The stop-card was designed and issued by customs to companies, who were to report customs officers asking for bribes by giving this card to customs, triggering an internal investigation.

claim a partial refund to the CGS. CGS eligibility criteria should be designed to target only credit-constrained enterprises. Its pricing mechanisms in terms of proposed coverage ratio and fees should remain attractive while reducing moral hazard. A CGS could be initially launched for selected key regions with high agricultural production and low access to finance.

The CGS could draw from the successful experience of Poland. In 2013, Poland's state development bank, BGK, introduced a portfolio guarantee facility to support access to finance for small and medium enterprises (SMEs) by reducing lending risks for commercial banks. Within less than a year, the programme had helped finance almost 15 000 SMEs for an amount of more than USD 1.5 billion (WB, 2014c).

Furthermore, small-scale enterprises would benefit from financial literacy training aiming to improve financial management and strengthen their understanding of legal and regulatory issues. It would facilitate their use of alternative financing mechanisms, such as leasing schemes and warehouse and agrarian receipts.

### ***Ensure that the education and research system responds to the needs of agricultural enterprises***

Although the number of graduates exceeds market needs, investors face skills shortages. The Ministry of Education and Science should work more closely with the private sector to identify and anticipate skills needs in the agricultural sector. The OECD and the World Bank have conducted a survey to identify skills gaps by type of occupation. This survey should be updated every year, involving representatives of the Ministry and the industry. An Agricultural Skills Council could also be set up to foster dialogue between public and private actors. It could gather representatives of employers, students, industry experts, trade unions and the relevant ministries, provide feedback on the current skills mismatch, and advise on improvements and training needs.

Internship schemes can be an effective mechanism to reduce the skills mismatch. They allow students to gain work experience, put their theoretical knowledge into practice, and help universities assess the relevance of their curriculum. A legal framework for establishing such internship schemes should be developed. These schemes should be made compulsory within university curricula. Students, faculty, and employers should be well aware of their obligations, guarantees and responsibilities. The OECD is working on an action plan to set up internship schemes at Lviv National Agrarian University.

The participation of the private sector in agricultural research and development would help leverage the potential offered by the current fundamental research and the critical mass of agricultural teachers and researchers. It would also help respond to the needs of agricultural enterprises. Such participation could be enhanced by promoting PPPs between universities and the private sector, drawing for instance from the successful example of the Foundation Mach in Italy, and allowing universities to adopt a more entrepreneurial approach like in most OECD countries and to offer services and products to the industry.

### ***Strengthen environmental protection***

The government should urgently respond to major environmental challenges, particularly soil erosion, agricultural run-off, and low energy efficiency. While the current labyrinth of regulations on environmental protection displaying a 'command and control' and top-down approach has not demonstrably improved environmental outcomes, the following recommendations could be considered in the way forward:

- *Provide greater responsibility to the private sector for environmental outcomes:* A results- rather than input-based environmental policy may yield better environmental outcomes than additional laws that the current administration would not be able to enforce due to capacity constraints. For instance, the

private sector should take an active role in designing and implementing industry-wide environmental standards;

- *Support the introduction of environmentally-friendly technology:* Large foreign investors can help raise environmental standards by introducing advanced technology that can be grafted onto domestic companies. Indeed, small and medium-sized farms without ready access to capital have been more reliant on less efficient technology and more environmentally damaging equipment (Deininger and Byerlee, 2011; McMonagle, 2014). Foreign investors are already contributing to technology transfer, including by importing high-quality capital goods. The government can support the dissemination of best practices and knowledge at the farm-level by drawing from the experience of Poland in the late 1990s, where the Ministry of Environment worked with private research institutes to disseminate good agricultural practices to small farms (Duer and Igras, 2004);
- *Strengthen land tenure rights:* As demonstrated by the tragedy of the commons, environmental protection relies on secure tenure rights. The creation of a unified land cadastre should be accelerated to secure land tenure rights and provide incentives for sustainable land management;
- *Consider climate change adaptation when designing agricultural policy:* While climate change may benefit some regions of Ukraine, it also raises significant risks, such as an increased frequency of droughts. The government should support the use of soil and water conservation techniques, such as no till farming, the introduction of drought resistant crop varieties, and the development of irrigation infrastructure, as crucial measures to increase climate resilience.

## CONTEXT

This section provides some background on the agricultural sector and the business climate in Ukraine by first describing macroeconomic conditions as well as farm structures and their productivity and examining the current framework for agricultural policy. Then it analyses investment trends in the sector and compares Ukraine with similar countries in terms of business climate ranking.

### Macro-economic conditions

Following a deep recession in 2014 and 2015, an economic recovery in 2016 is envisaged. In 2014, end-year net public debt reached nearly 80% of GDP and consolidated government balance deficit widened to 4.8% of GDP, with another 3-4% of GDP deficit possibly run by the state-owned Naftogaz oil and gas company. IMF financial assistance was approved in 2014 and 2015, conditional on Ukraine implementing broad structural reforms and austerity policy to deal with public deficit (OECD, 2015c).

Tight monetary and fiscal policy has exacerbated the recession. In the first quarter of 2015, real GDP contracted by 17.2% year on year, driven by sharp falls in consumer spending, private investment and exports. In the second quarter, the pace of decline slowed slightly, to 14.7% year on year. Real GDP is expected to drop by 10% in 2015. A fiscal deficit may develop in the second half of 2015 and the shortfall at Naftogaz would remain significant. Low global oil prices and recession in Russia will damage demand in important Ukrainian markets. Prices for wheat are forecast to fall again (EIU, 2015a).

However, tight monetary and fiscal policy, and measures to rebuild confidence in the banks, should stabilise the financial sector. Lifted by soaring inflation, but also improved collection, revenue continues to grow at a much faster pace than spending. Since early 2015, outflows on the capital and financial account have moderated greatly and inflation has started to come down slowly. Although falls in real wages in the trade and the agricultural sector quickened, contractions in retail volumes and industrial output may have started to bottom out. Economic recovery should help to close the budget gap from 2016 (EIU, 2015a).

### Farm structures and agricultural production

Farms can be classified into corporate farms, peasant farms, and household plots:

- Corporate farms include large holdings that mainly operate on leased land and are commercially oriented. They include joint-stock or limited liability companies and private enterprises managed by an entrepreneur with privately owned assets. They number around 17 500 and account for approximately 60% of agricultural land - down from nearly 95% prior to 1990 - and 40% of gross agricultural output;<sup>6</sup>
- Approximately 43 000 peasant farms account for 8% of agricultural land and 5-10% of gross agricultural output;

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<sup>6</sup> In 2010, they produced about 76% of grains, 92% of sugar beets, 83% of sunflowers, 55% of meat, and 60% of eggs.



- Around 5.3 million household plots that are generally small and largely subsistence-oriented account for 30% of agricultural land and almost 50% of agricultural output<sup>7</sup> (Lissitsa, 2010; Visser and Mamonova, 2011; EU, 2012).

In recent years, large-scale investments led to land consolidation: by mid-2011, 79 large holdings operated on 5.1 million ha, i.e. 12% of agricultural land, with some covering up to 500 000 ha (Table 1).

**Table 1. Foreign land-based investments in agriculture**

Company	Land area (thousand ha)
Ukrlandfarming	482
NCH capital	449
Ukrainski Agrarni Investystsii	330
MHP	280
Mriya	240
Astarta	240
HarvEast	226
Kernel	210

Source: Invest Ukraine, 2012.

Ukraine has a comparative advantage in **grain production**. Its production costs are estimated to be about 50% lower than those of European producers (State Statistics Service, 2013; OECD, 2012a). Its geographic position guarantees low freight costs for exports to Western Europe and to growing importers such as middle-eastern and African countries. Finally, Ukraine has the potential for increasing agricultural yields and arable land:

- Agricultural yields are relatively low and, for wheat and coarse grains, particularly volatile. They are lower than in Western Europe (Table 2) and estimated at 40% of their potential. This may be due to the lack of technologies and knowledge, water mismanagement, land degradation, and the low use and misuse of fertilisers and plant protection products. The use of fertilisers has decreased drastically since 1990 when it reached 141 kg per ha. During the last decade, it increased again up to 58 kg per ha in 2010 but remains far below the EU average (EU, 2012). Increased grain production has been driven by the expansion of agricultural land rather than increased productivity (Baker Tilly, 2014). Volatile productivity is caused by a high dependency on natural precipitation since only 2% of cropland is irrigated. On average, wheat production changes by 20% and corn by 25% every three years, which has a major impact on the trade balance. While climate change may result in an increased production of key grains (see Chapter 7), it should exacerbate this volatility further (FAO, 2014b);
- According to official statistics, the actual use of arable land is 29.5 million ha against 32 million ha available. At least 1.5 million ha is either abandoned or used unofficially (UCAB, 2014a), which allows for significant expansion of arable land.

<sup>7</sup> In 2010, they produced about 97% of potatoes, 88% of vegetables, 84% of fruits and berries, and 80% of milk.

**Table 2. Comparative yields of main crops, 2010**

*Tonne per hectare*

	Ukraine	Western Europe	US/Canada
Wheat	4.1*	7.0	2.5 - 3.0
Barley	3.1*	6.0	2.5 - 3.0
Maize	4.9*	8.5	10.5
Sunflower seed	1.5	3.0	-
Rapeseed	1.8	3.5	1.5 - 2.0

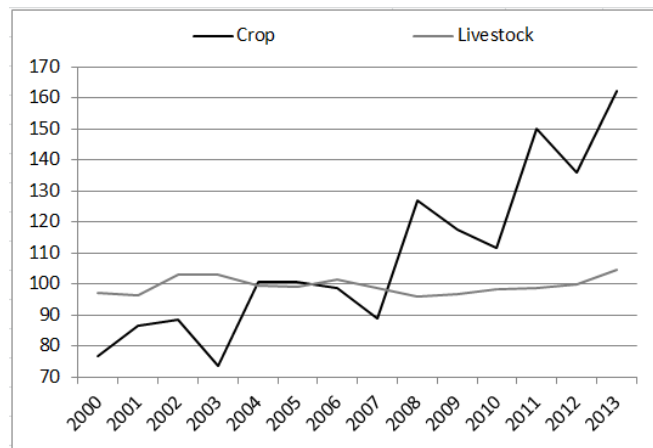
Note: (\*) These numbers are from GAIN, 2014.

Source: Lissitsa, 2010.

While crop production has almost doubled between 2000 and 2013, **livestock production** has stagnated (Figure 1), particularly due to wide fluctuations in the profitability of livestock production, especially beef and milk production, caused by fluctuating feedstock prices. For instance, the profitability of milk production decreased by 16% from 2011 to 2012 and increased by 11% from 2012 to 2013 (State Statistics Service, 2013). Milking cows, mostly raised on small farms, produce almost exactly half of the milk that a similar cow in the Netherlands does (van Leeuwen *et al.* 2012). The dairy sector has also been affected by Russia’s ban on imports from Ukraine effective since 28 July 2014, as Russia was the largest export destination for dairy since independence, accounting for 88% of Ukraine’s dairy exports in 2013. Beef production remains a very low-margin activity.

In contrast, Ukraine has been extremely successful in poultry and related products as profit has been rising due to increased vertical integration in the industry (FAO, 2014a). Egg production grew by 7% a year from 2000-11 to rank Ukraine second in Europe behind Russia, while the value of poultry production as a share of the value of total animal production increased from 14.6% in 1990 to 44.2% in 2011 (GAIN, 2013).

**Figure 1. Production index, 2000-15**



Note: 2004-06=100.

Source: WB, 2015a.

## Agricultural policy

A **Strategy for Agriculture and Rural Development 2015-20** has been finalised in July 2015. Its overall objective is to increase agricultural competitiveness and promote rural development in a sustainable manner in line with EU and international standards. It consists of seven specific objectives: approximate to the EU legislation, particularly on food safety; deregulate to abolish unjustified regulations and administrative acts and reform state-owned enterprises (SOEs); address the main challenges related to factors of production, including land reform, access to finance, modernisation and upgrading of production and processing capacities, and infrastructure and logistics; promote agricultural innovation; increase the transparency and efficiency of production and market management measures; improve the efficiency of state support to agriculture; develop a rural development programme, including measures to support small farms, and improve the quality of life in rural areas; and establish a regulatory framework for environmentally-friendly agriculture and production methods.<sup>8</sup>

The 1990 *Law on priority development of the agricultural sector and social development of rural areas* (with the most recent amendments in 2014), the 2004 *Law on state support to agriculture*, and the 2005 *Law on major principles of agrarian policy until 2015* constitute key documents outlining the **legislative framework** for agricultural policy. The objectives of these first two laws include: i) balanced development of agricultural production and improvement of social conditions in rural areas; ii) food security based on production, productivity and efficiency improvements; and iii) enhanced agro-food exports (OECD, 2013a). The latter law aims in particular to further integration to the EU.

Based on this legislative framework, the main **domestic policy measures** comprise input subsidies, tax concessions, and several market price support instruments:

- *Input subsidies* represent the principal instrument of non-price support. Until recently, the bulk of this support has been provided through specific procedures to use the Value Added Tax (VAT) due from agricultural producers and processors. For instance, in 2013-14, one procedure redirected the VAT from milk and meat processors on processed products to livestock producers. Another procedure, the so-called VAT accumulation mechanism, should remain in effect until 31 December 2017 (OECD, 2015c). However, in a context of budgetary austerity, these tax concessions may be removed. Some ad hoc support measures are also implemented. For instance, in 2014, some producers benefited from a reimbursement of the milking costs on a first-come, first-served basis. In 2015, some producers received around USD 15 000 to partially compensate the interest paid for planting (MAPF, 2015; UAIC, 2015);
- Agricultural producers are eligible for a *single tax* set as a percentage of agricultural land value. At present, this tax replaces three taxes - profit tax, land tax, and special water use fee - with agricultural taxpayers eligible for all other taxes due on agricultural business. The preferences incorporated in this tax have been narrowing since its introduction in 1998 (OECD, 2015c);
- *Market price support* includes tariff protection, non-tariff trade regulation, and various forms of domestic price measures, such as minimum reference purchase prices, direct state purchases, and loans against pledged grains, mainly through the State Agrarian Fund (Box 1).

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<sup>8</sup> See <http://minagro.gov.ua/en/node/15819> for more information.

### **Box 1. The State Agrarian Fund**

The State Agrarian Fund was established in 2005 and reorganised in 2013 as a state-owned public joint stock company. Its initial mandate was to regulate grain prices, i.e. to limit price reductions in case of high supply by proceeding to intervention purchases of grain, or to provide loans to grain producers against pledged grain enabling them to delay the sale of grain in anticipation of higher market prices. It stored grain in state-owned silos and sold it to bakeries to guarantee bread prices. But relations with state-owned silos that engendered corruption and limited public funding erased this initial function. The fund has become progressively involved in other activities, such as sugar commodity interventions, purchases and sales of a range of agri-food products, forward contracts, flour processing and wholesaling, and sales of fuel and mineral fertilisers to producers.

Grain producers can enter forward contracts with the fund and receive advance payments of up to 50-70% for future delivery. The contracted value is established on the basis of the minimum intervention price with the final settlement done on the basis of price quotations at the agrarian exchange or other accredited commodity exchanges on contract's delivery date. Through both forward and spot arrangements, the fund purchased around 2.1 million tonnes of grain in 2013 and 1.45 million tonnes in 2014. In 2014, the fund pre-paid USD 98 million to small- and medium-sized producers, concluding contracts for 886 000 tonnes of grain, of which 91% was delivered at the end of the harvest season and which was then turned into flour and sold to 162 selected bakeries at fixed prices. As in February 2015 food prices were almost 40% above their levels a year earlier, the fund also supplied flour produced from grain state stocks to bakeries at prices below market levels. Such deliveries are to be continued throughout 2015. The fund also bought relatively important quantities of sugar in 2013, and some small amounts of milk products, both in 2013 and 2014.

While the fund continued forward contracts in 2015, it did not engage in grain pledge operations enabling producers to withhold sales in the anticipation of higher prices – this programme remained frozen in recent years.

Source: Agrarian Commodity Exchange, 2014; CA, 2015; OECD, 2015c.

Most producer support has come from the input subsidy based on VAT accumulation, and to a lesser extent, the benefits from the single tax. Agricultural commodities, particularly wheat, barley, maize, sunflower and milk, have been taxed through market price support in recent years. Support counted as fixed capital formation has remained low and fluctuating: while the support for orchards, vineyards and berry fields and the reimbursement of the cost of construction of livestock farms were relatively high in 2010-13, they have fallen in 2014 (OECD, 2015c).

Producer support has been highly dependent upon the available budget, leading to annual swings in financial support (Table 3). As per OECD Producer Support Estimate (PSE) database, the percentage PSE, i.e. the ratio of the PSE to the value of production at farm gate, has varied from 10.92 in 2005 to -8.22 in 2014, the lowest level since the mid-1990s. The General Services Support Estimate (GSSE) has increased since 2000, corresponding mainly to expenditures for agricultural knowledge and innovation as well as inspection and control systems. In 2014, financial austerity measures led to the elimination of some previously important tax concessions. The number of agricultural programmes financed through MAPF has been reduced from 32 in 2014 to 19 in 2015, with a five-fold cut in the Ministry's budget from USD 530 million to USD 100 million over the same period (OECD, 2015c).

**Table 3. Producer Support Estimates, 2000-14**

USD million

	2000	2005	2010	2012	2013	2014
<b>Producer Support Estimate:</b>	<b>203</b>	<b>10,683</b>	<b>16,150</b>	<b>4,472</b>	<b>-11,157</b>	<b>-34,294</b>
- Support based on commodity output	-1,780	6,507	3,808	-12,064	-28,486	-52,661
- Payments based on input use	582	2,685	9,541	12,502	13,257	14,105
- Benefits from fixed agricultural tax	1,400	1,400	2,800	3,300	3,500	3,800
<b>Percentage PSE</b>	<b>0.41</b>	<b>10.92</b>	<b>6.49</b>	<b>1.50</b>	<b>-3.18</b>	<b>-8.22</b>
<b>General Services Support Estimate:</b>	<b>408</b>	<b>2,856</b>	<b>4,866.80</b>	<b>6,191</b>	<b>5,253</b>	<b>3,487</b>
- Agricultural knowledge and innovation	215	1,045	2,097	2,837	1,995	1,951
- Inspection and control	66	791	1,342	1,593	1,602	1,292
- Development and maintenance of infrastructure	92	862	1,011	1,296	293	9

Source: Note: This table only provides the major categories of support.

