

**Issues and challenges for farm and enterprise
diversification and integration of small scale farmers
into value chains in EECA**

Hrabrin Bachev and Stjepan Tanic

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Executive summary

This paper reviews and evaluates issues and challenges for farm and enterprise diversification and integration of small scale farmers into value chains in East Europe and Central Asia (EECA). First, it presents context and approaches to agricultural and rural income diversification. Second, it assesses the extent of agricultural diversification in EECA. Third, it identifies issues, challenges and lessons learnt of the integration of small farmers into agricultural value chains in the region. Forth, it outlines options and areas of intervention to foster diversification and market inclusion of smallholders in EECA. Finally, it concludes with recommendations for improvement of public policies and international assistance.

Farm diversification is defined as the development of alternative economic activities using the whole range of farm's resources. Fundamental changes of farming and agri-business sector in the last two decades (economic liberalisation, privatisation, food chains integration, advances in technologies and standards, support policies, economic instability) left a great part of dominating smallholders in EECA out of the modern market chains and in poverty. Farm and enterprise diversification is perceived as a prospective strategy for market integration, employment and income expansion, and sustainable rural development in the region.

Farm diversification could be agricultural based (alternative crops, livestock, services) or non-agricultural based (processing, transportation, wind energy etc.). It is internally driven (necessity, entrepreneurship, resources) and/or induced by outside (market demand, public policies, donor's support), and carried out through a simple or complex (contract, coalition, trilateral, hybrid) form. The most common reasons for diversification are: declining or inadequate incomes; creating additional employment; available resources and skills; exploration economies of scale and scope; related or complementary products; agronomic and ecological requirements; willingness to enter new markets; reducing risk; response to new policies, business opportunities, and/or international assistance.

There is a big variation in the states, approaches, opportunities, constraints, and effects of farm enterprise diversification in the individual EECA countries caused by the specific farming organisation, resources endowment, markets development, and regulatory, support and infrastructural environment. Proper estimation of the extent and factors of farm diversification is impeded by the lack of appropriate data and comprehensive studies.

In the New Member States (NMS) of European Union pluriactivity is practised by 40% of farmers mainly by smallholders. On the other hands, diversification concerns 13% of farms varying considerably - between 1% in Lithuania to 22% in Romania. Structure of diversification activities also differs significantly processing being the most preferable one. Principally, small farms tend to set up processing of agricultural products, while the larger ones contractual work. Farmers dealing with livestock are more inclined towards on-farm diversification. Contractual work is more frequent on farms specialised in field crops while processing on farms specialised in permanent crops. Farms specialised in grazing livestock may be located in places which are attractive for diversification activities such as tourism. Impact on employment and income is rather positive – diversification increase demand for labour and diversified holdings occupy on average more people than non-diversified ones.

Assessment on the evolution of EECA agricultural diversification though the Index of Crop Diversification indicates that agricultural sector in Central Asia (CA) is the less diversified with Kazakhstan being with the least diversified agriculture, and Tajikistan and Kyrgyzstan with the most diversified one. In the Caucasus there is a hectic trend in crop diversification with Georgian agriculture most diversified and Azerbaijan least diversified. In Central Europe and European Commonwealth of Independent States (ECIS) a stable tendency in agricultural diversification is experienced as Poland and

Belarus are leaders in crop diversification while Bulgaria and Russian Federation are lagging behind. The only subregion where a significant improvement in crop diversification is demonstrated is South-East Europe (SEE), and FYRM agriculture is the most diversified while Turkish one the least diversified. All these trends are a consequence of the specific reforms (market liberalization, privatization, public support), and the more favorable socio-economic and natural environment (tradition, demand, climate etc.) for mono or multi-crop agriculture in the individual countries and subregions.

In SEE, CA, and Caucasus countries the expansion of agricultural diversification is associated with increased Agricultural Value-added per Worker and presumably with enlarged income of employed in the sector. Progression of crop diversification in these subregions is also associated with improvement of land productivity and thus with the overall farm income. Nevertheless, only in the CA subregion the higher income from the expansion (growth) of cultivated area is likely coming as a result of deepening the crop diversification. What is more, process of improvement of agricultural diversification in SEE is connected with increased agricultural income of rural population. However, no indication exists that dynamics of rural population is affected by the process of agricultural diversification in the entire EECA region.

There are big similarities in the state of agricultural and rural income diversification in SEE, ECIS and CA countries. In general, no reliable data are available on current farming structures in the region. Nevertheless, it is estimated that post-privatisation agriculture consists of large number of small scale, subsistence and semi-market farms. In most cases, small holdings manage and often compete for the insignificant amount of critical resources such as land, water etc. In a number of countries, private property rights on farmland are restricted (to user rights, leasing terms) and in certain instances disputed. There is a slow “process” of modernization and restructuring of farms as many smaller size holdings have been highly unsustainable in changing market, institutional and natural environment.

Small scale farms are important for household food supply throughout SEE, ECIS and CA region. There is a partial commercialization of stallholders but in some cases they are a major and “specialized” market supplier of certain basic products such as milk, vegetables etc. Commonly, low productivity and primitive technologies dominate among small farms. These holdings capability to adapt to evolving market, formal, and natural (climate) changes is insignificant. Principally, vertical integration is not developed and mostly farm (crop, livestock) diversification is practiced. However, there are individual success stories for effective market inclusion and enterprise diversification in all countries.

There are not enough data for the rural employment and poverty in SEE, ECIS and CA and the picture for the state of unemployment and poverty in rural areas is not full. Commonly, there is higher poverty and less employment opportunities in rural areas. Generally, agriculture is a or the major (self)employer. There is significant official as well as hidden unemployment throughout the region. Nevertheless, there is increasing needs for high qualified labor and young entrepreneurs in many countries. Agriculture is a major income source along with the pensions and remittances from abroad. Predominantly income diversification in other regions, industries and countries is practiced. Despite that food security is an essential problem in the region (particularly access to food), no specific “rural” food security issues has been identified.

The major issues of small farmers integration in agricultural value chains in EECA are associated with enabling environment, skill and knowledge, identified market gaps and niche markets, extent of horizontal cooperation, and integration in value-chains.

The main challenges for market inclusion of stallholders identified through a number of case studies relate to: efficiency of vertical links; increased funding needs; undeveloped markets; inadequate infrastructure; insufficient public support; increased market, business, institutional, production and environmental risks; abilities of farmers; quality and safety control; small farm size; aged farm managers; low contracting power; absence or inefficient producers organization; innovation; and (in one case) political instability.

Key lessons learned from the case studies are: personal ability plays a role, promoting local products, public financial support, training farmers, improving infrastructure, associating producers, system of control, improving vertical coordination, and third-party assistance and cooperation. Main recommendations withdrawn from the case studies include: improve efficiency of public programs, continuous training programs, public support to producer associations, upgrade infrastructure, improve collective organization, modernize farms, risk management, environmental management, enhance public-private partnership.

There are considerable differences in major challenges for farm diversification, enterprise development and value-chain integration in SEE, ECIS and CA. According to experts, the key challenges in SEE are: insufficient farm adaptation capability to dynamic market, industry and formal standards and rules; small and dispersed operational size and resources; lack of access to outside funding; and lack of appropriate education and training of farmers. For ECIS the most important challenges are associated with: lack of enabling institutional, support, and (macro)economic environment; widespread ineffective production methods; lack of producers organizations; outdated infrastructure; insufficient access to information; and lack of initiatives in farmers and other agents. In countries from CA major challenges relates to: restricted agrarian resources both at country and farm level; outdated inputs supply, processing and retailing systems; widespread “contract failure” of farmers vertical links; absence or (available but) ineffective public funding; lack of skills in farmers; high vulnerability of farms due to lack of risk management.

According to experts, success factors for farm diversification, enterprise development and value-chain integration are also sub-region specific. For SEE they are identified as: private know-how and capital, including foreign direct investment; natural climate, soil, product etc. advantages; consistent public support policies; high consumer (market) demand; modernization of processing industry; inspiring positive experience; and globalisation opportunities. In ECIS these factors are specified as: good natural potential and established international reputation; favourable tax, duty and trade regime; industry initiatives, providing effective information, networking, training, standards, branding; low labor costs; and infrastructure development. In CA factors for success are: preferential crediting and taxing; higher productivity and adaptability of stallholders; adaptation of community based approach, giving both production and transaction costs advantages; giving more decision-making power to farmers for selecting crops and counterparts; and positive dynamics of market prices.

As far as the overall assessment of the process of farm diversification, enterprise development and value-chain integration is concerned, the picture is quite similar across the region. It is described by experts as “bad”, “poor”, “not satisfactory”, “satisfactory”, “space” or “needs for improvement”, “great potential for development”, , “incentives for future”, “promising at present” or “in future”, “declining production”, “acknowledged by government”.

Most priority areas for improvement outlined by experts are also sub-region specific. In SEE they are determined as: preferential funding and taxation; support commercialisation and diversification of smallholders; simplify procedures and improve distribution of public subsidies; create incentives for young farmers; create stable and effective business environment, including improved enforcement of laws and standards; introduce rules for and promote local, special etc. products; projects and incentives for land consolidation, including effective lease outs of state lands; and better train and inform farmers. In ECIS priorities are identified as: preferential credit; facilitate direct investments and innovations; promote and assist diversification, including prospective local products; modernize post-harvest, market, processing, storage and information infrastructure, including through public-private partnerships; support farmers cooperation in marketing and branding; protect against monopolistic pricing and terms; train farmers in entrepreneurship and marketing; and extend private property rights on farmland. For countries from CA these priorities are specified as: preferential credit, taxation and insurance for smallholders; create environment for local and international long-term investments; improve the use of farmland; promote innovation, particularly in appropriate crops, breeds, and water efficiency; promote and support traditional technologies and products; establish farming infrastructure such as slaughter houses, wells, etc.; support

marketing associations; provide incentives for transfer of user and ownership rights on farmland; and improve contract enforcement.

Feasible and effective options of interventions to foster diversification and value-chain integration are country, region, sector specific and depend on particular socio-economic, institutional and natural environment. Based on the outcome of case studies and experts consultation a list of prospective options of intervention recommended in EECA includes:

- in the area of farm modernization and adaptation capability: provide preferential funding, taxing and insurance for farmers and vertical partners; effectively disseminate research and innovations; increase efficiency of extension, training and other (veterinary, quality tests etc.) services; expend and better assign and enforce rights on major farm (land, water) resources and activities (including environmental preservation, selection of production structure and counterparts etc.); protect against monopolistic pricing and terms; and support projects for land consolidation and effective state farmland utilization.
- in the area of research, extension, training and information: direct research and extension programs to smallholders needs, diversification and integration alternatives; establish system of continuous training in farm, risk and eco-management, innovation, quality standards and control, formal regulations, contracting, grant application etc.; improve information on markets, technologies, public programs, adaptation needs; multidisciplinary research and assessments on approaches, factors, benefits, costs, impact(s), and trends for the specific conditions in individual countries, regions, subsectors and segments of population; share positive and negative experiences; improve data collection and public disclosure of available information.
- in the area of producer cooperation and vertical integration: provide support to producers organisations and prospective forms of vertical integration; assist critical activities like inputs and know-how supply, crediting, marketing, processing, quality control, risk-sharing, environmental conservation, certification etc.; improve enforcement of individual and groups rights and contracts.
- in the area of infrastructure modernisation: develop wholesale and terminal markets, irrigation system, storage and processing facilities, transportation network, and telecommunications; create legal conditions and incentives for private and collective investment, and public-private partnerships.
- in the area of public programs design and management: support commercialisation, diversification, public goods provision, and prospective ventures; facilitate criteria for smallholders access; simplify procedures and reduce costs for participation; create incentives for young farmers; improve transparency and farmers involvement in management at all levels; establish public insurance scheme.
- in the area of public-private partnership: jointly define opportunities, constraints, and strategies; effectively divide responsibility in strategies implementation and management; jointly promote new (organic, branded, protected) products, (eco-system) services, and relevant standards; united combat counterfeit products, brands, and services; jointly popularise prospective models; better coordinate national and donor agencies activities.
- in the area of institutional modernisation: create stable and effective regulatory environment for local businesses and foreign direct investments; give full property rights on farmland and decision-making power to farmers; introduce new rights on intangible (brands, origins), infrastructural development, natural resources, eco-system services; better enforce laws, and absolute and contracted rights of all agents; introduce protection against (semi)monopolistic pricing and terms; establish effective court and out of court system for dispute resolution; harmonise with prospective international standards and norms.

Introduction

Over the last two decades there has been a fundamental transformation of farming and agri-business sector in East Europe and Central Asia (EECA) as a result of undertaken economic liberalisation, privatisation, restructuring, and property rights modernisation. During the same period significant changes in the national and global agri-business have also taken place such as new trade rules (world economic order), intensification of exchanges and competition, food chains integration at large (transnational) scale, introduction of high quality and safety standards, advancements in farming, processing, storage, transportation and marketing methods. Evolution of the sector has been substantially affected by political, economic, financial, food, ecological etc. crisis.

All these developments have given new opportunities and put more constraints for small and middle size farms inclusion in modern markets¹. In EECA a great majority of dominating smallholders are still out of the modern market chains and live in poverty². This has led to farm diversification becoming widely advocated and implemented as a prospective strategy for farmers' market integration, "non-traditional" employment and income generation, and sustainable rural development.

Different aspects of farm diversification have been predominately studied in developed³ and developing⁴ countries. With few exceptions⁵ there are no studies on agricultural diversification approaches, factors and impacts in transitional countries from Central and Eastern Europe and Former USSR. Nevertheless, it is widely recognised that context and driving forces for commercialization and diversification in the transition are quite different from developed and low-income food-deficit countries⁶.

The objective of this paper is to review and evaluate issues and challenges for farm and enterprise diversification and integration of small scale farmers into value chains in EECA. First, it presents context and approaches to agricultural and rural income diversification. Second, it assesses the extent of agricultural diversification in EECA. Third, it identifies issues, challenges and lessons learnt of the integration of small farmers into agricultural value chains in the region. Forth, it outlines options and areas of intervention to foster diversification and market inclusion of smallholders in EECA. Finally, it concludes with recommendations for improvement of public policies and international assistance.

¹ Barghouti S., Kane S., Sorby K. and Ali M. (2004). Agricultural Diversification for the Poor, Guidelines for Practitioners, Agriculture and Rural Development Discussion Paper 1, World Bank.

² Csaki C., C.Forgács, D.Milczarek, and J.Wilkin (Editors) (2008). Regional Outcome: Central and Eastern Europe. Restructuring market relations in food and agriculture of Central and Eastern Europe - Impacts upon small farmers. Agroinform, Budapest.

³ McNally S. (2001). Farm diversification in England and Wales — what can we learn from the farm business survey? *Journal of rural studies*, 17 (2), 247-257; The Role of Agriculture and Farm Household Diversification in the Rural Economy of Germany, OECD; The Role of Agriculture and Farm Household Diversification in the Rural Economy of Canada, OECD.

⁴ Goletti F. (1999). Agricultural Diversification and Rural Industrialisation as a Strategy for Rural Income Growth and Poverty Reduction in Indochina and Myanmar, MSS Discussion Paper No. 30, IFPRI, Washington DC; Delgado C. (2000). Agricultural diversification and export promotion in sub-Saharan Africa, IFPRI, Washington DC; Proceedings of National Workshop "Small Farm Diversification", New Delhi 1995.

⁵ Chaplin H., Davidova S. and Gorton M. (2004). Agricultural adjustment and the diversification of farm households and corporate farms in Central Europe. *Journal of Rural Studies*, 20, 61-77; Garnevska E., J. Edwards, and D. Vaughan (2006). Farm diversification opportunities in Bulgaria – the perceptions of farmers in the Plovdiv region – a preliminary analysis, *Journal of International Farm Management* Vol.3. No.2, 1-14.

⁶ FAO (2010). Income Diversification for Sustainable Development of European and Central Asian Rural Areas – Role of FAO, Agenda Item 7, 36th Session, FAO European Commission on Agriculture, Yerevan, 11-12 May 2010.

CONTEXT AND APPROACHES TO AGRICULTURAL AND RURAL INCOME DIVERSIFICATION

Content, needs and effects of agricultural diversification

Diversification is a type of development, which takes a business away from its existing markets and products⁷. It reflects a change in business activities flexible and differentiated response to new opportunities and threats created by evolution of production technology, markets signals, public policies, and natural environment. Diversification is a “change in product (or enterprise) choice and input use decisions based on market forces and the principles of profit maximization”⁸.

Farm diversification may be defined as the development of alternative economic activities using the whole range of the farm’s resources (land, capital, labour, buildings, etc.)⁹. These new activities may be agriculturally based (related diversification), or non-agriculturally based (unrelated diversification). Furthermore, (part-time) farmers can diversify their income through other non-farm based activity which is broadly described as “pluriactivity”.

At the farm level, diversification represents a change in the characteristics of the farm system such that farm practices and products are more aligned with the social, environmental, and economic contexts, as well as the existing constraints and opportunities. At the community level, diversification implies establishing a dynamic optimal mixture of farm production alternatives capitalizing on between-farm heterogeneity in terms of resource availability and qualities¹⁰. Farm diversification enhances sustainable growth and is associated with increased income, employment, competitiveness and sustainability of farms.

The most common reasons for diversifying into new agricultural activities are: declining or inadequate farm incomes; creating employment for family and/or non-family members; exploration of “economies of scale/scope” on production and management; related or complementary products; use of excess capacity; agronomic and ecological requirements (for crop-rotation; pest and disease control; manure management); planning future expansion; “overcoming” (local) competition; willingness to enter new (e.g. niche) markets; exploiting an opportunity or ability; climate change; reducing production, market, business, and/or natural risk¹¹.

