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# Exploring the potential for agricultural and biomass trade in the Commonwealth of Independent States

## Rendicontazione

### Informazioni relative al progetto

#### AGRICISTRAD

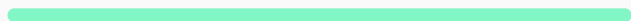
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[Sito web del progetto](#) 

Progetto chiuso

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## Final Report Summary - AGRICISTRAD (Exploring the potential for agricultural and biomass trade in the Commonwealth of Independent States)

### Executive Summary:

The call for this research (published in 2012) is motivated by the expected intensifying trade relations between the European Union (EU) and its Eastern Neighbours as a result of (the then ongoing negotiations on) the establishment of Deep and Comprehensive Free Trade Agreements (DCFTAs) between the EU,

Armenia, Georgia, Moldova and Ukraine, the accession of Russia to the World Trade Organisation (WTO) in 2012 and the creation of a Customs Union between Russia, Belarus and Kazakhstan in 2011. Russia and Ukraine already play an important role at the international cereal markets as exporters. Yet, productivity levels in these countries are far below potential agro-ecological attainable yields and there is a large supply of underutilised or abandoned agricultural land. If these countries could use their agricultural potential, it would have important consequences for their position at international markets as well as for the bilateral trade relations of the EU with these neighbouring countries.

The aim of AGRICISTRADO is to accompany these developments by analysing the potential impact of changing trade relationships of the EU with its Eastern Neighbours and by delivering insights on the potential developments of the food, feed and biomass sectors in Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Moldova, Russia and Ukraine. With the exception of Ukraine and Georgia, this cluster of countries is an important part of the Commonwealth of Independent States (CIS).

In 2012, political tension arose between the EU and Russia in the wake of the Ukraine government's Association Agreement with the EU in the first half of the year, whilst relations hit a low as the Ukraine fell into a political crisis. By the summer of 2014, increasing strains between the EU and Russia culminated in the imposition of trade sanctions on Russian imports of EU food products, which are still in place to this day, whilst the ongoing Ukrainian crisis continues to cast a shadow over East-West integration. As a counterweight to the EU's ENP, the Eurasian Customs Union (EACU) formed in 2010 by signatory members Russia, Kazakhstan and Belarus was superseded on the first of January 2015 by the Eurasian Economic Union (EAEU); with the aim of further extending regional market integration to both current and former signatory members of the Commonwealth of Independent States (CIS). Indeed, in that same year, EAEU membership was extended to Armenia and Kyrgyzstan.

It is in this context that the AGRICISTRADO research project analyses the potential for agricultural development in the CIS and the possible implications of improved use of potentials for EU's trade relations with this cluster of countries. This paper concisely summarises the main findings of the project.

AGRICISTRADO explored the agricultural sector and the agricultural policy framework in the CIS. The project looked into future trade potential by estimating the ability of the CIS agri-food sector to compete at international markets. An estimation of the performance of the agrofood chain in the CIS benchmarked against major EU producers of agri-food products was produced, and the project evaluated the extent to which CIS markets are integrated with international markets, identifying factors that constrain economic potentials. AGRICISTRADO also investigated biophysical factors and identified existing unused biophysical potentials in CIS countries, i.e. abandoned land and yield potentials. The project then developed the toolbox used for generating projections based on different scenarios. The main project results are the model projected scenario outcomes in terms of CIS' agricultural production, use and trade, followed by qualifications of these outcomes by country experts.

The AGRICISTRADO project has improved our understanding of the agri-food sector performance in the context of relevant policy measures at stake in the 8 CIS countries covered. A consolidated and rich data base, country based research by local experts plus an in-depth inventory of policy measures have provided the basic framework for analyses of current and future agricultural and trade developments in

these 8 countries.

Vast amounts of abandoned land and significant yield gaps suggest large unused agricultural potentials in the region. Causes of untapped potentials are many, with (a combination of) biophysical, economic and institutional factors hampering development. Abandoned land may be remote and face poor agro-environmental conditions, while low yields are due to limitations in management skills, water and fertilisers application. To un-tap potentials requires investments in (yield enhancing) input use, machinery, sheds, storage and in access to education, knowledge, finance, functioning land markets, property right protection and other institutions that a market-driven agricultural system needs. Government policies are not always conducive to improved efficiency and competitiveness of the sector, and all CIS score relative poor on 'good governance', a crucial factor for a country's business development. Moreover, in most sectors – except for poultry – farmers are poorly integrated in the supply chain, due to an underdeveloped processing sector in almost all supply chains in all CIS. The latter explains why the sector generates relatively little value added and exports mainly raw commodities (such as grains and oilseeds).

Market outlook projections under the baseline scenario show that Russia and Ukraine will produce, process, consume and export more cereals and oilseeds in the future. Additionally, imports of meat decrease due to domestic -poultry and pork meat- production increase. The most important driver of production growth is yield growth, even though moderate technological progress is assumed. Yields and productivity levels can be increased but to achieve those investments in technology, education and institutions are required.

The market and trade scenarios designed in this project show the benefits of reducing trade facilitation costs to both the DCFTA (Georgia, Moldova and Ukraine) and EAEU (Armenia, Belarus, Kazakhstan, Russia) region. Gains are generated by most agri-food sectors, but as the economy-wide analysis shows, the non-food sector would benefit even more. Much of the sector and macroeconomic benefits would decline in case of an isolationist EAEU policy. This shows the overall advantages of having more open trade relations between the EU and its Eastern Neighbours, and among the countries in the CIS region.

For the EU28, under the Deeper Integration scenario, the net impact of tariff reductions on EAEU-EU trade and additional NTM reductions with the DCFTA region is to further accelerate the baseline trend of economic restructuring toward non agri-food activities. In the Liberalisation scenario, additional multilateral market access provides EU producers in dairy, 'other meat' and beverages sectors with opportunities to expand production and exports, which slows the relative contraction of the EU agri-food industry when comparing with the Deeper Integration scenario. The Trade Blocks scenario produces very little impact for the EU28 since the EAEU market represents a very small share of the EU's overall trade.

CIS country experts' qualifications of project results may give rise to a range of policy recommendations aiming at more efficient use of agricultural resources in their countries. Most obviously, policy suggestions target at increasing land and labour productivity, as improved productivity levels would contribute to enhanced competitiveness of and higher incomes in the sector. As all CIS experts point at human capital being a crucial yet failing factor in agricultural development, major attention should be spend to public/private investments in the agricultural knowledge and innovation system (AKIS). This could be an area in which East-West cooperation could be made more profound.

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## BACKGROUND AND CONTEXT

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The European Union is the biggest importer and exporter of agri-food products worldwide, and is therefore a major world player in agricultural trade. In the EU, agri-food trade has increased considerably since 2003 and its trade balance is positive since 2010.

The EU trade policy includes three major kinds of agreements: multilateral agreements, bilateral agreements and unilateral preferences. While multilateral agreements are still a priority for the EU, the setting-up of bilateral agreements gained importance in the recent years, especially with Eastern European countries. Regarding the establishment of an Association Agreement with Eastern European partners (as part of the European Neighbourhood Policy, ENP), the situation has been evolving rapidly over the last years:

- An Association Agreement (AA) was signed on June 27, 2014 with Moldova and Georgia after one year of negotiations. Its implementation started on September 1, 2014. The Agreement introduces a preferential trade regime – the Deep and Comprehensive Free Trade Area (DCFTA);
- The EU concluded a new AA with Armenia, but its implementation has been withheld in September 2013 as Armenia started negotiations with the Eurasian Customs Union (EACU), founded by Belarus, Kazakhstan, and Russia in 2010, and which Armenia joined in 2015.
- For Ukraine, the negotiation of a new AA has been initiated in 2008 and concluded in 2012, but the AA was only signed on June 27, 2014 and ratified on September 16, 2014. Following the events related to the Ukrainian revolution in February 2014, and to avoid further destabilisation of the country, the EU suspended the implementation of the DCFTA until January 2016.

Regarding current exchanges, the 8 countries listed above mostly export unprocessed agricultural products (wood, cereals and oilseeds), while the EU is mainly exporting processed food (meat and dairy products mainly).

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## MAIN OBJECTIVES

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The overall objectives of AGRICISTRADe were (i) to explore the production and trade potentials of 8 eastern neighbour countries of the EU (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Moldova, Russia and Ukraine), (ii) to investigate how an improved use of presently untapped possibilities in the 8 countries may affect international markets, and (iii) to analyse the possible implications and consequences for the EU under different future trade scenarios.

To this end, AGRICISTRADe had split its main objectives into six scientific work-packages:

- WP1 aimed to systematically collect process, quantify and document data and information needed for the analysis of agricultural, trade and policy developments in the 8 countries;
- WP2 aimed to compile country reports in which the structures and the development of agri-food sector

are described, in its general economic context;

- WP3 aimed to generate scientific knowledge on the untapped biophysical potentials in the agri-food sector of these countries;
- WP4 aimed to assess performances of selected agri-food supply chains in the 8 countries and the EU, and to improve the understanding of the impact of structure and price formation on performance of selected agri-food supply chains in the 8 countries;
- WP5 aimed to develop a conceptual framework for the quantitative assessment of agricultural production and demand potentials, and to model the impact of supply drivers and drivers of food and non-food (energy) demand according to different scenarios (the latter being elaborated in WP6);
- WP6 aimed to analyse the impact of market, technology and policy scenarios on agricultural production, use and trade of the 8 countries, and the consequences for EU27 trade relations with these countries.

The specific objectives and main achievements of the project are the following:

#### WP1 - Statistical database and inventory of policies

- To collect and process key macroeconomics data, agricultural and food industry statistics, trade statistics, data on policy support (budgetary and non-budgetary support) as well as data needed for the project (other WPs) from national statistics and other sources.
- To build a consolidated database on agricultural and other relevant statistics for WP3 (crop production), WP4 (agri-food chains) and WP5 (AGMEMOD model). This database was updated all along the project duration (D1.1 delivered).
- To provide a consolidated database on support to agriculture (D1.2 delivered).

#### WP2 - Country reviews

- To compile country reports in which the structure and development of the agri-food sector are described, in its general economic context (D2.1 delivered).
- To provide a market report synthesising the macroeconomic context of the agri-food sector in the 8 countries (D2.2 delivered).
- To provide a policy report detailing the analysis of the relevant policies: agricultural policies and budgetary support to agriculture, agricultural trade relations, and other policy areas that are important for trade and business development (D2.3 delivered).

#### WP3 - Explore the untapped potentials of agricultural production

- To provide an up-to-date land cover/land use map for all the 8 countries and identify areas available for agricultural expansion (D3.1 delivered).
- To quantify current biophysical yield gaps in the cropping sector in a geographically explicit manner for all 8 countries, to provide a factor of decomposition explaining the yield gap based on the analysis of management practices, and to elaborate a set of agronomic production possibility sets aiming at closing the yield gap (D3.2 delivered).
- To assess the productivity gaps in the forestry sector and the potential of biomass production from short rotation plantations for material and bioenergy use (D3.3 delivered).

#### WP4 - Explore "CIS" competitive chains in food and biomass on international markets

- To provide detailed information about the structure of selected supply agri-food supply chains in the 8 countries and their performance in comparison with similar EU agri-food supply chains (D4.1 delivered).
- To investigate market behaviour of selected supply chains by investigating the level of regional and international market integration, and to investigate factors influencing the degree of market integration (D4.2 delivered).
- To collect data related to vertical price formation and market power.
- To investigate price margins and transmission of price changes along the selected supply chains, and to identify their determining factors (D4.3 delivered).
- To conduct a survey on institutional deficiencies and policy measures affecting CIS agri-food traders (conducted).
- To identify institutional deficiencies and policy measures that have an impact on performance of the CIS agri-food markets (D4.4 Delivered).

#### WP5 - Toolbox development

- To deliver a report synthesising the conceptual framework to be used for the quantitative assessment of agricultural production potential in the 8 countries (D5.1 delivered).
- To revise and extend the AGMEMOD model to provide an updated AGMEMOD version for EU Member States (D5.2; delivered) and to revise and to update the AGMEMOD for CIS countries (D5.3 delivered) which is precondition to link the three models AGMEMOD, MAGNET and GLOBIOM.
- To improve and extend the GLOBIOM model: regional disaggregation and integration of bio-physical datasets from WP3 (D5.5 delivered). To extend MAGNET and GLOBIOM models to enable a link between the three models used in the project. (D5.4 and D5.5 delivered).
- To harmonise AGMEMOD, GLOBIOM and MAGNET in common assumptions and exchange data between them through a linkage via the developed tool for a common baseline and scenario analysis i.e. work WP6 depends on (D5.6 delivered).
- To develop a tool to link models and a Report describing the operating system to link the economic models AGMEMOD, MAGNET and GLOBIOM (D5.7 delivered).