Source: OECD PSE database, 2015.

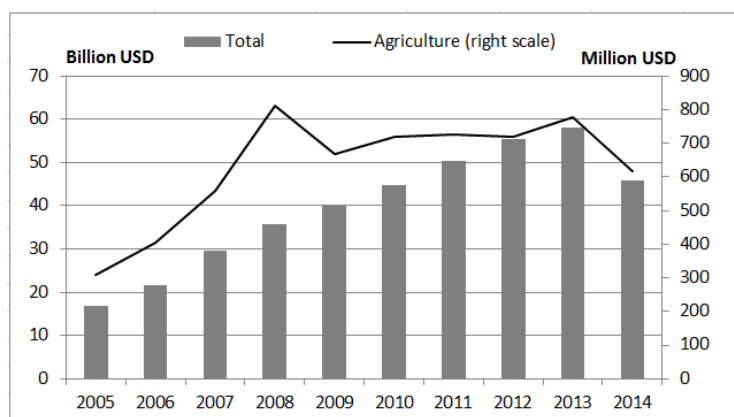
### Investment trends

**Domestic investment in agriculture** has increased recently. Fixed capital investment in agriculture and hunting (excluding forestry and fisheries) reached approximately USD three billion in 2013, an increase over the USD 1.86 billion of 2005. It has been fairly steady as a percentage of total investment at approximately 6.3% for the past six years, although regional differences are substantial. In 2012, Kirovohrad, Kherson and Cherkasy oblasts had nearly a third of their investment directed towards agriculture (State Statistics Service, 2013).

Annual inflows of **foreign direct investment (FDI)** have increased at an impressive pace in the early 2000s, before decelerating following the economic crisis. They more than halved in 2009 with the economic crisis. In 2013, they declined by 45%, reflecting concerns about economic management and the business environment. In 2014, they plummeted by 81% in a context of political instability and escalating conflict in the Donetsk and Lughansk regions. They recovered in the first semester of 2015, reaching 3.6 % of GDP, even though this is partly due to the recapitalisation of foreign-owned banks. This data must be interpreted with caution, insofar as a sizeable portion of *prima facie* foreign capital may in fact correspond to round-tripping FDI: official statistics therefore overestimate the real level of FDI inflows (OECD, forthcoming).

**FDI inflows in agriculture** have increased steadily between 2005 and 2009 but decreased since the global financial crisis (Figure 2). However, they have never been higher than 1.9% of total FDI inflows. Unlike primary agriculture, the share of food processing in total FDI inflows has been relatively stable at about 5% over the last decade. This corresponds to its contribution to GDP (Agricistrade, 2014). Financial services and manufacturing, in particular metallurgy, absorb 53% of the total FDI stock, with trade and repair representing an additional 13% (OECD, forthcoming).

**Figure 2. Foreign Direct Investment stocks, 2005-14**



Source: State Statistics Service.

Based on state statistics, **EU countries** are the main source of FDI, representing over 77.4% of the FDI stock, although this includes investment by EU-based affiliates of non-EU countries' firms. Excluding Cyprus,<sup>9</sup> this share falls to 49%. Indeed, Cyprus is by far the single largest country of origin, accounting for 28.6% of the inward FDI stock by June 2015. Germany constitutes the second largest source of FDI with 12.8% of the overall FDI stock.<sup>10</sup> It is closely followed by the Netherlands (12%). All other significant investors (among which Austria, the United Kingdom, France, Italy, and Poland) are also from the EU, with the exceptions of Switzerland (3.2%) and the United States (1.6%) (OECD, forthcoming).

Several **agribusiness giants** from the EU and the US have increased their investments in recent years. Three of the US-based 'ABCD' companies – ADM, Bunge, and Cargill (excluding Dreyfus) – have invested billions of USD in Ukraine recently, including in storage facilities and the sales of agricultural inputs. As industrial land for processing, storage, and transportation is not constrained by the same laws as farmland, foreign agribusinesses have invested substantially in these types of infrastructure:

- Cargill has been in Ukraine for 20 years and has recently acquired a domestic animal feed company Provimi;
- Monsanto has had operations in Ukraine since 1992. News reports indicate that, in 2012, its team doubled in size, and that, in March 2014, it invested USD 140 million in building a new seed plant;

<sup>9</sup> Footnote by Turkey: 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. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the 'Cyprus issue'. Footnote by all EU member states of the OECD and the EU: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

<sup>10</sup> The high share of Germany mainly reflects the fact that the largest foreign investor in Ukraine, Arcelor Mittal, controls its Ukrainian affiliate (ArcelorMittal Kryvyi Rih) through a German entity.

- In June 2013, DuPont announced that it would invest in a new seed plant to produce seeds with resistance to drought and heat stress. Its seed facility was extended in September 2014 to support increased demand for its corn hybrids (Oakland Institute, 2014);
- As regards food processing - which accounts for around 15% of total industrial output - some of the main international players include Nestlé, Bunge and Cargill in the sunflower oil segment, Wimm-Bill-Dann (mostly owned by PepsiCo), and Danone in the dairy segment (EIU, 2013).

Other new entrants originate from the **Gulf countries and China**. In 2013, a consortium of agribusinesses from Saudi Arabia acquired the Ukrainian Continental Farmers Group. In September 2012, Ukraine signed a USD three billion loan contract with a Chinese bank, which guaranteed Ukraine a line of credit in exchange for part of the corn harvest for a period of 15 years. These loans would be used to purchase Chinese agricultural technologies, herbicides and pesticides (Oakland Institute, 2014).

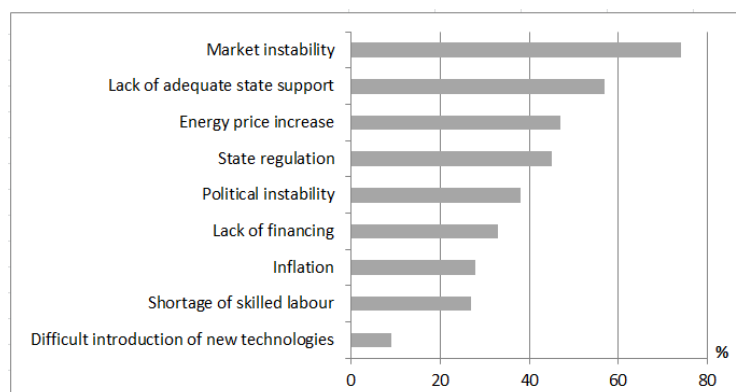
**Financial players** have also been investing in Ukraine’s agriculture. Three private equity funds - NCH Agribusiness Partners Fund I, NCH New Europe Property Fund II, and Sigma Bleyzer Southeast European Fund IV - have invested about USD 750 million in primary agriculture and control around 550 000 ha. Other foreign-led equity investments of some USD 2.1 billion have been made and would cover some 950 000 ha (FAO, 2013).

### Business climate rankings

The World Bank’s Doing Business Index ranked Ukraine 112<sup>nd</sup> in 2014 against 140<sup>th</sup> in 2013, thanks to improvements in many of the areas covered by the index, including construction permits, property registration and getting credit. In 2014, Ukraine was the fastest improving country in the world and ranked in the top five among the economies that had gone the furthest in reducing the distance to the best performers in the world since 2005.

However, the 2014 index places Ukraine below all regional peers. It lags in most areas, but especially in getting electricity, paying taxes and trading across borders (WB, 2014c). According to farmers, the major constraint is market instability (Figure 3). Frequent price jumps both at input and output markets result in huge losses. Other major problems include the lack of adequate state support and state regulation, with 45% of the farmers claiming that numerous inspections and certifications hinder investment (UCAB, 2014a).

**Figure 3. Main obstacles for doing agribusiness, 2014**



Source: Agrobarameter 2.0: Investment and economic expectations of agricultural producers, AgriSurvey study, UCAB 2014a.

## CHAPTER 1. INVESTMENT POLICY, PROMOTION AND FACILITATION

Clarity and predictability of the regulatory framework, simplicity and effectiveness of administrative procedures, such as through one-stop shops and a limited number of procedures, a level-playing field between various types of investors (non-discrimination and competitive neutrality), and openness to foreign investment, are core elements of an attractive investment environment. As the forthcoming OECD Investment Policy Review of Ukraine focuses on overall investment policy, promotion and facilitation, this chapter complements it by focusing mainly on agriculture-specific issues, i.e. discriminatory measures against foreign investment, privileges granted to SOEs, heavy administrative procedures, changing institutional arrangements, and unpredictable investment incentives.

Ukraine has an open and transparent legal **regime for foreign investment** that is broadly consistent with international norms. During the current crisis, it has upheld the generally open stance that has characterised its legislation since independence in 1991, including by protecting against nationalisation and providing guarantees for compensation and the repatriation of profits. Protection against expropriation is guaranteed by the Constitution and conditions and procedures are stipulated in the 1996 Foreign Investment Regimes Act (OECD, forthcoming). However, in 2014, Ukraine's score under the OECD FDI Restrictiveness Index (0.117) was higher than the OECD average (0.068), albeit lower than the average of non-OECD countries (0.151). It reflects the remaining restrictions on equity in information agencies, as well as a number of operational restrictions, notably on foreign ownership of agricultural land. Foreign investors are not allowed to own agricultural land, as described further in Chapter 2. The prohibition of foreign investment in unspecified 'strategic sectors' is also taken into account.

**SOEs** continue to play a major role in the agricultural sector and may benefit from preferential treatment, thereby undermining private investment. Out of 571 SOEs under its responsibility (out of which only 96 are operating officially and 20 are profitable), MAPF expects to privatise 254, reorganise 158, and transfer 40 to the Ministry of Education. The list of these companies includes those to be privatised under the *Law on peculiarities of property privatisation in agro-industrial complex*. More than 120 000 ha currently owned by SOEs would be privatised and 10 000 employees of SOEs would obtain land shares (MAPF, 2015). In addition, *Resolution No. 271 on conducting a transparent and competitive privatisation in 2015* was adopted in May 2015 and lists more than 300 SOEs subject to privatisation (OECD, forthcoming).

Numerous regulations and **administrative procedures** delay the investment process and provide fertile ground for corruption. For instance, at the stage of preparatory work, nine documents are required for a cost of USD 119-123. At the stage of production, 14 documents are required for crop production at a cost of USD 1 100-1 230 and eight documents are required for animal production at a cost of USD 230-800. For transportation, six documents are required for crops and seven for livestock (UCAB, 2014a). The sanitary and phytosanitary control system, which is largely non-WTO compliant, also imposes heavy costs to businesses. It is characterised by fragmented supervisory agencies, significant bureaucracy and corruption (Agricistrade, 2014). Compliance costs amount to 2.6-4.9% of annual turnover of agricultural enterprises, depending on the sector (Nivievskyi, 2013). The cost of phytosanitary measures for businesses is 7.5 higher in Ukraine than in the EU (IFC, 2014).

The most important weakness of investment promotion has been frequent changes in the **institutional structure**, which led to the multiplication of agencies with often unclear and overlapping responsibilities (OECD, forthcoming). MEDT is currently responsible for general investment promotion, while MAPF focuses on agricultural investment. Existing institutional arrangements for investment promotion are being



reorganised as part of ongoing reforms, with two of the major institutions responsible for investment policy being restructured:

- The *State Agency for Investment and National Projects* was responsible for investment facilitation and after-care services but was dismantled. It operated a single window that provided investors with information, analyses, legal services, support in organising site visits, site selection services, and post-investment support. These services were carried out by each Regional Centre for Investment and Development operating under the agency. The agency kept a list of investment projects that had been assessed as economically efficient and implemented national projects<sup>11</sup> that could be carried out as PPPs and benefit from the following state support: co-financing; loans and loan guarantees; and full or partial compensation of interest rates on loans. A list of priority projects was approved in 2010<sup>12</sup> and included in particular grain production and regional wholesale food markets. This agency is being liquidated: it does not perform any activities anymore and the ten remaining employees carry out the liquidation process.<sup>13</sup> Its functions were transferred to MEDT and the management of national projects was passed on to respective Ministries (MEDT, 2015);

The *State Committee on Regulatory Policy and Entrepreneurship* was responsible for supporting SMEs, including by streamlining licensing procedures imposed by other Ministries. It helped to reduce the list of documents attached to the application for a licence, for instance by managing to remove the requirement for a cleansing receipt for grain storage in November 2014. It hosted an expert and appeal council to which independent experts and business representatives participated. This council made recommendations on licensing procedures and reviewed complaints related to SMEs. The agency also provided financial support to SMEs through a ‘Foundation for Entrepreneurship’ which extended concessional loans to 43 entrepreneurs in 2013. The agency has been liquidated:<sup>14</sup> its competencies on policy design have been transferred to MEDT and a State Regulatory Service has been created (SCRPE, 2015). Effective investment promotion attracts investment where most needed, highlights profitable investment opportunities and helps foreign investors to identify local partners. In Ukraine, investment promotion relies in particular on **investment incentives**.<sup>15</sup> But these incentives, as agricultural policy in general, have lacked continuity, clear objectives, cost-benefit analysis and targeting, which limits their impact.

The 1991 *Investment Law*, the 1992 *Foreign Direct Investment Law*,<sup>16</sup> and the *Law No. 5205-VI on the promotion of investment activities in priority sectors for job creation* dated 6 September 2012 offer tax incentives, such as duty exemption on imports of capital equipment for foreign investors or corporate profit tax exemption for income derived from investment projects resulting in job creation in priority industries (MEDT, 2015). However, the number of tax incentives has been considerably reduced over the past two years. Since January 2015, tax incentives have been removed in several areas, including the production of agricultural machinery (OECD, forthcoming).

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<sup>11</sup> 2010 Cabinet of Ministers Resolution No. 1255 on approving projects of the priority areas for socio-economic and cultural development (national projects).

<sup>12</sup> 2010 Cabinet of Ministers Resolution No. 1256.

<sup>13</sup> 2014 Cabinet of Ministers Resolution No. 442 on the optimisation of central executive authorities.

<sup>14</sup> 2014 Cabinet of Ministers Resolution No. 724.

<sup>15</sup> Investment incentives most often take the form of tax concessions but can also be subsidies aiming to incentivise investment.

<sup>16</sup> This Law has been replaced by *Law No. 93/96-BP on Foreign Investment Treatment* dated 19 March 1996.

According to the 2004 *Law on state support to agriculture*<sup>17</sup> and the related 2010 Resolution No. 900,<sup>18</sup> domestic and foreign investors in livestock facilities can be reimbursed up to 50% of the costs of construction. The subsidy should be used for future investment or to ease access to loans. However, due to limited budget, this subsidy has not been given in 2014. In addition, until recently, only large investors could benefit from such subsidy due to specific requirements, i.e. minimum of 500 cows, 100 sheep, or one million hens. *Law No. 87-VIII on amending Article 172 of the Law on state support to agriculture* of January 2015 removed these capacity requirements (MAPF, 2015; UAIC, 2015).

While **investment climate reforms** have been underway since 2007 to reduce and clarify administrative procedures, progress was rather limited. Further efforts have been made since 2014, including by deregulating and limiting the number of required licenses:

- The 2014 *Law on Inspections* and the 2015 *Law No. 1580 on amending selected acts of the legislation with regards to reducing the number of permit/approval documents*<sup>19</sup> aim at slashing the paperwork needed to set up a business. It led to the following measures: the time to obtain phytosanitary and quarantine certificates has been reduced from five days to 24 hours after the vessel is loaded; the compulsory quarantine certificate for inland transportation of grain, oilseeds and their derived products has been cancelled;<sup>20</sup> six licences and 14 authorisation documents, including the veterinary certificates for animal products, vehicles, logistics centres and retail facilities, have been eliminated. The regulation on compulsory crop rotation has been abolished;
- The *Law No. 222 on licensing types of business activities* adopted on 2 March 2015 reduces the number of licensable business activities from 54 to 29. Aligning with the EU Directive 2000/128, activities that do not require a license include: the production of veterinary drugs and preparations; wholesale and retail trade in veterinary drugs and preparations; trade in pesticides and agrochemicals (except plant growth regulators); fumigation activities; and breeding resources. It also introduces a uniform licensing procedure and clearly determines grounds for refusing to issue and for revoking licenses (MAPF, 2015);
- A clear procedure for obtaining authorisations to market plant protection products and import plant protection products to be used in state trials as well as stronger intellectual property rights on these products have been introduced<sup>21</sup> (MEDT, 2015);
- The draft *Law No. 1460-1* submitted to the Parliament for the second reading on 10 November 2015 aims to simplify seed registration procedures by reducing the number of required documents and the time spent to examine the application (UAIC, 2015);

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<sup>17</sup> This law was recently amended by *Law No.191-VIII on amending some legal acts of Ukraine on deregulation* of February 2015.

<sup>18</sup> This Resolution on ‘*Provisions on budgetary allocations aiming to provide a partial cost recovery to economic agents for building and modernising animal farms and complexes and feed milling facilities*’ was approved by the Cabinet of Ministers on 4 October 2010.

<sup>19</sup> It has been adopted by the Parliament on 12 February 2015 and came into force on 5 April 2015.

<sup>20</sup> According to the draft *Law No. 2655* amending the *Law on Plant Quarantine* and registered on 17 April 2015.

<sup>21</sup> Resolution of the Cabinet of Ministers on some issues of business deregulation No. 42 dated 28 January 2015, which came into effect on 11 February 2015.

- On 15 April 2015, the *Law No. 191-VIII of December 2015 on amendments to certain legislative acts on the simplification of business conditions* (deregulation) was signed by the President of Ukraine. It aims to: reduce requirements to maintain the land cadastre; improve access to the land cadastre; facilitate the state registration of property rights; and address insolvency and creditors' rights protection;
- As corruption has been identified as a major impediment to investment and is engendered particularly by the numerous licensing and permits required in the agricultural sector, the *Law on the basics of government anti-corruption policy in Ukraine for the period 2014-17* adopted in October 2014 also aims to simplify business regulations (Box 2).

Investment climate reforms continue in 2015, with some legislative proposals already drafted and waiting for approval. MAPF aims to eliminate another 100 permission documents and certificates. A draft law is ready to completely ban the obligatory registration of export contracts for grain that was supposedly abandoned in 2012 but may currently be re-implemented at any given time (MAPF, 2015).