The rationale for developing non-agricultural activities are: increased efficiency of the agricultural sector resulting in higher productivity and reduced employment; rising costs of inputs combined with falling prices of outputs; reducing agricultural incomes; changes in demographic and occupational levels; willingness to enter new markets; diminish business risks; development of new policies and priorities relating to agriculture and rural areas; improvement of the rural infrastructure; needs to subsidise traditional farming activity etc.

Broad changes which are taking place in food and agricultural systems worldwide bring about significant challenges for farmers and rural areas across the EECA. Average income per head is still lower in rural regions than in urban areas and the skills base is narrower and the service sector less developed. Many rural regions now depend on a wide range of economic engines for growth. Increasing globalisation,

⁷ Johnson G. and Scholes K. (2002). Exploring Corporate Strategy - text and cases. London: Prentice Hall.

⁸ Pingali, P., and M. Rosegrant (1995). Agricultural commercialization and diversification: processes and policies. Food policy. Volume 20, number 3, 171-185.

⁹ Damianos D. and Skuras D. (1996). Farm business and the development of alternative farm enterprises: an empirical analysis in Greece. Journal of rural studies, 12 (3), 273-283.

¹⁰ At farm level it may be associated with specialization in certain products and/or services.

¹¹ Barghouti S., Kane S., Sorby K. and Ali M. (2004). Agricultural Diversification for the Poor, Guidelines for Practitioners, Agriculture and Rural Development Discussion Paper 1, World Bank; Prag P. (2000). Rural diversification. London: Estate Gazette.

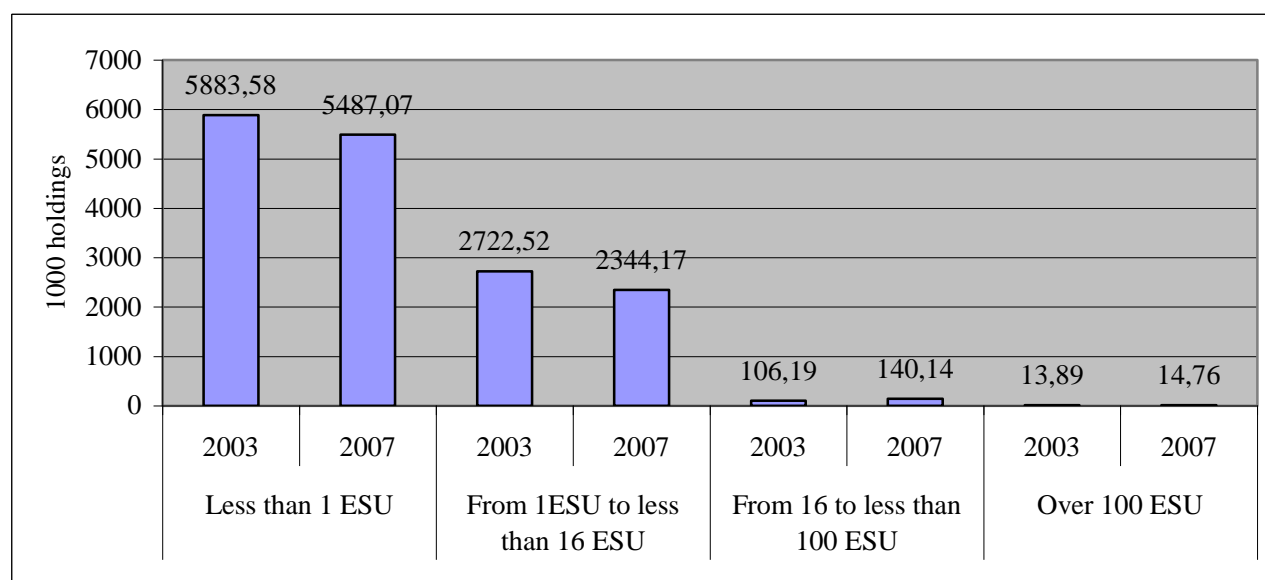
improved communications and reduced transportation costs are additional drivers of economic change in rural areas.

Poverty continues to persist in many countries throughout the EECA region despite institutional reforms, improvements in the global trade regime, and significant enhancement in agricultural productivity. Approximately 8,8 percent of the population lives in extreme poverty earning less than US\$ 2 per day¹². Even in EU27 countries 17% of the population are at risk of poverty¹³ and the highest at-risk-of-poverty rates are in Latvia (26%), Romania (23%), Bulgaria (21%) and Lithuania (20%)¹⁴.

In EECA a large proportion of the population is rural staying at 73,5% in Tajikistan, 63,4% in Kirgizstan, 63,1% in Uzbekistan, 58,8% in Moldova, 52% in Albania, 50,5% in Turkmenistan etc.¹⁵ The incidence of rural poverty is from one to three times higher that of poverty in urban areas (Annex 1 and 2). The share of rural population living below the national rural poverty line has declined in most countries but it still reaches a large portion in some countries – 50,8% in Kyrgyzstan, 49,2% in Kosovo and Tajikistan, 37,8% in Turkey etc. (Annex 3). Poverty is additionally affected by national and global economic crises and is typically severe among smallholders and marginal farmers.

Despite significant transformation in the last two decades, the NMS farming continues to be dominated by small scale operations (Figure 1, Annex 4). In certain countries some enlargement of farms has taken place. Nevertheless, the average size of holding is still quite small (3,4 ha in Romania, 6,4 ha in Slovenia, 8 ha in Hungary, 9,6 ha in Poland, 9,8 ha in Bulgaria, 13,7 ha in Lithuania etc.) with domination of a numerous subsistent and semi-market farms¹⁶.

Figure 1. Agricultural Holdings by Economic Size of the Holding in NMS



Source: Eurostat, *Agricultural statistics, Main results, 2008–09*

Although the nature and pace of change varies among and within countries and regions, common characteristic in developing regions is the transition to market-driven systems associated with greater reliance on input and output markets, hence the development of competitive agriculture sectors. At the same time, agriculture has become increasingly less important as economic driver in rural areas. Both

¹² World Bank Poverty Data.

¹³ with income after social transfers below the poverty threshold.

¹⁴ Eurostat, Living conditions in 2008, Newsrelease 10/2010.

¹⁵ World Bank Rural Population Data.

¹⁶ Eurostat, EU-Agricultural Census, Preliminary Results, 2010.

developments, the competitive pressure and the decreased economic relevance of the sector lead to a structural change process in agriculture – increasing farm sizes and replacing labour through capital.

The emphasis on cereal production over the past three decades in most developing countries has resulted in low output prices and profitability for cereals and dampened agricultural growth. Investment in the sector also has fallen. Farm-level specialization that happens because of biased public policies toward certain crops based on noneconomic considerations (such as food self-sufficiency) is not categorized as diversification in the context of market-based decision-making. In this case, the advantages from the distorted incentives may exceed those created by within-farm or even within-community heterogeneity in the environment. As a result, specialization in the cropping system will occur both at the farm and the regional levels. A typical example of this is the promotion of cereal-cereal cropping systems through price and non-price incentives during 1970s and 1980s. Similarly, the distorted use of certain inputs, such as fertilizer and water, during the 1990s is also not considered diversification in the market context. For example, the abuse of water resources in Azerbaijan and Uzbekistan encouraged by the cotton production policy have had a serious impact on the available water resources, since the level of ground-water significantly went on descending. So farmers have to make efforts and invest more to assure the irrigation for agricultural activity.

Diversification of the income base by redeployment of farm resources into new agricultural and non-agricultural activities could create opportunities to make better use of labour, increase farm household income and improve family farm livelihoods in the region. Nevertheless, the level of diversification in EECA is still relatively small and arguably enterprise diversification by farmers is unlikely to generate sufficient new jobs to solve the problem of high rural unemployment¹⁷. For example, many case studies show that impact of diversification on smallholders and marginal farms is often negative and it contributes little to reducing income disparities between regions and farms¹⁸.

Farming has experienced a dramatic evolution during the post-communist transition in the whole region: in CIS countries, in EU NMS, as well as in Central Asia. Changing consumer demands, adjustments of markets, institutional modernizations, privatization and agrarian reforms radically changed the business environment. This process resulted in a situation in which a great portion of small farmers can access only hardly to modern market oriented systems.

Evidence from several Central European Union Member States indicates that diversification contributes to the increase of household incomes in a period of stagnating farming revenues. However, there are substantial deviations from country to country across the EU and large differences in the performance of individual farms. There is growing evidence that rural households throughout Central and Eastern Europe are increasingly dependent on nonfarm sources for 30-35 percent of their income and although 60 percent of rural inhabitants in rural areas are connected to a farm, only 20 percent count farming as their main occupation¹⁹.

High level of vertical and spatial integration into agroholdings in some EECA countries resulted in reduction of production diversification in their individual members, thus providing the opportunity to increase profitability and economic efficiency. However, based on empirical research carried out to date, there is no evidence that this became widely evident. The establishment of super-large farms had serious impact on employment and livelihoods in rural areas. In many cases restructuring of economies resulted in large layoffs of farm and non-farm workers, who left without alternative employment opportunities, farming their small household plots. In times of hardship (restructuring, crisis) diversification into

¹⁷ Chaplin H., Davidova S. and Gorton M. (2004). Agricultural adjustment and the diversification of farm households and corporate farms in Central Europe. *Journal of Rural Studies*, 20, 61-77.

¹⁸ Barghouti S., Kane S., Sorby K. and Ali M. (2004). *Agricultural Diversification for the Poor, Guidelines for Practitioners*, Agriculture and Rural Development Discussion Paper 1, World Bank.

¹⁹ Davis J. and Pearce D. (2000). *The Rural Non-farm Economy in Central and Eastern Europe*, Discussion Paper No. 04, Natural Resources Institute, Kent.

farming was a (permanent or temporal) survival strategy for many rural and urban households. Furthermore, in many cases diversification of established farming activity is the only way for commercialisation and market inclusion of dominating “semi-market” (subsistent) holdings.

Restructuring of newly evolving private farms is associated with increasing agricultural income (for NMS with 61,2%), and decreasing holdings number and agricultural employment. In NMS for 2000-2009 agricultural employment diminished by 31,2% in some countries reaching high figures (Estonia – 55%, Bulgaria – 48,1%, Slovakia – 42,5%, Romania – 41,1%)²⁰. At the same time, unemployment in rural areas is significant particularly for youth and female while “hidden unemployment” (under-employed farmers and farm workers) comprises 3% of the economic active persons in EU.

In countries where farm sizes are small and likely to remain that way for decades because of population pressures and insecure property rights, diversification from production of staple grains to higher-valued commodities will be the first step in successful agricultural transformation. The next step will be to move beyond basic commodity production in order to access value added supply chains for the modern retail sector, especially supermarkets, where the value-added comes in the form of quality, timeliness, food safety, and labour standards in production. These are highly management-intensive factors and may well contribute to economies of scale in production that are not seen in commodity production alone.

Given the globalization of agrifood value chains the competitiveness remains a key determinant in sustainable use of productive functions of agriculture. However, not all forms of agriculture are capable of reaching the same levels of competitiveness. Increasingly consideration is being given to remuneration of the non-productive functions (eco-system services, animal welfare etc.) which could permit the viability and sustainability of a less productive agriculture and increase the overall rural incomes.

Diversification has become more important in recent years because of the uncertainties surrounding traditional farming practices (mainly associated with food production). Such uncertainties have included the fall in incomes partly because of the behaviour of markets caused by globalization and trade liberalization. The latter is coupled with reforms of government support policies which are increasingly removing or reducing many of the support measures that farmers, particularly in the developed countries, once enjoyed. Moreover, diversification is becoming increasingly important as an income generating and risk reduction strategy in the context of recent food price volatilities, global economic and financial crisis, and climate change. For instance, prolonged economic crises have been associated with return of many immigrant workers back to rural areas (increase in rural workforce and unemployment) and a significant decline of remittances that use to keep much of the rural (farming) economies vibrant. Similarly, global climate change (extreme weather, warning etc.) necessitates appropriate adaptation of production structure and technologies as well as allow introduction of non-native varieties, crops, animals and products.

Furthermore, modern agri-food chain is characterised with a number of new trends such as: raised consumer awareness of, and demand for, food quality and safety; emergence and inclusion of modern retail in the market chain with market opportunities increasing; rapidly growing high value-added sectors (processed products, organic, special origins etc.); changes in procurement systems and vertical market integration (supply chains) at local, national and transnational scales; ease of access of imported goods and global competition at national and local scale; opening up of new market opportunities, including export and processing; good agricultural practice, including traceable production and integrated quality assurance becoming the norm; increasing (price) volatility of supply and demand; changes relative prices of traditional commodities, inputs, and services; increasing scarcity of natural resources like farmland, water etc²¹.

²⁰ Eurostat, Employment in the agriculture sector, Newsrelease 66/2010.

²¹ Barghouti S., Kane S., Sorby K. and Ali M. (2004). Agricultural Diversification for the Poor, Guidelines for Practitioners, Agriculture and Rural Development Discussion Paper 1, World Bank; Proctor, F. and Digal L. (2008).

The main drivers of these trends are: technological advances in production, processing, storage, transportation, communication and marketing; increased purchasing power; changes in consumer lifestyle and preference; health concerns raising quality requirements and changing patterns of demand (health foods); media exposure; influence of globalisation including trade agreements and opening of markets; modernisation of the agrifood sector; growth in new national and external markets; new world economic order and policies (e.g. trade liberalisation, removal of subsidies, introduction of new property rights and privatisation of resources etc.).

Natural resources in some parts of the region have been exploited in an unsustainable manner for decades²². Agriculture was characterized by heavy mechanization, intensive use of fertilizers and pesticides, frequent reliance on monocropping, poor water management and unsustainable animal populations. On top of that, agricultural production is frequently affected by unpredictable adverse meteorological conditions, varying from regional floods and draughts to considerable losses caused by hail resulting in devastating impact on agricultural production, food security and livelihoods, and causing disruption in agrifood chains. Appropriate diversification could improve farm income and adaptability, and agricultural impact on environment - e.g. through a conversion to mix farming, organic production, and eco-system services such as soil and landscape conservation, watershed management, biodiversity preservation, carbon sequestration etc.

All these developments give new opportunities and pose new challenges for market inclusion of small scale holders in modern market chains. The key challenges faced by small-scale producers and entrepreneurs in supplying modern markets are identified as: high consumer quality demands and preference; weak bargaining position of farmers in the markets and/or producers; lack of farm organisations strong enough to engage with modern markets; imbalance of market information; small farmer quantities and non continuous in supply; need to improve productivity and lower production costs including high cost of inputs; high costs of certification and complying with new quality, safety, animal-welfare, environmental etc. standards; failure in the credit and insurance market to meet small-scale producers needs including dependency on traditional (primitive) crediting and assurance; inadequate cooperation between farmers and the need for cooperative action; lack of a conducive public policy environment that is supportive of small-scale producers in the market including at municipality level; asymmetric competition for natural resources with non-farming/rural sector etc.

Diversification could be an effective strategy for farm modernisation, risk management, and market integration of some of these smallholders improving their competitiveness at local and export markets alike. Moreover, trends for replacement of traditional farming inputs (e.g. labor) with chemicals and machineries make otherwise non-tradable farm inputs tradable creating both on-farm and off-farm (e.g. seed production, shops for inputs supply, machinery workshop, rural finance etc.) job opportunities. The later would provide additional income sources for further farm diversification of small farms.

Diversification can also invigorate sustainable growth independent of development parameters. For example, adjusting crops to microenvironments of soil and land, spreading the demand for labor, machinery, and other inputs, improving cash flows, and reducing production and marketing all can spur sustainable growth in agriculture. Learning to adjust to emerging opportunities has significant spill over in terms of know-how, technological and managerial skills, network of business relations (intangible gains/investment), which in long-term to pay-off facilitating transition to other activities and thus reducing income gap. In addition, when diversified production promotes dietary diversity or new food processing

Opportunities for small-scale producers' inclusion in dynamic markets in developing countries and transition economies: A synthesis of findings from eight country level chain-wide learning workshops. Regoverning Markets Working Paper, IIED, London.

²² Bachev H. (2008). Governing of Environmental Problems and Impacts in Bulgarian Agriculture – Lessons for Central Asian Countries, in Environmental Problems of Central Asia and Their Economic, Social and Security Impacts, eds. J. Qi and K. Evered, Springer, The Netherlands, 327-347.

product, it can enhance the nutritional balance of the diet, which improves earning capacity of labor. All these attributes of diversification induce sustainable productivity growth in agriculture, without being exclusively related to the parameters of development. The incidence of poverty is significantly less in those areas where agricultural activities are more diversified but have less development infrastructure compared to those where agriculture is less diversified but have higher development infrastructure²³.

In addition to income, employment, risk reduction, food security and environment effects, farm diversification has multiplier effect(s). It typically involves the movement away from traditional commodities (requiring minimal secondary processing) toward higher value commodities (requiring significant processing and handling). Because the new production systems are often more strongly interlinked with other sectors of the economy (in terms of providing their outputs and receiving inputs from these sectors), there is a stronger multiplier effect of the initial increase in income²⁴.

Approaches to farm and enterprise diversification

Diversification can comprise on- and off-farm activities and involves branching out into other activities and business enterprises either related to farming or entirely different from farming but making use of the assets that a farm typically might possess. We can distinguish between enterprise and income diversification (Figure 2). Enterprise diversification activity embraces both on- and off-farm business creations outside of agricultural core activities. Income diversification will embrace these two components plus any movement towards non-farm employment (whether agriculturally based or not).