#### WP6 - Scenario analysis for production and trade developments

- To define the general framework of scenarios aimed to analyse the impact of market, technology and policy on agricultural production, use and trade in the 8 countries (D6.0 delivered).
- To quantify and assess the implications of different technology and institutional innovations scenarios for production potentials and international trade positions of CIS and the EU (D6.1 and 6.2 delivered).
- To quantify and evaluate the impacts of trade policy scenarios on CIS and EU trade relations and their respective trade positions (D6.3 delivered).
- To provide a synthesis of scenario outcomes (D6.4 delivered), summarised in country notes (D6.5 delivered).

## WP7 - Recommendations and dissemination

- To define a communication strategy and start implementing the information campaign (D7.1 first version delivered).
- To develop and update the project website (D7.2 delivered).
- To disseminate the results of the project at scientific conferences and in scientific papers (D7.3 and D7.4 delivered).

## WP8 - Project management

- To produce the Consortium Agreement signed by each partner (D8.1 delivered).
- To ensure a smooth coordination of the work in the consortium, and to prepare the periodic reports and final project report.

### Project Results:

## WP1: STATISTICAL DATABASE AND INVENTORY OF POLICIES

The objective of WP1 was to systematically collect, process, qualify and document data and information needed for the analysis of current and future agricultural, trade and policy developments in the 8 countries addressed in AGRICISTRAD (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Moldova, Russia and Ukraine).

### Task 1.1: Template design for data collection (Task leader: KIS)

The aim of this task was to build a uniform template to collect main statistical and policy data in the 8 AGRICISTRAD partner countries.

A draft template of the statistical database, prepared by the WP1 leader (KIS), was sent to the 8 partner countries before the project kick-off meeting in Paris, in mid-January 2014. Partner countries were asked to give feedback on the general availability and quality of the requested statistical data for their countries, and to fill-in the draft templates with data for at least one year (2012). Partners were also asked to provide brief information on methodologies and definitions used, and to indicate potential problems.

At the kick-off meeting (February 3-4, 2014), responsibilities and detailed actions regarding data collection were agreed between KIS and the partners from the 8 countries (ICARE, IEAO, IPM, GCAD, ACEPAS, IEFS, IKAR and IER), with the input of all other partners (EQY, DLO, IAMO, LAEI, TI, IIASA, JRC and UL). It was agreed that the period covered would be 2004-2013. Furthermore, data requirements for other WPs were identified, and terms for collecting this specific data within WP1 were agreed. In particular, WP3 leaders (IIASA) requested land use and crop production data at a regional level, and WP4 leaders (IAMO and DLO) requested data on agri-food chains. WP5 leaders (TI, DLO, IIASA and JRC) requested regionalised data for crop production, as well as other specific data needed for AGMEMOD models for Belarus, Kazakhstan, Russia and Ukraine.

Regarding policy data, the decision was made that only Armenia, Azerbaijan, Belarus, Georgia and Moldova data would be collected. Indeed, in the framework of monitoring and evaluating the agricultural policy in non-OECD countries (emerging economies), the OECD already gathered the necessary data for Kazakhstan, Russia and Ukraine, which was used to achieve AGRICISTRATE research objectives.

Based on the feedback received from partner countries and their agreement on the template structure, the draft template mentioned above was redesigned and split into several separate data templates.

Final data templates for each partner country comprised the following predefined data tables with instructions regarding the requested methodologies and expected regional disaggregation level:

1. General statistics data: basic macroeconomic data, farm structure statistics, livestock production statistics, output (producer) prices and prices indices, agricultural output, supply balances, other topics (i.e. input prices, costs, farm income; organic farming, biomass and bioenergy production); data requested at national level.
2. Crop production data: land use and crop production statistics, irrigation, fertilizer use; data requested at regional level.
3. Agri-food trade data: data for all codes from the “Official FAO/UN Classification of Products in the Agriculture, Forestry and Fishery Domain” (chapters 1-24, 29, 33, 35, 38, 40, 41, 43, 44, 45, 50, 51, 52 and 53) at 6-digit level; data requested for total country trade, trade with EU, and among AGRICISTRATE countries.
4. Agri-food chains data: NACE (ISIC) 2 and 3-digit level data (NACE Rev. 2; Statistical classification of economics activities within the European Community); data for Section A (Agriculture, forestry and fishing), Section C (Manufacturing), Section G (Wholesale and retail trade; repair of motor vehicles and motorcycles), Section I (Accommodation and food service activities); data requested at national level.
5. AGMEMOD data: template prepared by TI (WP5 leader) and sent only to Belarus, Kazakhstan, Russia, Ukraine; data requested at regional level.
6. Policy inventory data: market price support measures and budgetary transfers related to the agri-food sector (simplified OECD PSE/CSE approach).

The completion of the work performed under task 1.1 resulted in the production of data templates that were sent to partner countries in March 2014, and marked the achievement of the first milestone within WP1 (due at month 3).

#### Task 1.2: Data and information collection (Task leader: KIS)

This task aimed at gathering all data and information needed for the project from the AGRICISTRATE partners.

Partner countries were asked to fill in the statistical data templates mentioned above for items 1 to 5 (general statistics, crop production, agri-food trade, agri-food chains and AGMEMOD) by May 1, 2014 and for item 6 (Policy data template) by June 15, 2014.

Most partner countries provided draft datasets for items 1 to 5 in time, whereas two countries could only provide data by the end of June 2014. Data requirements for item 6 had been gathered by TI with close



cooperation of Ukrainian and Russian partners. However, at that time, regional data for Russia and data for Belarus had not been obtained, as well as the required check of Kazakhstan data by the Kazakh team.

The data collected resulted in a first rough dataset available for processing in June 2014. Further, working datasets were approved by the partners according to the project timetable (August 2014), and were available to them to prepare country reports (milestone MS2: Dataset for WP2, due at month 8).

After the initial data collection, partner countries were asked to provide major data updates (national level only) also in autumn 2014, spring 2015, autumn 2015 and spring 2016.

The data updating proved necessary since most of the countries initially provided incomplete datasets or only preliminary data for the most recent years. A few partner countries had to be offered an additional flexibility in terms of complying with the deadlines, mainly due to lack or major changes in project teams.

Within this task, the following data collected for items 2., 4. and 5. (see task 1.1) were delivered to teams of other WPs: regionalised crop production data (item 2.) to the WP3 team, agri-food chains data (item 4.) to the WP4 team, and AGMEMOD data (item 5.) to the WP5 team.

### Task 1.3: Data processing and qualification (Task leader: KIS)

Based on the work performed in the previous task, the aim here was to reveal the level of data availability (data gaps), to investigate possibilities to estimate missing data, and to initiate the linking of WP1 activities with those of WP5 and WP6.

For some countries, draft datasets were not complete in terms of data topics covered (e.g. agri-food trade, farm structure, budgetary support), or could only be compiled for a shorter time period. Methodologies behind some of the provided statistical data were not always clear (e.g. producer prices, land use, supply balances) or were not classified according to instructions.

Extensive data revisions had to be conducted several times by WP1 leader team. Revision rounds were diverse in terms of complexity and time consumed for individual partner countries and data topics; all together five major revision rounds were conducted in July 2014, November 2014, March 2015, October 2015 and June 2016, and a final data review was eventually performed by the WP leader (KIS) in December 2016.

Intensive bilateral communication with project teams in partner countries, either via e-mail correspondence or directly at the project meetings, was instrumental in the revision process. Partners were asked to provide missing or corrected data and additional clarifications for specific data topics or methodologies used. Not all partners have managed to fill-in all data gaps or to provide relevant clarifications; in some countries, certain data is not publically available or not collected at all. The feedback from other WP teams about data quality was also considered in the revision process. In addition, the quality of data and its compliance for AGMEMOD modelling activities were checked and commented upon in by UL this phase.

With each revision round the data quality usually improved. In general, two types of revision issues can be identified:

1. Key technical revision issues in terms of the WP1 database comprised a variety of technical errors (e.g.

wrong/doubled/mixed up values, errors in aggregation and rounding), errors in the use of units and decimal marks, treatment and labelling of missing data, and lack of citation of data sources.

2. Key content-wise revision issues included illogicalities (e.g. sums of subcategories and regional data, order of magnitude, product coverage) and inconsistencies in the cross-comparison of data/indicators (e.g. between years, between countries).

In the light of cross-country comparability of the collected data, several data topics/issues were identified as problematic (unordered):

- Key macroeconomic and agricultural statistics: unclear categories and methodologies, nature of missing data;
- Farm structure: incomplete data, data inconsistent with land use data, unclear (incomparable cross-country) categories for some countries;
- Land use: unclear categories, especially the category of utilized agricultural area (UAA);
- Prices and price indices: unclear categories and incomparable methodologies (national statistics vs. international statistical databases, such as FAOSTAT);
- Supply balances and fertilizer use: outliers, unclear product/data item categories, level of aggregation, incomplete data;
- Trade: different methodology and level of aggregation;
- Budgetary support to agriculture: incomplete data for some countries, unclear content of some measures, unclear classification principles.

To enable a harmonized approach and sufficient cross-country comparability of collected data for some countries and data topics (e.g. land use, supply balances, budgetary support) data were re-categorized or re-calculated by WP1 team.

In terms of data availability and reliability combined, two groups of AGRICISTRADO countries can be differentiated:

- High level of data availability and reliability: Kazakhstan and Ukraine
- Limited level of data availability and reliability: Armenia, Azerbaijan, Belarus, Georgia, Moldova and Russia.

The assessment of data for specific countries as more limited in terms of reliability mainly had to do with the fact that a considerable effort had to be made to revise or harmonize the raw data received by partner countries in order to be represented in the consolidated database.

To conclude, in terms of data topics, the key macroeconomic data, production statistics, trade, and output data at the aggregate level appear to be the most complete for all the AGRICISTRADO countries and also the most cross-country comparable. Data on prices, farm structure and other data (human consumption, self-sufficiency in certain agricultural products ...) are only conditionally comparable due to differences in methodologies or data quality.

#### Task 1.4: Database creation (Task leader: KIS)

The aim of this task was to provide a consolidated database on agricultural and other relevant statistics

and budgetary support to agriculture for the need of country reviews of agri-food sector (WP2), as well as for public use. Datasets collected for the needs of other WPs were to be organised in a similar way. A draft for a public database was also to be provided. An outline of the database creation process is presented in Figure 1 hereafter.

After approval by all partner countries, key data collected in working datasets (collected with data templates for items 1 to 3, and for item 6) were compiled into the working consolidated database (separate for each country) using the same approach for all countries. Each working consolidated database for each country can be considered as a stand-alone data representation of the agri-food sector in AGRICISTRAD countries, and was also used in the preparation of WP2 reports.

Whereas working datasets include much more detailed data, and for certain data topics even regional level data (e.g. land use and crop production), only key national level data collected with data templates for items 1 to 3 (General statistics, crop production, trade) and a small part of data collected with the policy data template for item 6 (mainly, budgetary support to agriculture by main categories; and also market price support indicators for Kazakhstan, Russia and Ukraine) were used to fill-in the working consolidated database. On the other hand, working consolidated databases were enriched with some additional indicators calculated using the data from working datasets.

The working consolidated database was created by KIS in Microsoft Office Excel program as a set of interconnected spreadsheets and workbooks. Altogether, five data files per country were prepared, including one working consolidated database and four working datasets (general statistics, crop production, agri-food trade, and policy data).

In the same way as for working datasets, the working consolidated database has a uniform spreadsheet structure for all partner countries. The only exemption is for farm structure data, which is presented in a spreadsheet individually customised for each country, due to incomparability of data retrieved from farm structure surveys among countries. Monetary values in the working consolidated database can be converted in three different currencies: national currency, American dollar (USD) and euro (EUR).

Working consolidated databases and statistical datasets for each partner country were finalised and made available to partner countries and the WP2 team in mid-November 2014 (month 11), and to other WPs a week later. Until the end of the project they were updated up to four times (different for individual countries). The updates essentially consisted in correcting identified technical errors in statistical datasets, and revising or adding data.

Working consolidated databases and datasets for each partner country were uploaded on private area of the project website in December 2014. Website updates were made several times during the project duration, with major updates in February 2015, April 2015, and June 2015, October and November 2015, June 2016 and December 2016.

In April 2015, a draft database for public use was also prepared. This draft database consists of working consolidated databases for each AGRICISTRAD country with monetary values in USD only and with no connected working datasets, and was finalised by the end of June 2016 (deliverable D1.1 due at month

30) and updated at the very end of the project, in December 2016.

Few more characteristics of the consolidated database need to be mentioned. First, regarding the time period covered; most of the partner countries were not able to update their data up to 2015. Data missing for the most recent years is marked as not available (“na”). As not available is also marked data which was in the process of data qualification considered as not sufficiently cross-country comparable due to different reasons such as different or opaque methodologies or illogicalities. In the policy data spreadsheet the sign “-” is used to indicate the non-applicability. Data users also need to pay attention to the notes and clarifications at the bottom of data spreadsheets, specifying details about the methodologies and categories used, as well as regional and time period coverage.