### **Box 2. Tackling corruption**

Corruption has been a significant obstacle to investment since independence. It is noted as frequent in the following areas: business licenses and permits, tax collection, customs, public procurement, energy, and allocation of land and other natural resources. Ukraine is poorly ranked in international rankings and according to enterprise surveys:

- It ranked 142nd out of 175 countries in the 2014 Corruption Perception Index of Transparency International;
- The public recognised corruption as the fourth main issue (34%) to be addressed after normalising the situation in Donbas and peace (79%), improving financial situation by increasing salaries (48%), and ensuring economic growth (43%) (survey by Ilko Kucheriv Democratic Initiatives Foundation in December 2014);
- As per a survey conducted by the American Chamber of Commerce in early 2014, 99% of companies stated that corruption was widespread, 81% confirmed that they faced corruption on a regular basis, and 73% believed that corruption increased in 2013. They noted that cleaning the public administration would reduce corruption;
- According to the Global Competitiveness Index of the World Economic Forum, Ukrainian companies fell behind most peer countries in ethical firm behaviour, being ranked 130 out of 148 countries;
- A number of companies are members of the UN Global Compact, but only half of them, mostly large ones, submit reports on anti-corruption measures.

Widespread corruption was one of the main reasons that instigated mass demonstrations in 2014. The post-Maidan administration pledged to eradicate corruption and civil society became a driving force behind many reforms. The Anti-Corruption Strategy for 2014-17 was adopted as law. Two new institutions are supposed to be established: the National Agency for Corruption Prevention under the government and the National Council for Anti-Corruption Policy as an advisory body under the President. After numerous revisions in 2013-15, Ukraine has finally aligned its criminal law on corruption with applicable international standards; all corruption offences and their elements are now criminalised, including the crime of illicit enrichment.

Despite these efforts, results are not convincing. For instance, while a public council comprising 154 members was established at the tax administration in 2014, business associations noted that public councils were an 'echo from the past' and were not very effective as their composition did not represent well the private sector and state bodies were not obliged to take their views into account in the decision-making process.

Source: OECD, 2015d.

## CHAPTER 2. LAND AND WATER TENURE

Secure land rights are a necessary condition of any investment in agricultural production. They are critical to ease the process of land acquisition, incentivise long-term investment in land and sustainable land management, and facilitate access to credit by allowing land to be used as collateral. Similarly, secure and well-defined water rights encourage new agricultural investment and the upkeep of existing investments.

This chapter examines the challenges faced by investors to have secure access to land and water. It analyses procedures for registering land property and transactions, restrictions on land rights, and limits of the land administration. It describes recent policy measures that have been taken to address these issues. Finally, it examines the constraints to accessing water for irrigation purposes.

### Land tenure

According to the World Bank Doing Business index, Ukraine has made excellent strides in improving its ranking under the indicator ‘**registering property**’ from 88 in 2014 to 59 in 2015, out of 189 economies. While the number of procedures for registering property remains higher than elsewhere in Eastern Europe and Central Asia (7 in Ukraine versus 5.4 on average in the region) and time spent is also higher (27 days against 23.1 in the region), Ukraine’s improvement in both of these metrics is impressive. In 2012-13, Ukraine introduced an effective time limit for processing transfer applications at the land cadastre in Kyiv and made transferring property easier by streamlining procedures (WB, 2014c).

If properly undertaken, land registration in a land cadastre can enhance land tenure security by enabling the recording of land tenure rights, thereby facilitating their transfer and allowing investors to seek legal redress in cases of violation. A formal ownership registration system was established following the mass privatisation of agricultural land in 1991-95, with rural kolkhoz dwellers receiving formal property rights. Around 65% of total agricultural land, including 85% of arable land, was privatised during the land reform. Nowadays 30.8 million ha of agricultural land are privately owned and around 10.7 million ha are state-owned. As of 2013, 96.7 % of the land certificates received by 6.92 million Ukrainians were replaced by state acts of land ownership with physical delineation of properties (MAPF, 2015).

Comprehensive and up-to-date land registers can cut the time to acquire land tenure rights, reduce corruption and facilitate tax collection. They should be properly maintained and publicised. Two laws enacted in 2013 on the state land cadastre and on state registration of property right to real estate and encumbrances have introduced a system for registering land plots and property rights for real estate (Razumkov Centre, 2011). Using a USD 195 million loan from the World Bank for the Rural Land Titling and Cadastre Development Project, the infrastructure of the cadastre was completed in 2013 and would reduce the time needed to register land from over a month to merely one hour (Visser and Mamonova, 2011; WB, 2013a). The map is available on the website of SALR,<sup>22</sup> and is a major step towards codifying land rights - although current Prime Minister Yatsenyuk claimed in December 2014 that completing the cadastre would require additional effort as only 5% of the process was completed (Government of Ukraine, 2014).

Several initiatives have been taken to register and simplify land transactions. Indeed, registering land transactions, including leases, remains a complex and time-consuming process which requires between seven and eleven agreements at different administrative levels, varies significantly across regions, and can

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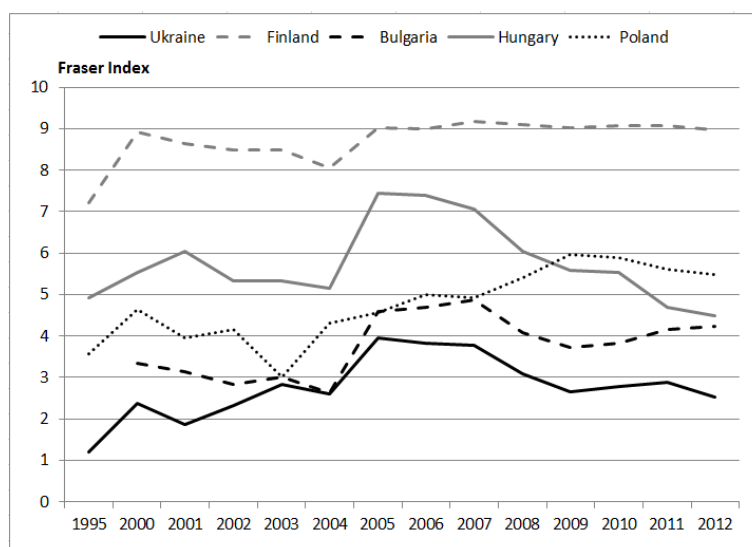
<sup>22</sup> <http://map.land.gov.ua/kadastrova-karta>.

take up to two years (Mischenko, 2012). The extensive involvement of government officials at all points along the lease procurement and registration continuum allows for many opportunities for rent-seeking behaviour. In practice, delays and diverse pressures induce enterprises not to complete the whole process. To reduce transaction costs, several legislative reforms have been or are being made:

- With the adoption of the *Law No. 191-VIII on deregulation*, the *Law on Land Lease* was amended to reduce the list of essential provisions of land lease agreements which previously reached 15 and to remove the five mandatory annexes. Essential provisions are now limited to: lease object, including cadastre number, location and area of the land plot; duration; and land lease payment details (Gide, 2015);
- The *Law No. 191-VIII on deregulation* allows notaries to register agricultural land leases without making notarial actions, which should considerably reduce waiting times while keeping the legal security of transactions (CA, 2015);
- There is now a minimum duration of lease of land designated for commercial agriculture, private farming or farming, of seven years to encourage investment in land, including in irrigation infrastructure. This would facilitate the use of long crop rotations to reduce the use of chemicals. The maximum duration remains 50 years (Gide, 2015);
- A draft law adopted in second reading aims to ease registration procedures, including by allowing submitting scanned copies of documents instead of originals and registering land ownership and lease at once (CA, 2015).

However, securing land tenure rights encompasses not only registering but also protecting these rights. In **property rights protection**, Ukraine falls far short of Finland, one of the world's highest-ranked countries for protecting property rights, and lags behind Bulgaria, Hungary, and neighbour Poland (Figure 4). Similarly, the Heritage Foundation notes that property rights protection in Ukraine is only slightly above Russia and far behind most Central and Eastern European transition economies. As described below, this may be due to several restrictions on land rights and a weak formal judicial system, making the exercise of property rights difficult.

Figure 4. Protection of property rights in selected countries



Source: Gwartney *et al.*, 2014.

The legislation puts **several restrictions** on land property rights. For instance, the 2001 Land Code obliges individuals who wish to own more than 100 ha to obtain permission from SALR. But the major impediment to both the exercise of property rights and to investment in agriculture remains the moratorium on the sales of agricultural land enacted in 1992 and extended in 2005, 2008, and 2012. It prohibits the sale, purchase and transfer of private agricultural land. According to a poll undertaken in 2012, while some Ukrainians worried that a free land market would result in rapid land consolidation and force people to sell, only 7% of the population responded positively to the moratorium (Mischenko, 2012).

This **moratorium** possibly presents several important drawbacks:

- **Undervaluation of agricultural land:** As the marginal benefit of an additional hectare is often very low for a large producer, each individual land plot tends to have below-market returns (Strohm *et al.* 2010). Lease rents are legally fixed at 3% of the land value, which resulted in rents of around USD 268-366 per ha in 2014. However, farmers indicated that the actual worth of their land was closer to USD 1 830-2 440 per ha (Mischenko, 2012). This huge price gap highlights that the fragmentation of agricultural land lessens the bargaining power of individual plot holders and favours large and sometimes politically-connected agricultural businesses. Removing the moratorium would create market-determined prices that can help to bring expectations in line with reality. It would encourage investments on the large tracts of unused land<sup>23</sup> that may also be contributing to low land prices;
- **Imperfect land valuation:** Land valuation is a necessary component of the lease procedure but a difficult exercise in the absence of an explicit land market. Governed by the 2003 *Law on Land Valuation*, valuation is undertaken by experts licensed by SALR, but the final valuation of a land

<sup>23</sup>

Large amount of private land is not used (abandoned heritage, uninterested owners) or in shadow land market (unexecuted lease contracts) (MAPF, 2015). Over 7 million ha of agricultural land would be idle (FAO, 2012). Furthermore, a large share of land is cultivated unofficially and, in some cases, illegally. About one million parcels would belong to deceased owners, covering around 3-4 million ha of land. Some owners live in urban areas without renting their land (IER, 2015).

parcel is approved by the village, town, and city council in which the land is located.<sup>24</sup> This normative valuation is based on the possible rental income from any grain crop which can be produced on the land, with corrections applied to account for soil fertility, location, and other possible factors that would diminish or increase the attractiveness of that particular parcel (Nivievsky and Kandul, 2011);

- **High transaction costs to access land:** The moratorium entails that businesses rely on land leases to access land. In 2013, 84.5% of the land cultivated by agricultural enterprises, i.e. 20.3 million ha of arable land, were leased (MAPF, 2015). In the Zhitomir oblast, as of 2009, 80% of the farms covered less than 100 ha, with the majority being from 0-50 ha (Strohm *et al.* 2010). Thus, large enterprises have to contract with numerous land owners which creates high transaction costs. One large agroholding, Mironovskiy Khleboproduct, concluded 100 000 agreements with land owners to be able to cultivate 280 000 ha (Visser and Mamonova, 2011). Currently, leases can last for up to 50 years, a timeframe that is seen as being equivalent to owning the land (Razumkov Centre, 2011). In reality, however, 90% of all agricultural land is on a year-to-year lease, with leases of 4.7 million private parcels of land renewed annually. This constant turnover of lease re-registration means not only is there little incentive for businesses to invest in land, but also that economic resources on the order of USD 90 million are wasted annually in time and labour costs of registration (Nizalov, 2014);
- **Limited access to finance:** The moratorium hinders the development of agricultural financing as collateralising land is impossible. To address this issue, a State Land Bank was created in October 2012 to provide concessional loans to agricultural producers at an annual interest rate of 8-9%, but the Bank was liquidated in June 2014 before extending a single loan (Kravchenko, 2014).

The moratorium applies only to the sale of agricultural land. Ukrainian citizens may generally **acquire ownership rights** to land on the basis of: (i) a sale-purchase, gift, barter, inheritance or other civil agreement; (ii) gratuitous transfer from state or communal ownership; (iii) privatisation of land plots previously allocated to them for use; or (iv) an in-kind share to which they are legally entitled. According to the Land Code, foreign entities are not allowed to own agricultural land but they may acquire non-agricultural land if they own, buy or will build real estate on such land. For instance, they can own non-agricultural land for purposes related to agriculture, such as agro-processing located further away from the growing area, but only as an adjunct to purchasing non-movable assets located on said land. This discourages investment as the purchase of or building a factory creates a right to own land, and not the other way around. If non-agricultural land plots become agricultural land, foreign entities should sell them within one year (Frishberg and Partners, 2007).

Companies can **access agricultural land** not only by obtaining ownership rights as mentioned above but also by: leasing land; acquiring non-agricultural land and changing its status to agricultural land; exchanging non-agricultural land for agricultural land; participating in schemes allowing control over land with the right to buy it once the moratorium is lifted; or acquiring equity within established domestic agroholdings (Visser and Mamonova, 2011).

In order to provide for secure land tenure rights, the **land administration** should be accessible, reliable and transparent. The responsibilities of the central government versus local authorities should be clearly defined to promote efficiency, reduce corruption, and enhance law implementation and enforcement. The efficiency of the Ukrainian land administration is hindered by the monopolistic position of SALR. Officially, SALR is charged with overseeing regulatory policy regarding land, establishing databases on land ownership, certifying land valuations and evaluators, and maintaining the land cadastre. Its activities are guided and co-ordinated by the Cabinet of Ministers with inputs of MAPF. As of 2013, it

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<sup>24</sup> Nivevskiy (2011) notes that the involvement of government organs may inflate land valuations, given that these valuations are used as the basis for property taxation.

employed 10 300 people, including 280 employees in Kyiv, making it one of the largest state agencies (UNECE, 2013). It has been long-perceived as a very corrupt organisation (Lerman, 2014), a reality that successive heads of the agency have acknowledged via many public meetings. Its broad discretionary power has facilitated its bureaucratic insertion into land transactions and the imposition of extra-judicial levies. The draft *Law No. 1159 on some measures to strengthen territorial community role in land management* dated 12 December 2014 could reduce the monopolistic power of SALR by decentralising land management to independent local councils.

Similarly, the inefficiency of the formal judicial system hinders the exercise of land tenure. Ukraine remains ranked near the bottom of Transparency International's Corruption Perception Index for 2014, i.e. 142 out of 175 countries. Its judicial independence, as measured by the World Economic Forum, is ranked at 134 out of 142 countries. Most court proceedings involving land are lengthy and rulings not always executed as delivered (Mootz, 2010 and Habdank-Kořaczowska, 2015).

### **Water tenure**

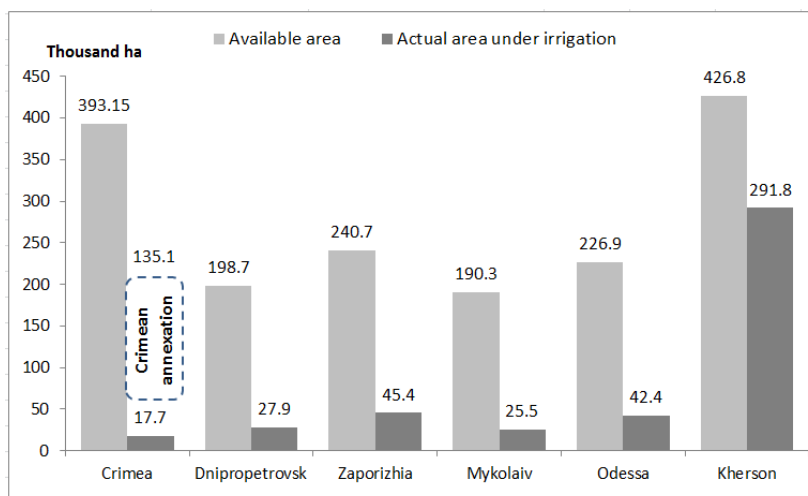
Water management suffers from the lack of private **property rights**, as all water is treated as government property and water rights are overseen by public local institutions, as set out in the 1995 *Water Code* and the 2002 *Law on Potable Water and Potable Water Supply*. Obtaining water rights has continuously been a cumbersome and bureaucratic process requiring multiple signatures and permissions (Hellegers, 2005). Moreover, while water rights can be issued for up to 25 years, they are often given for only one to three years (Pavlov, 2004).

**Water availability** is not as binding a constraint for agriculture as it is elsewhere in the region (Rouholahnejad *et al.*, 2014). As per the World Bank Development Indicators, the availability of freshwater at about 1 167 cubic meters per person ranks Ukraine 126 out of 179 countries. The Dneiper River provides a water basin that covers 40% and drains 60-65% of the land mass of Ukraine, while six further river basins provide 170 000 km of waterways (WB, 2008). These waterways are complemented by approximately 3 000 natural freshwater lakes that cover an area of 2 000 km<sup>2</sup>. The lakes and rivers are fed by an average annual precipitation of 300-600 mm, which has been increasing since the end of the Soviet Union to closer to 600 mm (FAO, 1997; Global Water Partnership, 2014). Agriculture accounts for 6% of total freshwater withdrawals, industry for 70% and households 24% (WB, 2015a).

The **area under irrigation** is well below its potential due to the lack of adequate infrastructure. It has decreased immensely since independence, from 2.3 million ha in 1990 to approximately 482 000 ha. Existing water resources, especially in the southern regions, can support much more than what is being utilised (IWPLR, 2015). For example, even the most heavily irrigated region of southern Ukraine, the Kherson oblast, has the capacity to have another 135 000 ha under irrigation (Figure 5). While the Southern region is most promising for expanding irrigation, the Western region also shows potential, due mainly to the higher levels of precipitation and snowfall in the Carpathian Mountains (Holko *et al.*, 2011).



**Figure 5. Available and actual irrigated areas in Southern Ukraine, 2014**



Source: IWPLR, 2015.

According to the Institute of Water Problems and Land Reclamation (IWPLR), most lands remain non-irrigated due to the unsatisfactory condition of the **pipe infrastructure** at the point of the aquifer or in radiating out from the water source to the community. As a result, seepage losses amount to 40%<sup>25</sup> and energy consumption for water supply is high due to the low (compared with the newest types) efficiency of pump-power equipment. With local governments facing considerable financing challenges, little funding is available for improving community irrigation infrastructure. This deterioration of existing pipes comes in tandem with a large increase in the number of users of irrigated water, meaning greater strain on the existing infrastructure. IWPLR estimates that the privatisation process in the Kherson oblast alone caused the number of land users on irrigated land to jump from 243 to 56 773 (IWPLR, 2015).