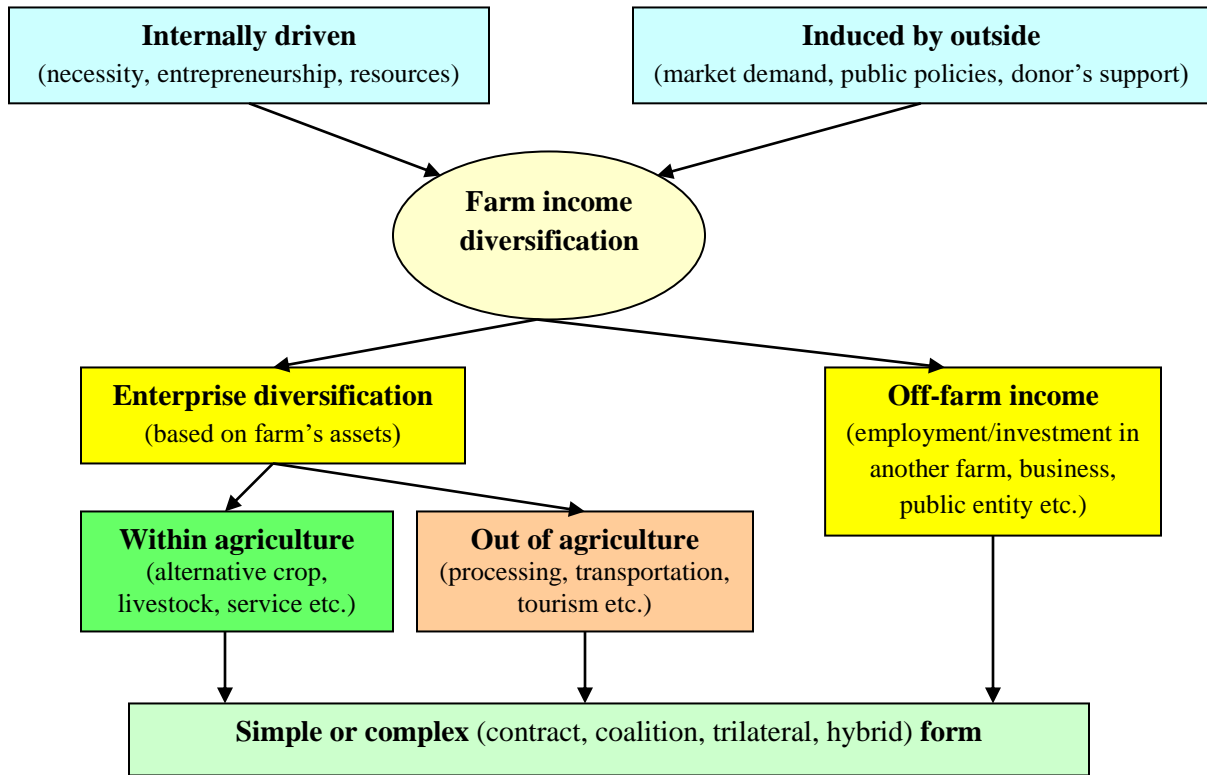
For example, agrotourism, on-farm processing, direct selling, provision of specific services, such as recreation and therapy, but also non-conventional value adding based on voluntary food standards and specific quality production schemes (organic farming, Protected Geographical Indication or Protected Denomination of Origin), high-value crop production, etc., all constitute the most well-known *on-farm diversification strategies* (Table 1). Besides value adding and increasing farm household income, new activities provide labour for a major number of the household members. The main external factors affecting farm-based diversification are related to the development of local economy and local labour markets, as well as the state of infrastructure, particularly transport and telecommunications.

Off-farm diversification in the local rural economy or by migrating is including all those activities that are not agricultural but located in rural areas. They generate income to rural households either through wage labour or self-employment (i.e. diversification away from agriculture sector). Generally, across Europe, income from non-farm activities is rising but invariably, moving into a different business area creates significant problems. For example, the sort of skills needed to deal with the bureaucracy, and marketing and face-to-face customer service may be very different to the sorts of skills many farmers already have. Similarly, many diversification activities take away time from and may distract the main farming activities. New activities also require investment in both financial terms and in learning how to manage a different business area. All these could pose great constraints for smallholders' diversification.

²³ Barghouti S., Kane S., Sorby K. and Ali M. (2004). Agricultural Diversification for the Poor, Guidelines for Practitioners, Agriculture and Rural Development Discussion Paper 1, World Bank.

²⁴ For example, it was estimated that a unit increase in initial income in cereals has a multiplier effect of two, while similar increase in vegetables will generate a multiplier effect of three (Barghouti S., Kane S., Sorby K. and Ali M. (2004). Agricultural Diversification for the Poor, Guidelines for Practitioners, Agriculture and Rural Development Discussion Paper 1, World Bank).

Figure 2. Approaches to farm income and enterprise diversification



There are numerous socio-economic pressures at the household level which act as drivers of diversification. Usually, small farms are associated with *distress-push diversification*. Those who are pushed, normally accept returns on assets or a wage below their returns to farming or their agricultural wage, as they are simply trying to increase their total household income. These households are constrained with regard to their job opportunities by their education levels, appropriateness of skills, lack of infrastructure, etc. This suggests that the resource poor households may be pushed to diversify by financial necessity. On the other hand, more progressive, better off and larger farms generate more agricultural income and frequently have surplus assets to deploy in diversified activities, such as machinery and buildings. Providing an income generating opportunity exists, they become pluriactive. This is a *demand-pull diversification*.

Farms and households driven into demand-pull diversification of their income generation portfolio, in response to an observed market gap or entrepreneurial reasons are more likely to have access to higher entry barrier activities that allow accumulation. On this basis, it might be expected that pluriactive households would tend to be those within the groups of the smallest and largest farms. This is indicative of where policies should be targeted if increased and diversified incomes in rural areas are to be achieved - at the smallest and largest farm groups by providing appropriate support and creation of an enabling environment for rural business development.

Diversification increases systems' flexibility, previously neglected in development measures, such as per capita income and poverty. In some cases, the components of a typical development plan, such as infrastructure, social capital, technology and research, and the policy environment, might be similar to that of a diversification plan. Diversification strategies have to go a step further to generate flexible abilities among producers to quickly adjust to the opportunities created by the market and rational

policies. Such strategies enable farmers to produce different crops (horizontal diversification) or engage in different value added activities (vertical diversification), or even leave agriculture as a full time occupation because of newly acquired flexible management and market skills to grab working opportunities out there.

Table 1. Prospective forms of farm and enterprise diversification

Diversification within agriculture	Diversification out of agriculture
Alternative crops: <ul style="list-style-type: none"> - speciality flowers; - pharmaceutical and aromatic crops; - special (organic, semi-organic, protected, origins, fair-trade etc.) products; - industrial fibre crops (hemp, flax, cereal straw etc.); - energy crops; - non-native crops. 	Processing (jus, cheese, smoked-meat, ice-cream, cans, vine, cakes, dying wool etc.) Transportation Consultation Tourist accommodation (B&B) Forestry farm
Alternative livestock: <ul style="list-style-type: none"> - special (organic, protected, origins, fair-trade etc.) products; - special (happy, free-range) livestock and poultry; - speciality bird eggs and meat (ducks, goose); - non-native animals (ostrich, lama); - worms for compost and bait. 	Fish farm Restaurant, coffee shop Craft and art making, training and selling Sport clubs and training (tennis, cross-country riding, mountain hiking, skiing, hunting etc.)
Alternative services: <ul style="list-style-type: none"> - direct marketing; - agro-ecosystem services; - farm stay and agro-tourism; - agro-training; - self-pick ups; - education and degustation tours; - experimental (demonstration) farm; - manure energy; - games (horse riding, bull fighting etc.) 	General or specialised shop Cultural and regional guide, entertaining etc. Wild fruits and animal gathering Environmental management Wind energy production

Although agricultural diversification is a natural response to the changing economic and political environments inside and outside the sector, we refer here to the “process of promoting diversification.” Such a process involves an unbiased economic analysis to identify the diversification opportunities at the community level. Information, extension, farmers training, and the attention of the private sector are then directed toward those opportunities while selection of appropriate enterprise(s) is left to farmers. Initially, the diversification process can be started at a larger community level because of the high costs. However, when additional resources become available, the diversification process can be narrowed down to smaller communities by identifying more specific opportunities.

The process of diversification requires a deep analysis of methods of different diversification strategies. One of the simplest ways of diversifying incomes, and deepening the integration into value chains is the horizontal (*crop or livestock*) diversification as a method of risk mitigation and the increase of incomes.

No room for doubt, it is necessary to examine how deep impact the crop diversification has on the livelihood of small farmers, and to discover what role it can play in small and medium size enterprises.

The next step of horizontal diversification is *mixed (crop-livestock) farming* with multiple marketed products.

Diversification further embraces integration of activities *backward* (inputs and services) and *forward* into processing, services, marketing (vertical diversification). Here diversification may be considered as unconventionality with respect to traditional farm family agricultural activities and could include on-farm processing, the provision of non-agricultural products and services on-farm. For instance, if there is no market for surplus factors of agricultural production such as labor, land or capital, output may be generated from them by utilising these factors in an on-farm non-agricultural enterprise. This may be of interest for EECA where labor, land and capital markets are still in the process of development.

Diversification can be *internally driven* by entrepreneurship (e.g. creating new market) or *induced by outside market demand*, favourable *public policies*, or *donor agencies priorities*. For instance, the importance of diversification has been increasingly emphasized in the past few years in the EU Rural Development Policy. One of the essential rules governing that policy for the period 2007-2013 is to improve the quality of life in rural areas and encouraging diversification of the rural economy. The EU intends that the resources devoted to the fields of diversification of the rural economy and quality of life in rural areas under this axis contribute to the overarching priority of the creation of employment opportunities and conditions for growth. Diversification of agrarian and rural activity is also a high priority in EU supports for candidate, neighbouring and other countries as well as a part of many donor institutions assistance strategy for EECA.

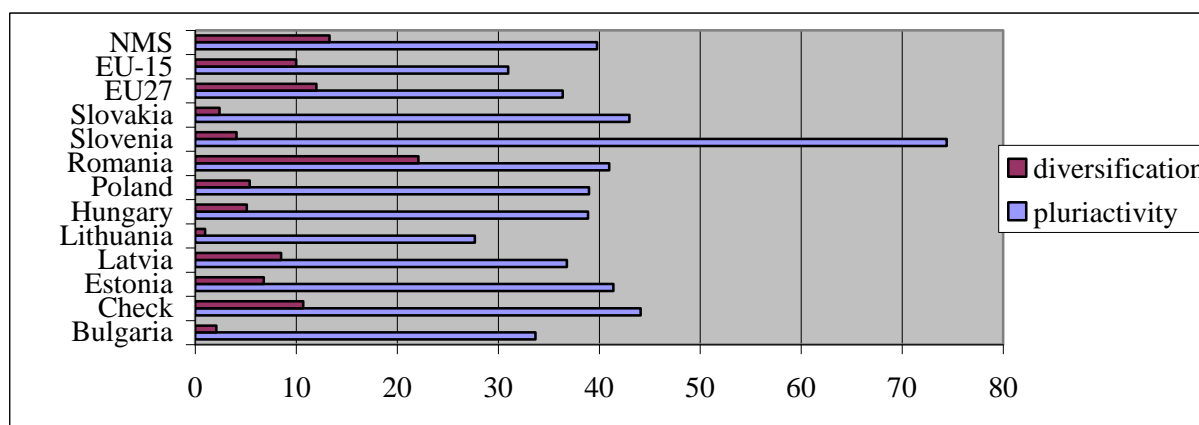
Finally, enterprise and income diversification could be managed by a *simple form* (e.g. within the farm enterprise, standard employment contract) or through a *complex form* including special contract and organisational arrangements with other private and/or public agents (cooperation, shareholding, interlinks, joint ventures, trilateral and hybrid modes). What is more, all forms of diversification have their costs and risks posing additional challenges (needs for new skills, investments, outside dependency etc.). That necessitates careful diversification planning and assessment of comparative efficiency of alternative diversification strategies including the overall costs, risks, and benefits.

ASSESSMENT OF AGRICULTURAL DIVERSIFICATION IN EECA

Pluriactivity and farm diversification in New Member States

In NMS, pluriactivity of farmers and farming households²⁵ is widespread as almost 40% of family farmers carry out “another gainful activity” (Figure 3). It is practised mainly by small farmers looking for complementary income and varies considerably between countries. Another gainful activity is often a result by a genuine entrepreneurship implementing diversification activities on their own farm. For the period 2003-2005 the later increased significantly from 4,5% to more than 13% of the holdings. Nevertheless, in some countries such as Bulgaria, Estonia, Slovenia, Hungary and Lithuania this share effectively decreased during the same period. In EU pluriactivity is mainly a feature of small farms, whereas diversification occurs more frequently on large holdings²⁶.

Figure 3. Share of holdings with pluriactivity and diversification in NMS in 2005 (percent)



Source: Eurostat, Farm Structure Survey, 2007

Structure of diversification activities differ considerably in individual countries processing being the most preferable one (Figure 4). In farm diversification small farms tend to set up processing of agricultural products, while the larger ones contractual work²⁷.

The type of farming is determinant, as some activities are more labour intensive than others or may require a constant presence of the farmer. As a consequence, farmers involved in permanent cropping or field cropping are more available to choose pluriactivity, while farmers dealing with livestock may be more inclined towards on-farm diversification²⁸. The type of farming may also influence the kind of diversification activity set up: contractual work is more frequent on farms specialised in field crops while processing of farm products on farms specialised in permanent crops. What is more, farms specialised in grazing livestock may be located in places rated as attractive for diversification activities such as tourism.

²⁵ Family farm manager is considered as pluriactive if he/she carries out any activity other than farm work for remuneration, be it on the holding itself (farm diversification), on another holding, or as employee in a non-agricultural enterprise. Farm diversification is understood as the creation of any gainful activities that do not comprise any farm work but are directly related to the holding i.e. use its resources or products, and have an economic impact on the holding (Other gainful activities: pluriactivity and farm diversification in EU-27, European Commission, 2008).

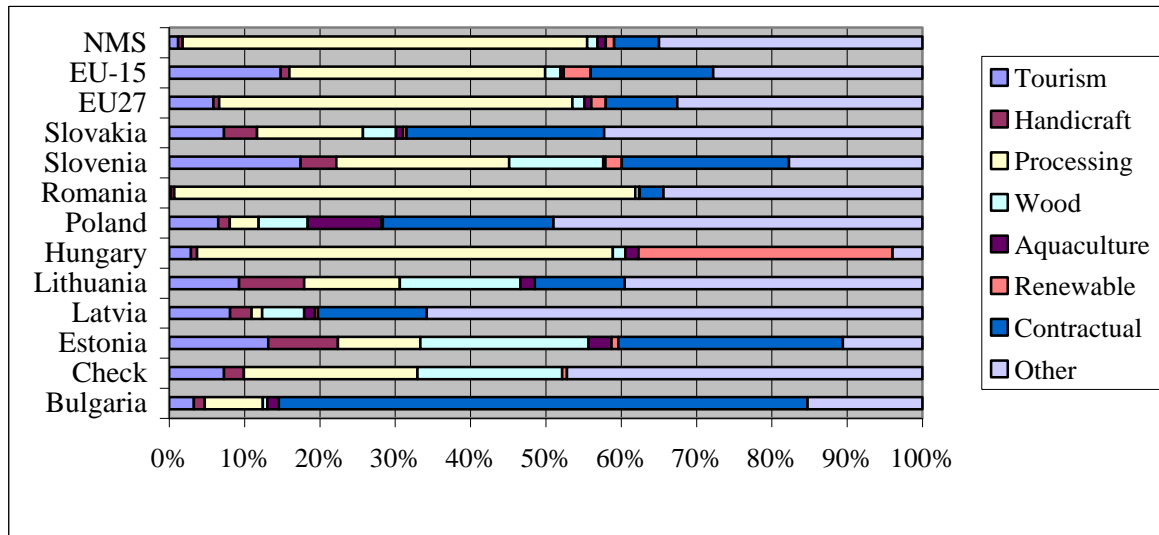
²⁶ Other gainful activities: pluriactivity and farm diversification in EU-27, European Commission, 2008.

²⁷ Other gainful activities: pluriactivity and farm diversification in EU-27, European Commission, 2008.

²⁸ Other gainful activities: pluriactivity and farm diversification in EU-27, European Commission, 2008.

More farmers located in predominantly urban areas (having more employment opportunities and better outlets for diversification activities) are pluriactive comparing to farmers located in predominantly rural areas.

Figure 4. Frequency of given farm diversification activities by NMS in 2005 (% of farms)

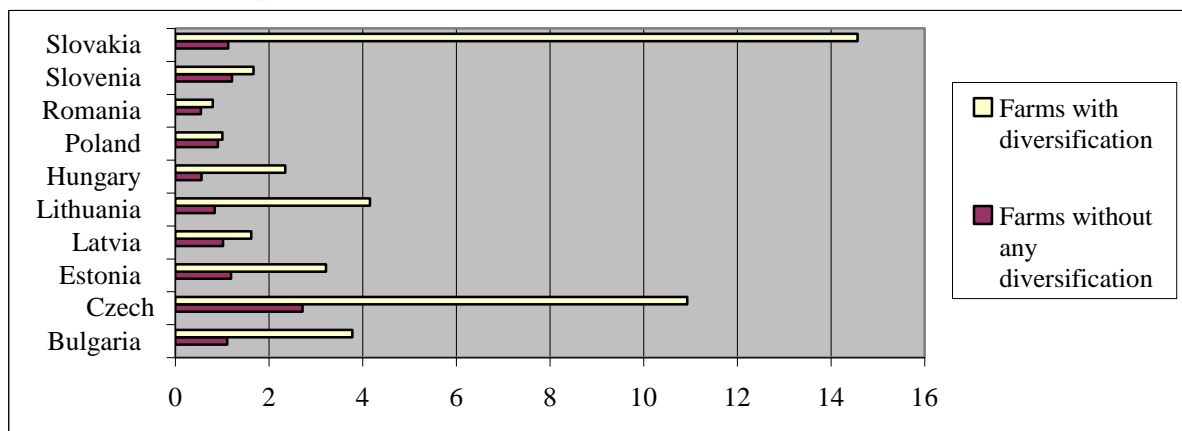


Source: Eurostat, Farm Structure Survey, 2005

Human capital is also important: older farmers are much less pluriactive than younger ones. Besides, a high educational attainment and an entrepreneur's mind are certainly advantages to launch new activities on farm.