The work related to support to agriculture performed under tasks 1.1 1.2 1.3 and 1.4 resulted in the production of Deliverable D1.2 “Database 2: Consolidated database on support to agriculture”.

The work related to collection and compilation of data on agricultural and other relevant statistics required by other WPs performed under tasks 1.1 1.2 1.3 and 1.4 resulted in the production of Deliverable D1.1 “Database 1: Consolidated database on agricultural and other relevant statistics”.

## Conclusion for WP1

In the framework of WP1 two deliverables (Deliverable 1.1 - Database 1: Consolidated database on agricultural and other relevant statistics, due at month 30; D1.2 - Database 2: Consolidated database on support to agriculture, due at month 12) were planned and also completed in due time. Both deliverables are essentially databases, nevertheless for each one a separate report was prepared describing data collection, processing and qualification, database creation and its key characteristics.

Specifically, D1.1 report addresses activities and findings related to Database 1 (Deliverable 1.1) with the first part of the report being dedicated to data collection, processing and qualification and the second part to the database creation process. D1.2 report presents in detail the activities and results of collected, processed and qualified datasets for AGRICISTRAD countries, as well as the creation of the dataset specifically needed for WP2 (milestone MS2). Key policy data from Database 2 are also included in the consolidated database for AGRICISTRAD countries, i.e. Database 1.

General conclusion at the end of WP1 is that most of the key agri-food statistics data is available for all the AGRICISTRAD countries. The level of quality and cross-country comparability of the data collected is diverse by countries; nevertheless, specific data topics are represented in a harmonized way or omitted from the consolidated databases. Most problematic still appears to be limited cross-country comparability of data on land use, producer prices, farm structure, food balances and fertilizers/nutrients use. The most complete and cross-country comparable datasets are collected for Kazakhstan and Ukraine, whereas in terms of data topics for the key macroeconomic data, production statistics, trade and output data at the aggregate level.

Despite the limitations mentioned, the data collected within the WP1 of the AGRICISTRAD project offers a great potential for cross-country comparisons and quick analyses of the agri-food sector in the region, especially after the significant political changes occurred in the recent years. Great potential for usability is

indicated by the feedback from the project partners who have already been profusely using this data for a wide range of uses: policy analyses, academic papers and theses, lectures, either for a specific AGRICISTRade country, group of countries or for all the AGRICISTRade countries. Such feedback as well as simple public access undoubtedly offers strong incentive to further promote the use of the collected data outside the AGRICISTRade project.

If in the future an attempt to recollect or update the data for the AGRICISTRade countries will be made, it would be useful to consider the following recommendations:

- Find reliable and experienced partners in partner countries; help them build capacity and competence if necessary;
- Establish common terminology and clear instructions before the start of the project; encourage information and best practice exchange regarding data collection and other aspects of data management;
- Align the timing of project milestones and deliverables with the timing of standard (most common) updating of statistical data in the partner countries;
- Promote wider use of the collected data.

For some countries or data topics it was not possible to collect initially requested data as they are not collected in these countries. Another deviation from achieving the excellent progress would be that the official statistics data at the national level for some countries often markedly differ from the expert estimates available for these countries.

## ----- WP2: COUNTRY REVIEWS -----

The overall objective of WP2 was to analyse the structures and developments of the agri-food sector in each of the 8 countries addressed by the project. This analysis aimed to contribute to the assessment of productivity gaps and to the identification of the factors that constrain agricultural production and processing potential. The factors influencing the development of agri-food chains cover a wide range of items such as, for example, income (demand) developments, land ownership, access to credits, support policy or trade agreements.

### Task 2.1: Country reports (Tasks leader: EQY)

The main objective of the country reports was to identify and discuss the main factors affecting the agricultural sector, to provide recommendations on how to address bottlenecks for future developments. In the reports, attention was paid to current and future patterns of food consumption and to the production potential. The reports identified the factors constraining agricultural production and processing in responding to domestic food consumption patterns, as well as the main reasons for low productivity and supply chain inefficiencies.

The methodology set up by EQY and the other WP/task leaders combined three complementary elements: the analysis of statistic data collected in WP1, literature reviews (scientific and “grey” literature), and interviews (mainly with trade or business associations). Besides introductory and concluding chapters, the

country-reports consist of the five following chapters: (1) macro environment, (2) primary agricultural sector, (3) upstream and downstream sector, (4) trade of agri-food products, and (5) policy.

The first template of the country report has been submitted by EQY to the partners for comments on February 28, 2014. The final template has been sent on April 15, 2014 (milestone 3), and a first draft report has been delivered by each partner by August 15, 2014. The missing sections or chapters were progressively filled-in over the second semester of 2014 and beginning of 2015, more or less rapidly depending on the availability of data. In particular, since the country reports significantly use the data collected in WP1, their update was facilitated by the release of the consolidated databases in autumn 2014. At that time, the partners from the 8 countries were also encouraged to continue the search of national articles and reports of interest and to conduct interviews, in particular for the discussion of the production potential and the future perspectives. EQY and the partners involved in the preparation of synthesis reports (LAEI, KIS and UL, see tasks 2.2. and 2.3) recommended to quote opinions of the experts consulted in the reports (provided the authorisation of the person interviewed is granted). Other recommendations included (i) the utilisation of USD in tables and graphs and in the text, (ii) the study of similar periods in the different chapters (if possible with data from the year 2013), and (iii) the application of the Harvard system to reference the sources cited in the report.

The main results and conclusions of all 8 country reports were presented through two poster sessions organised in the frame of the third consortium meeting (held in Chisinau, Moldova, in February 2015), and during which the authors were invited to highlight the main findings on production potential and trade potential, principal strengths and weaknesses at the country level, factors affecting future development, and recommendations. These posters were published on the project website immediately after the meeting.

Based on the results presented by each team, the following recommendations were made by EQY and the other partners from EU Member states (wherever relevant for the country):

- Insist on capacity building, training/education of farmers vs. human capital deterioration;
- Further elaborate on food safety issues (classification, complexity...) weaknesses related to irrigation, infrastructures and logistics, risks and insurance, organisation issues faced by farmers;
- Address biomass production and trade potential;
- Focus more on regional development issues (e.g. challenges related to depopulation);
- Add some comments on the current situation and relations with Russia, especially as the most recent statistical data collected are from 2013;
- In the recommendations, make a distinction between expectations from the governments and expectations from the EU (how the EU could provide support, especially for capacity building, investments/infrastructures and product promotion actions?)

The country reports were finalised a few weeks to a few months after the Chisinau meeting with the support of LAEI and EQY, and were published on the project website as and when they were released by the partners in charge, from March 2015 (according to the project timetable) to early July 2015 (hence with a couple months' delay). The most important delays were observed for the partners from the two biggest of the 8 countries (Russia and Kazakhstan), which had to process big quantities of national and regional data, and which encountered difficulties with availability of human resources to carry out the work

(especially in Kazakhstan for ACEPAS, which has undergone reorganization of its internal functioning).

All national reports have been completed by the partners from the 8 countries by July 2015. These reports were then processed and compiled by EQY to prepare the corresponding deliverable. The main results, findings and recommendations resulting from national studies are presented in the synthesis market and policy reports (Tasks 2.2 and 2.3)

The work performed under tasks 2.1 resulted in the production of Deliverable D2.1 “Country reports”.

Task 2.2: Macroeconomic context for agri-food development (Tasks leader: LAEI)

The aim of this task was to synthesise in a Market report the information on the macroeconomic context for agri-food development in analysed countries. The report focuses on the structures, development trends, as well as the main problems and the main possibilities in the agri-food sector and agri-trade.

The template for the Market report was based on the country report template, excluding Policy parts, which were developed in a separate Policy report (see Task 2.3). The approach was to use the country reports (D2.1) and the statistics from WP1 (D1.1). Later, it was decided to also include information from other sources (World Bank, FAO and other datasets) and literature reviews to get data comparability.

A draft template for the Market report was presented by LAEI to all consortium members during the Chisinau meeting in February 2015, and partners were asked for comments after this meeting. The final template was then prepared by early March 2015. The Market report consists of four main chapters. Chapter 1 is related to macroeconomic developments in the analysed countries. Chapter 2 is related to the comparison of the situation of the agricultural sector in the eight countries. Chapter 3 provides an overall picture of the food industry in the eight countries, for which comparison of the main food sector indicators helped to draw parallels between different countries and to investigate common or specific problems. Chapter 4 is related to the main agri-food trade relations among the 8 countries. Finally, an overview in which major strengths, weaknesses, opportunities and threats of the agri-food sector were structured and classified at farm, sector and country levels, is provided in Chapter 5.

A first draft of the Market Report was provided in early June 2015. This version covered Chapter 1, Chapter 2 and Chapter 3. All partners were asked for comments. Some open questions were especially prepared for the partners of the 8 analysed countries. Comments were received by the end of June 2015. The Market Report has then been updated in the following weeks, and missing chapters (Chapter 4 and Chapter 5) were prepared and again submitted to partners' comments before finalisation of the document.

The comparison of macroeconomic environment of agricultural development show that agricultural and food markets in the analysed countries vary. Significant differences are in the levels of economic welfare and employment, and the 8 countries can be split into two categories regarding labour mobility: donors and receivers. The Russian Federation has an outstanding role, as one of the largest economic migrants-receiving countries, and with the highest demand for agricultural and food products. After the recent events in Ukraine, the second most attractive macroeconomic environment moved from Ukraine to Kazakhstan. Other CIS or EU-eastern neighbour countries often play the role of labour donors, their

markets of agricultural and food products being highly dependent on Russian market demand. The analysis of the institutional environment of agricultural and food sectors also show significant gaps in development. Almost all countries mentioned importance of harsh changes in agricultural credit system and educational and research sectors. Access to market information differs significantly and correlates with government attention to these issues and with farm size.

The role of agriculture in the economy of the eight countries is recognised as significant. The share of the agriculture, forestry, hunting, and fishery sectors in total gross added value is the highest in Moldova, and accounts for nearly 15%. In Russia and Kazakhstan this rate is nearly of 5%, and in the other CIS/EU-eastern neighbour countries it is around 10%. Farming intensity in the analysed countries ranges from the relatively intensive farming in Ukraine and Moldova, through moderate intensity of farming in Belarus, Russia and Georgia, to very extensive farming in Azerbaijan, Armenia and Kazakhstan. The first two groups of farming intensity are typical of fertile land with intensive production systems. The third group of countries represents more traditional land uses, usually found on poorer lands. Concerning farm structure, the countries can be separated into two groups. Individual farms are predominant in Armenia, Azerbaijan and Georgia, while corporative farms are predominant in Belarus, Kazakhstan, Moldova, Russia and Ukraine. The yield of various crops and productivity level among the eight countries strongly differs. The overall level of yield and productivity in these countries is much lower than the EU average due to low application of fertilizer and crop protection products, and in some case due to climate conditions and natural handicaps (poor lands in Armenia, Georgia, Kazakhstan, and Azerbaijan).

The food sector plays an important role in the economy of analysed countries (particularly in Armenia, Belarus, Georgia and Moldova): a considerable share of the industrial production is covered by the food sector, although the sector's contribution to the countries' total GVA ranges from 7% to 1% only. The average food production value per capita in the analysed countries is low, compared with the EU average level. Agri-food chain stakeholders are less able and have fewer possibilities in these countries to attract higher value from the market (both in terms of higher quantity sold locally and abroad, and higher product prices obtained). Food sectors are quite diverse in the analysed countries. Belarus excels in the sector of processed products from breeding (dairy products, meat and meat products), while Ukraine is more specialised in the production of large quantities of oil. The manufacture of beverages is one of the main food sectors in almost all analysed countries. The food production structure in the 8 countries ranges from very fragmented organisations to structures similar to the EU average, and even to EU very large structures in Belarus. Overall, the average number of employed persons per enterprise in the food sectors of the 8 countries is larger than in the EU, which contributes to low labour productivity. There has been a strong growth of both food output and input prices in the 8 countries, the ones affecting Belarus being the most remarkable. The growth in input prices has been more significant than increase in output prices. A more positive development of food sector prices relative to production costs was only found in Ukraine. The average profitability of the food sector in the largest producing countries is rather high, especially in Belarus, followed by Russia. Profitability in Ukraine and Kazakhstan seems to be closer to the EU average level.

The integration of national markets into global markets through the re-establishment of foreign trade links was the most challenging issue of the transitional economies. Russia was the main recipient of agricultural and food products from analysed countries. The USSR collapse was accompanied by unfavourable trade



regime and restrictions from the Russian market, resulting in the decline of exports in other former USSR countries. The analysed countries could be mentioned as important trading partners of the EU, with significant growth of imports and exports during the last decade. Per Eurostat, Russia still holds the highest weight in the structure of exports and imports. Other countries are strongly dependent on the Russian market; therefore, its political and economic situations have a strong influence on the neighbouring countries. The establishment of the Eurasian Customs Union created favourable conditions for deeper integration of some countries in the region (particularly Russia, Kazakhstan, Belarus, Armenia and Azerbaijan). Ukraine, Moldova and Georgia declared EU market orientation and seek for liberalised trade with the EU.