At **farm level**, after the poor conditions of irrigation infrastructure, the second most-cited reason for the lack of irrigation is the absence of the requisite sprinkling machines to disperse water. Similarly, pump and power equipment, even when in place, has been going through a long period of depreciation, and as a result, only approximately 62% of pump stations and 63% of pump units are operable (Leidel *et al.* 2012). The combination of degrading infrastructure and poor human capital has contributed to a relatively weak and fragmented private water user system: user associations are in their infancy and have little ability to organise and improve irrigation. Farmers have limited access to finance to upgrade irrigation equipment, an issue that touches upon not only the financial system but also on the legal framework surrounding irrigation and the abilities of local water user associations. The increasing cost of electricity also constitutes a barrier to irrigation (State Agency of Water Resources, 2015).

Legal issues related to **land tenure** also intrude on water use for agriculture, as unresolved property rights over on-farm irrigation infrastructure prevent private operators from making needed repair to the pipes. Short term land leases and fragmented land tenure prevent long term investment in new irrigation infrastructure, as an irrigation pipe to tap an existing aquifer may have to cross tens or hundreds of different pieces of property.

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Poor irrigation infrastructure causes water stress on the ecosystem, as more water is needed due to leakage, runoff, and improper management than would be necessary in a modern and sealed system (WB, 2008). IWPLR estimates that approximately 23% of all water withdrawal is lost. The poor irrigation infrastructure has also contributed to soil degradation (NAAS, 2014).

## CHAPTER 3. TRADE POLICY

Open, transparent and predictable agricultural trade policies both domestically and across borders can improve the efficiency of resource allocation, thus facilitating scale economies, reducing transaction costs and boosting productivity and rates of return on investment. They can also help reduce price volatility and improve the stability of food markets, thereby fostering food security. This chapter examines general trade policy, including tariff, non-tariff and trade facilitation measures, before focusing more specifically on agricultural trade policy, i.e. existing trade agreements and their impacts on trade flows, non-tariff measures for both agricultural exports and imports, and recent measures taken to reduce non-tariff measures.

### General trade

As in many countries, the **trade legislation** in Ukraine comprises a large number of laws, decrees, and amendments, beginning with the *Law on foreign economic activities*, originally passed in 1991 but subsequently amended several times, with the latest amendment in 2009. The largest legislative changes came amidst the accession to the WTO in 2008. The 2008 *Law on ratification of the protocol on Ukraine accession to the WTO*, complemented by the instruction on ‘approving the plan of urgent measure to meet Ukraine’s commitments under WTO membership’,<sup>26</sup> specified changes to the trade regime in line with WTO commitments. Ukraine has also been negotiating or is a party to a series of regional and bilateral trade agreements, including the DCFTA set to enter in force in January 2016, which has lowered duty rates for goods and services imported from or exported to partner countries.

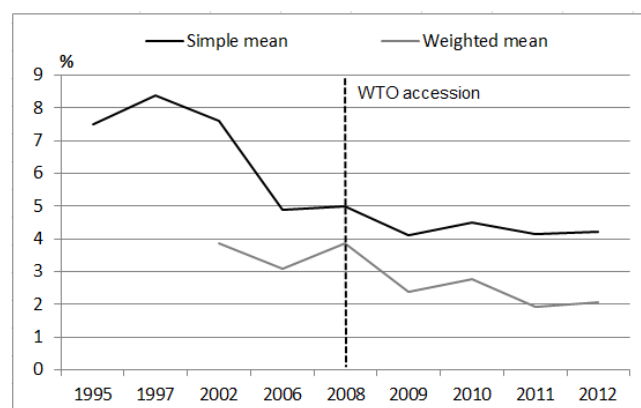
**Tariffs** have come down substantially since 2005, with a simple mean tariff rate for imports across all products reaching an average of 4.4% since 2008 (Figure 6). However, in 2012, the government announced its intent to re-negotiate tariff bindings on over 350 products that were agreed-upon as part of WTO accession (Auyezov and Miles, 2012). Such a move was thwarted after an international outcry and Ukraine revised its submission in May 2014, but the new government stated that it reserved the right to initiate a review of its customs duties under the WTO over a three-year period starting January 1, 2015.

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Cabinet of Ministers Instruction No.1570-p of December 2008.

**Figure 6. Applied tariff rates for imports of all products, 1995-2012**



Source: World Development Indicators.

Ukraine's accession to the WTO created a basis from which the **DCFTA** could be launched, allowing the EU to enter into a regional agreement with Ukraine. The talks on the Association Agreement with the EU were launched in 1997, followed by technical negotiations of the DCFTA that started in 2008. According to the State Statistics Service, by the late 2000s, the EU had edged past Russia as Ukraine's largest trading partner. The DCFTA aimed to build on this trend and form a joint economic space; this involves expediting Ukraine's approximation of EU trade legislation which has been ongoing since 2004, while lowering the remaining formal barriers to trade between the two partners. In April 2014, most EU import duties on Ukrainian agricultural products were provisionally removed by EU Regulation No. 374/2014, with a number of tariff-rate quotas set up for sensitive products, including wheat, maize, barley, pig meat, poultry meat, beef and dairy (Agra Europe, 2015). In October 2014, amendments to EU Regulation No. 374/2014 extended trade preferences through end-December 2015. These preferences will be incorporated into the full-fledged free trade agreement in the framework of the provisions of the Association Agreement.

As part of the DCFTA, Ukraine and the EU will eventually eliminate nearly all trade duties, i.e. covering more than 97% of tariff lines and over 95% of bilateral trade. The EU will abolish import duties on the majority of goods, amounting to 99% of tariff lines, within the first year, with additional reductions over the following seven years. Ukraine will have a slower schedule of abolishing import duties, within three to ten years, with a transition period of up to ten years envisaged for goods such as passenger cars and some agricultural goods (MEDT, 2015). Ukraine will partially reduce the duty rate on these remaining tariff lines by up to 60% over a decade. Duty free access will also be granted to a certain amount of goods, with the amount of goods depending on the specific good.

While tariffs have been on a steady path downward, the prevalence of **non-tariff measures (NTMs)**, in conjunction with the trade disruptions emanating from Russian embargoes, remains problematic. Prior to 2014, several types of NTMs were used in order to discriminate against imports, a trend that was particularly pronounced in the first decade of the transition (Bodenstein *et al.* 2003) but continues to persist. NTMs in Ukraine have been classified by Movchan and Shportyuk (2008) in three categories:

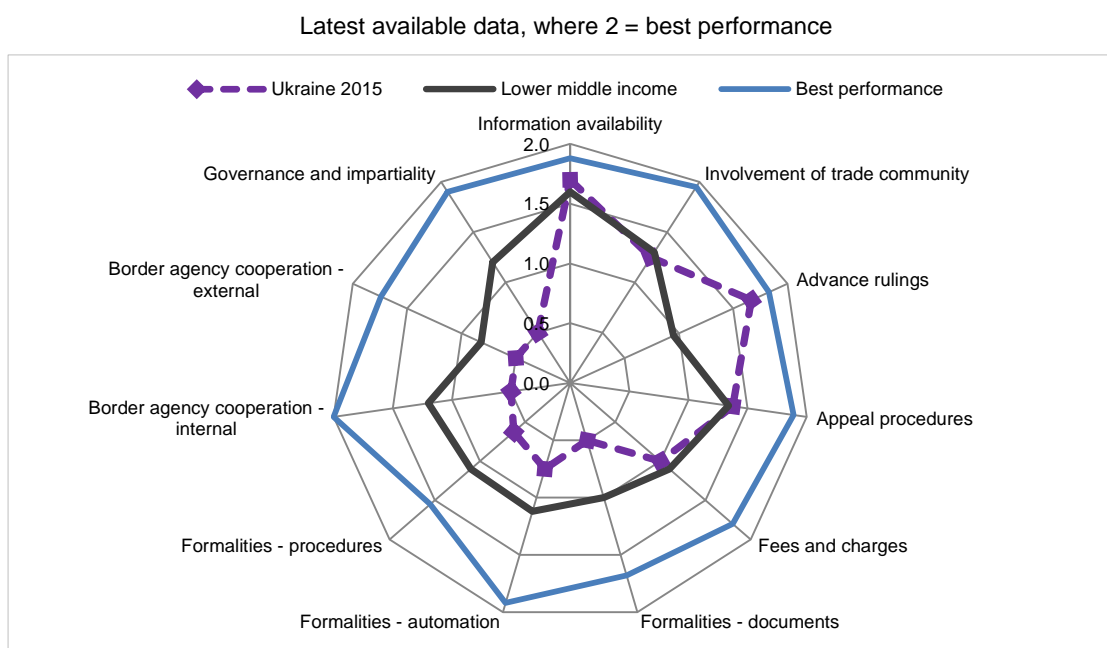
- Hard or outright barriers to trade, including quotas, licenses, and antidumping or competition-related barriers;
- Health-related barriers, including sanitary and phytosanitary (SPS) regulations, technical standards, mandatory certification, and veterinary inspections;

- Customs, i.e. the administrative and paperwork requirements from the customs service at the border, including prepayment of customs fees and taxes before releasing a shipment.

These NTMs are well captured by **OECD Trade Facilitation Indicators**. According to these indicators, Ukraine matches or exceeds the average performance of lower middle income countries in the areas of: information availability (publication of trade information, including on internet; enquiry points); involvement of trade community (consultations with traders); advance rulings (prior statements by the administration to requesting traders concerning the classification, origin, valuation method, etc., applied to specific goods at the time of importation; the rules and process applied to such statements); appeal procedures (possibility and modalities to appeal administrative decisions by border agencies) and fees and charges (disciplines on the fees and charges imposed on imports and exports) (Figure 7).

Performance has improved between 2012 and 2015 in the areas of information availability, appeal procedures and automation (electronic exchange of data; automated border procedures; use of risk management). In contrast, some ground was lost in the areas of the involvement of trade community, fees and charges, simplification and harmonisation of documents, streamlining of procedures, border agency co-operation (internal and external) and governance and impartiality. The performance in the other areas is stable.

**Figure 7. Ukraine's trade facilitation performance: OECD indicators, 2015**



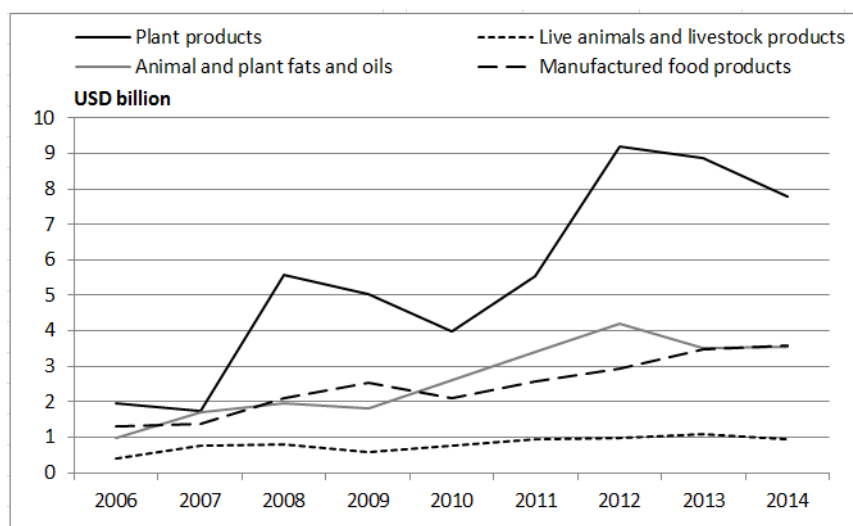
Note: The analysis is based on the latest available data as of May 2015 and the set of indicators constructed for countries outside the OECD area in "Trade Facilitation Indicators: The Potential Impact of Trade Facilitation on Developing Countries' Trade" (OECD Trade Policy Paper No. 144, 2013). "Best performance" denotes the average of the top quartile for each of the trade facilitation areas covered, across all countries within the database.

## Agricultural trade

Agriculture remains a key engine for the Ukrainian economy, accounting for 18.2% of exports in 2014, mostly composed of plant products (Figure 8). The volume of **agricultural exports** doubled over 2005-12, with the only pauses accompanying the global financial crisis of 2007-08 and the political events of 2013 and 2014. From 2004 to 2013, the value of agri-food exports more than quadrupled and their share in total exports almost tripled from 9.8% to 26.3% (Agricistrade, 2014). Over 2000-11, either sunflower oil

or wheat remained the highest value exports, a trend commensurate with these commodities also being the most widely planted (Table 4). The production of maize, accounting for 6.4% of all arable land in 2009, only began to skyrocket around 2011, with an expansion in the use of hybrid seed that dramatically increased yields.

**Figure 8. Value of agro-food exports, 2006-14**



Note: Plant products include seedlings and other trees, vegetables, eatable fruits and nuts, cereals, flour products, and oilseeds; live animals and livestock products include live animals, meat and meat preparations, fish and crustacean, milk and milk products, eggs, honey, and other animal products; manufactured food products include products with meat or fish, sugar and sugar confectionery, products with cocoa, grains or vegetables, alcoholic and non-alcoholic beverages, vinegar, and tobacco.

Source: State Statistics Service of Ukraine.

**Table 4. Major agricultural exports, 2014**

Commodity	Value Million USD	Quantity Thousand tonnes	Unit value USD per tonne
Sunflower oil	3,550.60	4,336.90	818.69
Maize	3,350.70	17.56	190,851.30
Wheat	2,290.70	10,543.69	217.26
Barley	841.90	4,165.88	202.09
Sugar Confectionery	123.90	67.48	1,836.02
Cheese	120.10	19.46	6,172.84
Sunflower Seeds	43.90	73.90	594.07
Cereal and grains	10.80	29.73	363.29
Millet	10.20	44.18	230.89
Rye	9.30	58.89	157.91
Rice	2.40	3.88	618.68
Oats	1.60	8.98	178.09

Note: Unit value is value in current USD divided by quantity exported, as per FAOSTAT definition.

Source: State Statistics Service of Ukraine.

The **DCFTA** will further reduce tariffs for approximately 80% of Ukraine's agricultural tariff lines with the EU, while lowering EU tariff rates from their high levels (a maximum ad valorem equivalent specific import duty of 600%) to zero for agro-food imports. The EU estimates that, when fully phased-in, the benefits to Ukraine will be worth USD 438 million for agricultural products and USD 70 million for processed agricultural products (European Commission, 2013). The Institute for Economic Research and Policy Consulting estimates that Ukraine will see an increase in export of its agricultural and food products of approximately 20%, with the main gains coming in tobacco, cereals, and meat, as well as an increase in agricultural imports of 7%, coupled with the benefits of trade generation in goods that were previously not traded between the two economies (Ryzhenkov *et al.*, 2013).

In 2012, Ukraine ratified the **Agreement on Free Trade** in the CIS area, along with Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, and Tajikistan. Beyond maintaining the existing duty free trade, the parties committed: not to increase import duties on goods exempted from free trade; to apply no new restrictions on mutual trade; to abolish all quantitative restrictions from free trade according to established schedules, except those specified in Article XI of the GATT; and to implement scheduled removal of export duties (OECD, 2013a). In addition, Ukraine has a free trade agreement with the European Free Trade Association (EFTA) and bilateral trade agreements with Montenegro and the Republic of Macedonia.

The impact on agricultural trade of these agreements has varied in each case:

- Agricultural trade between Ukraine and CIS countries increased by 4% in value over 2013, with exports increasing by 0.3% and imports by 16.1% in value;
- Imports from EFTA increased by 7.3%, with the largest increase coming from Iceland - an incredible growth of 57.6% of agricultural goods. However, agricultural exports decreased by approximately 12.9% over 2013, although agricultural exports to Norway increased by an impressive 74.5% in value. MAPF notes that the range and volume of products is small, concentrated on fruit, nuts, oil seeds, and food industry waste;
- Given the much smaller sizes of Montenegro and Macedonia, gains in trade were muted, but mostly favoured Ukraine's exporters to Macedonia - a 250% increase from 2012 to 2013 (MAPF, 2015).

In addition, MAPF supports the government in concluding and implementing FTAs with Canada, Turkey, Serbia, Israel, and Viet Nam.<sup>27</sup> MAPF classifies Turkey as the highest priority, with total exports from Ukraine totalling nearly 15% of the amount sent to the EU in 2013. Agricultural exports could increase as Turkey's levels of tariff protection remain high, the average weighted bound tariff for agricultural products being 61%. Trade agreements are also being discussed with Jordan, Egypt, Albania and South Korea (MAPF, 2015). Furthermore, the list of agricultural commodities that can be exported to China, which is now limited to corn, rapeseed and soybean, should be expanded soon (EBA, 2015).

Despite these gains in lowering tariffs, the focus has shifted in recent years from tariffs to **NTMs**, with hard NTMs persisting to a much longer extent in agriculture than in the broader economy. The *Law on foreign economic activities* reserves the right to periodically apply licensing and export quotas. Food security is a continuing reason for introducing restrictions on agricultural exports. If MEDT determines that there is an imbalance in a certain good, it alerts the Cabinet of Ministers, which then approves the list

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<sup>27</sup> Minister for Agrarian Policy and Food, Alexey Pavlenko, quoted in 'Ukraine to sign FTA with Canada, Israel, Turkey and other countries', APK-Inform Agency, 18 March 2015, <http://www.apk-inform.com/en/news/1043425#.VtF VfmUeSo>.

of goods subject to export restrictions for that year. These NTMs may have a significant impact on trade flows (Box 3).

Hard NTMs have targeted in particular **grain exports**. In 2006, a resolution by the Cabinet of Ministers to licence grain exporters was transformed into a quota system after resistance from private actors who set an embargo on grain exports in protest (Crane and Larrabee, 2007). This quota system led to price reductions in flour and bread and created a powerful deterrent to investment in the grain industry as grain storage facilities were overwhelmed with grain that could not be exported. The quota system was dropped in 2008 as part of WTO accession, but in October 2010, the Cabinet of Ministers voted a resolution requiring quotas and licenses for exporting grain (Krasnozhan, 2011).