Impact on employment and income is rather positive – diversification increase demand for labour and diversified holdings occupy on average more people than non-diversified ones (Figure 5). Therefore, setting up of diversification activities on farm is encouraged via rural development in the region.

Figure 5. Comparative average labour force on farms with or without a diversification activity in NMS in 2005 (AWU per farm)



Source: Eurostat, Farm Structure Survey, 2005

Crop diversification in EECA

Diversification into a more remunerative and viable production portfolio and towards non-food grain and high value commodities is the right answer for the changing scenario of agriculture. That is due to the fact that these commodities have potential of income augmentation, employment generation, poverty alleviation and export promotion. Therefore, it is important to diagnose the production-consumption linkages in the context of agricultural diversification. It will require identification of the driving forces that can alter production portfolios and consumption baskets. It is also important to understand how the production portfolio is evolving itself in response to changes in the consumption pattern, when smallholders dominate agriculture and a majority of them live in the rural areas.

It is pertinent to ask: Is there any scope for increasing income from farming by optimal choice of enterprises and efficient allocation of available resources with diversification involving high-value crops? More specifically, how the income of non-viable farms can be raised by switching from low-value subsistence-oriented (e.g. cereal) crops to high-value commercial crops like vegetables, fruits and other enterprises (livestock, dairy, poultry, etc.)?

There are some evidence that small and marginal farms can increase their income, if they diversify activities to include high-value and value-added crops/commodities²⁹. The assumptions underlying the suggestion are that the producers have no production constraints, a free access to markets, and a fair share of produced surplus. Nevertheless, there is difference in the perception of the consumers and processors on the one hand and the producers, on the other, regarding the "high-value" commodity when market imperfections galore. Often a commodity may not be a high-value one from the point of view of both the consumer and the producer.

Normally, as farm size decreases, the cropping pattern gets more and more intensified, diversified and oriented to high-value crops, in order to maintain, if not increase income level and to guard against risk. Theoretically, smaller the farm size, higher is the tendency to diversify. The criterion of risk reduction is more relevant to small/marginal holders whose risk bearing ability is very low. The converse is also true as farm size increases, i.e., large farms tend to specialise.

There are a number of studies analyzing the nature and spread of agricultural diversification at state, district (village) and farm levels³⁰. Moreover, they try to assess the role of various factors such as farm size, technology, inputs, infrastructure etc. as well as the effect on productivity, income, risk etc. Spatio-temporal pattern of crop diversification is commonly analyzed by using various indices.

In EECA there are no specific studies on extend of farm and rural income diversification. In addition to imperfect methodology, the later is impeded by the lack of appropriate farm level data, and incomplete or not comparable statistical data.

We have tried to assess the evolution of agricultural diversification in the region by using available data for crop areas, agricultural value added, and numbers of agricultural workers and rural inhabitants. The Crop Diversification Index is used as a proxy for measuring the state of agricultural diversification.

Diversification Index (DI) is calculated as a ratio, where the numerator is the sum of the squares of different cropping areas belonging to each cultivated crop, and the denominator - the square of the total cultivated area in the region³¹:

²⁹ Proceedings of National Workshop "Small Farm Diversification", New Delhi, 1995, 97-111.

³⁰ Review of major studies is done by: U.De and M. Chattopahyay (2010). Crop Diversification by Poor Peasant and Role of Infrastructure: Evidence from West Bengal, Journal of Development and Agricultural Economics, Vol. 2(10), 340-350.

³¹ Maji C. and Rahim K. (1995). An Investigation into Small Farm Diversification: Some Case Studies in West Bengal, in Proceedings of National Workshop "Small Farm Diversification", New Delhi, 97-111.

$$DI = \frac{\sum Xi^2}{(\sum Xi)^2}$$

where X_i is the area under i th crop.

Thus a lower value of the Diversification Index means a higher level of agricultural diversification.

Calculation of DIs for countries in the region and subregions shows that Central Asia possesses the highest DIs (Table 2, Figure 6). Therefore, the agricultural sector is the less diversified due to the monocropping characteristic of Central Asian agriculture. Among individual countries agriculture in Kazakhstan is the least diversified while Tajikistan and Kyrgyzstan have the highest diversification in the subregion.

In the Caucasus there is a hectic trend in crop diversification. Nevertheless, Georgia is with the most diversified agriculture while Azerbaijan with the least diversified sector.

In Central Europe and European CIS countries a stable tendency in agricultural diversification is experienced. What is more, Poland and Belarus are the leaders in crop diversification while Bulgaria and Russian Federation are lagging behind.

The only subregion where a significant improvement in crop diversification is demonstrated is South East Europe. Besides, agriculture of FYRM is the most diversified while Turkey is with the least diversified sector in the subregion.

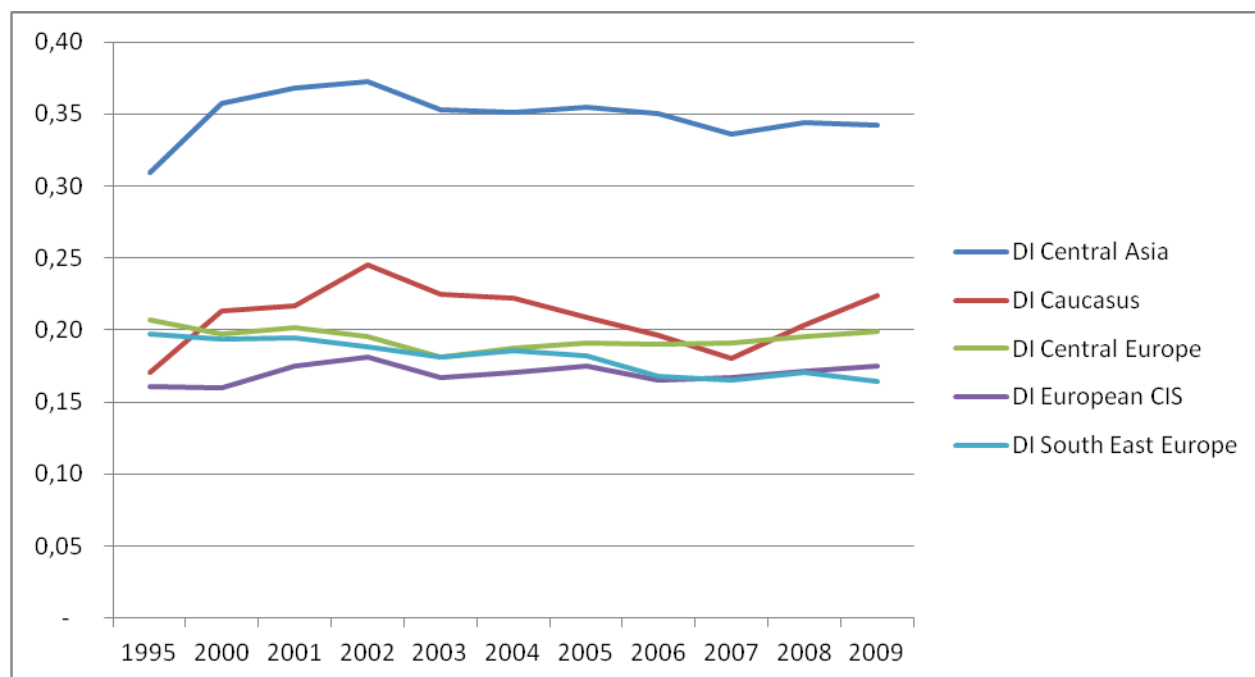
Presumably all these trends are a consequence of the specific economic reforms (market liberalization, privatization, public support), and the more favorable socio-economic and natural environment (tradition, demand, climate etc.) for multi-crop agriculture in certain countries and subregions.

Diversification Index provides a tentative picture on the process of diversification in the region and individual countries. However, it does not fully reflect the progression of national/regional cropping structure within the same DI – e.g replacement of less valuable with a new more valuable crop(s). Neither DI gives a good idea for the dynamics of processes of diversification and/or specialization at farm level. It is well known that farms restructuring and modernization is associated with quite diverse type of development of farms of different size (semi-market, small, middle-sized, large), juridical status (family, cooperative, corporative), and production structure (cereals, horticulture, livestock, mixed) in individual countries and regions.

Table 2: Crop Diversification Index in the countries from CEECA

Countries	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Turkmenistan	0.32	0.37	0.38	0.37	0.39	0.38	0.38	0.39	0.37	0.37	0.37
Kazakhstan	0.47	0.60	0.61	0.62	0.58	0.61	0.62	0.61	0.61	0.61	0.63
Kyrgyzstan	0.26	0.27	0.28	0.31	0.24	0.21	0.23	0.22	0.19	0.20	0.22
Tajikistan	0.23	0.25	0.26	0.25	0.25	0.24	0.23	0.23	0.21	0.23	0.22
Uzbekistan	0.27	0.31	0.32	0.30	0.30	0.31	0.31	0.31	0.30	0.31	0.29
Central Asia average	0.31	0.36	0.37	0.37	0.35	0.35	0.36	0.35	0.34	0.34	0.34
Georgia	0.11	0.15	0.13	0.16	0.14	0.15	0.13	0.14	0.12	0.15	0.15
Armenia	0.17	0.23	0.24	0.25	0.25	0.23	0.23	0.20	0.19	0.19	0.19
Azerbaijan	0.23	0.26	0.28	0.33	0.29	0.29	0.27	0.26	0.23	0.27	0.33
Caucasus average	0.17	0.21	0.22	0.25	0.23	0.22	0.21	0.20	0.18	0.20	0.22
Slovenia	0.18	0.19	0.20	0.19	0.17	0.18	0.17	0.15	0.17	0.18	0.17
Lithuania	0.24	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.19
Latvia	0.21	0.19	0.18	0.18	0.17	0.16	0.18	0.18	0.19	0.21	0.24
Estonia	0.30	0.22	0.21	0.22	0.21	0.21	0.24	0.24	0.23	0.22	0.23
Czech Republic	0.22	0.24	0.23	0.22	0.18	0.22	0.21	0.21	0.21	0.21	0.21
Slovakia	0.19	0.19	0.20	0.18	0.16	0.17	0.18	0.17	0.18	0.19	0.18
Poland	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.11	0.11	0.12	0.12
Hungary	0.17	0.20	0.21	0.19	0.19	0.19	0.19	0.20	0.19	0.19	0.19
Bulgaria	0.20	0.19	0.25	0.25	0.19	0.21	0.24	0.23	0.25	0.24	0.25
Romania	0.23	0.23	0.24	0.22	0.23	0.24	0.22	0.21	0.20	0.21	0.20
Central Europe average	0.21	0.20	0.20	0.20	0.18	0.19	0.19	0.19	0.19	0.20	0.20
Republic of Moldova	0.13	0.15	0.16	0.16	0.19	0.18	0.17	0.16	0.16	0.16	0.15
Belarus	0.18	0.13	0.13	0.13	0.12	0.11	0.11	0.11	0.11	0.11	0.11
Russian Federation	0.19	0.21	0.23	0.25	0.22	0.24	0.25	0.23	0.24	0.25	0.28
Ukraine	0.14	0.15	0.17	0.18	0.14	0.15	0.17	0.16	0.16	0.16	0.17
Europe CIS average	0.16	0.16	0.18	0.18	0.17	0.17	0.17	0.16	0.17	0.17	0.18
Serbia	-	-	-	-	-	-	-	0.20	0.21	0.22	0.21
Serbia and Montenegro	0.23	0.22	0.23	0.23	0.20	0.21	0.21	-	-	-	-
Montenegro	-	-	-	-	-	-	-	0.14	0.14	0.14	0.13
Bosnia and Herzegovina	0.15	0.19	0.19	0.18	0.17	0.16	0.17	0.16	0.16	0.17	0.16
Croatia	0.22	0.20	0.21	0.21	0.20	0.24	0.20	0.19	0.18	0.19	0.19
Albania	0.20	0.17	0.17	0.16	0.15	0.13	0.14	0.13	0.12	0.13	0.12
FYRM	0.15	0.14	0.14	0.13	0.13	0.13	0.14	0.12	0.12	0.11	0.11
Turkey	0.24	0.24	0.24	0.23	0.23	0.24	0.24	0.23	0.23	0.23	0.23
South East Europe average	0.20	0.19	0.19	0.19	0.18	0.19	0.18	0.17	0.17	0.17	0.16

Figure 6. Crop Diversification Index in subregions of CEECA



We have also tried to assess the relationship between the crop diversification and the performance of agricultural sector – and estimate whether the level of crop diversification has impacted the agricultural value added, value added per worker, value added per hectares, value added per rural inhabitants, as well as the trends of these indicators.

Correlation between DIs and Agricultural Value-added per Worker (VAW) in South-East Europe, Central Asia, and Caucasus countries is negative (Figure 7). What is more, it is strongly negative for South-east Europe and Central Asia which means that expansion of diversification is associated with increasing the VAW (and presumably the income of employed in the sector) in the sub-regions. For other parts of the region there is a weak or no correlation between the process of diversification and the evolution of value-added (income) of workers.

Furthermore, there is a strong negative correlation between DIs and Agricultural Value-added per Hectare in South-East Europe, Central Asia, and Caucasus countries (Figure 8). Therefore, progression of crop diversification is associated with improvement of land productivity and presumably with the overall farm income in these subregions. Nevertheless, only in the Central Asian subregion there is a stronger negative correlation between DIs and Agricultural Value-added per Hectare Growth (Figure 9). The later indicates that the higher income from the expansion (growth) of cultivated area is most likely coming as a result of deepening the crop diversification in the subregion. In European CIS there is no relation between the evolution of diversification and the return on farmland.

Figure 7. Correlation between Crop Diversification and Agricultural Value-added per Worker in CEECA

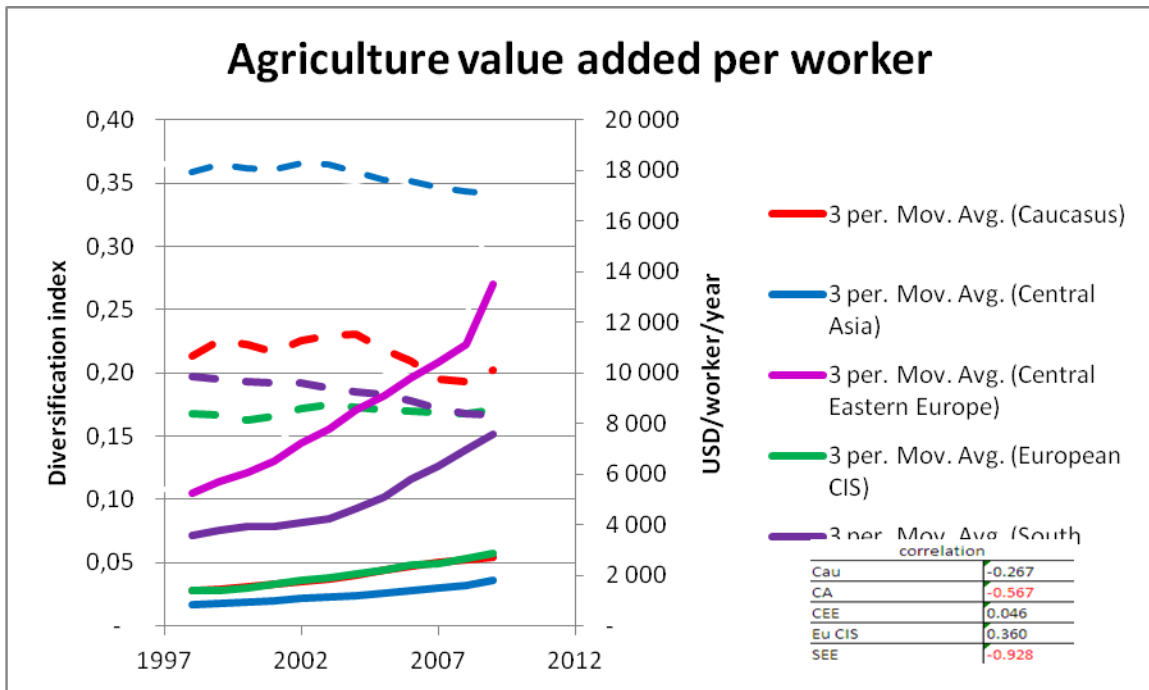


Figure 8. Correlation between Crop Diversification and Agricultural Value-added per Hectare in CEECA