The work performed under tasks 2.2 resulted in the production of Deliverable D2.2 “Market report”.

### Task 2.3: Policy developments and analyses (Task leaders: KIS and LAEI)

The analysis of agricultural policy has been given an important emphasis within the project. Since the early 1990s, the CIS countries have undergone transition from a centrally planned to a market-oriented economy. In the context of agricultural production and trade, economic and institutional reform meant the abolishment of central controls and planning, privatisation of production assets, reductions in government intervention in internal markets, price and trade liberalisation, and economic stabilisation.

The joint research team from KIS and UL has attempted to analyse agricultural policies in AGRICISTRAD countries and the effects thereof on production and trade, and thus to fill the gap in the literature, as there is a lack of more recent comprehensive analyses dealing with the changes in general agricultural policy and their impacts on production and trade. The main research questions included the agricultural policy focus (challenges and objectives), key instruments used, evaluation of market price support, systematisation and quantification of budgetary transfers and potential impact of agri-policy on trade and production.

#### Methodology:

The analysis was conducted both qualitatively (through document analysis and literature review) and quantitatively (using the OECD PSE methodology of policy analysis). The research team has analysed (and subsequently synthesised), as primary sources of information, the national strategies pertaining to agricultural policy. UL and KIS also made much use of the country reports prepared by country experts in the framework of the project, as well as direct consultation with them. They supplemented this information with country-specific research and expert papers. Finally, they analysed the conceptual framework of national agricultural policy measures, relying most heavily on the country reports prepared by country experts, and supplemented this information using reports and policy analyses issued by various international organisations (OECD, FAO), as well as some scientific papers.

The quantitative assessment of price protection is based on the calculation of the Nominal Protection Coefficients (NPC). The choice of prices for comparison was based on data availability. The data on domestic producer prices mainly reflect the price levels registered by official national statistics (Belarus, Kazakhstan, Moldova, Russia, and Ukraine). In Armenia, Azerbaijan and Georgia there are no official

statistics on producer prices and therefore FAOSTAT data were used. For Russia, Ukraine and Kazakhstan, NPCs were calculated using the countries own reference prices as assessed by the OECD. For Armenia, Azerbaijan, Belarus, Georgia and Moldova, for which the data on own trade prices are not available, NPCs were estimated based on Russian and EU reference prices.

Budgetary support (explicit and implicit budgetary transfers) was analysed by group of measures respecting the basic OECD PSE/CSE classification scheme (budgetary transfers to producers, budgetary transfers to general services and budgetary transfers to consumers) and compared between countries using relative (percentage/ratio) indicators. For Kazakhstan, Russia and Ukraine, the primary source of data was the OECD PSE/CSE database. For Armenia, Azerbaijan, Belarus, Georgia and Moldova, the basic data were taken from consolidated databases by country, established as a part of the AGRICISTRADe project. Datasets on budgetary support to agriculture cover different time periods, depending on the country, and are not complete in terms of measures covered for all countries.

## Results:

Qualitative and quantitative analysis have shown that the agricultural policies of the AGRICISTRADe countries have become quite differentiated, which is illustrated by the varying numbers of pre-transitional policy patterns still in existence, levels of market-price and trade policy liberalisation, development of market structures, as well as dominant farm structures and the amount of funds available for agricultural policy. The priorities of agricultural policies exposed in strategic documents are quite similar, with a strong production-oriented character that emphasises food security. There are also other priorities, which indicate the primarily developmental role of agricultural policies: increasing competitiveness, productivity, efficiency, farm investment, export orientation, and food value chains. Policy priorities may be similar and only vary between countries in their emphasis, yet the choice and volume of individual instruments differ.

Market-price instruments range from heavily controlled and managed agricultural markets in Belarus, to almost complete market deregulation, mostly in the smaller countries (Armenia, Azerbaijan, Georgia, and Moldova). Russia is somewhere in the middle; Ukraine and Kazakhstan are closer to the smaller countries.

Key budgetary instruments for development-oriented agricultural policies in the region are input subsidies, which is typical of policies in emerging and developing countries. Producer support is regionally specific and is largely based on budgetary revenue forgone; tax concessions (Ukraine, Azerbaijan), concessional credit and bank guarantees (Belarus) play an important role. Prices of agricultural products show a very heterogeneous picture as well. The overall conclusion is that the three countries that have radically implemented land reform and established a fragmented land ownership structure in agriculture (Armenia, Azerbaijan, Georgia) exhibit higher price levels than the reference, while on the other side countries where the market structure is dominated by larger enterprises (Belarus, Kazakhstan and Ukraine) have lower levels of domestic prices. Russia, which is also dominated by large enterprises, falls somewhere in between.

By calculating nominal protection coefficients and budgetary transfers based on the OECD PSE logic, UL and KIS have acquired an aggregate evaluation of total transfers to producers, expressed as a percentage of value of production.

## Conclusions:

The evaluation of producer support allowed for clustering countries within the region according to the nature of agricultural policy:

- The first group consists of the Transcaucasus countries - Armenia, Azerbaijan and Georgia, where the rate of support is about 20% of the value of agricultural production and comparable as a percentage with the European Union, but differs significantly in support composition.
- The second group comprises Russia and Kazakhstan. Support there is at the level of 10% of the value of agricultural production, market price transfers are positive and the share of budgetary transfers to producers is already significant (about half of support). Both countries are also in the Eurasian Customs Union.
- A third group might include Ukraine and Moldova. Both have a negative value of transfers to agricultural producers, especially Moldova with about 20% of the value of production and very limited budgetary support.
- Belarus forms its own group. Due to the large negative market transfers, the substantial and by far regionally highest budgetary support to agriculture is entirely offset, resulting in zero total transfers to agriculture.

The impact of trade policies is different, mostly modest, but existent, and especially important in specific market and political circumstances. Special measures are export duties and export bans in specific political and economic circumstances (food price crisis, political turbulence). However, it is difficult to recognise the developmental impact of trade policies on production growth and the modernisation of agriculture. A special impact on policy and subsequently on trade and partly production is exerted by the visible regionalisation of trade relations through the process of formation of trade agreements, generating new trade patterns, which has started to intensify after 2014.

The key processes here are the Eurasian Customs Union and preferential trade agreements with the EU. This alignment of countries is strongly connected to the influence that the Customs Union has on regional trade and to the fact that most of the countries rely heavily on Russia for their exports; the first group therefore promotes exports to Russia and the EACU, while for the second this represents a policy issue to be dealt with in terms of diversifying export markets.

This work may be regarded as preliminary, as an attempt to increase the body of knowledge about agricultural policy in the AGRICISTRAD countries. Gaps in the literature, weak permanent monitoring systems, complexity of issues and lacking/opaque information and statistics have limited the quality of the work performed by UL and KIS, and resulting outputs. These partners are fully aware of this and wish to stress that the qualitative and quantitative results should be taken with much reserve. This applies in particular to price comparisons, as well as the causal analysis of the causes and effects on prices.

The work performed under task 2.3 resulted in the production of Deliverable D2.3 "Policy report".

Additional work: Monitoring of trade developments (Task leader: DLO)

The AGRICISTRADe project was closely linked with and influenced by current policy issues between the 8 analysed countries and their trade partners. Following the Russian ban on imports of EU agricultural products announced in 2014, the consortium decided that it was important to consider the consequences of the ban on the macroeconomic context in the 8 countries. Consequently, EQY and DLO met with DG AGRI in September 2014 and, per request of the EC, started in the frame of AGRICISTRADe the preparation of a short report analysing and describing these impacts, based on a survey circulated among the partners from the 8 countries. This report identifies the most important products exchanged with the EU and provides a review of the state of play regarding existing trade agreements.

DLO presented the first results of this additional study to the consortium members during the third project meeting in Chisinau (Moldova, February 2015), and then to the EC (on February 23, 2015) in the frame of a meeting organised between DLO, EQY and six representatives from DG AGRI. The study focused on the monitoring of trade developments and more particularly the impacts of the embargo on EU products on recent trade flows with Russia, based on the national statistics collected, analysed and commented by the partners of the 8 countries. The data used consisted of monthly and annual variations of exports of the seven neighbouring CIS countries to Russia and overall agri-food imports by Russia. The period covered and compared were July to October 2013, and July to October 2014. The objective was essentially to show the main trends of trade developments of CIS countries with Russia, and not the detailed reasons of the results observed, which are likely multifactorial (combination of different ban situations, devaluation of Russian rouble, etc.) During this meeting in Brussels, and after this presentation, it was agreed to continue the work by completing the analysis up to December 2014. Therefore, DLO organised a last round of data collection in collaboration with the partner institutions from the 8 countries, to cover the last months of 2014, and then drafted and delivered an updated report (PPT format with slides and notes) by mid-April 2015.

The reports on the monitoring of trade developments were published on the project website.

## Conclusion for WP2

WP2 included one milestone (MS3) consisting in the delivery of a country report template (month 6), and which was completed in due time. Most of the activities were performed according to Annex I (Description of Work) of the contract, although limited delays were observed in the delivery of deliverables D2.1 and D2.2 in part due to difficulties met with data collection and to redefinition of methodology (basically, use external sources of information whenever needed data were missing in country reports). Additional work was also performed per request of the EC to consider and provide information on current modification in trade relations (Russian Bans).

The work performed for country reports led to two synthesis reports, respectively on markets and on policies. The market report focuses on the structures, development trends, main problems and main possibilities in the agri-food sector and agri-trade of the 8 countries. Its preparation was also based on data from WP1 consolidated databases, and on literature reviews.

The report on policy developments provides detailed analysis of the relevant policies (agricultural policies and budgetary support to agriculture), agricultural trade relations and other policy areas that are important for trade and business development.

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### WP3: Explore the untapped potentials of agricultural production


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The main aim of WP3 was to assess both the extensive and the intensive margin for agricultural and biomass production in the 8 countries. The first specific objective for the period was to update the land cover/land use maps for the 8 countries, to delineate the current extent of agricultural and biomass production activities, and to identify land reserves available for further development. Second, bio-physical process models (EPIC, G4M) were applied to assess current production levels and analyse production potentials of agricultural systems (e.g. low input rain-fed, high input rain-fed, irrigated), bio-energy systems, and forest land-use systems for the 8 countries on a geographic resolution of clusters of 10 kilometre grids.

#### Task 3.1: Assessment of current and potential land use (Tasks leader: IIASA)

Precise information about the current land use was a prerequisite for the assessment of potential expansion of agricultural and biomass production on the extensive margin. Land cover/land use maps globally suffer from a high level of uncertainty (e.g. Fritz et al., 2013, 2009). This is even more evident for the project region, which has undergone very dynamic land use change over the past two decades.

The aim of this task was to bridge this gap. The best freely available global and regional spatial information was used to produce a state of the art hybrid map of current land cover/land use for the 8 countries. The main focus was made on delineation of the abandoned and fallow land as the primary source for future agricultural land expansion.

The task leader (IIASA) collected a number of available land cover datasets together with land statistics at the provincial level to harmonise them into a hybrid land use map with known uncertainties. The end product is focused on arable utilised and arable non-utilised land classes. The first step was to simplify legends of initial maps, highlight changes and resample to a targeted resolution of 300m. "Ground truth" information was collected via the Geo-Wiki platform (<http://geo-wiki.org> ) which allows users to classify Google Earth high-resolution imagery. Twenty experts from the IIASA Geo-Wiki network along with AGRICISTRADe project partners were involved in a validation campaign and collected ca. 15K points. They were processed within a Bayesian network for the harmonisation of input datasets into a hybrid product. The method resulted in probabilities of every land cover class for every single pixel on the map. The available regional statistics was downscaled to 300m resolution based on probability map.

The final product is a land use map of the CIS/EU-eastern neighbouring region for the year 2010 with spatial resolution of 300m. Due to independent validation, overall accuracy is 0.76 which is higher than any of input map.

Tasks 3.1 resulted in the release of Deliverable D3.1 "Hybrid land cover / land use map".

#### Task 3.2: Assessment of crop yield gaps (Tasks leader: IIASA)

Along with untapped land potential, yield potential is the second factor which may have a great impact on future agri-trades within the region of interest. Current yields in the 8 countries are lower than in the EU but have a great potential of increase. The aim of this task was to assess the crop yield gaps for the main traded productions.

The EPIC model was used to estimate yield potential of 11 crops (barley, maize, cotton, pulses, potatoes, millet, rape, rye, sugar beet, soya and sunflower) on a grid with 5 arc-min spatial resolution.