Facing an outcry from private producers, these restrictions on grain exports were removed and transformed into export taxes in 2011, and into a Memorandum of Understanding system in 2012 (Götz *et al.*, 2013). This system allows the government to set the extent of grain supply and export quantities with major grain producers. At the beginning of the marketing year, 'agreed' export volumes for wheat, barley, and maize are established. If exports of any type of grain reach certain levels of the agreed volume, the Ministry could review conditions of trade, implying the possible introduction of export restrictions. This system shifts responsibility for monitoring exports to the largest agro-processors but keeps the government involved in determining what is necessary for domestic consumption. In practice, given the good harvests from 2012-14, no export restrictions were applied (Cramon and Raiser, 2006).

Furthermore, the policy on **VAT reimbursement** and exemption remains unclear and unpredictable. The current VAT regime on exports of grains, oilseeds and fibre crops exempts eligible exporters from VAT payment, making VAT refunds unnecessary. The exemption was introduced in 2011 to be effective until January 1, 2014, but was extended until January 1, 2018. However, in July 2011, the *Law on amendments to the tax code* also came into force, mandating VAT reimbursements (but not exemption) for exporters who were producers or first buyers of grain, i.e. only if the grain was produced on land which they owned or permanently used or if they had bought the grain directly from grain producers (Kulyk *et al.*, 2014). In March 2014, this law was superseded by the *Law on the prevention of the financial disaster and creation of conditions for economic growth*, which temporarily reinstated the VAT exemption for all grain exporters, except producers. This policy remained in effect until 31 December 2014, but in 2015 caveats were added explaining that producers and first buyers were ineligible for VAT refunds and had to pay VAT on their exports (MAPF, 2015). A further proposed law indicates that producers or first buyers would be paid back at a rate of respectively 100% and 50% (CA, 2015). A related issue lies in the delay in refunding VAT. In July 2013, VAT arrears amounted to USD 545.8 million, while USD 1 334.3 million worth of refunds was being disputed in courts. Bribes continued to be solicited to obtain refunds and fraud reportedly cost the government upwards of approximately USD 1.33 billion in 2014 (OECD, forthcoming).

The yearly **quotas on some agricultural imports** also create uncertainty. Since 2010, a quota of 267 800 tonnes has been set for raw cane sugar imports. The import duty rate is 2% of the customs value for raw cane sugar within the quota and 50% for sugar above the quota (FAO, 2013). Sugar importers must be licensed by MEDT, subject to approvals by the State Reserve Agency and MAPF. This policy appears to be discretionary as in 2013 the quota was not imposed and the 2% duty rate applied on all imports of sugar. In addition, in February 2015, Ukraine made recourse to GATT provisions permitting special measures to stabilise the balance of payments. A 5% to 10% import tariff surcharge was introduced on all imports for a period of twelve months. The maximum rate of 10% is applied to all agro-food imports (OECD, 2015c).

In 2012, the 2 280 tariff lines of agricultural and related products faced approximately 46 000 instances of **health or customs-related NTMs** (Ryzhenkov *et al.*, 2013). The most frequent measures encountered, in addition to the hard NTMs above, include: (i) health: licensing of export and import activities (such as alcohol and tobacco products), various SPS and technical barriers, state registration and

permits for certain imports (e.g. pesticides), discretionary and automatic licensing, and high certification and licensing fees; (ii) customs: export licensing, mandatory exportation of certain products processed under “give-and-take” schemes (Taran, 2008). For instance, 2012 and 2013 have seen poultry meat and offal, lard, insecticides (except for veterinary medicines), fungicides, herbicides, plant growth regulators, and rodenticides (except for veterinary medicine) subjected to import licenses.<sup>28</sup> Imports of live animals face the highest amount of NTMs, likely due to high phytosanitary constraints (Ryzhenkov *et al.*, 2013).

### Box 3. Quantifying the effect of NTMs

The effect of NTMs on agricultural imports and exports has been quantified in an analysis undertaken by the Center for Social and Economic Research (CASE) in 2014. The analysis reveals an ad valorem equivalent (AVE) of barriers to imports in agriculture, forestry, and fisheries products of 166% from the EU 28 and an AVE of 103% on exports of these products. If an equivalent average tariff was imposed on agricultural goods exported from Ukraine to the EU 28, it would cost 103% of the value of the good to export it. This tariff-equivalent rate for imports, while incredibly high compared to Ukraine’s formal tariff rates, is actually encouraging in the case of the EU 28, as AVE rates on agricultural imports from Russia and the Eurasian Customs Union (ECU) are even more prohibitive: 169% in the case of Russia, and a significantly higher 238% for the ECU. Thus, Ukraine’s NTMs in agriculture have not really benefitted one market to the favour of another, but rather handicapped all of Ukraine’s trade partners to a large degree.

Source: CASE, 2014.

The new government started to **tackle** this myriad of NTMs:

- The number of NTMs on imports in regards to animal and animal products is likely to have declined in the past two years as a result of the approximation to the EU legislation. The *Law No. 191-VIII on deregulation* removed the requirement of permits for importing certain goods, including animals, animal products, reproductive materials, biological products, pathological materials, veterinary preparations, substances, feed supplements, premixes, or feeds (Ostapenko *et al.* 2014);
- A risk-based system has been set out for overseeing border procedures in animal health, classifying goods according to risk along the lines of EC Decision 94/360.<sup>29</sup> This should limit border inspections to only the highest-risk animal and animal products;
- By November 2013, the government had harmonised 65% of its agricultural SPS standards with European ones and a further 40% of the standards in the food industry;<sup>30</sup>
- Passed in 2013 and made effective in January 2014, the *Law on Customs Tariffs* intends to harmonise goods nomenclature and foreign trade documentation with international standards and to streamline customs clearance;

<sup>28</sup> According to the Cabinet of Ministers Decree 1360 dated 26 December 2011 and Decree 1201 dated 19 December 2012.

<sup>29</sup> Order of the Chief State Veterinary Medicine Inspector No. 3.

<sup>30</sup> Minister of Agrarian Policy and Food, Mykola Prysiazhniuk made this announcement in late 2013, quoted in ‘Prysiazhniuk: More than half of international agro-industry standards adopted in Ukraine’, UKRInform, 11 November 2013, [http://www.ukrinform.ua/eng/news/prysiazhniuk\\_more\\_than\\_half\\_of\\_international\\_agro\\_industry\\_standards\\_adopted\\_in\\_ukraine\\_313176](http://www.ukrinform.ua/eng/news/prysiazhniuk_more_than_half_of_international_agro_industry_standards_adopted_in_ukraine_313176).



- In 2012, the new *Customs Code* attempted to simplify the customs valuation procedures and introduce electronic declarations, a system-wide improvement that could disproportionately benefit the agricultural sector (Ryzhenkov *et al.*, 2013). Greater transparency is still needed in the valuation process, however, in order to avoid the overvaluation of agricultural imports and garner higher tax revenues (US Department of Commerce, 2014). The electronic VAT system was on test mode from the 1<sup>st</sup> of January to the 30<sup>th</sup> of June 2015 and has been successfully launched on a permanent basis on the 1<sup>st</sup> of July 2015 (Maydanyk, 2015).

These processes are in their infancy and the customs administration would need to be further reformed in order to lessen the burden on agricultural importers and exporters. Donor assistance to customs may help, but the EU Border Assistance Mission to Moldova and Ukraine is slated to end its activities in 2015 after having been extended already three times.

## CHAPTER 4. INFRASTRUCTURE DEVELOPMENT

Well-developed rural infrastructure, including good irrigation networks and transportation and storage systems as well as a reliable access to energy, can effectively attract private investors in the agricultural sector and increase competitiveness. This chapter examines the state of agriculture-related infrastructure for production, storage, transport and energy and existing policies to enhance such infrastructure.<sup>31</sup>

### Production and storage

As regards **crop production**, significant investment is needed in three important infrastructure sub-sectors: irrigation, grain storage, and greenhouses.

As noted in Chapter 2, **irrigation infrastructure** constrains the expansion of agricultural production. Rehabilitating irrigation canals in Southern Ukraine that are rapidly deteriorating should be a priority to increase agricultural production.

**Grain storage** is crucial throughout the supply chain, from producers through to processors and exporters, in order to avoid spoilage and loss. According to estimates,<sup>32</sup> Ukraine had approximately 40.1 million tonnes of grain storage capacity in 2011, 70% more capacity than in 2001 (Acs *et al.*, 2013). However, the prevalence of floor-based granaries (as opposed to silos and elevators), coupled with a lack of capacity and low efficiency of drying technology and inadequate transport system, entails that storage capacity would need to double by 2020 (Stoyozhka, 2014).

Investments have been made in recent years, mostly by the private sector. The largest grain silos are owned by the state, through for instance the State Food and Grain Corporation (Kobuta *et al.*, 2012). The remainder of storage facilities have been built by international agribusiness firms, including Archer Daniels Midland Co., Cargill, and Louis Dreyfus Commodities Group (Bunge, 2014). The agro-holding Nibulon has substantially invested in storage facilities, concentrating on storage at ports. In 2011, private companies built two cereal terminals in the ports of Kherson and Nikolayev to assist in the export of cereals to Egypt, with the second silo in Kherson holding three million tonne loading capacity and the ability to offload a volume of 350 tonnes per hour by rail or 300 tonnes per hour by road (Riabko, 2014). Grain terminal capacities increased from approximately 7 million tonnes per year in 1998-99 to 47.1 million tonnes per year in 2012-13, with most investments made in the past five years (Agricistrade, 2014).

Recognising the increasing needs for storage facilities, the government has made some progress in lowering the cost of grain storage and removing impediments to investing in storage infrastructure. With the *Law No. 191-VIII on deregulation*, grain warehouses are no longer obliged to undergo certification procedures and grain products do not need quality certificates anymore, which opens up the grain warehouse market and cancels a requirement that was often observed in the breach but not in practice (GAIN, 2015). This represents significant cost savings to law-abiding businesses: agricultural businesses

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<sup>31</sup> Please refer to (OECD, forthcoming) for further details on transport and energy infrastructure.

<sup>32</sup> There is no official data on total grain storage capacity, as grain producers and processors are not obliged to report on the size of their facilities.

spent over USD 312 000 on grain silo certifications in 2012 and over USD 15 million on grain quality certification from 2011 to 2012 (WB, 2014b). Thus, the grain and seed storage market could be an excellent area for international investment, especially given the preference of Ukrainian farmers for foreign-made technology in grain storage (US Department of Commerce, 2014).

**Greenhouses** have expanded over the last decades but their quality remains low. They have allowed the year-round production of staple vegetables and fruit, such as tomatoes and cucumbers, and the introduction of more exotic fare, such as bananas (Rozendaal, 2013). Showing slow but steady growth since independence (estimated at approximately 5% per year), the greenhouse sector has been supported by Dutch investors, given their acknowledged position as world leaders in this technology. Plastic and glass greenhouses would cover around 8 500 ha and tunnels a further 6 000 ha. However, the quality of greenhouse infrastructure remains poor, as in 2011, only 60 ha of greenhouses could be considered modern (Duis and Streljok, 2011). The largest challenge faced by greenhouse growers is energy inefficiency as energy costs may comprise as much as 60% of expenditures from greenhouses (AgriEvent, 2014). In order to satisfy the huge domestic demand for cucumbers and tomatoes, investment in energy-efficient technologies would be needed.

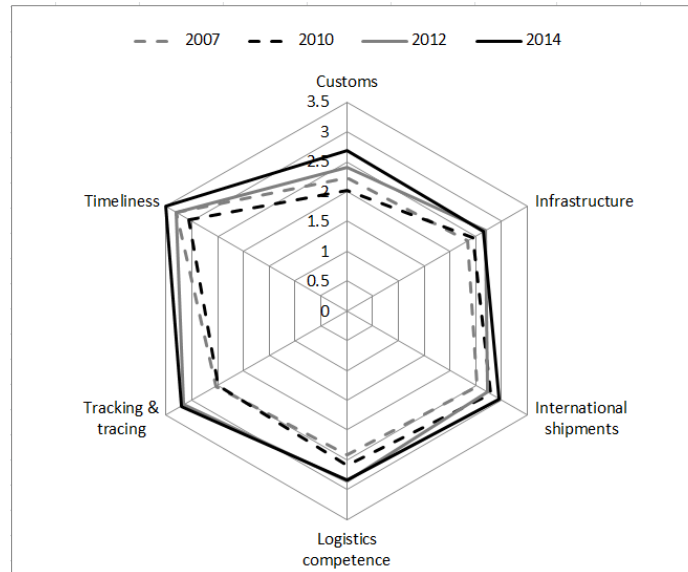
As regards **livestock**, some state support has allowed large farmers to expand production facilities, and private investment is needed now rather in processing and storage facilities, particularly slaughterhouses. In 2011, the government adopted a programme of investment in the construction and reconstruction of livestock production facilities, with investors eligible for reimbursement of up to 50% of the cost of facility repair/construction. This programme, which lasted until 2014, led to increased livestock production by large dairy farmers, who were able to fully utilise the rebate and who now supply 30% of raw milk. The state slaughterhouse network has 18 abattoirs in 17 regions, but these abattoirs are characterised by outdated equipment, antiquated technologies, and substantial inefficiency in the waste recovery process (Kalnitskaya, 2013). Attracting private investment is difficult, as the return on investment for independent slaughterhouses has averaged -15%. Stand-alone slaughterhouses cannot compete against vertically-integrated meat processing facilities that can reduce costs and subsidise internalised slaughtering. Cold storage facilities for meat preservation have not been internalised by large producers, and currently lack adequate funding (FAO, 2014a).

## **Transport**

While Ukraine has improved its ranking in terms of logistics performance, the capacity and quality of its infrastructure often remain inadequate. According to the World Bank's logistics performance index (LPI), Ukraine has jumped up to 61<sup>st</sup> in 2014 from 102<sup>nd</sup> in 2010, an impressive gain in just four years. It has improved substantially in several key areas of logistics necessary for agricultural trade, including in the ease of arranging competitively priced shipments, competence and quality of logistics services such as transport operators, and the ability to track and trace consignments. However, infrastructure and customs are the lowest-scoring components of LPI (Figure 9).

The logistics costs of moving grain from Ukrainian farms to Black Sea ports are approximately 40% higher than costs for comparable services in France and Germany, and about 30% higher than in the United States. As a result, farmers in Ukraine receive lower shares of world market prices. Foregone revenues would amount to between USD 600 and 1 600 million each year. The lack of regulatory clarity, the sub-optimal management of public assets, underinvestment in rail transport and the excessive use of road transport can explain these high logistics costs (WB, 2015b).

**Figure 9. Logistics Performance Index, 2007-14**



Source: WB, 2014a.

Most agricultural trade uses the well-developed **rail network** as Ukraine enjoys one of the densest rail network in the world (OECD, 2013b). The rail network comprises both passenger and freight trains and has a utilisation rate three times that of similar railways in the EU (Ojala, 2010). Most agricultural shipments, especially in grain, go via railways; in 2012, 70% of grain shipments and 67% of all freight used railways, a further 27% used roads, and only 3% used river transport (Acs *et al.*, 2013). Moreover, the volume of agricultural goods travelling via railways has doubled over the past four years, from 12.2 million tonnes in 2010 to 25.2 million tonnes in 2014. In September 2014 alone, the state rail operator loaded 43 200 rail cars' worth of grain totalling 2.8 million tonnes of grain, an increase of 50% over the same period in 2013 (Ukrzaliznytsia, 2014).

This rapid expansion of demand for grain transport has unfortunately not been met by a corresponding increase in supply. Indeed, the **state rail monopoly**, Ukrzaliznytsia, is often cited as an impediment to the expansion of agricultural trade:

- Like other SOEs, it depends on the government budget and has been unable to build new tracks or to increase the number of grain carriages; in fact, with an average age of grain carriages of approximately 30 years, it plans to retire large numbers of its rolling stock in the coming years, further exacerbating the supply constraints;
- Its monopolistic position has not only led to low provision of infrastructure, but also to high prices for users. In the second quarter of 2013, transportation costs of moving wheat from field to export ports was estimated at one third of the average domestic market price, several times higher than its immediate Black Sea competitors and in contrast to less than one fourth of the average domestic price for moving wheat from Kansas and North Dakota to ports in the Pacific Northwest (USDA, 2013). These high costs can also be traced to the company's practice of subsidising unprofitable passenger transport with profitable freight proceeds (Ojala, 2010);
- As Ukrzaliznytsia has exclusive control over the usage of carriers, private companies do not invest into their own fleet (US Department of Commerce, 2014). According to the Ministry of

Infrastructure, only approximately 13% of the rolling stock is privately-owned. In addition, grain carriers are used for only 6-7 months out of the year around harvest time, which deters private investment in an environment where infrastructure is on the wane and the use of the rail subject to intensive bureaucratic procedures.

**Road transport** plays a much smaller role in agricultural trade, the network of the road network being roughly one third of the average of Eastern Europe and Central Asia (OECD, 2013b). Rural roads are state- or municipally-owned, and thus their maintenance and modernisation are funded from the state and local budgets. According to the state agency charged with overseeing road development, Ukravtodor (under the Ministry of Infrastructure), in late February 2015, 88% of roads out of a total of 169 647 km<sup>33</sup> required repairs or reconstruction, with almost 40% of them failing to meet requirements for durability. Only 46% of the bridges and overpasses were in satisfactory condition with the rest being in poor to dangerous states, due to their extreme age, with as many as 21% of bridges and overpasses being built prior to the Second World War and 51% built during the 1950s through the 1970s (Ukravtodor, 2015).

**Vehicles** for carrying agricultural products have been in short supply, which has recently been exacerbated by the conflict in the east that mobilised some vehicles normally used for grain transport (AACU, 2014). Additionally, 23% of the country's transport stock is at risk of being removed from operation due to the dire financial situation of the owners, exacerbated by currency fluctuations. This lack of basic transport equipment has contributed to long waits and thus agricultural losses of 10% over 2012-13 and 11% in 2014. The Association of Agricultural Carriers of Ukraine (AACU) has begun to implement an electronic logistics system to serve as a matching service, searching for available transport carriers in a local area as need for their service arises.

**Water transport** accounted for only 2% of agricultural transport as of January 2015, a proportion comparable to its use in all freight transport. As nearly every other facet of agricultural infrastructure, seaports are state-owned and sea and major inland waterways are governed by the Ministry for Infrastructure. The *Law on domestic river transport* under development is identified under the government coalition agreement as a priority for passage in 2015. It would allow establishing common rules for inland waters and delineating a method of privatisation (instead of long-term concessions) of ports where deemed applicable. If additional investment can be channelled to inland waterways, including dredging operations and improvement of port facilities, marine transport could emerge as an alternative to rail transport (Ojala, 2010).