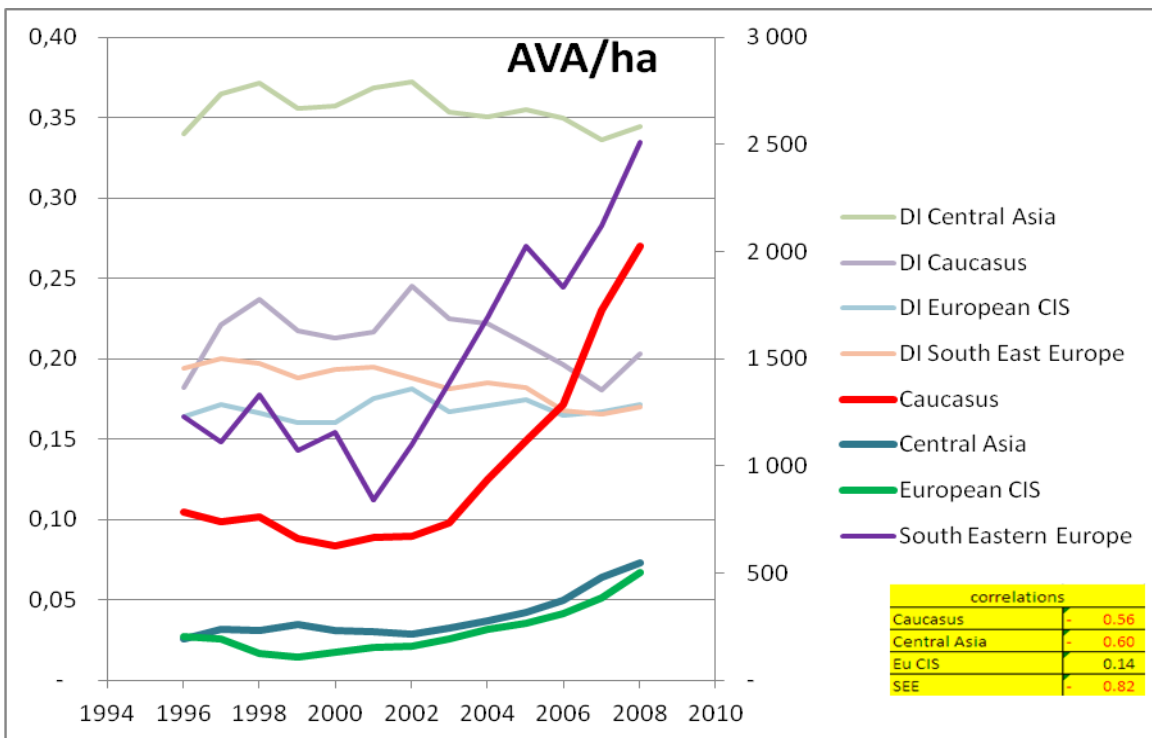
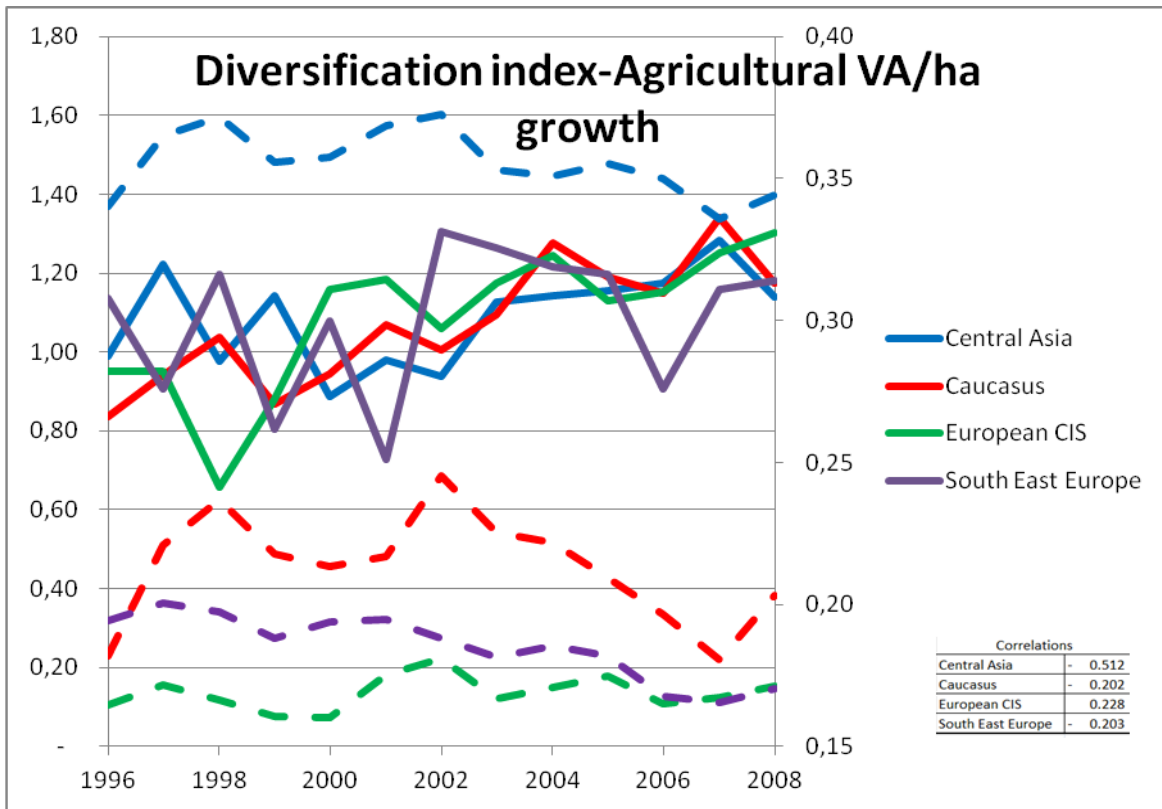


Figure 9. Correlation between Crop Diversification and Agricultural Value-added per Hectare Growth in CEECA



Correlation between Crop Diversification Index and Agricultural Value-added per Rural Inhabitant is very strong for countries from South-East Europe (Figure 10). Thus we can assume that process of progressive improvement of agricultural diversification in the subregion is also connected with increased agricultural income of rural population. Nevertheless, most countries are small and many urban inhabitants also contribute to (and share) generated agricultural income and possibly benefit from the extended diversification. For the other subregions there is a weak or no evidence that agricultural diversification relates to income of rural population.

Finally, there is only a weak or no correlation between the Crop Diversification and Agricultural Value-added per Rural Inhabitant Growth throughout the region (Figure 11). Therefore, dynamics of rural population is not affected by the process of agricultural diversification in the entire region.

Figure 10. Correlation between Crop Diversification and Agricultural Value-added per Rural Inhabitant in CEECA

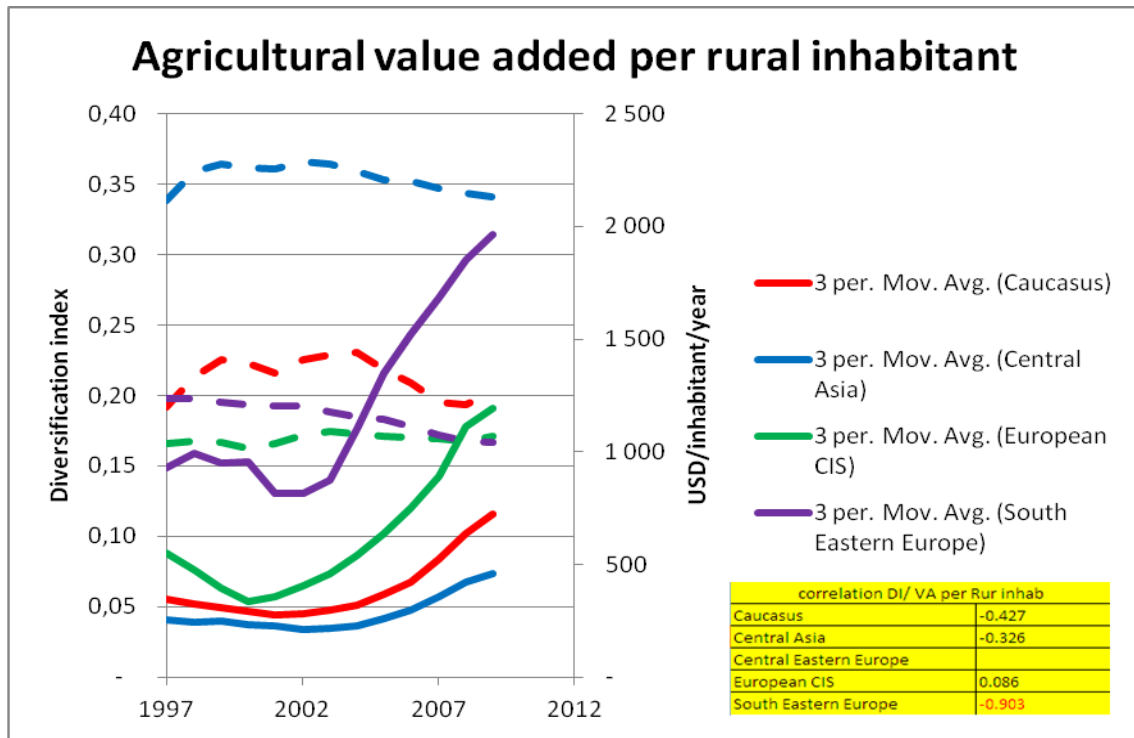
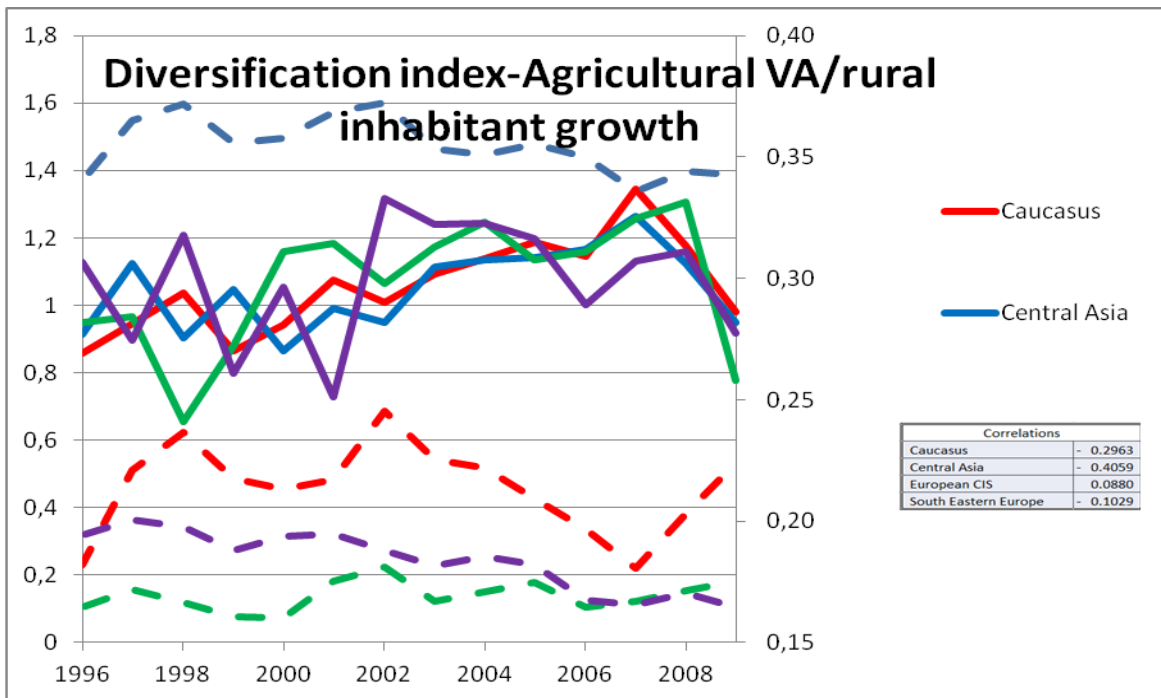


Figure 11. Correlation between Crop Diversification and Agricultural Value-added per Rural Inhabitant Growth in CEECA



The state of agricultural and rural income diversification in SEE, ECIS and CA

The state of agricultural and rural income diversification in EECA was discussed during the FAO Consultation on “Enabling Environment for Producer-agribusiness Linkages in Eastern Europe and Central Asia” held in Ankara, Turkey from November 29 to December 1, 2011.

Representatives of the Ministries of Agriculture, agribusiness, academic communities, and international, and donors organisations from 15 countries in the region assessed the specific farm structures (use of agricultural resources, farm typology, share of small scale farmers production), performance of small scale farms (productivity, commercialisation, incomes), rural employment and poverty, and income sources and food security in rural areas. Countries’ presentations are summarised in Table 3.

There are big similarities in the state of agricultural and rural income diversification in SEE, ECIS and CA countries. In general, there are no reliable data on current farming structures in the region (Table 4). Nevertheless, it is estimated that post-privatisation agriculture consists of large number of small scale, subsistence and semi-market farms. In most cases, small holdings manage and often compete for the insignificant amount of critical resources such as land, water etc. In a number of countries, private property rights on farmland are restricted (to user rights, leasing terms) and in certain instances disputed. There is a slow “process” of modernization and restructuring of farms as many smaller size holdings have been highly unsustainable in changing market, institutional and natural environment.

According to participating experts, small scale farms are important for household food supply throughout the region. There is a partial commercialization of stallholders but in some cases they are a major and “specialized” market supplier of certain basic products such as milk, vegetables etc. Commonly, low productivity and primitive technologies dominate among small farms. These holdings capability to adapt to evolving market, formal, and natural (climate) changes is insignificant. Principally, vertical integration is not developed and mostly farm (crop, livestock) diversification is practiced. However, there are individual success stories for effective market inclusion and enterprise diversification in all countries.

There are not enough data for the rural employment and poverty in the region and the picture for the state of unemployment and poverty in rural areas is not full. Commonly, there is higher poverty and less employment opportunities in rural areas. Generally, agriculture is a or the major (self)employer. There is significant official as well as hidden unemployment throughout the region. Nevertheless, there is increasing needs for high qualified labor and young entrepreneurs in many countries.

Agriculture is a major income source along with the pensions and remittances from abroad. Predominantly income diversification in other regions, industries and countries is practiced. Despite that food security is an essential problem in the region (particularly access to food), no specific “rural” food security issues has been identified.

Table 4. Assessments on state of agricultural and income diversification in South-East Europe, European CIS and Central Asia

Sub regions, countries	Farm structure	Performance of small farms	Employment and poverty in rural areas	Income and food security in rural areas	Other
<i>SEE</i>					
Albania	Majority of population in rural labor force Subsistence farms – 60% Huge remittances income All farms are small (egalitarizm) 1,2 ha 3-4 peaces of plots, no big farms Unstable property rights, many disputes on land rights	Profitable cash crops 50% of farms commercial	High food inflation Improving poverty indicators - reduced from 29 to 14% Quicker poverty reduction than in urban areas	37% agricultural income 31% remittances The rest – non-farm income In mountainous regions – less income from agriculture	Land consolidation a big issues, State subsidies – accreditation of agency for public payments already done
Bulgaria	Dual farm structure Cereals – huge farms 500 ha and more Fruits, vegetable and livestock – small farms Trends – concentration in cereals, small farms going out of business or in gray economy	Family farms – low productivity, labor costs is not included Commercialization is low in retail and value-added sectors, in some areas major supplier (milk 100%) Low income compare to others sectors, during economic crisis – just survival	Few employment opportunities Majority of population live in rural area Diversification decreasing	Support family of 4-5 No problems with food security Income sources: immigration in other countries (remittances) Pensions	Dual structure will sustain EU standards will not be fully enforced at local markets (local gray sales will remain)
Macedonia	190000 household farms less than 2 ha Less than 100000 registered farms in MA – commercial or semi-commercial Agricultural companies – 300 (250 ha)	Low productivity Diverse farm produce Just general specialization in crop or livestock	Agricultural employment (plus agro-processing) – 20% Self-employment – modest Government incentives for semi-subsistence – e.g. pension schemes (however only few thousand registered) Unemployment 35% - higher in rural areas	Agricultural income - 40% Differences between viticulture (higher) and cereals (lower) Small farms diversification – way to reduce risk and survive, but – reduce competitiveness and productivity as well It must be supported – funding, know how	High level of public support (increased 3 times recently) - negative effect in long run Output not sustainable Modest rural on and off diversification New measures - regional and EU
Serbia	Inadequate data (2002) 778000 farms Majority 2-10 ha Small size (1-2 ha) 21% Middle size (2-10 ha) 24% Commercial 25% (subsidy area based) There are also companies	Small farms are unsustainable Subsidies to support income (area based) plus RD measures	Poverty more than 60% in rural area Statistics only for companies: 10% in farming 22% in agri-processing	Non-farm income more than 60%, pensions – 8% Agrarian income: 45% Landing machinery – 8% Daily wages – 12,4% Renting land – 2,3% Our of agriculture – 61% Small business – 10%	Unlike general perception the rural people do not consider agriculture as a major industry No policy for diversification
Turkey	One third of land is agricultural, 25% irrigated Water shortages and stress Population growth 2005 Census -3 million farms	Low productivity Small part –marketed Income security Not reaching market and price policies	Important Other sources as well – depending on specific socio-economics conditions	Mainly agricultural income Some – not agricultural (seasonable) Poor farmers work as labor in other regions (e.g. pick up	na