The potential was calculated separately for rain-fed and irrigated conditions to provide benchmark yields for both rain-fed and irrigated agricultural production systems. In this analysis, EPIC was forced by daily weather data from the Princeton Global Dataset of Meteorological Forcing for Land Surface Modelling. Crop calendar and cultivar distribution (based on GDD from sowing to harvest) was constructed based on data published by Sacks et al. (2010). In this scenario, irrigated yield potential represents yields not limited by water and nutrients. Automatic fertilization was set in EPIC to eliminate N and P stress on crop growth. Water stress was eliminated across all simulated grids by using automatic irrigation. Rain-fed yield represents potential achievable under rain-fed conditions. Automatic N and P fertilization were used to avoid nutrient stress, but irrigation was not used in this scenario. No technological development in crop cultivars was considered in this study.

Crop specific information on fertilizer application rates and irrigation shares collected in WP1 were used to update existing IIASA EPIC management database for the target regions. Crop yields under present day management were simulated in EPIC and validated against regional yields reported in AGRICISTRIDE. These crop yields represent a baseline for quantifying existing yield gaps.

In this scenario, spatially explicit yield gaps with respect to the rain-fed and irrigated yield benchmarks were provided as well as aggregated gaps for provided share of irrigated area.

Task 3.2 resulted in Deliverable D3.2 “Report on the crop yield gap”.

Task 3.3: Analysis of the potential to produce biomass for material and energy use (Task leader: IIASA)

Non-food production systems can be in competition with food production systems. Therefore, it is important to understand their dynamics in order to anticipate their impact on food production and trade. This task aimed at analysing the potential of non-food biomass production in the 8 countries.

Based on the land cover information collected in Task 3.1 the Global Forest Model (G4M) has been used to estimate the forest harvest potential for the material and energy use. The model applies geographic explicit information concerning aspects such as elevation, soil, slope, temperature and precipitation. The total harvest potential is then separated into the essential categories: total harvest, stem wood of industrial quality, and rest wood to separate how much wood can be used for various purposes. Key information concerning land cover from Task 3.1 has been incorporated into the assessment, including information of current forest species.

From the information collected, three scenarios concerning future forest management strategies were created. The scenarios selected were the followings:

- Current management of forest (Baseline).
- Management of forests to maximise forest increment and biomass production (INC).
- Management strategy to maximise stocking biomass and carbon sequestration level (STOCK).

Scenarios impact crucial elements such as harvest rates, the forest carbon stocks, the extent as to which pre-commercial thinning and final cuttings are taken place. Harvest potentials for the scenario with current management of forests represent the baseline to which the other scenarios can be used to quantify the yield gaps for the forest sector. In these estimations, no change in future climate was taken into consideration nor change in natural mortality disturbances such as fire, wind, and outbreak of pesticides.

Harvest potentials in the CIS area for the period 2020-2030 were calculated for the remaining two scenarios and compared to the current management scenario (i.e. the baseline).

Task 3.3 is presented in Deliverable D3.3 “Report on the biomass production potential”.

### Conclusion for WP3

This work package was divided in three tasks. Task 3.1 assessed the current and potential land use by using the best available spatial information. The main focus was put on the delineation of abandoned and uncultivated land as the primary source for future agricultural land expansion. This task led to the delivery of a hybrid land cover/land use map (D3.1) in December 2014.

Task 3.2 assessed crop yield gaps for 8 CIS countries in three main steps. The first step was the update of the EPIC model (Environmental Policy Integrated Model) with information on current crop management practices. The second step was the assessment of crop yield potential with the EPIC model and the third step was the assessment of productivity enhancing management practices able to close the yield gaps.

Task 3.3 estimated the potential to produce biomass for material and energy use by assessing productivity in forest and by quantifying productivity gaps.

WP3 included milestone MS4, dealing with the delivery of a current land cover/land used map at month 12. The activities were performed according to Annex I (Description of Work) of the contract and the milestone was reached in due time. All relevant data produced in WP3 have been provided to WP5, where the data are being implemented in and used by simulation models.

WP4: Explore “CIS” competitive chains in food and biomass on international markets.

This Work Package was meant to look for empirical evidence on whether and how international competitive food chains can be built in the 8 countries. The analyses have been performed on a set of selected commodity markets and chains with the approval of DG AGRI representatives. This work emphasised the improved understanding of the performances in the food supply chain by investigating its structure and market behaviour, especially focusing on the pricing processes. The final aim was to provide a qualitative and quantitative assessment of the competitiveness of the selected supply chains, in order to examine the socio-economic and institutional causes of untapped agri-food chain potentials, and to provide suggestions for improving the agri-food supply chains competitiveness.

Task 4.1: Assessment of performance of selected agri-food supply chains (Task leaders: DLO and IAMO)

This task was aimed to provide detailed information about the structure of selected agri-food supply chains in the 8 countries and their performance in comparison with similar EU agri-food supply chains. The analysis concentrates on the most relevant food chains in CIS/EU-eastern neighbour countries agri-food trade, and particularly on animal products (meat/dairy), cereals and wine/beverages. Moreover, regarding new developments in international agri-food markets, the performance of biomass supply chains in the 8 countries were analysed in this task.

As part of the AGRICISTRADO project, this task relates to the third objective of the project, which is 'to explore developments in agricultural supply chains'. The report on competitiveness delivered in this task contributes to the evaluation of the performances of selected supply chains, identifies institutional factors that constrain their economic performance, and make suggestions on how policies could enhance supply chain performance. More specifically, this report considers structure and performance indicators of selected food supply chains in EU's eastern neighbours to assess their relative competitive position against EU supply chains.

As competitiveness is a broad, complex concept embracing many issues of resource endowment (availability, quality and use) and is often heavily affected by policy interventions, there is no general agreement on how to define and measure precisely competitiveness. Studies often adopt own definitions and choose a specific measurement method that would fit the entity level of analysis. Measurement can identify revealed performance, relying on indicators such as market shares, export revenues, revealed comparative advantage indicators, etc. In analysing the competitiveness of the EU food industry benchmarked against other main agri-food exporting countries, Wijnands et al. (2008) presented a wide range of economic and trade indicators of performance using food industry data from Structural Business Statistics. Performance indicators included among others (annual growth of) value added per (sub)industry, labour productivity and export market shares.

Efforts to retrieve Structural Business Statistics for the EU-eastern neighbour countries addressed in the project, however, did not deliver the data required for evaluating food and biomass chain competitiveness at subsector level per the approach used in Wijnands et al., as data was not detailed enough and incomplete to allow for country comparisons. The alternative to the 'Wijnands approach' is to use Porter's diamond concept to assess nations' competitive advantage in combination with performance indicators of a specific food industry. However, Porter's framework is highly qualitative and abstract of nature and lacks a methodology for measuring competitiveness, which has not been established in the economic literature (see Rugman and Verbeke, 2005). The AGRICISTRADO competitiveness report (D4.1) therefore, contributes to the literature in two ways: it proposes a quantitative measurement of competitiveness based on the determinants of a nation's competitiveness per Porter's theoretical framework, and applies this quantitative approach to CIS/EU-eastern neighbour countries food industries benchmarked against EU countries.

Deliverable D4.1 "Report on agri-food supply chains" was submitted in November 2015, and provides the comparison of the agri-food sectors' competitiveness between selected CIS and EU countries. In the quantification of performance indicators, the study focuses on nine agri-food sectors and the CIS countries Russia, Ukraine, Kazakhstan and Belarus, which together account for over 90% of CIS' total production value of these agri-food sectors. At EU level, major producers of each agri-food sector are selected for



benchmarking. The overall results of the analysis for the whole agri-food sector indicate that agri-food chains in the four Eastern Neighbours have a weak position against EU competitors. Highest scores are on factor conditions and demand conditions, pointing at cheap resources (land and labour) and strong home country demand as major strengths, whereas related/supporting industries are relatively inefficient and the CIS lack 'good governance'. Hence, competitiveness would be enhanced with more efficient processing and distributing chains and by government policies that are more supportive to agri-food sector development. The latter need not be agricultural sector policies per se, but would refer in the first place to policies that help to establish institutional infrastructures that a market driven agricultural system needs.

Task 4.1 resulted in the production of Deliverable D4.1 "Report on agri-food supply chains".

Task 4.2: Analysis of market competition (Task leader: IAMO)

This task focused on the conduct and market behaviour of selected supply chains, and addressed the question of to what extent the market structure can be characterised as perfect competition and fully integrated. Furthermore, this task provided basic information necessary for conducting the third part of WP4 research activities, focusing on analysis of vertical price formation and market power.

Per data availability and overall relevance for the selected EU-eastern neighbour countries, this task focused on wheat, meat and milk supply chains. Furthermore, the meat supply chain was further divided into pork, beef and poultry supply chains. The investigation of regional and international market integration for the 8 countries mainly relied on data and information provided by the AGRICISTRATE project partners (country experts).

The main contribution of this task is that it provides a comprehensive overview about regional and international integration of the selected supply chains in the 8 countries. Furthermore, broader contribution of this task is that it provides insights of the market functioning in the 8 countries, which is of great importance for policy makers, researchers and broader community.

This task lead to the delivery of a report: "Agricultural market integration of the Commonwealth of Independent States" in June 2015. The overall results indicate strong integration of the selected CIS markets with both reference markets, for particular country/commodities combinations. Strong regional integration is particularly characteristic for those CIS countries that greatly depend on food import from the region (e.g. Armenia, Azerbaijan and Georgia). Furthermore, the members of the Customs Union (i.e. Belarus, Russia, and Kazakhstan) show strong regional integration when it comes to pork and beef markets. Integration with international markets is especially strong for those CIS markets that are export oriented, such as wheat markets in Russia and Ukraine. Also, the results indicate strong integration for those CIS markets that greatly depend on import of food outside from the region, such as pork, beef, and milk powder markets of the CIS countries.

Beside the price transmission results, we were also able to identify some of the most important factors that have an impact on the CIS market integration, such as domestic market support and trade policies, physical trade flows between countries, infrastructure, and bilateral or multilateral trade agreements. For the markets characterized by a high level of state support (e.g. Belarus), integration with international markets is weak or there is even a lack of integration compared to markets where the state does not have

market support measures. In addition, sudden changes in CIS trade policies are significantly affecting CIS market integration by temporarily dampening the transmission of price shocks from external markets towards domestic markets (e.g. wheat export restrictions in Russia and Ukraine). Second, our results indicate that CIS markets might be well-integrated with both regional and international markets since regional integration is more connected to the physical trade flows (import dependency), while integration with international markets is more based on defining the benchmark price for the products that are traded on the regional level. Third, for most of the CIS countries underdeveloped infrastructure significantly reduces market integration (e.g. Armenia and Kazakhstan). Fourth, strengthening trade relations through bilateral or multilateral trade agreements significantly contributes to market integration of the CIS countries (e.g. the Eurasian Customs Union and CIS agreements with the EU).

Task 4.2 resulted in the production of Deliverable D4.2 “Report on market competition”.

Task 4.3: Analysis of vertical price formation and market power (Task leaders: IAMO)

The aim of this task was to analyse the gross margin developments and price transmission mechanisms along the selected CIS supply chains (i.e. wheat, meat and dairy). Furthermore, we look at the determining factors affecting supply chains' performance.

The analyses of gross margin developments across different products (i.e. flour, bread, pork, beef, poultry, cheese and butter) indicate that the average gross margin increased for the period 2012-2014 compared to 2009-2011. The % share of gross margin in retail price increased only in the case of flour retail prices, and stayed at the same level for bread retail prices. On the other side, % share of gross margin in retail price of meat and milk products decreased for the observed period.

The price transmission analysis along the selected supply chains indicates almost complete transmission of price changes from producers to retails in the long run. This is especially the case for CIS meat supply chains. In the short run, producer prices adjust much faster to deviations from the long-run equilibrium compared to retail prices. Furthermore, the analysis of different price adjustments across selected CIS countries indicates that an increase in a country's production specialization decreases the adjustment of retail prices to deviations from the long-run equilibrium. The same is observed if import specialization increases. The results also show that retail prices in Armenia, Azerbaijan and Belarus adjust faster compared to retail prices of other CIS countries. Furthermore, CIS pork and beef retail prices adjust more slowly compared to poultry prices (reference product). When compared with selected EU supply chains, results obtained indicate that the selected CIS retail prices adjust quicker on average than those in the EU. In both CIS and the EU, the retail poultry prices adjust quicker than prices of other selected products.

We argue that some of the factors that might explain a high level of price transmission and fast adjustments of producer prices are: a) low productivity of domestic producers and lack of large cooperatives or unions which could improve the position of domestic producers compared to large importers; b) underdeveloped processing sector for almost all supply chains and selected CIS countries; c) rapid development of the retail sector which is gaining in negotiating power in procurement processes; and d) domestic trade and price policies.

Task 4.3 and resulted in the production of Deliverable D4.3 “Report on price formation and margin”.