To respond to the need for **expanding existing transport infrastructure**, several major public investments in infrastructure are planned: dredging of the river beds of Dnipro and Southern Bug, increased fleet of trucks, and reconstruction of 15 linear elevators for the State Food and Grain Corporation (MAPF, 2015). In addition, despite the preponderance of the state in providing road infrastructure, large agro-holding companies have built such infrastructure to protect their investment in agricultural processing. For example, Mriya Agro Holding has financed the construction of local roads for both agricultural transport and passenger cars (Sarna, 2014).

The government has also explored the possibility of road concessions under the *Law on concessions for construction and operation of motor roads* adopted in 2008, in order to attract more private investment, but only pilot projects have been mooted to this point (Interfax Ukraine, 2014). Promoting

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<sup>33</sup>

Including Crimea and Sevastopol.

public-private partnerships (PPPs)<sup>34</sup> may help address infrastructure needs (Box 4), although building road and water transport infrastructure may require going beyond PPPs towards full privatisation.

#### **Box 4. Public-private partnerships in agricultural infrastructure**

Public-Private Partnerships (PPPs) can enhance the co-operation between public and private actors, thereby increasing returns from public funds through cost and risk sharing and securing contributions that are more adapted to both public and private demand. For both the public and private sectors, the benefits from PPPs come from the pooling of resources and the complementarity of capacities. PPPs can aid private investment by sharing risks, providing strategic input and minimising bottlenecks. The decision for the government to adopt a PPP approach to pursue a given objective should be guided by the balance of costs and benefits, compared with other alternatives. If properly implemented, PPPs can support the development of efficient and competitive supply chains by enhancing rural infrastructure, increasing access to credit, providing market-oriented R&D, and improving product quality.

The main conditions for forming a successful PPP include: common objective, mutual benefits, complementarity of human and financial resources, and clear institutional arrangements. Good governance, transparency and public leadership are essential to ensure success. Consultation with stakeholders and the establishment of dispute settlement and exit strategies are also important.

In many countries, PPPs have been an appropriate vehicle for providing agricultural infrastructure, particularly in remote locations where private sector participation is highly risky. While PPPs have been authorised for 16 years under the Law on concessions and the Law on PPPs was passed in 2010, no successful PPPs have emerged in agricultural infrastructure, mainly due to policy instability which discourages long-term contracts.

Allowing the provision of various infrastructure services, including roads, ports and grain silos, under a single contract, i.e. infrastructure bundling, and supporting foreign competition, may enable private sector participation. Indian firms have been recognised in recent years for providing large-scale infrastructure. Allowing them to compete with Ukrainian and other regional firms would help to deliver high quality infrastructure at low cost. This would also reduce corruption, limit the selection of favoured firms, and bring in international technology.

Water user associations can serve as PPPs and help improve irrigation infrastructure. The interposing of these associations in-between municipal governments and individual end users can professionalise the management, operations, and maintenance of irrigation infrastructure, while cushioning commercial risks. This approach has been used around the world and proven to be an excellent application of the subsidiarity principle: those who need water on a daily basis are those who better manage that resource.

Source: Warner et al. 2008; Invest Ukraine, 2012; MAPF, 2015; OECD, 2013d.

## **Energy**

As traditional energy sources are costly and unsecure, the government has taken steps to promote renewable energy production, particularly from biomass.

The agricultural sector relies mostly on **natural gas and electricity** as energy sources. In 2013, natural gas made up 24% and electricity 10% of energy consumption in the sector. However, access to gas is at risk due to the political tensions and access to electricity is a time-consuming process:

- Most of the gas is imported, which makes energy security is tenuous, a fact that the government is working to remedy via diversification away from gas;

<sup>34</sup> OECD defines PPPs for the delivery of public services as “long term agreements between the government and a private partner whereby the latter delivers and funds public services using a capital asset and sharing the associated risks”.

- Nearly every single (99%) agricultural enterprise obtains its electricity from the state-owned electricity grid, a process burdened with bureaucratic delays. According the 2015 World Bank Doing Business report, Ukraine is one of the most difficult places to obtain electricity, ranking 185<sup>th</sup> out of 189 countries. Of the 277 days it takes an average firm to connect to the grid, 150 days are spent awaiting various permissions, stamps and signatures from authorities to approve ‘energisation’.

Recent efforts have been made to improve **energy transmission**. While much of Ukraine is covered by the national grid, private companies operate transmission lines connecting to the grid and are responsible for the safety, modernisation, and development of local grids. The infrastructure for transmitting energy is of average quality with losses of approximately 3.4% in transmission. The World Bank has attempted to reduce energy losses via a ‘Power Transmission Project in Support of the Energy Sector Reform and Development Programme’ that renovated sub-stations and built 73 km of new transmission lines but the programme is set to close at the end of 2015.

Ukraine remains one of the most energy and carbon intensive European countries per unit of GDP. It has huge potential for GHG emissions abatement by modernising the electricity sector and improving **energy efficiency**, which would also contribute to energy security (IEA, 2012). The implicit subsidy of electricity prices has been linked to inefficient energy use, especially in agriculture. Indeed, prices set by the National Electricity Regulatory Commission have remained steady at approximately USD 0.01 per kilowatt hour since mid-2010 (Ogarenko and Hubacek, 2013). Energy efficiency in the agricultural sector is no more than 22% to 43% of the EU level depending on the region (System Capital Management, 2013). In particular, greenhouses tend to be highly inefficient, with energy making up about 47% of the cost of greenhouse vegetables, as compared to 27% in the Netherlands (Van Winden, 2013). Ongoing reforms should increase the electricity price, multiplying it by 3.5 by April 2017 (CA, 2015).

**Alternative sources of energy** have developed in recent years. The share of renewable energy in total primary energy supply (TPES) has grown over the last twenty years from 0.5% in 1990 to about 2% in 2010. Hydropower accounted for 80% to 85% of the renewable energy supply in 1990-2005, followed by biomass. The share of solid biomass has significantly increased since 2006 and accounted for nearly 45% of the renewable energy supply in 2010. Wind power and solar energy have seen rapid growth in the last few years. Alternative fuels tend to be a much lower source of energy for agricultural producers. Ukraine produces about 100 000 tonnes of biodiesel per year at small installations. Bioethanol is produced at six small plants at about 50 000 tonnes per year, and one large plant produces 120 000 tonnes to 150 000 tonnes per year of bioethanol (IEA, 2012). The Updated Energy Strategy to 2030 foresees a nearly twenty-fold increase in biofuel production, i.e. bioethanol and biodiesel production, between 2010 and 2030 (Table 5).

**Table 5. Projected biofuel production, 2015-30**

Million tonnes

	2010	2015	2020	2030
Bioethanol	< 0.1	0.3	0.6	1.1
Biodiesel	0	0	< 0.1	0.8

Source: Reference scenario of the Updated Energy Strategy to 2030 (IEA, 2012).

**Biomass** is often highlighted as the energy source with the greatest potential (OECD, 2012b), but the high costs and the lack of availability of the necessary equipment hinder its development. Agricultural residue is often touted as a promising input for biomass conversion. It can help generate energy close to the

source of its raw inputs. However, in 2013, only 1% of the 120 million tonnes of biomass feedstock (mainly straw of cereals, corn residue such as stalks and leaves, and animal and agro-industrial wastes) was used for electricity and heat production, 54% was processed for other purposes and 45% was wasted (Tebodin, 2013). The high cost of straw fired boilers is prohibitive to many farmers: equipment, installation, and maintenance costs can run well over USD one million (Geletukha *et. al*, 2010). This may be due to the lack of competition as only two Ukrainian firms, UTEM and Brig, manufacture boilers. As of 2014, only approximately 100 boilers were operating, of which 45 were foreign-manufactured (Geletukha and Zheliezna, 2014).

The **government** has taken steps to increase renewable energy production. It has set a target for renewable energy to reach 11% of energy supply by 2020 (MEDT, 2105). The huge gap between the current level of biomass production and its potential is partly due to the direct subsidies to conventional energy sources. In light of the difficulty of removing these subsidies, policies focused on green tariffs and tax incentives to support the development of renewable energy (Agricistrade, 2014). A National Action Plan for Renewable Energy until 2020 approved by the Cabinet of Ministers in October 2014 provides measures for generating electricity from renewable energy sources. Several bioenergy development programmes are operating, including a national programme for improving energy efficiency and developing energy production from renewable sources and alternative fuels in 2010-15.<sup>35</sup> MAPF also developed a sectoral programme for improving energy efficiency in 2010-15 (MEDT, 2015).

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<sup>35</sup> It was approved by the Cabinet of Ministers in March 2010 and is implemented by the state energy efficiency agency.



## CHAPTER 5. FINANCIAL SECTOR DEVELOPMENT

Efficient financial markets can allocate capital to innovative and high return investment projects of both large and small agricultural investors, thus increasing revenues and generating economic activities. This chapter examines the various ways that agribusiness enterprises can access finance, focusing particularly on the banking sector as the major provider of finance, and the related challenges.<sup>36</sup>

Although Ukraine's banking system is relatively well developed, access to finance remains limited, especially for SMEs. In 2012, Ukraine had the highest share (76%) of companies reporting credit constraints in Eastern Europe and the Caucasus, from only 50 % in 2008.<sup>37</sup> Up to 75% of agribusiness companies report poor access to finance as a key barrier to further expansion and investment (IFC, 2011). In the 2013-14 Global Competitiveness Report, 16.7% of respondents in Ukraine identified access to finance as the number one obstacle to doing business (in a single choice survey), up from 15.3% in 2012-13, and ahead of corruption and inefficient public administration.

As a result, internal self-financing in the form of retained earnings (60%) and personal savings (13%) remains the most prominent source of funding. About half of the producers sell 80-100% of their new harvest immediately to finance their working capital (IFC, 2011). Liquidity issues in the banking system, political uncertainties, and external risks which arose in 2014 have adversely affected the accessibility of financial resources.

### **The banking sector**

While the banking sector represents 95% of the total assets of the financial sector, its asset growth has been nearly flat in the past few years. In 2012, its gross loan portfolio expanded by only 2%, driven mainly by loans to the corporate sector. In 2013, only 19 % of firms used bank credits, ten percentage points lower than in the Eastern Europe and Caucasus region.<sup>38</sup> Banks limit their lending to the agricultural sector that they perceive as relatively risky, despite the fact that the rate of overdue loans in agriculture has been consistently lower than in many other sectors in recent years (Table 6). In 2013, the agricultural sector grew by 13%, the largest growth of all economic sectors, but it represented only 6% of the loan portfolios of commercial banks (Figure 10).

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<sup>36</sup> For further details on the financial sector, refer to (OECD, forthcoming).

<sup>37</sup> Data from BEEPS V (2011-14), the fifth wave of the Business Environment and Enterprise Performance Survey, administered by the EBRD and the World Bank (dataset available at <http://ebrd-beeps.com/>). Credit constrained firms reported needing a bank loan, but either decided not to apply for one or had their loan application rejected. The Eastern Europe and Caucasus region comprises Ukraine, Moldova, Belarus, Georgia, Armenia and Azerbaijan.

<sup>38</sup> Data from BEEPS V (2011-14).

**Table 6. Overdue loans of commercial banks by economic sector, 2011-14**

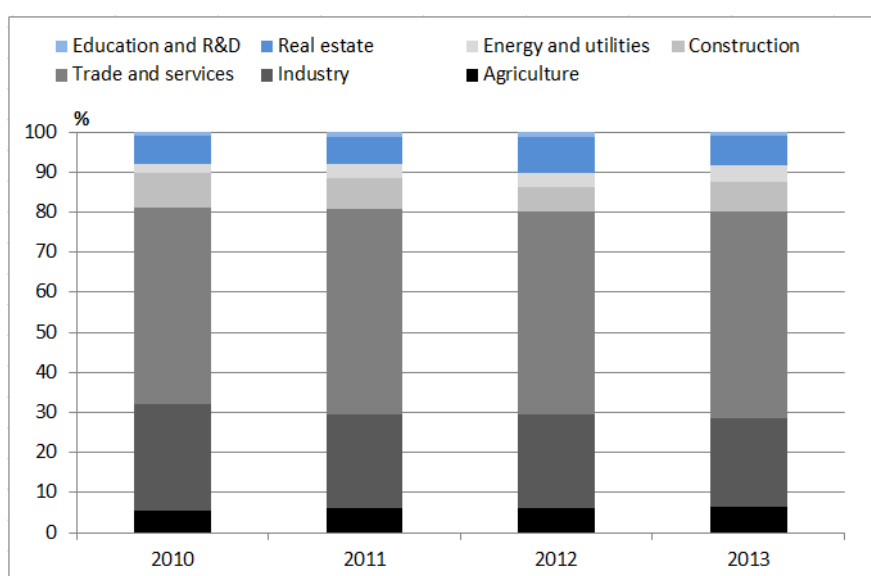
Percentage of loan portfolio

Sector	2011	2012	2013	2014
Agriculture	8%	7%	6%	11%
Industry	11%	9%	10%	18%
Trade and services	9%	8%	7%	10%
Construction	14%	15%	9%	11%
Energy and utilities	1%	4%	1%	6%
Real estate	12%	10%	10%	10%
Education and R&D	7%	9%	3%	44%
<b>Average</b>	<b>10%</b>	<b>9%</b>	<b>7%</b>	<b>12%</b>

*Note:* According to NBU definition, overdue loans comprise outstanding loans which have not been repaid within the term defined in the loan agreement. They differ from non-performing loans. The latter are defined as doubtful or lost loans that are for instance more than 90 days overdue or for which, according to national oversight norms, loan servicing remains weak or unsatisfactory.

Source: OECD calculations based on NBU, 2015.

**Figure 10. Loan portfolio of commercial banks by economic sector, 2010-13**



Source: NBU, 2015.

Several reasons can explain a difficult access to bank loans, particularly by SMEs:

- **High and volatile interest rates:** in 2012-13, they fluctuated between 15% and 23% for loans to agricultural producers in national currency and between 7% and 12% for loans in foreign currency. But interest rates on loans to small-scale enterprises can reach 40%. Foreign currency loans bear lower interest rates but requirements are more demanding as they are treated as high risk transactions (UCAB, 2014a and 2015);

- **Short-term loans** extended to a narrow range of clients: according to data of the National Bank of Ukraine (NBU), half of the corporate loans have a maturity of less than one year and 12% have a maturity of five years or more (WB, 2014c). If commercial banks extend loans to SMEs, these loans are only short-term loans of up to six months (UCAB, 2015). Bank loans target a few large, capital-intensive business groups, making access to finance difficult for SMEs. Indeed, long-term loans may be issued by captive banks to enterprises within the same business groups. The lax supervision over related-party lending supports the domination of the banking sector by a few local business groups, which tend to distribute credit only within their groups rather than to the whole economy;
- Uncertain, absent or inaccessible information about **borrowers' creditworthiness**: the lack of adequate credit history information is cited by many banks as an obstacle to the growth of their portfolios. It inhibits lending to underserved segments or new firms. The existing credit information system is fragmented, unreliable, and incomplete. It consists of seven licensed credit history bureaus, of which three are active, that gather non-standardised data based on contributions by selected banks. Many SMEs suffer from inadequate management capacity, poor accounting and reporting standards, and low transparency. The level of financial education among the key managers is often low. Therefore, most banks employ strict risk metrics, which results in prohibitively high interest rates, while foreign currency loans for non-exporting SMEs are legally prohibited. The delays, costs and risks inherent in looking for the borrower's information are passed along to borrowers in the form of higher interest rates, less favourable terms, and rejections (WB, 2014c);
- A large number of non-performing loans combined with limited **creditor rights** and costly, prolonged and unpredictable judicial proceedings for contract enforcement. According to the NBU definition (which includes doubtful and loss loans, as recorded in the balance sheets), non-performing loans as a share of total loans increased from 12.9% at end-2013 to 24.1 % in May 2015 (NBU, 2015);
- The **lack of collateral**, particularly for SMEs: commercial banks often request between 100% and 200% of the loan's value as collateral. Land is not accepted as collateral by banks due to the moratorium on land sale. Assets such as immovable property, agricultural machinery, equipment and vehicles, are often timeworn and lack sufficient value, and agricultural products are considered as risky collateral due to their seasonality, their vulnerability to damage during storage and transportation, and their perishability (UCAB, 2015);
- Large public agricultural holdings are often 'too big to lend to' for local banks that must comply with the regulatory single exposure limit of 25% of capital. Hence, these holdings access foreign debt and equity markets at lower interest rates (WB, 2014c).

The already conservative approach adopted by commercial banks may be exacerbated by the **recent financial instability**. From January to February 2015, almost 29 banks were closed and an additional 27 were in the process of liquidation. As of April 2015, the interest rates of bank loans to the agricultural sector ranged between 25% and 42%. While large agribusinesses can still access domestic credit, the high costs of borrowing make loans unattractive and non-viable and they prefer to use their own working capital or turn to foreign financing sources, such as loans from international financial institutions, initial public offerings (IPOs) or Eurobonds (Prostobank Consulting, 2015).

To respond to some of these challenges, several **alternative financing mechanisms** have been developed (Box 5). Furthermore, since January 2012, moveable and immovable collateral can be registered in a more secure way through the *state register of property rights and encumbrances* that provides banks with a reference to borrowers' property rights and encumbrances, and through the *state*

register of encumbrances over movable property, administered by the State Enterprise Information Centre (WB, 2014c).

### Box 5. Alternative financing mechanisms

**Agricultural leasing schemes** are relatively developed. Agriculture constitutes 13% of all leasing transactions and continues to rapidly increase. However, the value of agricultural leasing represents only 1% of agricultural output. In 2013, agricultural machinery accounted for 11 % of the value of all leasing contracts. Leasing schemes are offered by banks and specialised leasing companies, often jointly. Leasing offers several advantages: interest rates are lower than for bank loans, varying from 9% to 12% per year; leased assets cannot be subject to foreclosure or enforcement of property, as the title to such assets may be transferred to the lessee only after the completion of the final settlement; the bank or leasing company can control the machinery supplier's compliance with its warranty or maintenance obligations. Disadvantages include machinery insurance premiums and hidden peg of the payables on the loan to the exchange rate depending on the country of manufacturer.