	Family farms, subsistence and semi market farms important - average size 6 ha, 70% less than 5 ha (1,5% do not own land), 20% of land, 45% of sheep 50% of cattle Large farms (bigger than 20 ha) – 5% (35% of land, 10% of sheep, 10% of cattle)			cotton)	
<i>European CIS</i>					
Armenia	After 1992 - privatization of state farms – not timely “lesser fair” Majority household farms – not business (income source) Commercial (including industrial) 10-15%	Low productivity Commercialization – only surpluses Quite low income Problems searching for loans	Official unemployment rate 20% (real rate is higher)	Household farms - subsistence 80% - a man working in Russia or in capital city for entire season Mostly imported farm and agri products	na
Belarus	After 2000 – privatization Now 2000 cooperatives - 5000 ha State ownership on land leasing out for 99 years 95% - big farms Individual farms – 2000 (less than 1 ha) - no transfer of land rights outside family Many subsistence farms – 4% of land State policy to support subsistence farms	Profitability of small farms - 38% Large farms – 9%	Unemployment 1% 30% is rural population 15% employed in agriculture No data for poverty	2010 – average salary 328 USD (due to economic crisis dropped to 250 USD) 2004 - National concept for food security – annual monitoring on self-sufficiency 83% from national production	State guarantee – 90% for employment, distribution of income, social, infrastructure etc.
Georgia	Decreasing agricultural share 8%, production 5%, 53% employment Small farms (up to 1 ha) – 20% Middle size (1-3 ha) – 75% Big market farms – 5% (up to 100 ha) 65% of farm workers with experience up to 5 year	Low productivity	Import grows 3 times faster than export Agricultural employment 16%	40% from agriculture	Need changes in legislation - Law for agriculture
Moldova	Land privatization “disaster” - based on labor input in state farms Farms – multiproduct, 1,5 ha Big corporate – based on lease in Vineyards – good earnings	High value agriculture – surviving income Mostly in vine chain to Russia Labor immigration to Russia, women to EU	Employment not a problem Lack of high qualified labor in agriculture Poverty high - more than 60%	Farming major - 30% Social transfer – 16% Remittances – the biggest share	Possibility to promote profitable small-scale agriculture No financing, market institution, farmers cooperation Big farms – specialized in cereals
Ukraine	After 2005 the big capital enters agriculture (political and financial power) Dual structure Individual farms – no possibility for	25% - government support 25% commercial farms (90% of potatoes, 80% of vegetables, 80% of milk)	Corporate - less than 1 million Small farms – 3 millions Small processing –	1 st - pension 2 - salary 3 - diversification	Fight for land (on political agenda) Expansion of large enterprise on cash

	development Own 4 ha Foreign investors and farmers – big enterprises 200000-500000 ha	40% - subsistent farms Rest – semi-market	decreasing (huge losses, 50% unsuccessful) Big rate of agricultural unemployment Small holders – no alternatives		crops Unbalance supply and demand Socio-economic (welfare) losses - e.g. big farms spreading chemicals by airplane affecting villages
<i>Central Asia</i>					
Kazakhstan	Private plots Family farms (less than 5 ha) - 52000 Agrarian companies (5-100 ha) - 75000 Small number of companies bigger than 100000 ha	In South part of the country - vegetables and fruits Irrigation Big prices, costs and productivity differences comparing to nearby China (for tomato, apples etc.) in Chinese Yuan and USD Big potential to explore market (profit) opportunities	6% unemployment Decreasing poverty Diversification not important – rather increasing productivity Specialization in 1-2 products Plus cooperation and integration	No work migration abroad	
Kirgizstan	Reform of state farms Small scale farms Equal distribution of land - 1 ha 1 million farms 318000 farms 900000 household plots Large farms – private Some cooperatives and state companies with small share in land and output (less than 2%)	Concentration does not occur Limitation to rural inhabitants (min 2 years in the area) First years – growth in productivity in private farms Now – the same or lower productivity	40% is rural population Employed in agriculture – 30% Poverty in rural area - 10% higher than average	Alternative income – migration in country or abroad No statistics for incomes From informal sector 2 billion from official remittances (actually - higher) Seasonable income in some regions from eco-tourism and visits; in difficult to reach area – forestry Slow than other sectors growth	Unstable situation – not favorable conditions No state farms
Tajikistan	90% - household sector Unregistered farms – 0,1 ha Companies (registered) Lease in state land annually	Productivity stagnates due to climate change, droughts, economic crisis	Unemployment exists (labor migrate to Russia) Rural population – 73% Poverty – 47,2% (rural poverty – 49%)	Remittances – 24% In marginal northern part - 51%	Huge remittances - long term risk in case of political crisis - “lost generation” (child physiology)
Uzbekistan	Specialized farms in poultry and meat Many small farms and family households Crop – 35 ha, livestock – bigger than 35 ha Irrigated land In prairies 64% of production personal plots	Labor and resource costs higher in smaller farms	65% in rural areas Poverty rate decreasing - 33% in 2004 to 26% in 2009	50-60% is agricultural income Construction – 10% Migration in cities – 20% Consumption of own production	na

Source: FAO Consultation, November 29-December 1, 2011, Ankara

Table 4. The state of agricultural and rural income diversification in SEE, ECIS and CA

Talking points	Assessments
Farm structures	Lack of data Large number of small scale, subsistence and semi-market farms Manage (and compete for) insignificant share of critical resources In some countries – disputed private property rights on farmland Slow “process” of modernization A good part unsustainable in changing environment
Performance of small scale farms	Important for household food supply Partial commercialization, and in some cases important (“specialized”) market supplier of certain basic products Low productivity and primitive technology Low adaptability to market, formal, and natural changes Undeveloped vertical integration and mostly on farm (crop, livestock) diversification Individual success stories
Employment and poverty in rural areas	No data for full picture Higher poverty and less employment opportunities in rural areas Agriculture – the major (self) employer Significant official and hidden unemployment Increasing needs for high qualified labor and young entrepreneurs
Income sources and food security in rural areas	Agriculture - a major income source along with pensions and remittances Mostly income diversification in other regions, industries, countries No specific “rural” food security issues

ISSUES AND CHALLENGES OF INTEGRATION OF SMALL FARMERS INTO AGRICULTURAL VALUE CHAINS

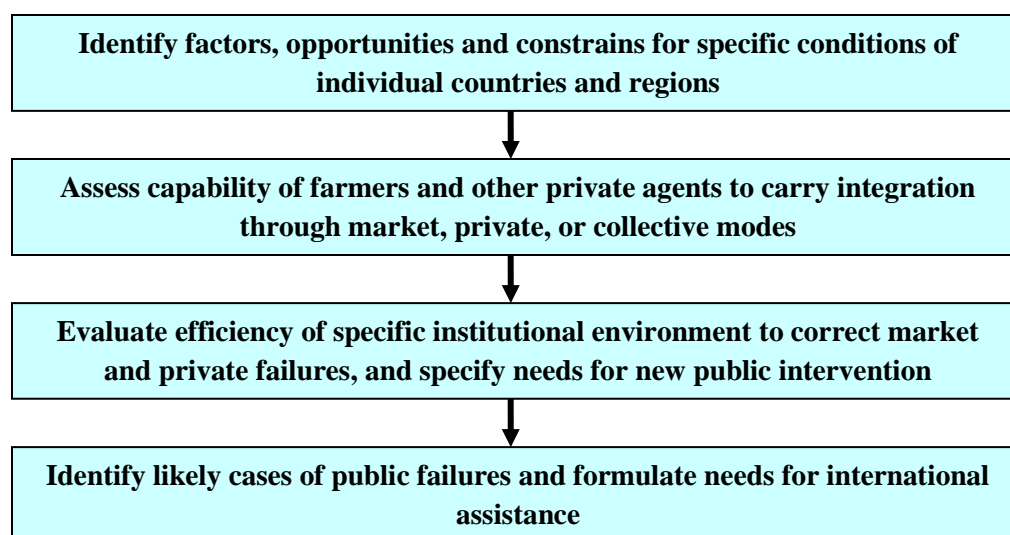
Traditional state of most small scale farmers in EECA (production structure, primitive technologies, available resources, relations with market agents, access to public support) is responsible for the little commercialisation usually restricted to few produces with local importance. There are a number of opportunities for inclusion of smallholders in modern market chains in the region. Diversification could be a prospective strategy for market integration but majority of small farmers face a number of challenges.

Successful inclusion often requires additional investment and skills, and significant modernisation of farming structure, technologies, and relations with “competitors” and upstream and downstream partners. It also requires appropriate market infrastructure (market information, system of terminal and wholesale markets, quality standards) and public support (regulations, training, extension service, crediting etc.). Successful inclusion of small scale farmers in the region is often initiated and developed by individual entrepreneurs, collective actions (partnerships, cooperatives), or outside private integrators (processor, exporter)³². In some cases, it is induced or further enhanced by an effective third-party assistance e.g. local or national program, NGO, international assistance etc.

³² Csaki C., C.Forgács, D.Milczarek, and J.Wilkin (Editors) (2008). Regional Outcome: Central and Eastern Europe. Restructuring market relations in food and agriculture of Central and Eastern Europe - Impacts upon small farmers. Agroinform, Budapest.

In order to accelerate the process of market inclusion of smallholders in the market chain first, we have to identify factors, opportunities and constrains for the specific conditions of individual countries and regions (Figure 12). Next, we need to assess the managerial and resources capability of farmers and other private agents to carry successfully the integration through effective market (price and quality competition), private (e.g. long-term or interlinked contracts), or collective (marketing or processing cooperative) modes. Furthermore, we have to evaluate the efficiency of specific institutional environment (systems of property rights assignment and enforcement, public regulations and support instruments) to correct existing (market and private) failures, and (if that is necessary) to specify the needs for new public intervention to fill the governance gap. Finally, we have to identify likely cases of public failures due to impossibility to undertake effective national and regional policies (economic reforms, lack of administrative capability and financial resources), and formulate needs for international assistance.

Figure 12. Steps in improvement of market inclusion of smallholders



Enabling environment

Small farmers often find it difficult to get loans to develop their farms as banks are more willing to finance larger operations, especially if investment are long-term (e.g. planting fruit trees). Limited funds also prevent land purchase making difficult the change of fragmented land structure. In addition, small producers suffer lack of appropriate financing when they want to buy machines or build irrigation systems and storages. Restricted internal funding and lack of access to outside credit make it impossible to reach the sufficient (technologically optimal) scale and slow down farms modernisation. Frequently, commercial banks charge very high and unaffordable interest rates for the profitability of agricultural sector.

Improvement of local storage, processing and wholesale capacity is crucial. However, due to financing obstacles available facilities and infrastructure are inadequate and out-dated. Insufficient local processing, storing and wholesale capacity impede farmers to diversify activities. Commonly the number of feasible wholesale partners is low which further increase farmers' vulnerability and dependency.

Lack of viable financing system delays agricultural developments hindering farms operation as well. As a result of constantly increasing prices of major farm inputs (chemicals, pesticides, fertilizers) production

costs are high, and farmers have not enough working capital to operate businesses effectively. Subsequently, the quantity and quality of inputs farmers use are not sufficient.

Furthermore, farmers have no financial capability to cover increasing costs associated with introduction of modern quality and safety standards, registrations, certification and control requirements imposed by formal regulations, processors, retailers, or export markets. Consequently, majority of small farmers have to stay in informal and gray sector without being able to enter the national or international supply chains.

Lack of appropriate financing and low profitability leads to using out-dated technologies affecting farms productivity, products quality and safety, and viability. Insufficient innovation activity sustains primitive farming methods, and poor quality, labor, animal-welfare and environmental standards. There exists no effective state support system to develop farming technology, performance quality, and assist adaptation to new market and formal norms. Out of date technology, machinery and irrigation system is widespread, and causes low efficiency, competitiveness, diseases, and vulnerability.

In most countries, there is not established system of agricultural insurance accessible for majority of smallholders. As a result, primitive modes of risk management are applied (dispersion of plots and crops) and there is not effective protection of farm labor, assets and output against diverse risks in the sector (accidents, burglaries, natural disasters etc.).

Another obstacle that small farmers face is associated with labour quality. Advanced age of farm managers and agricultural workers is typical in the region. Aged farmers are not able to or interested in modernizing farms (lack of qualification, “life-cycle” problem) since nobody in the family or vicinity wish to take-over the farm. Lack of successors is caused by age problems, skill reasons, and unwillingness of young people to be involved in agricultural activities. In addition, small farms usually suffer from the lack of available workforce and can not expand farming operations.

Regulatory and business environment is not supportive with complex, controversial, and ineffective rules. Decision making process of national and local authorities is often slow and inefficient. Public agencies hardly recognize the severity of situation, and usually do not focus on support needs and prospective sectors. For instance, neither poor state nor the importance of development of processing sector is acknowledged. In most EECA there is no awareness of potentials of new sectors like organic farming, innovative crops etc. Subsequently, there is no sufficient public (credit, subsidy, tax etc.) support to organic conversion and processing industry modernisation.

Often farmers do not have appropriate knowledge or are unaware of relevant practices since they get no assistance from extension service providers. Public extension is either not existent or inefficient and oriented to smallholders needs. The number of qualified market service suppliers is not significant while the prices of know-how services for farmers are high. Membership in a non-for-profit association providing technical knowledge, sharing best practices, and other (crediting, risk-sharing etc.) services would be an effective solution. Nevertheless, professional organizations are typically non-existent, unsustainable, or mostly deal with primary marketing activities rather than comprehensive services.

Finally, there is not efficient public system of assignment and enforcement of property and contracting rights in certain parts of the region. Smallholders are mainly affected by asymmetry (power, monopoly) position of certain agents and are unable to protect contractual terms, legitimate rights on critical (land, water) resources, and intangibles (intellectual products, origins, labels etc.). Introduction of new rights (privatisation, redistribution) and effective enforcement of existing (absolute and contracted) rights of farmers and other agents would stimulate market integration and private investment in new ventures.

Skills and knowledge

Most small farmers do not have comprehensive knowledge on modern management, markets, and available technologies following traditional way of business. Commonly, modern product and market development activities require special (new) skills and knowledge. The lack of appropriate knowledge and skills in farmers is responsible for decreased production and competitiveness.

There are no effective (continuous) programmes for training of farmers in new approaches, technologies, product quality and safety norms etc. Consequently, obsolete chemicals, machinery and technologies are used while farm produce hardly meet high quality, food-safety, environment etc. requirements of dominating retailers, processors, and exporters. For instance, farmers do not recognize the importance of recording and traceability systems and absence of reliable information impede farmers to operate efficiently, develop business, and integrate with downstream partners.

Domestic market and especially export markets need big quantities, high quality, standardised and often certified production. Due to fragmented land structure, lack of modern technologies, absence of marketing and certification skills, small farmers are unable to meet new market demands and benefit from increasing opportunities. Small farmers can not produce sufficient quantity, appropriate quality neither they meet modern standards and certification requirements. They are rarely able to introduce quality differentiation and traceability systems, promote trademarks, origins and special produces. Without all these developments entering modern export markets is often impossible.

What is more, there are no public programmes but few value chain initiatives. Consequently, farmers can hardly learn the best practices and introduce innovations. For example, widespread domination of monoculture and violation of crop rotation requirements results in soil degradation, accumulation of infections, and decrease in productivity.

Poor managerial and entrepreneurship skills, and lack of vision and a long-term strategy hinder farmers to optimize businesses. Most of them are not able to assess feasibilities and comparative advantages (costs and benefits) of new technologies and/or business model. For example, poor postharvest handling makes vegetables vulnerable and therefore increases farmers' losses. Frequently farmers are unwilling to transform family businesses into private limited liability entity because of associated short term costs (for registration, taxation, financial reporting) despite that on a long term such transformation would bring significant benefits. Similarly, potentials from producers cooperation in inputs, services and know how supply, and marketing are not effectively explored in the region. On the other hands, modern market players or public (donor) agencies have preferences to farm's legal status (e.g. formal registration) or collective organisation (producers grouping).

Due to deficiency of knowledge on business models and marketing small farms have limited ability to launch actions to diversify activity, and introduce and promote new products on existing market. Even if a farmer is able to produce a special product having potential consumers, he/she rarely possesses techniques to spread it. Smallholders mostly use spot marketing at the farm gate, road-side, and local farmers market.

Farmers and producer organizations are not able to cope with the challenges of entering or creating a new market. For example, although international organic market is a promising opportunity, domestic organic production and marketing is very weak throughout the region. Consequently neither producer organizations nor state owned programmes could increase production and consumption of bio products.

Identifying market gaps, niche markets

Organic farming is a newly emerged and fast growing sector driven by growing international demand. Regional experts consider it as a promising new segment of the market, which has huge future potential in the region³³. Specific climate, soil, and traditions provide a good opportunity to produce organic products. Proximity of Western European markets experiencing growing demand makes transition to organic farming a new prospective way for integration of small-scale farms in modern market chains.

Organic farming requires significant specific investments, labour, and administration (training, conversion, certification, control). Therefore, small farmers can transform their businesses only through difficulties under the current circumstances. Tough institutional regulations and credit crisis has made the conversion and financing of that new venture more expensive and difficult.

Despite all difficulties there are several approaches to promote organic farming and strengthen small farmers' position within organic value chains. However, organic value chain is complex and a successful development can appear only if different intentions and ambitions enter into an alliance. Initiatives of few entrepreneurs to induce "market driven" organic chain are not enough. Neither the public decision (e.g. regulations or a strategy for organic agriculture) is able to build up a viable value chain. There is a need for consistent public-private partnership (rules, controlling mechanisms, training, support measures, promotion) which would lead to emergence of an effective organic value chain and let inclusion of smallholders.

Best practices and upgrading strategies for developing of this new market varies in the region.

Organic value chains in Bulgaria

In Bulgaria, according to the results of a survey conducted among farmers, agri-business, experts and administrators, vertical linkages are the most important factors for small-scale organic dairy farming development – namely integration with processors and cooperation with "right" food-chain-agents (Figure 13). Viable linkages resulting in contractual relations among farmers, processors and traders provide capital for organic farming and reduce (share) associated risks. Diversification has an effect on income level of farmers on medium term which drives the development of that new venture. Moreover, successful integration requires special abilities of farmers such as entrepreneurial ability, negotiation skills, liability and willingness for environmental conservation. Public support to organic farming is also crucial for organic farming development.

Effective inclusion is usually initiated by a processors specialized in processing locally produced goods. High quality, assets, capacity, product specificity, cite, time of delivery etc. dependency between farmers and processors is commonly governed by tight long-term and interlinked contracts. Processor sets up own quality and safety control system from on farm collection of raw material to wholesale delivery of processed products, and integrates stages of raw material collection, cooling, and transportation, and packaging and storage of processed products.