Task 4.4: Identifying institutional deficiencies and policy measures that have an impact on supply chain (Task leaders: IAMO and DLO)

The aim of this task was to identify institutional deficiencies and policy measures that have an impact on selected CIS supply chain performance.

One of the main milestones in this task was to conduct a survey to identify the main obstacles to trade of agro-food products in the selected CIS countries (e.g. firm’s characteristics, main obstacles, food standards, etc.). The survey was conducted in all 8 CIS countries accounting for about 60 enterprises involved in trade of grain, meat, and dairy products. The main results of the survey indicate that customs regulations, necessary certificates, and tax regulations represent the most important obstacles for trade of agro-food products in selected CIS countries.

Task 4.4 resulted in the production of Deliverable D4.4 “Report on institution and supply chain performance”.

#### Conclusion for WP4

This work package was divided into four tasks. T4.1 and T4.2 were completed during the first project period (2014-2015). Task 4.1 analysed the performances of the selected agri-food supply chains, while the second task (4.2) was focused on production prices and their spatial transmission, as a translation of specific supply chains integration on a market.

Tasks T4.3 and T4.4 were completed during the second project period (2015-2016). Task 4.3 was analysing gross margin developments and price transmission mechanisms along the selected CIS supply chains. Finally, Task 4.4 was focusing on institutional deficiencies and policy measures that are affecting CIS agro-food markets.

WP4 included milestone MS5, consisting of the delivery of a conceptual framework for the analysis of the competitiveness (reached at month 12). A different methodology from the one described in the Annex I (Description of Work) of the contract was applied to tasks 4.1 and 4.4 due to difficulties with data collection. New methodologies have been presented to the consortium partners at the meetings in February 2015 (in Chisinau), July 2015 (in The Hague), and September 2016 (in Kiev), and were included in deliverables D4.1 and D.4.4.

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WP5: TOOLBOX DEVELOPMENT  
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The main aim of WP5 was to provide a conceptual framework for the quantitative assessment of agricultural production and demand potential in the 8 countries.

T5.1: Conceptual framework for quantitative analysis (Task leader: TI)

The main objective of this task was to outline the steps necessary to link the three models AGMEMOD, MAGNET and GLOBIOM as well as to present a concept for the actual linkage. Through the linkage of these models, all aspects concerning the agricultural sector were considered for scenario analysis.

The linkage was envisaged as follows: GLOBIOM would provide yield development, land use and land use changes, while AGMEMOD would provide agricultural and food production and MAGNET bilateral trade between countries. The linkage would be made through a graphical user interface translating files and data from one model to the other including the mapping of regions and sectors between the models. Before the actual linkage can be implemented, the models had to be harmonised in terms of common exogenous assumptions, endogenous variables and starting values.

This task was the first step to link the models, which was continued in the second half of the project.

Task 5.1 resulted in the release of Deliverable D5.1 “Conceptual framework report”.

#### T5.2: Update and revision of AGMEMOD for EU Member States (Task leader: TI)

AGMEMOD is a bottom-up partial equilibrium model covering the main agricultural products and their processing sectors in the EU-28 member states and some neighbour countries. It allows deriving the influence of policy options on agricultural markets; the main outputs are the production, the supply, the demand and prices. Its main drivers are the GDP, population, and agricultural market policies.

The AGMEMOD model is based upon time series data which are used to econometrically estimate the model equations or calibrate them. Hence, a continuous update of the data and equations is necessary to keep the model up to date. AGMEMOD consists of country models which are combined to a single model to capture interactions between the countries, especially the European Union member states. Generally, each country model is updated and maintained by an organisation (institute or university) within the country. While some countries regularly update their models, others do not have the capacity to do so.

Therefore, a combined effort was undertaken by TI, LEI and JRC to update AGMEMOD. The update was achieved for Germany, Finland, France, Ireland, Italy, the Netherlands, Poland, Romania, the United Kingdom, Bulgaria and Croatia so far. On-going additional country updates after the submission of the Deliverable D5.2 covering the countries Spain, Denmark, Slovenia, and Slovakia improved the quality of AGMEMOD projections further. However, limited time and resources as well as countries where currently no partner for AGMEMOD exist, made it impossible to update each EU country within the timeframe.

Deliverable D5.2 “Report on AGMEMOD revision” summarises the results of task 5.2.

#### T5.3: Extension of AGMEMOD to Kazakhstan and to Belarus (Task leader: TI)

The AGMEMOD model is a multi-product partial equilibrium model covering the agricultural sector in various countries. For AGRICISTRADe, this model was updated and extended. The objective of task 5.3 focused on EU-eastern neighbour countries selected for inclusion or regionalisation in AGMEMOD. The

modelling work carried out by TI, JRC and partners from the CIS countries included intensive data search and equations (re-)estimations.

First, Ukraine and Russia were updated to the newest available data. Second, Ukraine was regionalised, i.e. in AGMEMOD the crop production of Ukraine was divided into six regions. This regionalisation was a feature newly implemented into AGMEMOD in course of the project. Finally, Kazakhstan data was implemented into AGMEMOD, however an operational model as described in D5.3 was not successfully finalized due to time constraints. Due to limited data availability, Belarus was finally not introduced in the AGMEMOD model. In addition, regionalisation of Russia was also not possible because of missing data.

The model update was a substantial improvement of the AGMEMOD model and allowed to take most recent developments into account.

Deliverable D5.3 “Report on AGMEMOD revision” summarises the results of task 5.2.

#### T5.4: Updating the MAGNET model (Task leader: DLO)

MAGNET is a general equilibrium model allowing analysing the economic linkage of the agri-food system with the overall economy. In the AGRICISTRIDE project, this model will be used to assess the influence of trade policy and technological changes on bilateral and global trade. Its main drivers are the GDP, population, technological change, tariffs and other market policies which need to be constantly updated with current figures. Its main outputs are production, supply, input use, demand, trade and prices.

MAGNET is using a database with benchmark year of 2007. Updating of the MAGNET model is required to ensure that the database accurately captures the most recent developments in trade and trade policy issues in the context of EU-CIS trade relations. Next to EU and international data sources, data produced in WP1 on CIS countries are being used to better represent these countries in the model's database. Part one of D5.4 explains which data have been updated and how policy shocks (changes in EU's CAP and trade measures such as the Russian import ban on a many EU food categories) are implemented in the model. In addition, DLO has prepared a note – included as the second part of D5.4 - on estimating trade costs of non-tariff measures in bilateral trade between the EU and the DCFTA partners Ukraine, Georgia and Moldova, and NTM trade costs in Russia's trade with the EU, Ukraine, Georgia and Moldova, respectively. The work consists of estimating quantitative indicators of NTM trade costs to be possibly used in the future trade scenarios based on the MAGNET model. Due to difficulties in collection of the required data, the execution of this sub-task has had some delays. Because of this delay, other sources of NTM trade costs estimations were used in the eventually projections of scenarios designed in WP6. It subsequently appeared that the outcomes of own estimations confirmed the level and ranges of NTM trade costs found in the literature to a high extent.

Task 5.4 resulted in Deliverable D5.4 “Report on MAGNET extension and NTM trade costs estimations”.

#### T5.5: Improvement of GLOBIOM (Task leader: IIASA)

GLOBIOM is a bottom-up partial equilibrium model focusing on land use for the main agricultural and forestry products. Its main outputs include the change in land use, greenhouse gas emissions, the supply,

the demand, trade, prices, irrigation and water use. Its main drivers are the GDP, the population, the biofuel and environmental policies, as well as the constraints in resources.

In the original version of GLOBIOM, all CIS/EU-eastern neighbour countries were represented together in an aggregated region. In order to get better insights into single countries, IIASA singled out Russia, Ukraine, Belarus, and Kazakhstan as individual regions from the aggregate.

In addition, various data sets regarding land cover as well as crop and biomass production potentials, produced by IIASA under WP3, were integrated into GLOBIOM:

- 1) Detailed land use data for CIS countries as described in deliverable 3.1 provide information on abandoned land, which was formerly used for agricultural production but fell out of production after 1990. These spatially explicit data are implemented in the GLOBIOM model to allow for the calculation of scenarios reflecting developments in the agricultural sector in the CIS countries, which eventually would ease the re-cultivation of abandoned land.
- 2) Yield gaps of major staple crops in eight CIS countries were estimated with the crop model EPIC (Deliverable 3.2). Based on these estimates, production systems are implemented into GLOBIOM reflecting a closure of the yield gaps in the four countries Kazakhstan, Ukraine, Belarus and Russia.
- 3) The potential productivity of forests in the CIS area under different management regimes was analysed with the forest model G4M in WP3 (Deliverable 3.3). These scenarios were analysed in terms of their potential increment, harvests and standing stem carbon. Two of these scenarios were used to update the net annual increment estimations for the CIS forests in GLOBIOM.

Task 5.5 resulted in the Deliverable D5.5 “Report on GLOBIOM extension”.

#### T5.6: Linking MAGNET, AGMEMOD and GLOBIOM (Task leader: TI)

Through model linkage the performance of models are improved. In the Task 5.6 the three economic models MAGNET, AGMEMOD and GLOBIOM are linked to produce a flexible tool for quantitative assessments of agricultural production and demand potentials. The linked system of models is the basis for the baseline and scenario analysis in WP6. The task has a technical and a conceptual component.

The conceptual component specifies the harmonization and exchange of data between the models. The three economic models have been harmonized in their common exogenous assumption, e.g. GDP and population development. Further data has been exchanged between the models based on the concept developed in Task 5.1. GLOBIOM provided data on yield and area projections to the system and MAGNET provided data on trade projections to the system. AGMEMOD contributed the most detailed and up-to-date historical data (based on WP1 for Ukraine and Russia) and projections. In AGMEMOD, data from GLOBIOM and MAGNET is jointly used for the baseline and scenario projections. The realization of the concept (Task 5.1) and first results focusing on the wheat sector were presented at the 155th EAAE seminar in Kiev (September 2016). There, GLOBIOM provides yield and area data to AGMEMOD as well as yield data to MAGNET. MAGNET then provides trade data to AGMEMOD and GLOBIOM while AGMEMOD provides production data to MAGNET. This first attempt showed us some short comings of the approach, which were addressed afterwards. For example, trade information from MAGNET to GLOBIOM did not improve the model results and were not used in the model system on which WP6 was

built upon due to expert recommendation. The linkage focuses mainly on crop products and the regions Ukraine, Russia and the EU. These changes to the model link and further details are described in Deliverable 5.6 “Formal link between MAGNET, AGMEMOD and GLOBIOM”.

The technical component overcomes the fact that model linkages are often loosely implemented and require a lot of manual work. In order to automate the link between MAGNET, AGMEMOD and GLOBIOM for the AGRICISTRADe project, the Model Junction linkage Tool (MOJITO) was developed. The aim of this tool is to connect the model in several ways: a) transfer formats (e.g..gdx to .har), b) map regions, sectors and variables, c) exchange data, d) define scenarios, e) run models and f) compare model results. This work is described in Deliverable 5.7 “Operating system of combined models”.

## Conclusion for WP5

This work package was divided into six tasks. Task 5.1 delivered a general framework for model linkage toward a synergetic work on the 8 countries markets. This framework has been informed by the data, policies and information of current agricultural supply and demand developments (WP1 and WP2) and by an understanding of the processes that lead to improved yields (WP3) and potential increased land use and enhanced international competitiveness (WP4). It can assess possible consequences of technology, market and policy scenarios (WP6). The three models and their databases are being improved and extended within the Tasks 5.2 to 5.5. AGMEMOD was updated for Russia and Ukraine and regionalized for Ukraine. An Extension to Kazakhstan was made with respect to the database. The database and model of MAGNET was improved to better reflect the situation in the analysed countries and trade costs related to Non-Tariff Measures were implemented. In GLOBIOM, the region of the Former Soviet Union was disaggregated to represent Russia, Ukraine, Belarus, and Kazakhstan as individual countries. Further data and information on abandoned land and yield potentials from WP3 were included in GLOBIOM.

WP5 includes milestone MS6, related to the availability of a functional database for each model and was also achieved. Specifically, the database of Ukraine and Russia were updated twice to cover and reflect market developments of 2015 if data was available in April and November 2016, respectively.

The technical tool to link the three models MOJITO was successfully developed. Also, the three models have been linked and are the basis for the work in WP6.

In AGMEMOD, for the country Kazakhstan only the database was extended (D5.3) and for Belarus the required data could not be obtained. In MAGNET, the NTMs were only implemented in a stylized way and further research is needed for a more detailed implementation. The main reason here, is also the lack of data. The envisaged linkage of the three models as proposed in D 5.1 is partially implemented as tests showed that some linkages did not improve the model system. Also, an iterative approach was finally abandoned.

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## WP6: SCENARIO ANALYSIS FOR PRODUCTION AND TRADE DEVELOPMENTS

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WP6 aimed to provide an analysis of the impact of market, technology and policy scenarios on agricultural production, use and trade of the 8 countries and the consequences for EU-27 trade relations with those countries.