The state support provided to the leasing industry has not been successful: while the State Leasing Programme managed by the SOE Ukragroleasing received USD 102.6 million in 2011-15 to support the procurement of domestic machinery, the state financial inspection concluded that most funds were allocated inefficiently. An important share of machinery used in these schemes is imported and pegged to foreign currency. With the currency devaluation in 2014, a growing number of court cases are expected as debtors may refuse to pay foreign exchange differences. This might cause a systemic crisis in the leasing industry.

**Warehouse receipts** allow farmers to access financing from banks by using their crops as collateral. Crops are stored in licensed warehouses and receipts issued to confirm the physical storage. The loans can only be short-term as they cannot exceed the period of storage. Mandatory state certification of licensed warehouses was abandoned in 2014 to simplify procedures. As a result, warehouse receipts have become less solid collateral for banks.

**Agrarian receipts** allow farmers to access loans from banks or input suppliers before harvest by pledging future crops. The 2012 *Law on Agrarian Receipts* regulates their formulation, issuance, circulation and implementation. It states that an agrarian receipt establishes an unconditional obligation of the debtor to supply agricultural production as specified in the document - quality, quantity, place and date of delivery. As most banks are reluctant to accept future harvests as collateral, they consider such receipts as a supplementary security enabling to minimise the provisions for loan losses. Agrarian receipts have been piloted in the Poltava region, with the support of the International Finance Corporation. As this pilot has been a success, agrarian receipts will be extended to three additional oblasts. As the issues highlighted below have been raised as regards their implementation, MAPF issued the Order No. 124 on 9 April 2015 to create a working group responsible for developing a legal framework that would improve their implementation:

- The absence of a reliable uniform public registry and the mandatory notary certification of agrarian receipts limit their use;
- In the event a grower has not fulfilled obligations under the receipt, the creditor can approach the third party, i.e. grain traders, to whom the goods have been sold or transferred. Thus, grain exporters may not work with farmers who pledged grain via agrarian receipts.

The **Agrarian Fund** uses forward contracts against pledged grain at an interest rate twice lower than the average interest rate of commercial banks (Box 1). These contracts tend to benefit large grain producers. The fund pays an advance of 50-70% of the contract amount calculated based on minimum intervention prices. The final price is based on the weighted average price quoted during three trade sessions held by the agrarian exchange or other commodity exchanges accredited by the Agrarian exchange, net of the down payment received and the commission based on the average weighted interest rate as determined by NBU statistical data. The drawbacks of such contracts include the cost of the crop insurance that is required for receiving advance payment and the need for preparing a sizeable documentation package.

In 2013-14, **promissory notes** gained popularity on the debt market. They operate as follows: a farm procures inputs from a distributor against a promissory note, which is avalised by a bank acting as the guarantor of the payment of the note. The distributor transfers the note to a manufacturer, thus eliminating any risks it may face. The period of financing normally does not exceed one year. Promissory notes provide certain freedom to farms, banks, distributors

and input producers. Their interest rate varies from 2% to 4.5%. They are normally issued on the most favourable terms within programmes of co-operation with large input producers, but may also be issued under standard operations offered by banks.

Source: NC, 2013; UCAB, 2014a and 2015; WB, 2013b and 2014c; EBA, 2015; UAIC, 2015.

## Non-bank financial institutions

Non-bank financial institutions, such as factoring and leasing companies and credit unions, comprise only about 5% of Ukraine's financial sector assets, and of these, 4.5% are insurance companies. The weak development of non-bank financial institutions results mainly from the poor institutional and regulatory framework (WB, 2014c).

While the **insurance market** can help increase access to finance by mitigating agricultural risks and lowering the requirements of banks for accessing credit, it remains insufficiently developed in the agricultural sector. Although the number of hectares covered by some insurance increased by 20% from 2012 to 2013, mainly due to the forward purchases carried out by the State Agrarian Fund, it reached only 869 000 ha in 2013 (IFC, 2013). In addition to several other projects aiming to promote an attractive business climate in the agri-food sector, IFC is implementing a project aiming to foster the use of agri-insurance (Box 6).

### Box 6. IFC activities in Ukraine

IFC runs the four following projects to support an enabling business climate in the agri-food sector in Ukraine.

**Investment climate for agribusiness in Ukraine (2012-15):** The project aims to develop transparent and consistent regulations through a three-tiered implementation approach focusing on: (i) legislation and policy dialogue by supporting the development of new legislation and the improvement of existing laws; (ii) monitoring and evaluation of the business environment and the impact of reforms on key stakeholder groups by conducting surveys and performing empirical research and assessments; and (iii) awareness and stakeholder involvement to increase awareness about, and participation in, planned and enacted reforms among key stakeholders through outreach activities and information campaigns.

**Increasing access to finance for Ukrainian farmers (2010-present):** The project aims to increase access to finance by working with financial institutions to enhance banks' agri-lending capacity. The project intends to: develop agronomy-based credit risk management tools for banks to better understand agricultural production processes, ensuing risks, and funding needs of farms; introduce bank loan/financial products specific for agri-lending, and corresponding credit policies and procedures; develop and provide training to bank loan officers on the above mentioned tools, products, policies and procedures. IFC aims to facilitate investments of at least USD 40 million, of which USD 20 million would come from IFC.

**Developing agri-insurance industry in Ukraine (2007-present):** The project aims to boost the use of agri-insurance as a risk management tool by: developing legislation in close co-operation with government agencies to implement a PPP as a prerequisite for the efficient regulation and implementation of agri-insurance programmes; supporting the establishment of an agri-insurance pool through an association of companies active in agri-insurance; increasing the awareness of agri-insurance among producers through extension and media campaigns as well as dissemination of information and training events; and working with banks to increase their expertise in rural lending and in developing and marketing financially-viable loan products with the use of insured crops as collateral.

**Agribusiness standards advisory programme in Europe and Central Asia (2013-16):** Inadequate food safety and poor environmental and social standards inhibit growth, which keeps regional food companies out of modern food value chains while jeopardising consumer health and the environment. This programme assists local companies in applying food safety, environmental, and social standards throughout the value chain while strengthening the capacity of local consultants. It is implemented in Armenia, Azerbaijan, the Balkans, Belarus, Georgia, Kazakhstan, the Kyrgyz Republic, Moldova, Russia, Tajikistan, Ukraine, and Uzbekistan.

Source: IFC website, 2015.

**Capital markets** are also underdeveloped. They have been at a standstill in recent years, despite the fact that local stock exchanges are technologically advanced (WB, 2014c). None of Ukraine's agricultural companies conducted an IPO in 2012-13 and only a handful of holdings, like Ukrlandfarming, Mriya, and Myronivskiy Khiboproduct, stepped on the path of Eurobonds in 2013. Following the events in 2013-14, which resulted in the downgrade of Ukraine's sovereign ratings, international capital and debt financing markets may be closed for Ukrainian companies (UCAB, 2014a).

Thus, large agricultural holdings may rather attract credit from **foreign financial institutions**, including European Bank for Reconstruction and Development (EBRD) and International Finance Corporation (IFC). Such institutions offer interest rates of up to 10% in foreign currency, thus lower than banks, but the costs of servicing their loans are high both in monetary equivalent and in terms of labour resources required. In 2013, EBRD granted loans totalling USD 212 million to large agricultural holdings (UCAB, 2014a).

Foreign **export credit agencies** - entities established in countries of domicile of exporters in order to facilitate their exports - are a good source of funding for imported agricultural equipment and machinery. Ukrainian enterprises have access to the programmes of export credit agencies in the US, Japan, UK, Germany, France, and the Netherlands. Advantages of such financing include: low interest rates, low minimum volumes of financing offered which makes such instruments accessible to medium-size farms, absence of collateral which is replaced by insurance, and the option of separate financing of down payment for up to one year. The amount of the down payment is normally 15% or more. The drawbacks include the need to formalise warranties and guarantees, which may result in extra costs of verification and submission of the documentation, and to pay for insurance which increases the effective interest rate. Some of these programmes may be suspended due to the downgrading of Ukraine's sovereign rating (UCAB, 2014a).

SMEs rely mostly on **credit unions** that are probably the financing mechanism they most commonly use. Credit unions operate at community level in rural areas, allocating loans only to physical persons based on trust and personal relationships. They have collateral requirements lower than loan values, but offer interest rates often higher than those of commercial banks.

**State programmes** aiming to ease access to finance have not been successful. They are not easily accessible by SMEs, suffer from limited funding, undergo frequent legislative changes, and face presumptions of mismanagement, which decreases their attractiveness to businesses. For instance, while the *Farm Support Fund* should provide loans to farmers, it is not operational since the budget assigned to the programme in 2015 (USD 1.28 million) has not been allocated (WB, 2014c).

## CHAPTER 6. HUMAN RESOURCES AND INNOVATION

Strong human capital and dynamic agricultural innovation systems are critical to foster productivity and investment in agriculture. Policies should support high-quality education and well-functioning extension and advisory services to enhance human capital. They should promote partnerships between national and international research, better connect research with demand and effectively protect intellectual property rights to build effective innovation systems. This chapter reviews the challenges related to the development of human resources as well as research and development in the agricultural sector and examines recent policies aiming to address these challenges.

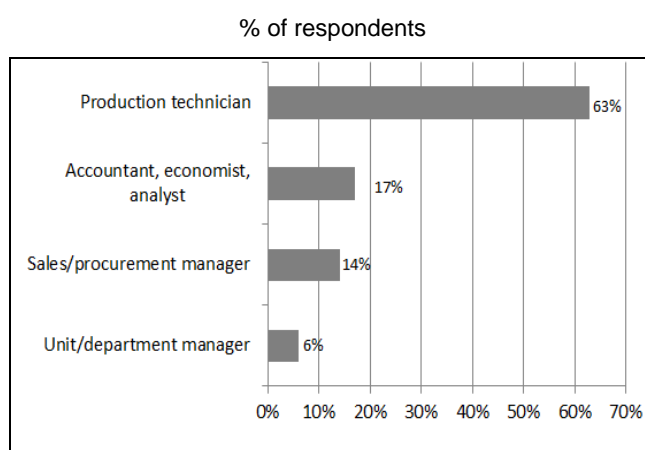
### Human resources development

#### *Agricultural education*

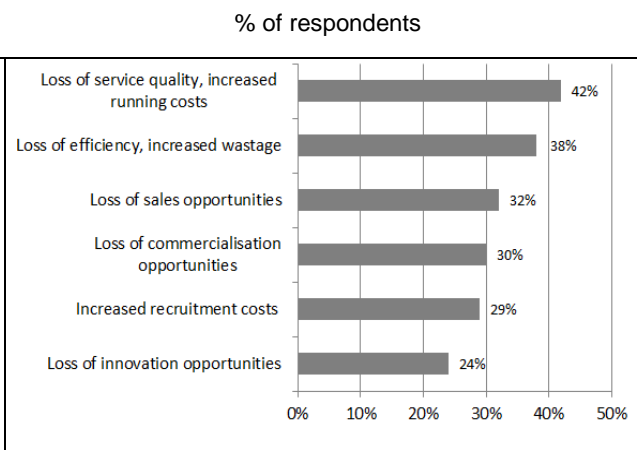
While numerous government institutions are responsible for agricultural education, there is a **mismatch** between educational outcomes and the skills actually needed by agricultural investors. For the academic year 2013-14, MAPF supervised 17 universities, 13 colleges and 11 technical schools enrolling a total of 174 213 students. However, 30% of employers in the agricultural sector and 44% of employers in the food and beverage manufacturing sector indicate that employees with vocational and higher education lack the necessary skills (OECD and WB, 2015). In 2013, higher agricultural education institutions trained 77 815 students, which exceeded the needs of domestic labour market in terms of number, but some job vacancies remained unfilled (MAPF, 2015).

As a result, agribusinesses may often need to compete with each other to hire well-qualified technicians, and many refrain from buying new machinery or implementing new technologies, because they lack qualified specialists (UCAB, 2014a). According to enterprise surveys, the most demanded specialists are agronomists, managers, mechanics and veterinarians. The lack of suitable skills results in reduced service quality and increased running costs for both agricultural producers and food and beverage manufacturers (Figure 11).

**Figure 11a. The most acute shortages of skills**



**Figure 11b. Impacts of skills shortages on the performance of agribusinesses**



Note: Production technicians comprise agronomists, engineers, veterinarians, and zoo-technicians. The loss of sales opportunities refers to existing clients and markets while the loss of commercialisation opportunities refers to new clients and markets.

Source: UCAB, 2014b; OECD and WB, 2015.

This skills mismatch can be explained by several **challenges** faced by the current education system:

- *A highly centralised governance structure:* As part of MAPF, agricultural education institutions used to report directly to MAPF that defined most of their activities and provided the necessary funding through a top-down approach. Due to insufficient co-operation with the private sector, the education system is unable to respond to the needs of the private sector and faces difficulties in identifying skills gaps and anticipating skills needs (OECD, 2014);
- *Weak incentives framework:* State financing is allocated based on the number of students rather than performance criteria (Agricistrade, 2014);
- *Theoretical curricula:* In agricultural higher education, curricula are outdated and highly theoretical in comparison to OECD countries. For example, internship schemes typically last 4-6 weeks against up to 3-12 months in OECD countries, partly due to the fact that budget planning and curriculum development are carried out by MAPF without adequate consultations with the private sector (OECD, 2012d). Vocational education (VET) does not provide workers with adequate hands-on experience and vocational practice is mainly school-based (OECD, 2014);
- *An increasing interest in university training:* The shortage of production technicians is partially explained by the fact that more students opt for university training to the detriment of VET. Between 1995 and 2013, the number of VET students shrank by 30% while the number of higher education students grew by 41%. In the agricultural sector, the number of VET students fell by 28% from 2003 to 2013, from 121 600 to 87 700 (MES, 2015a);
- *Bribery:* According to 44% of Ukrainians, the most important problem in the education system is corruption in higher education institutions (Nedeli, 2015). Bribery, plagiarism and cheating are widespread. Services to complete research and bachelor's and master's thesis are openly offered at any campus or even subway stations (MAPF, 2015). This undermines the quality of education and trust in the quality of university degrees, and results in unequal access to education.

The following **initiatives** have been taken to better provide investors with required skills, particularly through increased public-private co-operation in the education system:

- Recent *restructuring and legislative reforms* aim to make higher education converge towards European standards, including by developing PPPs and aligning degrees with European equivalents. In February 2015, agricultural higher education was transferred from MAPF to the Ministry of Education and Science (MES) to be integrated into the overall system of education (MAPF, 2015). In addition, the *Law No. 1556-VII on higher education* of July 2014 should foster dialogue between the private sector, government and universities by transferring competences from the central government to universities and creating mechanisms for greater private sector involvement in higher education;
- *Sectoral skills councils* gathering public and private sector stakeholders, labour unions and civil society, have been initiated by the private sector. The first one, the Mining and Metals Skills Council, was created in December 2012. These councils facilitate the co-operation of metallurgy, energy generating and coal mining industries with MES, and provide advice on various topics such as training and skills needs and occupational profiles;
- *VET institutions* have strengthened their co-operation with the industry since 2010. The VET content is being renewed and VET educational standards are developed drawing from professional standards prepared by the private sector, i.e. requirements for workers' qualification and competencies. More



than 30 professional standards have already been developed for sectors other than agriculture, and twenty professional standards are currently being developed for metallurgy, energy generating and coal mining industries. Furthermore, in March 2015, MES launched a pilot project to implement a dual system combining on-the-job and theoretical training in VET schools in Kyiv, Lviv and Zaporizhia (MES, 2015b; FEU, 2015).

### **Extension services**

Human resources development in agriculture relies not only on primary, secondary and tertiary education but also on extension services. In Ukraine, extension services can have a status of non-governmental organisations (NGOs), limited liability partnerships, charitable organisations or co-operatives. The 2005 *Law on agricultural extension activities* guarantees state support via tendering procedures to agricultural extension services that are socially-oriented. Fee-based advisory services can also be provided to farmers (Jaroszewska, 2007; FAO, 2012).

However, public **funding** for extension services has been extremely low, limiting access to technical advice by small-scale farmers. Central funding has not been allocated to extension services since 2011 because of budgetary constraints. Local funding is not systematic: expenditures are allocated on a regular basis in some regions and cut in others. As a result, out of 74 existing agricultural extension services, only 15-20 are operational (MAPF, 2015). Extension services are currently funded mainly by international donors, leading to a fragmented approach with a focus on one or several regions with insufficient co-ordination at national level. When strengthening its extension services, Ukraine may draw from the experience of OECD countries that offer various public, private or mixed models (Box 7).

#### **Box 7. Agricultural extension systems in OECD countries**

In OECD countries, extension services encompass numerous actors operating at national or local level, including public institutions, industries, NGOs, co-operatives, and farmers' associations. They provide technical and financial advice and support to policy implementation.

As described in the table below, they can be classified by delivering organisation and source of funding. While in some OECD countries, such as the US, they are publicly funded and managed, in others, such as the Netherlands, they are entirely private with farmers choosing a service provider and paying for services on a commercial basis. In mixed systems, services are provided by both public institutions and private consulting firms and farmers cover the costs of related services partially or fully. In countries such as France, services are managed by farmers' organisations with funding from the government, farmers' organisations and farmers. Farmers' organisations can help identify farmers' needs and link them to relevant services. By transferring innovation, knowledge and best practices to their members, they can improve the efficiency of public spending on extension services.

<b>Category</b>	<b>Main institutions</b>	<b>Source of funds</b>	<b>Countries</b>
State-run	Public organisations at national and regional level	Public funding	Belgium, Italy, Greece, Slovenia, Sweden, Southern regions of Germany, Spain, Portugal, Luxembourg, Japan, United States
Public-private services	Public organisations and consulting firms	Public funding and farmers	Canada, Ireland, Czech Republic, Poland, Slovak Republic, Hungary, Estonia, Australia, Chile
Farmers	Farmers' organisations	Public funding and farmers' membership fees and payments	Austria, France, Denmark, Finland, North-West regions of Germany, Norway

Commercial	Commercial firms or private individuals	Farmers	England, Netherlands, North-East regions of Germany, New Zealand
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Source: OECD,2012c; OECD,2013b and c; OECD,2015a.