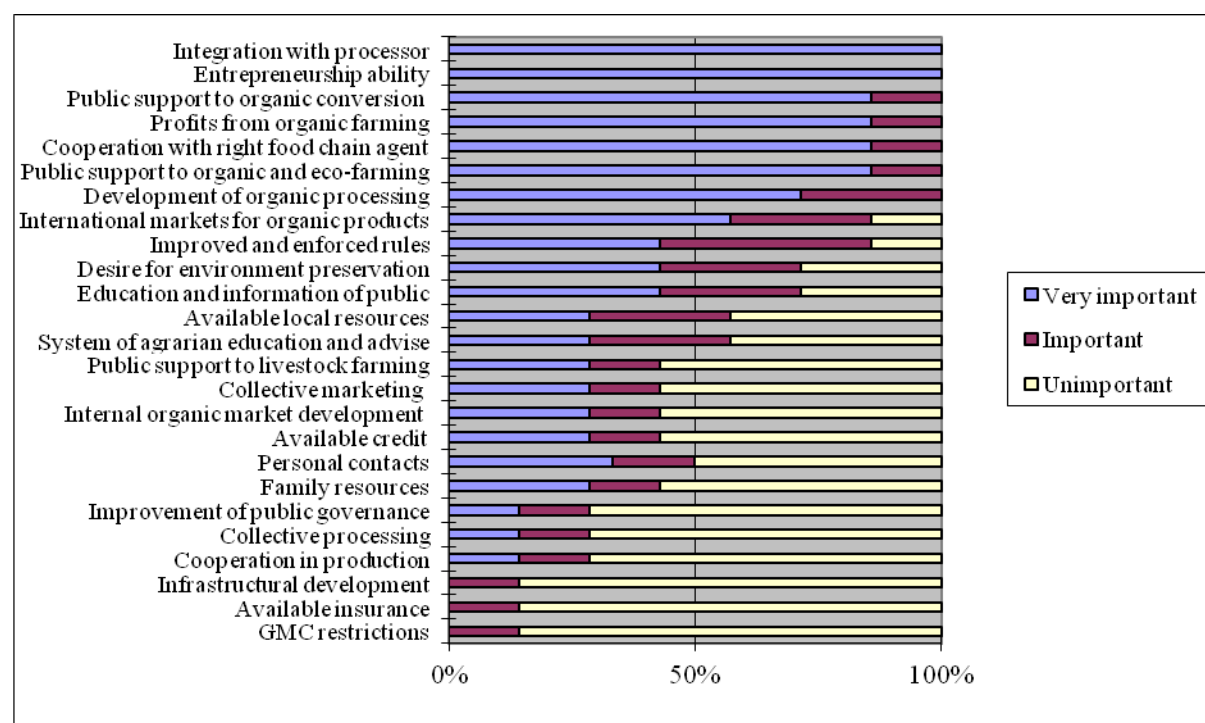
Although organic value chains have emerged, mass transition to organic farming has not started yet. Commercialization of organic farms has been impeded by their shorter-horizon (aged farmers, unattractiveness for younger operators), small size and investment capability, and low productivity, competitiveness, and compliance with modern quality, safety, environmental etc. standards. More

³³ Growing Organic Agriculture from Eastern Europe to Central Asia (2010), UNEP Green Economy Initiative, Geneva.

favourable institutional environment for investments in eco-farming by farmers, food chain partners, and market agents is to be created to overcome existing funding difficulties. Public assistance for cooperation of small holders in eco-actions is to be also given as an alternative mode for effective (“collective”) inclusion in value chain and a means to overcome labor and capital shortages, and efficiency problem.

Informal collective organizations would make possible or more efficient individual or collective organic operations allowing smallholders to concentrate and/or complement labor, farmland and other resources (e.g. collective certification, common cooling tanks); expand operational size; explore benefits of labor division and (functional and/or production) specialization, and scale economies; share costs and risk of conversion; increase transacting (contractual, access to public programs etc.) efficiency etc.

Figure 13. Key factors for small-scale organic dairy farming development in Bulgaria



Source: Bachev H. (2010): *The state of integration of small scale farmers in value chains in Bulgaria – a case study on organic dairy sheep farming*

Organic value chains in Hungary

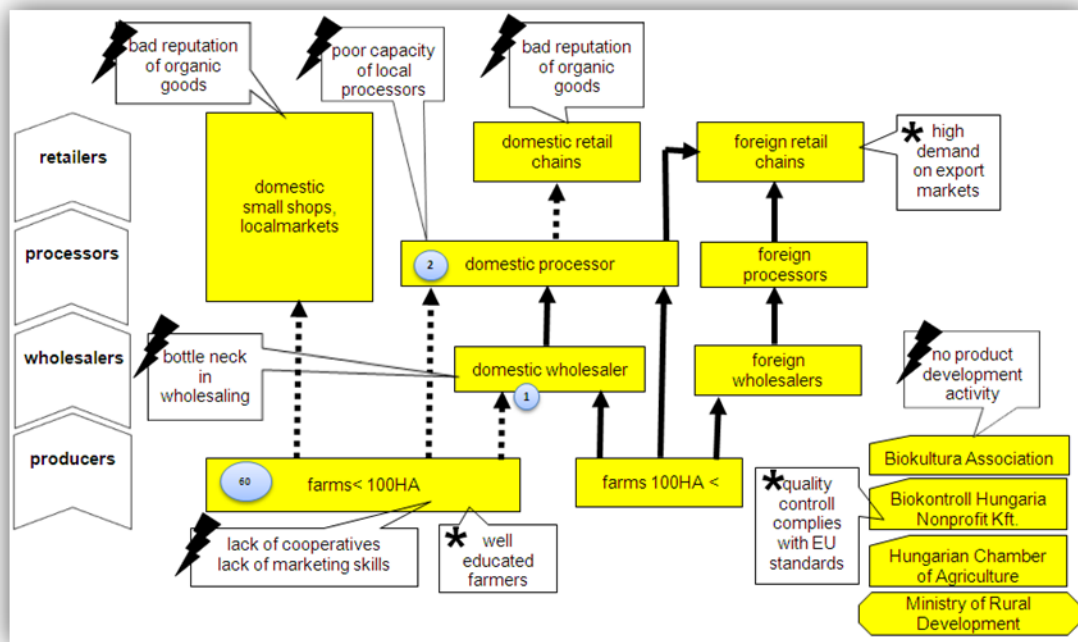
Recent years in Hungary have seen a rapid rise of organic farming, although domestic demand for fresh and processed organic produce increases at a slower pace. One reason is the higher consumer price of organic products, another one is the lack of organization in the internal markets. On the other hand, Hungary has a good market opportunity taking into account the increasing trend of bio food consumption on export markets.

Although the facilities of organic fruit development in the region are in place regarding technical experience, soil quality and climate, organic production could not be a dominating agricultural sector. Mostly small and mid-size farmers deal with organic production and they are quite exposed to changing business environment. These farms face financing problems preventing the establishment of sufficient

scale of operation, entailing the lack of modern machinery, irrigation system etc. Under these conditions smallholders can hardly diversify their market accesses.

The most commonly applied channel is spot marketing and farmers usually bear the transportation costs (Figure 14). The number of farmers' wholesaling partners is low since only a fraction of wholesalers possess sufficient infrastructure to store products. Regional wholesalers offer fixed rather than negotiable prices and real competition does not exist. The largest bio fruit processor in the region buys any quantities of organic fruit for which the bio certificate is available at fixed prices. Furthermore a long term contract is not applied, although processing companies can take opportunities of improving demand for organic products on export markets.

Figure 14. Organic cherry value chain in County of Szabolcs, Hungary



Source: Case study on organic cherry value chain in County of Szabolcs

Organic producers' success could have been much greater if there had been more supportive government policies for family farm development in multiple directions - price, credit, inputs supply, insurance, duty protection etc. Extremely important would have been the existence of an efficient public fund for guarantees against natural disasters (hail, frost etc.) in instances where private insurance companies are not eager to take the risk. Moreover, a well organized association also would have played an important role as a support provider. Such assistance (technical, funding, market and product development) would have certainly given a real opportunity for the timely materialization of all components of the organic farm modernization projects.

The analysis of achievements and constraints of farms in Hungary and the Northern Great Plain region suggests several directions for further improvement for family farm development, income diversification and integration deepening – better public support, producers organisation, contract integration etc.

Horizontal integration

Horizontal integration and cooperation would be an option for regional small size farmers. Coordination with others allows producers to achieve economies of scale in supplies and reduce transaction costs. Often, horizontal coordination is the first step in a sequence of interventions that ultimately result in market access, and it is a prerequisite for other forms of upgrading. Critical to the success of horizontal coordination strategies are the entry rules to join the group and the quality of collective management.

Given the constraints in land, capital and labor markets, small and medium sized groups are able to specialize labor efforts better than if they were to work on land individually. The later is due to dividing tasks within the work force and uniting groups of workers around highly capable or skilled farmers. These groups face low (internal) transactions costs in labor monitoring because of the few number of coalition and mutual interests to coordinate. In addition, grouping could save significant transacting costs for carrying relations with other counterparts (inputs suppliers, buyers).

State of horizontal integration varies among EECA countries. Generally farmers are not associated in groups. Associations are often weak to bargain prices on behalf of small farmers. Some associations are only formal, while others offer merely technical support, organize filed trips, deal with professional farming issues. Only a few associations are able to be the engine of the integration and offer a wide range of services, like marketing, financing and business management tools.

Moldova dairy cooperative

The advantages of described approach could be demonstrated by the example of a dairy cooperative Vita-Lact cooperative in Ignatei village. It was founded by 12 members in 2001 and currently associates 420 small farmers. The goal of the coop's foundation was to improve the milk quality to create added value through: assisting farmers with new investments in facilities, cows and feeding systems; increasing productivity per cow and per farm; improving milk quality and safety; demonstrating farm profitability. Eventually the purpose of cooperative was to increase the income of small scale dairy farmers. To achieve these goals a fundamental mutual trust and some help from different public and international programmes were required.

The first cooperative members invested own money in the Cooperative in the form of investment stock. They purchased an old house and a small amount of property around the house. In addition, farmers received a grant from Farmer-to-Farmer Programme implemented by CNFA, Inc. funded USAID. The later was used to renovate the house and install a cooling tank, generator, pumps, testing equipment, basic office equipment, etc. The Cooperative members provided all the labor.

The coop benefited also from training opportunities offered by the Farmer-to-Farmer Programme. Over the past years the coop members have been trained in cooperative development and administration, financial management, marketing techniques, veterinary services and milk production and handling.

The system is based on nine village receiving centers that collect approximately 3,000 liters of milk daily and deliver to two processing plants located near Ignatei. This milk represents the production from 3600 to 4000 head of dairy cows that are free ranging and are not kept in pens or corrals. These are cows owned and milked by individual independent families having three to five animals. Milk is picked up by the co-op's own tank truck. Farmers are paid monthly based on milk fat content, volume produced and quality. Dairy farmers prefer to sell their raw milk to the cooperative, because other independent milk handlers are unreliable in regard to payments. Membership in the cooperation costs a once payable fee of 50 Lei (around 3 Euro).

Besides, the principle service marketing of member's milk (and the reason for very existence of the coop), there are other services offered to dairy farmers such as: assistance of a veterinarian, artificial insemination, veterinary medicines, and a new entity, lease of farm equipment-hay baler, combine, mower and large tractor.

In 2010 Vita-Lact decided on a transition from being a supplier of raw milk to processing own milk. It has obtained milk production certificates allowing processing pasteurized milk with 1,5, 2,5 and 3,2% butter fat in plastic pouches. The cooperative batch pasteurizes the bagged milk at processing plant located in Ignatei village.

Integration into value chains

Small farmers do not have bargaining power and other operators of the value chain (as processors and traders) dominate. Traditionally businesses are mostly done without a written contract. Long term contracting is very rare, and there are no reliable long term contracts and relations. When a contract exists, it is often violated by farmers and processors alike because of the lack of mutual trust. Delayed payment is also very frequent.

Due to the lack of bargaining power of small farmers, they are vulnerable on the market. Marketing channels are weakened and uncoordinated, and family businesses have unreliable trading partners. Without a deep integration, it is difficult to access and supply internal and external markets demands.

Smallholder farmers are unorganized, isolated, and detached from the commercial market opportunities in the region. There are many forms of organizations and associations with a great variation in dynamics of their activities. Sometimes associations exist only officially without any practical benefits for members. In some cases co-operations provide members only with out of date technical advices, or very limited marketing services, like collection and transportation. Often farmers' cooperation looks like in the "Soviet times". There are only few "new generation type" associations where farmers are provided with a broad scope of services.

Frequently cooperative organizations are not managed democratically. Despite that the coop does not satisfy producers' needs and expectations, members keep membership since the small number of possible partners. In the late case there are serious problems with the members participation and the decision making process.

State of integration of small farmers in the region is poor. Generally there is mistrust and lack of cooperation between producers and processors. Processing capacities are often limited, and both sides lack chain vision in spite the high mutual (capacity, time of delivery) dependencies. There is no effective mechanism for farmers and processors to resolve disputes and plan joint activities. Weak contract enforcement also does not allow farmers and agro-processors to plan in advance activities. Poor linkages among value chain operators result in high transaction costs, bad coordination and disputes.

The most often applied channel of marketing is spot sells. Farmers are at the first stage (raw material production for industry) which means they cannot get the high value added from products. Only a fraction of small farmers have diversified marketing channel, some of having good relations with input suppliers and processors. Export markets are not directly accessible without intervention of traders or middlemen. Typically there is no general value chain approach regarding financing. Without mutual trust, there are only a few cases when a processor promotes inputs procurement of farms. Effective chain integration requires a long term interest, which is normally missing in the regional systems.

Farming in CIS countries, in new EU member countries, and Central Asia has experienced a dramatic evolution during the post-communist transition. Changing consumer demands, adjustments of markets, institutional modernizations, privatization and agrarian reforms radically changed the business

environment. This process resulted in a situation in which farmers can access only hardly to modern market oriented systems.

Farmers usually are unable to bear a complex role in value chains: mostly they deal only with producing raw material and they choose the simplest way to sell their product, without participating in progressing or any value adding activities. They have no skills to oversee the chain, and understand the market. This exposure makes them unable to launch appropriate diversification strategies.

Small size farmers' access to value chains is inhibited by many obstacles: lack of public support; lack of trust among value chain operators; inappropriate safety and quality standards and veterinary and sanitary control; primitive technology and hygiene; fragmented land structure; low economy of scale; inadequate on-farm and surrounding infrastructure; lack of capital to invest in irrigation, equipment, inputs or marketing; limited information sources; depopulation; age structure of farmers etc

Farmers' exposure to uncontrolled market characteristics, and limited skills and resources, results in low income and poor living standards. Under these conditions it is difficult to identify market potentials for SMEs, and apply value chain upgrading strategies and usual diversification techniques.

Taking into account positive examples in the region, it is clear that only an approach integrating more upgrading and developing tools can be successful.

Marinated cucumber value chain in Kyrgyzstan

Osh region is the largest producer of vegetables in Kyrgyzstan. Demand is high but the farmers find it difficult to take advantage of this opportunity because of a number of production and processing problems. Production constraints include: poor farming methods, high cost and low use of inputs, price disincentives, weakened and uncoordinated marketing channels, limited adoption of improved technologies, lack of investment by farmers, and a lack of disease-free planting materials. All these problems have been identified as limitations by the extension service advising farmers.

Processing constraints include: a lack of capital, poor infrastructure and inadequate cold storage facilities, a preference to dispose vegetables in raw form, inadequate information on the market and available technologies. There is an oversupply of vegetables during the peak season, leading to low prices. Linkages among producers, exporters, agro-processors and consumers are poor, resulting in high transaction costs.

Most of Osh's vegetables are produced by small-scale farmers. Farmer usually possesses only a few hectares, produces and sells very small amounts typically to local traders. Traders offer low, unstable prices, and take an unpredictable amount of produce. The other choice of farmers is to sell small amounts of vegetables directly to consumers at open-air markets and by the roadside. Farmers are not organized for bulk handling and transportation, and farmers and the buyers alike cannot benefit from economies of scale. The farmers feel exploited, and would prefer longstanding commercial relationships with buyers who are able to buy in bulk at reasonable prices.

The Local Market Development Project (LMDP) aimed to improve market access for producers in the fruit and vegetable, and dairy sectors by improving the product value chain. Recognizing the vegetables high potential, LMDP decided to improve the production and processing of cucumbers in the region. It was found that smallholder farmers were unorganized, isolated, and detached from commercial market opportunities. They lacked the initiative to form producer groups. Such groups were needed to improve the producers' market position in terms of quality and quantity, as well as increase their bargaining power and leverage over buyers.

LMDP selected 2 local agro-processing companies with a good reputation which showed sincere interest in establishing long-term relations with producers. Well in advance of harvesting season the project organized the planning workshop where managers of processing companies and leaders of producer groups worked together to plan their activities. Such meetings were held on a regular basis. Farmers and management of processing companies discussed the current problems and planned activities for the next period.

One of the processing companies signed the contracts with 5 producer groups while another one preferred individual contracts with each farmer. In contracts actors of the chain agreed on prices, volumes and schedules of delivery. Both companies provided small loans and fertilizers to the farmers though the most of financing was provided by a microfinance company. The farmers planted hybrid sort of cucumbers intended specially for marinade. That variety brings higher yield and is valued by processors.

At the end of the season both processing companies bought more cucumbers than was agreed in the contracts in spite of the higher prices for cucumbers on local markets. All chain actors agreed to continue such cooperation in the next season.

The farmers have made significant gains from the improved supply chains and linkages with buyers. They had greater access to production inputs and new sorts of cucumbers which resulting in an increased productivity and product quality. The buyers also benefited - they were provided by raw material of certain quality and volume at stable prices, and their transaction costs have fallen. Producers and processing companies got an opportunity to plan their activities and thus to reduce risks. The mutual trust also rose.

Lesson learnt from case studies

Thanks to the strong market demand, vertical integration among organic chains has been built up on a market basis in Bulgaria. In order to make farmers' bargaining power stronger, more emphasis has to be taken on trainings of small producers and prospective entrepreneurs on formal regulations, practical possibilities, and likely benefits for transition to organic farming, as well as on entrepreneurship, organizational design, and financing, contract and food-chain management.