#### T6.1: Baseline scenario (Task leader: DLO)

In WP6, the improved/extended modelling tools (AGMEMOD, MAGNET, GLOBIOM) were applied to run several scenarios. All partners from the 8 countries contributed in formulating and evaluating the results of the scenarios for their respective country.

A first discussion of possible scenarios to be included in this research took place in the project meeting held in February 2015 (Chisinau, Moldova). Ideas on drivers and trends were shared, for further elaboration and discussion during the meeting in The Hague, in July 2015. This meeting further defined and designed the scenarios, and discussions occurred on how to use the modelling tools developed as part of WP5. DG AGRI was invited to this meeting, provided inputs and presented the expectations of the EC on this topic.

During the meeting in The Hague (July 2015), it was agreed that narratives of the scenarios would be prepared in September. DLO elaborated the narratives, for presentation and discussion in Vilnius, at the project team meeting in November. Based on feedback from all project partners, final decisions were made on the design of the scenarios.

This work resulted in the delivery of scenario hypotheses for a baseline scenario, a scenario based on technology and institutional innovations, and a scenario based on policy changes. This work is related to milestone MS7: Scenario hypothesis: assumptions used in each scenario are approved by the partners. This milestone was reached by month 23 (originally scheduled for month 20).

The next step was making these scenarios operational (i.e. work with GDPs; define which growth figures to include in the models for each storyline; etc.) This work essentially was to be performed by DLO, TI and IIASA. Partners from these institutes had several Skype meetings to discuss model and data issues, and a workshop meeting organised by TI in Brunswick on May 18-20 2016 to specifically address remaining modelling issues, and plan the next steps to make the model linkage system work. Draft reports on scenario outcomes were discussed and finalised to be ready for presentation at the EAAE seminar in Kiev in September 2016.

Based on feedback and comments provided by EAAE seminar participants and project team members, the scenario reports were revised by October 2016, Month 34 of the project. Deliverable D6.1 “Baseline scenario” was drafted by DLO in October 2016, and then presented to stakeholders attending the project meetings in Moscow and Brussels. This report was then revised according to the comments received, and finalised in December 2016, before submission to the EC in early January 2017.

#### T6.2: Assessing the impact of technology and institutional innovations on production and trade relations (Task leader: DLO)



This task was executed in parallel with T6.1 and was implemented during the second project period, as indicated in the DoW (see text at T6.1 above). For this task a separate “technology scenario” was constructed and run within the system of models after several scenarios were tested in GLOBIOM.

This work resulted in Deliverable 6.2 “Report on the impact of technology and institutional innovations”.

#### T6.3: Designing and quantifying the impact of policy relevant scenarios (Task leader: DLO)

This task was executed in parallel with T6.1 and T6.2 and was implemented during the second project period, as indicated in the DoW (see text at T6.1 above). The work resulted in Deliverable 6.3 “Report on the impact of policy scenarios” that presents outcomes of a set of trade policy scenarios.

#### T6.4: Synthesis of scenario outcomes (Task leader: TI)

A report summarising the main findings of the project, including the results of the scenario analyses was prepared by DLO in October and November 2016 (Months 34 and 35). This synthesis report is available as Deliverable D6.4 of the project, distributed during the final conference organised in Brussels in the framework of the project.

Additionally, detailed country notes for Russia and Ukraine on the baseline results are provided in Deliverable D6.5 prepared by TI in December 2016 and submitted to the EC in early January 2017.

#### Conclusion for WP6

WP6 has been implemented over Period 2 using the results from previous WPs. However, the first task was anticipated by the Task Leader (DLO) to provide the consortium with a first raw draft of the scenario for the task leaders meeting held at the end of Period 1, in early July 2015 (as the original plan was to start with WP6 in July 2015). The scenarios were then continuously elaborated between Months 18 and 32. Preliminary results were presented at an interim workshop organised in May 2016. Quantification of the scenarios by the three models took place in the first half of 2016, with analyses of results and report writing in summer and autumn. Scenario outcomes were publicly presented at the EAAE seminar in Kiev (September 2016), in a stakeholder meeting in Moscow (October 2016) and at the final project meeting in Brussels (November 2016). WP6 tasks were completed in October and November 2016, with report polishing as the main activity in the last months up to the end of the project.

#### Potential Impact:

IN Agricistrade, WP7 was dedicated to “Recommendations and dissemination”, and essentially aimed to have the project results known and used by a broad scientific and non-scientific audience. Even though this WP started during the first project period, the activities foreseen were mainly developed in the second part of the project, as the first results of AGRICISTRADe project became available and ready to be shared.

#### T7.1: Preparation and execution of a detailed dissemination plan (Task leader: EQY)

This task handled the coordination of dissemination activities, which consisted for the first period in the

creation of the project website, the publication of news on partners' websites, brief presentations of AGRICISTRAD results, and the publication of the deliverables and first results on the project and partner institutions websites. Workshops, seminars and scientific publications were coordinated by IAMO in Task 7.2 and DLO in task 7.3 respectively.

Regarding Task 7.1 one main activity performed during the first project period was the design and implementation of the project website.

EQY purchased the domain agricistrade.eu at the beginning of the project. EQY was responsible for preparing the design and the contents of the website, as well as for its development and maintenance. A first presentation page has been published a few weeks after the project start, and the full version was released during the second semester of 2014, after the second consortium meeting in Slovenia.

EQY also designed the project logo and graphic identity (in colour and grey scale), which were submitted to all project partners during the Kick-off meeting, for comments and approval.

Website contents were produced based on the project Description of Work, and inputs provided by the partners during the implementation of the project. The website is entirely available in English. As the main dissemination tool of the project, it has been and will be updated regularly with publication of news and documents, announcement of events, new country statistical data, etc.

The website contains the following sections:

- Home: This page introduces the project by presenting briefly the whys and wherefores of the AGRICISTRAD project.
- About displays the major information regarding the project: description of AGRICISTRAD, mission, expected results, management team, overview of the project structure (work packages) and project fact-sheet.
- Partners: This page presents the partners involved in the consortium, their competences, and their role in the project. The website URL of each partner organisation as well as contact information is displayed for every partner.
- News: This page informs the visitors about the new publications available on the website and upcoming events related to the project.
- Events: This page provides a list of the past and upcoming events related to the project, divided into two parts:
  - Meetings and conferences
  - Other external events
- Document Library: This page displays all public deliverables including country reports, PPT presentations of the main findings and recommendations of national studies, as well as the scientific publications produced by the project partners.
- Statistics: This page provides statistical data covering the 8 AGRICISTRAD countries (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Moldova, Russia and Ukraine) for the 2004-2015 period.
- Links: This page displays the links to EU and World Bank resources for the 8 AGRICISTRAD countries studied in the project.
- Contacts: contains e-mail addresses for each partner, as well as a general contact form.
- Private area: gives access to the project extranet portal and administration panel.

The private area of the project website was implemented from the beginning of the project. It has been used internally within the consortium and shared with the Project Officer to facilitate the exchange of documents and information, ensuring fast and easy communication between all the participants. Personal login and password was provided to each person involved in the project within the consortium, and to the Project Officer. Within the extranet portal, each partner had the possibility to create folders and to share files with the consortium members interacting on a given task or work package.

Task 7.1 also focused on the preparation of a detailed dissemination plan. Individual reports summarising the activities implemented or foreseen in the frame of the information campaign were prepared by each partner. EQY collected individual contributions and prepared a synthesis report in June 2015. This work resulted in deliverable D7.1 'report on information campaigns'. This first version essentially summarised the activities implemented and the actions foreseen by each project partner until the end of the project. This report addressed the scientific publications, publications in general press, publication of news on partners' websites, participations in conferences, release of a policy brief and freely available results (e.g. mixed Land Cover/land use map), and other presentations of AGRICISTRAD results by the consortium members.

The results of these activities are presented in Deliverable D7.2 (project website) and in Deliverable D7.1 (Report on information campaigns), which essentially presents the Agricistrade dissemination plan and a summary of communication activities carried out over Period 1.

#### T7.2: Workshops and seminars (Task leader: IAMO)

This task refers to the participation of AGRICISTRAD consortium members to any events in which they can disseminate the project results throughout the project duration (while Task 7.4 will focus on the presentation of final results in various events during the last semester of the project). AGRICISTRAD was already presented in the conferences/workshops below:

- GEWISOLA Conference, September 2014. Conference toward the scientific community and policy makers held in Gottingen, Germany, which targeted less than 500 people. The AGRICISTRAD partners presented the situation of Russia, Ukraine and Kazakhstan.
- Economic growth in conditions of globalisation, October 2014. Conference toward the scientific community held in Chisinau, Moldova, which targeted 100 people. The AGRICISTRAD partners presented the situation in Lithuania, Romania, Ukraine, the Russian Federation and Moldova.
- Sustainable development of the agri-food sector in the context of assurance of the food security of the Republic of Moldova, November 2014 which targeted 40 scientists. The AGRICISTRAD partners presented the situation of Moldova.
- Contemporary development trends of the theory and practice of management in Russia and abroad, December 2014. Conference toward the scientific community held in Stavropol Krai, Russia, which targeted 150 people. The AGRICISTRAD partners presented the situation in Belarus.
- CIS Agricultural Trade Policy Network, FAO Conference, 15-16 December 2014, in Rome, Italy, was targeting more than 100 people.
- National Strategy for Agricultural and Rural Development, January 2015. Meeting with policy makers held in Kiev, Ukraine, which targeted 200 people. The Country report on Ukraine has been disseminated

among the drafters of the Strategy and it has been largely used in drafting the Strategy.

- Innovative Directions of Agri-food Sector Development and Competitiveness Increase of Enterprises and Sectors, January 2015. Conference toward the scientific community held in Yaroslav, Russia, which targeted 120 people. The AGRICISTRADO partners presented the situation in Belarus.
- Meeting with the Korean Ministry of Economy, Industry and Rural Economy Institute under the Knowledge Sharing Programme, January 2015. Meeting toward policy makers held in Seoul, South Korea, which targeted 50 people. The AGRICISTRADO partners presented the situation in the CIS countries.
- FAO Conference, March 2015. Conference toward the scientific community, policy makers, the Industry and the Media in Kaliningrad, Russia which targeted more than 500 people. The AGRICISTRADO partners presented the situation of Russia, Ukraine and Kazakhstan.
- Bavarian Ministry of Food, Agriculture and Forestry, April 2015. Workshop toward policy makers in Germany, which targeted more than 100 people. The AGRICISTRADO partners presented the situation of Kazakhstan.
- 3rd NEEFOOD congress, May 2015. Conference toward the scientific community in Brasov, Romania, which targeted 200 people. The AGRICISTRADO partners presented the situation in the whole CIS/EU-eastern neighbour countries.
- Agricultural technologies and trade policy in Central Asia: Issues and prospects, May 2015. Workshop toward the scientific community in Bishkek, Kyrgyz Republic, which targeted 150 people. AGRICISTRADO partners presented the situation in the whole CIS/EU-eastern neighbour countries.
- Towards more efficient agri-food sector for Belarus, June 2015. Conference toward the scientific community held in Minsk, Belarus, which targeted 100 people. The AGRICISTRADO partners presented the situation in Belarus.
- IAMO Forum, June 2015. Conference toward the scientific community held in Halle, Germany, and which targeted 50 people. The AGRICISTRADO partners presented the global situation for the CIS/EU-eastern neighbour region.
- Introduction of AGRICISTRADO project to Dutch agribusiness representatives and staff of Economic Affairs (Agro-department). The meeting was held in The Hague, Netherlands and targeted more than 50 people.
- Annual conference of the swine breeders of Russia, June 2015. Conference toward the scientific community, policy makers and the Industry. The AGRICISTRADO partners presented the situation in the whole CIS/EU-eastern neighbour countries.
- 2015 AAEA & WAEA Joint Annual Meeting, 25-28 July 2015, in San Francisco, USA, was targeting more than 1,000 people.
- 13th Conference of the International Association of Agricultural Economists (IAAE), held in Milan, Italy in August 2015. AGRICISTRADO partners presented their first findings to their international colleagues.
- ETSG conference, 7-10 September 2015, Paris. DLO paper presentation 'Assessing EU DCFTAs with Eastern neighbours'.

Vilnius, Lithuania; 17 November 2015. Stakeholder meeting with national representatives from the public administration and business organisations related to food processing and trade. AGRICISTRADO partners presented their actual findings and exchanged views with the audience.

- IATRC Annual General Meeting, 12-16 December 2015, in Clearwater Beach, USA, targeting more than 50 people.

- Innovation for Agribusiness meeting with business representatives from Ukraine and the Netherlands, 15 December 2015 in Wageningen. DLO introducing the AGRICISTRADO project and presenting project

results (60 people audience).