## Research and development

Agricultural research and development (R&D) is executed by four types of organisations: the National Academy of Agrarian Sciences (NAAS), the main player (Box 8); 15 sectoral research institutes that report to MAPF, four of them being funded by the state budget; agricultural higher education organisations; and R&D departments of large agricultural companies that carry out privately funded and owned research (MAPF, 2015).

### Box 8. The National Academy of Agrarian Sciences (NAAS)

NAAS is a public organisation with a self-governance status implying that its governance body is collegial and elected and that it keeps some autonomy in setting the research agenda, managing staff, and developing its activities. It sets its research agenda based on the research priorities defined by laws, government decisions, and decisions of the NAAS Presidents' Council. It limits its teaching to PhD and post-doc students.

As of January 1, 2015, NAAS comprised 48 R&D institutions employing 4 400 researchers and 152 state-owned research farms with 12 500 employees. It also possessed 449 900 ha of farmland. NAAS represents the highest share in the market of innovation products at national level: 95% of cereals, 67% of winter wheat, 90% of pedigree dairy herd and 75% of pedigree pig stock. Every year, it co-ordinates or undertakes nearly 1 500 researches under 44 research programmes in agriculture.

NAAS funding comes mainly from the state budget which covers fixed costs, including payrolls. Its budget decreased from USD 65 million in 2012 to USD 16.8 million in 2015 – against needs estimated at USD 30.6 million for 2015. NAAS generates income from its farms and the sale of its assets – although only 134 farms were profitable as of January 1, 2015. While it reports yearly on its budget allocation, the efficiency of its management of financial resources is not audited nor controlled. An independent audit of land management was launched in 2014 to assess the effectiveness of its land use.

Despite NAAS' extensive research facilities, industry representatives consider that the outcomes of its R&D activities do not meet market needs. As its structure and mandate have not been substantially reviewed since it was established in the Soviet times, an assessment of its effectiveness in delivering R&D would help ensure that it responds to the needs of the industry.

Source: NAAS, 2015; Koester *et al.*, 2010 ; MAPF, 2015 ; UCAB, 2015.

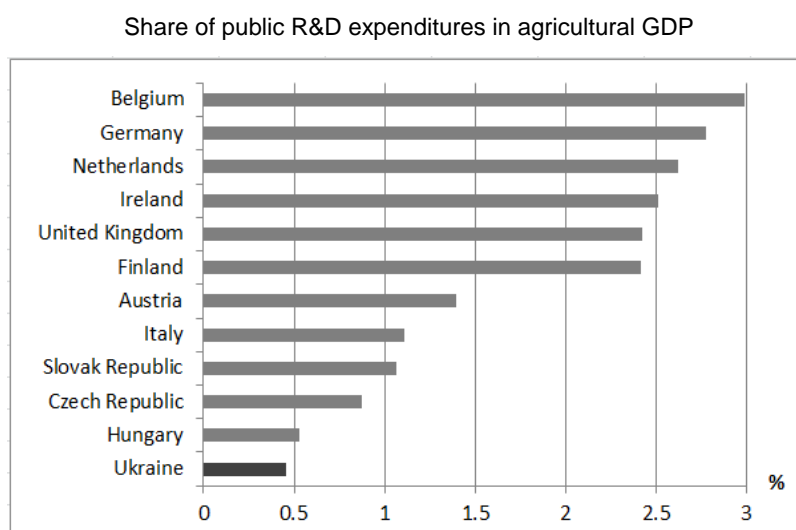
### Agricultural R&D faces **several challenges:**

- First, it has limited collaboration with the industry. No institutional mechanism allows involving the private sector in defining research priorities, resulting in a mismatch between R&D projects carried out by NAAS and the needs of agribusinesses (UCAB, 2015). The Mach Foundation in

Italy provides a good example of a successful PPP that supports skills development and from which MAPF could draw;<sup>39</sup>

- Second, R&D intensity remains low in comparison with OECD countries (Figure 12). To respond to shrinking public expenditures in R&D, NAAS intends to establish closer co-operation with the private sector, as indicated in its five-year strategy to be made public in April 2015 for consultations with European partners. It also foresees to provide paid R&D and consulting services to farmers (NAAS, 2015).

**Figure 12. Agricultural R&D intensity, 2011**



Source: OECD, 2015b.

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The Foundation is a research centre whose mission is to promote the land-based economy through research and innovation that improves agricultural and forestry products and enhances the quality and nutritional value of food products. It manages several farms where it conducts fruit and vine research. The government of the Trento region, the Trentino province, agribusinesses representatives and research and education centres work together in the Foundation to improve the competitiveness of the agricultural sector, which led to a stronger brand and higher exports.

## CHAPTER 7. ENVIRONMENTAL POLICY

Strong and well-enforced environmental policies contribute to ensuring a sustainable use of natural resources such as land, soil and water, thereby fostering long-term food security, protecting biodiversity and mitigating climate change. This chapter examines environmental risks in the agricultural sector as well as policies and regulations to address them.

**Land erosion** constitutes one major environmental problem: 57.5% of the land is already eroded and a further 80 000 ha are eroded every year. According to FAO, 76% of the land is severely degraded, mainly because of a history of intensive agriculture, and 17.7% is affected by acidification (UNECE, 2007; FAO, 2012). More than 500 million tonnes of soil would be eroded annually from arable land, resulting in loss of soil fertility across 32.5 million ha, equivalent to around USD five billion in nutrient equivalent. The value of eroded soil reaches around one third of agricultural GDP each year, i.e. for each dollar of agricultural value added generated, one third is lost through erosion (FAO, 2014b).

Ukraine's relief and climate and its very high proportion of arable land make erosion a widespread natural phenomenon. Poor land management practices, such as crop cultivation on steep slopes, excessive cutting of forests, shrubs and bushes, and overgrazing, accelerate erosion. Undefined land ownership has also contributed to land erosion by leading to illegal cutting of tree belts that served as wind breaks around farmland. In turn, erosion leads to a loss of soil fertility and to sedimentation in rivers, lakes and water reservoirs (UNECE, 2007; FAO, 2012).

The loss of soil fertility has been exacerbated over the past 20 years due to a lack of fertilisers, the abandon of crop rotation practices, and the increased planting of row crops such as grain and sunflower, which reduce the content and stock of humus in the soil and make it more susceptible to erosion by water and wind (Kucher, 2007; Geletukha and Zheliezna, 2014). For instance, the share of sunflower seeds in cultivated areas varies from 18% to 22%, whereas it should not exceed 10% to 15% to ensure sustainable production (FAO, 2012). Relatively short land leases can explain why producers invest little in maintaining soil fertility. The lack of technical knowledge and appropriate equipment and the absence of well-functioning institutions and extension services for land management and conservation also contribute to soil degradation (Kucher, 2007). The former collective agricultural enterprises had some positive environmental practices such as an obligatory inclusion of pastures and meadows in rotations. But low prices, high costs for energy and the withdrawal of subsidies led commercial enterprises to cut the number of cattle dramatically and switch to tillage (FAO, 2012).

A change of legislation may not substantially improve this situation in the short term as the low level of land prices and the abundance of land might still stimulate short-term production strategies at the cost of soil fertility (Visser and Mamonova, 2011). However, the considerable expansion of the use of minimum tillage during the last decade is testimony of the effort towards change (FAO, 2014b).

The **misuse of agricultural inputs** may have adverse environmental impacts. The use of mineral and natural nutrients is on the rise again, although from a very low level (Table 7). Similarly, pesticide use diminished in the 1990s but is expected to increase again. Nutrients and pesticides leach to the surface and groundwater, and residues remain present in products. Furthermore, about 19.3 thousand tonnes of obsolete pesticides are stored at 4 983 storage facilities of agricultural enterprises, and 33% of the storage sites do not meet sanitary and environmental requirements (UNECE, 2007). While Ukraine ranks 95 out of 178 in the Yale Environmental Performance Index (2014) with an assessed 5.44% positive change in environmental performance compared to ten years ago, environmental performance in agriculture has declined considerably over the same period, with a -22.46% change. This can be explained by significant

agricultural subsidies which are used in the index as a proxy measure for the degree of environmental pressure exerted by subsidising agricultural inputs (EPI, 2015).

**Table 7. Use of fertilisers, 1990-2012**

	Unit	1990	2000	2005	2010	2012
<b>Mineral fertilisers for all crops</b>	<i>Kg of nutrient per ha</i>	901	128	362	517	555
Grain and leguminous crops		132	15	35	63	79
Industrial crops		260	18	39	57	66
Vegetables and cucurbitaceous		164	23	90	137	172
<b>Organic fertilisers</b> (manure, compost, organic mixtures)	<i>Tonne per ha</i>	240	39	17	8	9

Source: State Statistics Service, 2012.

**Water mismanagement** in agricultural production may have long-term negative environmental impacts. In Southern Ukraine, irrigation is essential for agriculture and results in high water demand, while in the North, drainage is widespread for forage purposes. Existing irrigation and drainage systems may exert a negative impact on the environment by contributing to the salinisation of land and the loss of wetlands and aquifers (Kucher, 2007).

In addition, agriculture is a major source of **water pollution**, particularly through wastewater run-off (Kucher, 2007). Low investment levels at farm level and the lack of capacity in the administration have led to unacceptably high levels of inland water pollution (Nazarov *et al.* 2004), with nitrate pollution acknowledged as the greatest threat from agricultural production (Ertel *et al.*, 2012). Agricultural run-off is particularly high in the fertile flood plains as well as in the relatively flat regions of the Black Sea coast near Odessa and of the Azov Sea. It is further compounded by improper storage of organic and mineral fertilisers at farm level, with losses reaching 20-30% (Tagarakis *et al.*, 2012; Strokal and Kroeze, 2013).

**Forests** will be under increasing pressure and their management should be more integrated. Forests cover about 9.6 million ha, half of which is used for commercial purposes. They are all state-owned: 77% are managed by the State Forestry Agency, with the remaining 23% spread across approximately 50 public agencies, local municipalities, and educational organisations (State Statistics Service, 2015). Forest management has been driven by financial considerations and the incentives of the public sector, rather than by the needs of the agricultural sector (Nyzhnyk and Soloviy, 2009). While there is currently no shortage of arable land, the demand for agricultural and forest land may increase, especially if land markets are liberalised or biomass use expands. A holistic approach towards forestry may help to address soil erosion and promote carbon sequestration and renewable energy.

Ukraine may be one of the few countries to benefit from **climate change** if computer simulations are proven correct (Fay *et. al.* 2010). While the steppe regions in the South may be subjected to more frequent droughts, the growing season in the Azov Sea basin will be longer and marginal areas for agriculture in the North may become productive (Dronin and Kirilenko, 2012). According to the 6<sup>th</sup> National Communication on Climate Change of Ukraine, climate change is likely to be favourable for key grains, which could bring a gross harvest of 85-90 million tonnes by 2050 if adaptation measures are implemented successfully. For example, productivity of winter wheat could increase by 26% between 2030 and 2040 compared to base period 1995-2009.

However, climate change poses the following risks which could threaten agricultural production: increased frequency and severity of droughts, which may result in harvest losses of up to 40-60%; reduced

frequency and increased intensity of precipitation preventing the accumulation of soil moisture and impairing harvesting conditions; more frequent winters with unstable snow cover and lower temperatures that would increase the risks of crop failure; increased pest attacks, which could reduce productivity by 20-30%; and increased soil cover instability favouring water erosion (UCAB, 2014a).

A very comprehensive **regulatory framework** for environmental protection should help mitigate these environmental impacts:

- The 1991 *Law on environmental protection* includes a number of key principles, such as access to information. It contains provisions on the authority and obligations of different governmental bodies as well as enforcement mechanisms and administrative, civil and criminal responsibility for environmental violations;
- The 1995 *Law on environmental expertise* imposes environmental impact assessments for all draft proposals with potential negative environmental impacts and introduce the principle of public participation, hearings and comments on laws (OECD, 2011);
- The current guiding document of environmental legislation is the 2010 *Law on fundamentals (strategy) of the state environmental policy up to 2020* that covers nearly all aspects of environmental protection. While not superseding the legislation dealing with land, water, and air pollution, the document presents the first attempt to define a coherent environmental strategy (Bigdan, 2013).

As regards land management, the 2003 *Laws on land protection, land use arrangement and state control of land use and protection* include provisions to restrict improper use of land, but resources for ensuring their application are limited. Since Ukraine joined the UN Convention to Combat Desertification in 2002, national programmes on land degradation have been developed and some laws and by-laws amended to support its implementation (UNECE, 2007). In 2014, a draft *Law on the preservation and protection of soil fertility* was submitted for public discussion. It strengthens the state control over soil quality and shifts the responsibility for soil survey from agricultural producers to the state. It aims to give soil a separate legal status and protection and to establish rules for high farming standards, prevention of soil degradation and mitigation of environmental and economic risks associated with the improper or environmentally unsafe use of land. The law mandates the agrochemical certification of land. Agrochemical passports would be a prerequisite for transferring land ownership or using agricultural land.<sup>40</sup> They would form an integral part of contracts for transferring land ownership rights or leasing land (UCAB, 2014a).

In the coming years, environmental policy should be substantially changed to harmonise with EU standards, as part of the obligations under the Association Agreement. The EU is providing support to achieve these goals (Orlovska and Vovk, 2014). The government has already made first steps on developing an adaptation strategy to climate change, although specific policies and measures in the agricultural sector are yet to be developed. It has joined international conventions on climate change, including the Kyoto Protocol, but it lacks the capacity to implement its obligations (UCAB, 2014a). In light of the increasing demand for organic products from European countries and from the US, supporting the development of organic agriculture may be an efficient strategy to reach both economic and environmental objectives (Box 9).

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<sup>40</sup> These certificates have already been delivered on some land. State engineering and technological centres under MAPF monitor the quality of the soil through physical, agrochemical, and eco-toxicological indicators to protect soil fertility. Nearly five million ha underwent agrochemical certification in 2011 and agricultural producers received 94 000 agrochemical passports for their land (FAO, 2012).

### Box 9. Organic agriculture in Ukraine

Organic agriculture in Ukraine started in the 1970s and the first organic farms were certified for export in the late 1990s. In 2013, 393 400 ha and 175 producers were certified as organic, against only 31 in 2003. In 2012, 59 organic processors were also operating. The premium of organic products is 10-100% above conventional prices. The driving force behind the growth of organic farming is undoubtedly the export market. The main organic products exported are cereals, beans, oilseeds, berries, essential oils, mushrooms, nuts and fruit juice concentrates. The estimated annual value of organic production is about USD 149 to 210 million. Around USD 40-53 million are exported, mainly to EU countries and, to a lesser extent, to the US, Canada, Switzerland and Asian countries; the export potential is high as from international buyers from the EU and the US is constantly increasing. Another USD 1.3-2.7 million is sold on the domestic market, mostly in supermarkets, as organic; the domestic market for organic products is rather young. The remainder is sold as conventional products.

Exported products have to be certified to the standards of the importing country - the standards listed in the EU Regulation 1235/2008 or other private standards (e.g. Bio Suisse, Bioland or Naturland) for the EU and Switzerland, and the US National Organic Programme for the US and elsewhere. Twenty certification bodies are listed in the EU Regulation. They include Organic Standard, the only domestically-owned organic certification body. Registered in 2007, it was set up through the project 'Organic Certification and Market Development in Ukraine' financed by Switzerland and implemented by the Research Institute of Organic Agriculture (FiBL). Since being accredited against ISO 65 in October 2009, it offers full inspection and certification services against EU Organic Regulations. At the end of 2014, it had 137 operators (clients) in 24 regions and had certified 51 000 ha. It estimates to certify more than 50% of organic operators.

While foreign donors, in particular the Swiss and German development agencies, have been very active in promoting the organic sector, the government has had very little involvement with organic farming. In 2007, it released the *State Programme of the Ukrainian agriculture development until 2015* aiming to have 10% of the production as organic by 2015 but no subsequent measures have been implemented at national level – although at local level, many regional governments, e.g. Lviv, Khmelnytsky and Poltava, have development programmes for organic businesses, particularly for local promotion and market development. The *Law No. 425-VII on the production and circulation of organic agricultural products and raw materials* was approved in September 2013. It defines the legal and economic basis for the production and circulation of organic products and aims to ensure fair competition and proper functioning of the market of organic products. It clearly defines organic products, which protects organic producers from unfair competition. However, this Law has not been implemented yet as 16 by-laws are being developed or approved. These numerous by-laws may provide an overly complex regulatory framework.

MAPF does not have anyone responsible for organic agriculture, resulting in poor institutional co-ordination, including for drafting the 16 by-laws. No state institution registers nor supervises certified producers and certification bodies. According to the law, the State Inspection of Agriculture should do so but has been under a liquidation procedure since September 2014. The absence of a well-enforced normative framework leads to some fraud, such as misuse in labelling, which erodes trust among consumers, media and retail.

Several additional factors limit the development of the organic sector, including: the illegal use of genetically-modified seeds; the pollution of water and agricultural soils by industrial enterprises; the threat posed by nuclear power stations; low public awareness about organic agriculture and products; weak support services, including research and training, and difficulty to find professionals with good theoretical and practical knowledge of rules and technologies of organic production. Indeed, although organic agriculture is included as a subject at five agriculture colleges, at the National Agricultural University and at Zhytomyr National Agro-ecological University, most educational establishments do not include it in their curricula. Organic farmers are provided advice mainly through projects and a few freelance private consultants. Large organic producers have their own agronomists. As a result, Ukrainian organic products do not always meet the quality requirements of international standards. Furthermore, Ukrainian farmers need to strengthen their knowledge of export procedures from the farm to the buyer in Western Europe (e.g. logistics, forwarding cargoes, co-operation with transporting companies, and languages).

Source: UNEP, 2011 and 2012; Agricistrate, 2014; FiBL & IFOAM, 2014; Karasova, 2014; Sigg, 2014; MAPF 2015.

The numerous laws on environmental protection have not succeeded in mitigating adverse environmental impacts due to weak implementation. Environmental policy is designed through an ineffective top-down approach. The administrative system is burdened with many regulatory responsibilities and low levels of law enforcement. Streamlining the myriad of regulations remains challenging as the involvement of several agencies in environmental policy leads to a fragmented implementation. The Ministry of Ecology and Natural Resources is the main actor, although MAPF also has a large interest in this sector, as does the Verkhovna Rada, the Cabinet of Ministers, and MEDT (Buzogany, 2011).



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