- Meeting with Gilles Mettental, Director Agribusiness of the European Bank of Reconstruction and Development (EBRD) in Wageningen, where DLO presented the AGRICISTRATE project findings, audience 25 people.
- IAAE Inter-Conference Symposium: “Agricultural Transitions along the Silk Road”, 4-6 April 2016, in Almaty, Kazakhstan, which targeted more than 150 people.
- IFAMA-WICaNeM congress, 21-23 June 2016, Aarhus (Denmark), DLO paper presentation ‘Competitiveness of CIS countries’
- Armenian Economic Association 2016 meeting, 16-20 June 2016, in Yerevan, Armenia, targeting more than 100 people.
- Organisation of the 155th Seminar of the European Association of Agricultural Economists (EAAE) “European Agriculture towards 2030 – Perspectives for further East-West Integration” held in Kiev, Ukraine at 20-21 September 2016. AGRICISTRATE partners presented their findings to a more scientific-oriented community comprising about 50 persons. This had been the first EAAE-seminar organised in a CIS-country, so far.
- Moscow, Russia, 20 October 2016. Stakeholder meeting with national representatives from the public administration, business organisations related to food processing and trade as well as agricultural attachés from the EU delegation and various EU member states. AGRICISTRATE partners presented their actual findings with a focus on Russia and exchanged views with the audience.
- Samarkand Conference: “Regional and International Cooperation in Central Asia and South Caucasus Recent Developments in Agricultural Trade”, 2-4 November 2016 in Samarkand, Uzbekistan, targeted more than 100 people.
- Brussels, Belgium, 30 November 2016. Final stakeholder meeting with representatives of the European Commission (DG Agri, DG Trade and DG Enlargement) and business organisations. AGRICISTRATE partners presented their findings and discussed the draft final conclusions.
- 2nd international symposium for agriculture and food (ISAF 2015), held in Ohrid, Macedonia, 7-9 October 2015

The results of these activities are presented in Deliverable D7.3 (workshop and seminar report).

#### T7.3: Scientific publications (Task leader: DLO)

This task refers to the publication of scientific articles on the projects results by AGRICISTRATE consortium members:

- Sadig Salahov, Hamza Khalilov, 2015. “Modern trends in foreign economic relations of agrarian economy of Azerbaijan Republic.” Ekonomika APK, International scientific and production journal, Ukraine. The validation of this journal on the participant portal is pending.
- Sadig Salahov, Hamza Khalilov, Ramil Huseyn, Namig Shalbuzov, 2015. “Macroeconomic situation of production and export of agricultural products in the Republic of Azerbaijan”. The Journal of Azerbaijan Agrarian Science. The Ministry of Agriculture of Azerbaijan. № 2 (237), pp 3-7. The validation of this journal on the participant portal is pending.
- Hamza Khalilov, Ramil Huseyn, Namig Shalbuzov, 2015. “Export of agricultural products in the Republic of Azerbaijan”. Scientific works of Research Institute of Economy and Organization of agriculture. The Ministry of Agriculture of Azerbaijan. № 2, pp 5-15.

- Alexandru Stratan. "Development of the agri-food sector In the Republic of Moldova". The Tenth Edition of the International Conference on Theoretical and Applied Economic Practices, Economic growth in conditions of globalization. National Institute for Economic Research, pp 18-23.
- Alexandru Stratan, Victor Moroz, Anatolie Ignat, Eugenia Lucasenco, 2015. "Development of the food sector in the Republic of Moldova." Journal of EcoAgriTourism, ISSN 1844-8577, Romania.
- Victor Moroz, Anatolie Ignat, 2015. "External factors' impact over the agricultural sector of the Republic of Moldova." Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development Vol. 15, Issue 2, 2015, PRINT ISSN 2284-7995, Romania.
- Linda See, Dmitry Schepaschenko, Myroslava Lesiv, Ian McCallum, Steffen Fritz, Alexis Comber, Christoph Perger, Christian Schill, Yuanyuan Zhao, Victor Maus, Muhammad Athar Siraj, Franziska Albrecht, Anna Cipriani, Mar'ana Vakolyuk, Alfredo Garcia, Ahmed H. Rabia, Kuleswar Singha, Abel Alan Marcarini, Teja Kattenborn, Rubul Hazarika, Maria Schepaschenko, Marijn van der Velde, Florian Kraxner, Michael Obersteiner, 2015. "Building a hybrid land cover map with crowdsourcing and geographically weighted regression". ISPRS Journal of Photogrammetry and Remote Sensing. Vol. 103. P48-56. DOI 10.1016/j.isprsjprs.2014.06.016
- IAMO + IER. (2015). "Regional effects of wheat export restrictions in Russia, Ukraine and Kazakhstan: Evidence from price transmission analyses". American Journal of Agricultural Economics, Oxford University Press.
- Alexandru Stratan, Anatolie Ignat, Victor Moroz, 2015. "Support policies for agri-food export promotion in the Republic of Moldova". Agricultural Economics and Rural Development - Realities and Perspectives for Romania. Munich Personal RePEc Archive.
- Vasilina Akhramovich, 2015. "Mechanisms of Adaptation of Foreign Trade Policy in Agri-food sector of Selected Countries and Communities to the WTO Principles". Economic Bulletin of the Economic Research Institute at the Ministry of economy, No.5 pp. 15-25.
- Linde Götz, Ivan Djuric, Thomas Glauben, 2015. "Wheat Export Restrictions in Kazakhstan, Russia, and Ukraine: Impact on Prices along the Wheat-to-Bread Supply Chain". In: Schmitz, A., Meyers, W. H., (eds.): The Emerging Role of KRU in Global Agricultural Markets: Promise and Concern, Section 19, pp. 191-203.
- Linde Götz, Ivan Djuric, Thomas Glauben, 2015. "Are export controls an effective instrument for stabilizing food prices? The experiences of Russia, Ukraine, Kazakhstan and Serbia". IAMO Annual, no. 17, pp. 27-37.
- D. G. Schepaschenko , A. Z. Shvidenko , M. Yu. Lesiv , P. V. Ontikov , M. V. Shchepashchenko , F. Kraxner , 2015. "Estimation of forest area and its dynamics in Russia based on synthesis of remote sensing products" Contemporary Problems of Ecology. Maik Nauka-Interperiodica Publishing Russian Federation. Vol. 8/Issue 701, pp.811-817.
- J. Drozd, A. Volkov, 2016. "Structural changes in agriculture in the EU esatern Partnership countries". Mano #KIS (My farm). Magazine of Lithanian agriculture consultation service.
- Djuric Ivan, Linde Götz, Thomas Glauben, 2016. "Russian pork import ban – Trade diversion and high food prices". IAMO Annual, No. 18, pp. 51-57.
- Olga Shik, Alexandru Stratan, anatolie Ignat, eugenia Lucasenco, 2016. "Evaluation of agricultural support in the Republic of Moldova". Conference proceedings Agrarian Economy and Rural Development - Realities and Perspectives for Romania. Institute for Agriculture Economy and Rural Development, pp 30-37.
- Linde Götz, Ivan Djuric, Oleg Nivievskyi, 2016. "Regional price effects of extreme weather events and

wheat export controls in Russia and Ukraine”. Journal of Agricultural Economics, Vol. 67, No. 3, pp. 741-763.

- Maja Kožar, Marjeta Pintar, Tina Volk, Miro Rednak, Ilona Rac, Emil Erjavec, 2016. “Agriculture and agricultural policy in Eastern European Neighbourhood”. European Association of Agricultural Economists, 155th Seminar, September 19-21, 2016, Kiev, Ukraine. AgEcon Search
- J. Drozd, A. Volkov, 2017. “Russia and the former CIS countries, the agricultural sector’s potential”. Mano #KIS (My farm). Magazine of Lithuanian agriculture consultation service.
- Y. M. Ermoliev , T. Y. Ermolieva , P. Havlík , A. Mosnier , D. Leclere , S. Fritz , M. Obersteiner , S. V. Kyryzyuk , O. M. Borodina, 2017. “Robust Downscaling Approaches to Disaggregation of Data and Projections Under Uncertainties: Case of Land Cover and Land Use Change Systems”. Cybernetics and Systems Analysis. Vol. 53/Issue 1, pp. 26-33.
- Ivan Djuric, Miranda Svanidze, Linde Götz, Inna Levkovich, 2017. “How close is the link between producer and consumer prices in the CIS countries? Price transmission along the wheat-to-bread value chains”. IAMO Annual, No. 19.
- Ivan Djuric, Linde Götz, Miranda Svanidze, Thomas Glauben, 2017. “Agricultural market integration in the Commonwealth of Independent States – What are the main driving forces and challenges?”. In: Bianca Pocol, C. (Ed.): Agricultural Value Chain (forthcoming).
- IAMO , 2017. Agricultural market integration in the Commonwealth of Independent States – What are the main driving forces and challenges. Agricultural Value Chain.
- Emil Erjavec, Tina Volk, Ilona Rac, Maja Kožar, Marjeta Pintar and Miro Rednak, 2017. Agricultural support in selected Eastern European and Eurasian countries. Post-Communist Economies, publication pending. doi: 10.1080/14631377.2016.1267968.

In addition, the following articles were published in journals or are under review:

- George Philippidis, Siemen van Berkum, Andrzej Tabeau, Monika Verma, ‘Assessing overlapping and competing models of East-West trade: The case of the Commonwealth of Independent States’, submitted to Eastern European Economies
- Siemen van Berkum, Jo H.M. Wijnands and David Verhoog, ‘Competitiveness of agri-food chains in EU’s Eastern Neighbours. Quantifying Porter’s diamond’. Submitted to Review of World Economics
- Drozd J., Krievina A, 2017. “Food sector performance in the CIS”. Management Theory and Studies for Rural Business and Infrastructure Development. Aleksandras Stulginskis University and Lithuanian Institute of Agrarian Economics. Submitted to review

The results of these activities are presented in Deliverable D7.4 (scientific articles).

T7.4: Conferences to present final results (Task leader: EQY)

This task was implemented during the second project period, as indicated in the DoW. Besides national and international conferences the project partners participated in to present the project results through oral or poster communications (see online tables filled on the Participant Portal), three main events were organised in the frame of Agricistrade, or in connection with the project:

1) The 155th EAAE Seminar (European Association of Agricultural Economists) seminar was organised in Kiev on September 19-22 and focused on “European agriculture towards 2030:

Perspectives for further East-West Integration”. The event was organised by TI, with strong scientific support from DLO and UL. The seminar was hosted by IER at MIM-Kyiv and was embedded in the Days of Agrarian Economy. Leading experts, academics, industry representatives and regulators had the opportunity to discuss European integration impact on agricultural and food markets, and particularly the agricultural reform in the CIS countries, and food policies. Market segmentation and industry specialization in the EU and CIS were a central topic of the discussion, together with international trade and macroeconomic policies. Special attention was paid to the Ukrainian agriculture prospects.

2) A CIS stakeholder meeting was organised in Moscow, Russia, on October 20th, 2016 (hosted by IKAR) to present the project results and assess projections made towards 2030 with Russian policy makers (Ministry of Agriculture, Ministry of Economy), representatives of the Russian agri-food industry (meat, dairy, grains, etc.) and other local stakeholders of interest (i.e. agricultural delegates from the EU delegation in Russia and from embassies of EU Member States). This meeting was not foreseen in the DoW as such, but it appeared important to hold such an event on the (former) CIS side, especially to assess modelling work in the light of current trends observed by the main actors of the agri-food sector in the reality. Emphasis was put on the Russian case, and discussions revealed an underestimated baseline, which was further corrected before final release of the project results.

3) The same approach was eventually applied with EU stakeholders of Agricultural economy and the agri-food sector in the final project meeting, held in Brussels on November 30th, 2016. The project results were presented and discussed in the presence of all AGRICISTRADe country experts, who provided feedback on the main outcomes for each of the 8 countries addressed in the project, together with their impression on their participation on the project, and their views on the main barriers to reaching agricultural potentials evaluated in the frame of the project. The discussion and complementary presentations allowed putting the project results in the context of the European Neighbourhood Policy with the support of representatives of the European Commission (especially DG Agriculture), and interventions from FAO and industrial actors (ADM group) gave a good opportunity to enlarge the debate.

These activities are presented in Deliverable D7.5 (report on the final conference), submitted to the EC by EQY in February 2017. The main conclusions of the project, including the feedback received from the Agricistrade country experts and external stakeholders met in Agricistrade events, are summarised in Deliverable D7.6 (policy brief) submitted to the EC by EQY in February 2017.

## Conclusion for WP7

This work package has been divided into four Tasks. Task 7.1 was dedicated to the preparation and execution of a detailed dissemination plan. The first period focused mainly on the preparation of the dissemination plan and the design of the project website. Task 7.2 was dedicated to workshops and seminars and Task 7.3 to scientific publications, while conferences to present the final results of Agricistrade were organised over the last months of the project in Task 7.4.

List of Websites:

<http://www.agricistrade.eu/> 



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