Besides the strengthening of abilities of farmers, a special attention has to be put on the public programs and regulations as the means of enabling environment. However, programmes have to be more accessible for farmers, since they are inhibited due to the lack of information, bad design, restrictive criteria, and widespread mismanagement. Better information to potential beneficiaries, simplifying formal procedures, minimizing related costs, accelerating implementation of (all) environmental and rural development measures, and increasing transparencies and stakeholders participations in all stages of program management, have to take place. Criteria for participation in public support programs are to be redefined and access opened to diverse forms of cooperation (partnerships, joint ventures, long-term contracts, protected local products) between farmers, producers associations, and businesses. Improving conducive environment also should contain more public supports to education, national, market development, research and property rights protection, combating mismanagement and corruption in public sector.

A quite developed value chain can improve its efficiency only if an appropriate and improving enabling environment is surrounding. The way how this intervention could bring a significant breakthrough contained a complex approach. Combination of 3 different strategies was used in Kyrgyzstan: horizontal coordination (creation of producer groups), vertical coordination (trust building between farmers and processors, signing contracts), and product upgrading (planting new sort of cucumbers). The components of this approach comprised: regular meetings of chain actors which favoured growth of mutual trust and responsibility; creation of producer groups offering participatory, inclusive approach for farmers; small

loans (money, fertilizers) provided by processing companies; introduction of a hybrid sort of cucumbers that suited the buyers; assistance by Microfinance Company which provided loans.

The bargaining power of small scale farmers is especially low since they have limited access to market information and poor access to financial markets and storage infrastructure. That prevents smallholders from selling their products at the most profitable time. The lack of bargaining power leads farmers undervalue their production and obtain a smaller share of the added value. Cooperation in machinery is one of the major areas of cooperation among individual farmers in the country.

Although horizontal integration can play a key role, interviewed farmers stated that they rather operated their businesses individually than in association. Farmers announced that small size of land plots is not an insuperable obstacle for effective production. Compared with large-scale commercial production, small-scale farmers can have a price advantage due to lower opportunity costs for land and labor as well as better farm management because of status as resident owner-managers. The more important factors are lack of skills and resources for investments.

Another finding from the survey was that level of education is not significantly different among successful and less successful farmers. Other factors such as personal ability and technical skills play a greater role. Therefore, supporting policies should primarily be focused on increasing production and financial management skills and capacities of farmers. Furthermore, it is necessary to persuade farmers that contract enforcement will allow them to benefit in long term period even if they suffer short-term losses when market prices exceed contracted prices.

There is good business potential in the market for the milk cooperative in Moldova. Prerequisite condition for that is coop members to find consensus on a single clear focus for the cooperative instead of a mixture of activities (milk collecting and sales, machinery, veterinary service). It is recommended to focus on milk collection and collective milk marketing only initially. The main goal for the cooperative is to be an effective intermediary for all raw milk of members in the first place. The more milk they represent and better quality they can realize, the more effective they will be on the market.

An important condition to become a successful link in the local dairy chain is to increase the number of members of the cooperative (dairy farmers) up to at least 22 - 25 milk producers, with minimum 50 milking cows per farm and own forage base in order to decrease production costs. It is not recommended to build an own processing unit in order to strengthen the market position and involvement into the value chain. Cooperative members should first learn how to share risk, to establish better communication about supply and demand and financial risk management schemes, including supply chain risk-management funds and shared investments to improve the functioning of the chain. It should be more effective to negotiate a contract for collective milk supply with one of the existing milk producers. It is necessary to have a strong focus on the cooperative objective and execute the proposed action plan step by step, in order to be successful in the process. All members must be aware that sanctions will be imposed for those members who do not follow the agreements in the statutes about milk deliveries to the cooperative.

Due to the underdeveloped Hungarian organic food market, there have to be efforts to develop the domestic market as well as to start product development activities. Only a well organized association could have an impact on consumers to be informed about organic products. This work requires the alliance of small organic producers, which should be encouraged by the government. The State should call the operators' attention on the values and advantages of market development works which is possible only through horizontal integration.

In addition to weak domestic market, exploration of export opportunities requires a horizontal integration. Hungarian producers have a good market opportunity on export markets, but they are unable to take it, since they do not produce enough quantity and stable quality. With a systematic work of a producers association the currently closed market would open.

In order for the operators of organic fruit value chain to reach the export markets, the production of small farmers at least partly should be financed by processors or export companies. It is common interest to produce enough raw material through strengthening vertical market linkages (long term contracts, integrated transport system, improved infrastructure, etc.)

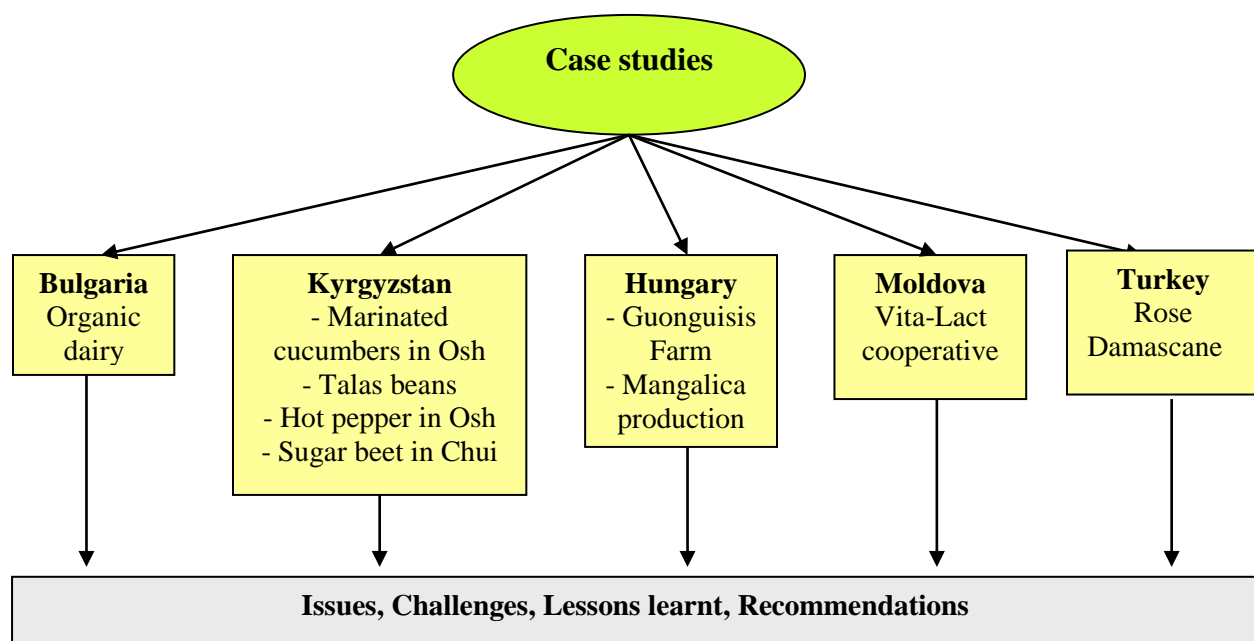
Special emphasis has to be made on training farmers in management, income diversification techniques, technological know-how etc. as well as in proposal writing, property rights arrangements, and application for different public programmes. Direct involvement of farmers and farm organizations needs to be institutionalized in priority setting, execution, and control of extension programmes at all levels. An appropriate system for public/collective/private co-financing of activities should be introduced. All of these measures would increase farmers' incentives to direct, participate, and support public programmes, and eventually would increase their efficiency.

The transparency and efficiency of each public support programme has to be improved in order to make their accessibility by family farms possible. Farmers' direct and indirect costs for application and obtaining public support have to be minimized. Otherwise all public programmes will remain beyond the reach of the neediest farms.

When it comes to the enforcement of law, not only contracts but also property rights suffer from the lack of respect. The agricultural implements of small farmers often disappear from storages. Farmers have to make efforts to save their crops from thieves after harvest. Denunciations never bring results while court procedures require a lot of administration and time without results. Therefore, Government should make efforts to improve the efficiency of court procedures as well as the performance of police.

In order to identify factors having impact on small farms market inclusion in EECA a number of case studies have been undertaken in Bulgaria (1), Kyrgyzstan (3), Hungary (2), Moldova (1) and Turkey (1) (Figure 15).

Figure 15. Identifying factors impacting smallholders market integration in EECA



Specific issues, challenges, lessons learnt and recommendations from the case studies are summarised on Table 5. The major issues of small farmers integration in agricultural value chains are associated with enabling environment, skill and knowledge, identified market gaps and niche markets, extent of horizontal cooperation, and integration in value-chains.

The main challenges for market inclusion of stallholders identified relate to: efficiency of vertical links; increased funding needs; undeveloped markets; inadequate infrastructure; insufficient public support; increased market, business institutional, production and environmental risks; abilities of farmers; quality and safety control; small farm size; aged farm managers; low contracting power; absence or inefficient producers organization; innovation; and (in one case) political instability.

Key lessons learned are that: personal ability plays a role, promoting local products, public financial support, training farmers, improving infrastructure, associating producers, system of control, improving vertical coordination, and third-party assistance and cooperation.

Main recommendations withdrawn include: improve efficiency of public programs, continuous training programs, public support to producer associations, improve infrastructure, improve collective organization, modernizing farms, risk management, environmental management, enhance public-private partnership.

Table 5. Factors having impact on integration in EECA

	Bulgaria Romanov farm	Kyrgyzstan Marinated cucumbers in Osh	Kyrgyzstan Talas beans	Kyrgyzstan hot pepper in Osh	Kyrgyzstan sugar beet in Chui	Hungary Guonguisis Farm	Hungary Mangalica production	Moldova Vita- Lact cooperative	Turkey Rose Damascene
Issues									
Enabling environment	Organic regulation	Local initiative				Organic regulation	Legislation, National organization		
Skills and knowledge	Family entrepreneurship and skills					Farmer entrepreneurship and skills			
Market gaps and niche markets	Organic		High value kidney bean for export	Hot chili paper for export		Organic, confectionary, retailing, renewable energy	Traditional breed recovery, brand promotion		Branded geographical indication Organic
Horizontal integration							Cooperation	Dairy cooperative	Rose oil cooperative union
Vertical integration	Long-term contract	Vertical coordination		Joint venture with a Korean	Sustain vertical links	On farm diversification	R&D, processing, retailing		
Challenges									
Efficiency of vertical links	Cooperation with “right” vertical agents	Planning, group and individual contracts (prices, volume, schedule)	Spotlite farm-gate and terminal sells	Contract on production and pricing	Sells agreement, delivery schedule, mistrust	Wholesale, canned factory, integration of processing and retail	Advocacy, product development, marketing, breeding, coordination chain interests	Collective marketing and processing	Sells to private companies or middlemen, no written contract, quota purchase
Increased funding needs	Joint investment, backward integration by processor, public support	Loans and fertilizers by processors, microfinance agency	High quality seeds	Prepayment, seeds and inputs	Large initial investment	Land, orchard, processing, branding, certification	R&D, marketing research, product promotion, Mangalica logo	Outdated facilities	No incentive for investing
Undeveloped markets	Product promotion	Lack of market information		Single buyer		Undeveloped wholesale trade	Market research, targeting consumers, price premium		

Undeveloped infrastructure		Inadequate cold storage, infrastructure		Lack of cold storages					
Insufficient public support	Not at all			no interests in administration		Lack commercial credit			Lack of any public support
Increased risks	Risk-sharing with vertical partners		Uncertainty on future development, declining prices	No alternative buyer, improper use of prepayment by farmers	Unilateral dependency	New venture	Changes in marketing channels, volatility of feed prices, instability of quality, falsifications, international competition		
Abilities of farmers	Entrepreneurial, liability, eco-conservation	Lack of skills and resources		Consultation on preparing seedlings	Lack of skills	Education, past experience, product promotion, branding		Cooperative development, management, marketing, technology	Lack of training
Quality and safety control	Processor, authority, independent		No resources and skills worsened quality	Lack of cold store deteriorated quality	Laboratory tests by processor	Guarantee, independent	Certification, quality control system not put in place	Improve milk testing and quality	Purchase close to farms, before midday delivery
Small farm size	Low productivity, in compliance with standards	Poor farming methods and productivity		Entry barrier	Low productivity, quantity and quality		Horizontal integration (mergers), efficiency calculations	Low productivity and quality; collective milk collecting, transportation, marketing; other services	Sustain quantity and quality, lack of record keeping system
Aged farm managers	Effective succession								Your people not interested
Low contracting power		Low prices, uncoordinated marketing			Low price, refusal to purchase, quality disputes	Inflexible prices of processors	Organization for reconciling interests		Low prices, no profit sharing
Absence or inefficient producers organization		No organization for handling and transportation					Association of Hungarian Mangalica Breeders	Organic Farms Association	Administration problems, farmers not participating in decision making
Innovation		New variety				New products, technologies,	Breed selection, products		Lack of advance

						services	differentiation		technologies
Production and environmental risks			Monoculture, soil degradation, infections and diseases				environmental and landscape management, tourism, employment		
Other				Political instability					
Lessons learnt									
Personal ability play a role	Entrepreneurship	Personal and technical skill	Foreign exporter	Foreign investor		High education, entrepreneurship		Group leaders	
Promoting local products	Dairy and meat		Kidney bean			Branded confectionary, renewable energy	Traditional and new products, rural tourism, retailing		Registered brand rose oil and products
Public financial support	Special financial measures						Special support measures	International support	
Training farmers	Vertical partner	Production and financial management, contracting	training needs	foreign investor		Sharing experiences	Sharing best practices	Farmer-to-Farmer program	
Improving infrastructure	Rural in general		service, irrigation and other	cold storages					
Associating producers	Vertical partner, public measures	Initiate producer groups, overcome resistance to cooperate	Needs for collective negotiation, training				Scale economies on production an transaction costs	Collecting, transportation, marketing; veterinary, insemination services; machinery lease	Production quotas, on site collecting facilities, processing
System of control	Independent					Independent, quality guarantee	Build in chain, transparency, traceability, liability	Sanctions for non-fulfillment of delivery terms	
Improving vertical coordination	Planning and contracting	Advance planning, contracts	Quality seeds, long-term contract				Backward and forward		Site investment, delivery time
Third party assistance and cooperation		Local Market Development Project		Local administration support		Local government support for school farm	Recognized and supported breeders “public” role	Grant and training from USAID	Trust, advance payments
Recommendations									

Improve efficiency of public programs	Information, design, criteria, procedures, management, incentives for your farmers		Farmers training			On farm diversification, new ventures			Incentives for your people
Continues training programs	Management, regulations, markets					Sharing progressive experiences		Communication, risk management, join investment	Farmers
Public support to producer associations	Effective measures		Collective inputs supply, training and marketing						
Improve infrastructure	Overall rural infrastructure		Service, processing, irrigation	Storage facilities					
Improve collective organization							Establish International Association of Mangalica Breeders	Increase membership, focus of efficient activities for members	Target farmers needs, involve in decision-making and profit sharing
Modernizing farms			Sorting, grading, packing				Mergers	minimum 50 cows with own forage base	
Risk management			Guarantee minimum prices	Public enforcement of contracts, guarantees			Product differentiation, strategy for local and export markets	Supply-chain risk management fund	
Environmental management			Support eco - management				Integrate in breeding		
Enhance public-private partnership	Product promotion		International investment in processing	Cooperation with foreign investors		Support new ventures	Fighting fake brands, expanding Mangalica standards internationally	International assistance	

Source: case studies

Challenges, success factors, and priority areas for improvement of diversification, enterprise development and value-chain linkages in SEE, ECIS and CA

The challenges, success factors, overall assessment, and priority areas for improvement of diversification, enterprise development and value-chain linkages in SEE, ECIS and CA were specified during the FAO Consultation on “Enabling Environment for Producer-agribusiness Linkages in Eastern Europe and Central Asia” (November 29 - December 1, 2011, Ankara). Assessments of experts from each country are summarised in Table 7.

There are considerable differences in major challenges for farm diversification, enterprise development and value-chain integration in main sub-regions (Table 6). According to experts the key challenges³⁴ in SEE are: insufficient farm adaptation capability to dynamic market, industry and formal standards and rules; small and dispersed operational size and resources; lack of access to outside funding; and lack of appropriate education and training of farmers. For ECIS the most important challenges are associated with: lack of enabling institutional, support, and (macro)economic environment; widespread ineffective production methods; lack of producers organizations; outdated infrastructure; insufficient access to information; and lack of initiatives in farmers and other agents. In countries from CA major challenges relates to: restricted agrarian resources both at country and farm level; outdated inputs supply, processing and retailing systems; widespread “contract failure” of farmers vertical links; absence or (available but) ineffective public funding; lack of skills in farmers; high vulnerability of farms due to lack of risk management.

Success factors for farm diversification, enterprise development and value-chain integration are also sub-region specific. For SEE they are identified as: private know-how and capital, including foreign direct investment; natural climate, soil, product etc. advantages; consistent public support policies; high consumer (market) demand; modernization of processing industry; inspiring positive experience; and globalisation opportunities. In ECIS these factors are specified as: good natural potential and established international reputation; favourable tax, duty and trade regime; industry initiatives providing effective information, networking, training, standards, branding; low labor costs; and infrastructure development. In CA factors for success are: preferential crediting and taxing; higher productivity and adaptability of stallholders; adaptation of community based approach giving both production and transaction costs advantages; giving more decision-making power to farmers for selecting crops and counterparts; and positive dynamics of market prices.

As far as the overall assessment of the process of farm diversification, enterprise development and value-chain integration is concerned, the picture is quite similar across the region. It is described by experts as “bad”, “poor”, “not satisfactory”, “satisfactory”, “space” or “needs for improvement”, “great potential for development”, , “incentives for future”, “promising at present” or “in future”, “declining production”, “acknowledged by government”.

Most of priority areas for improvement are also sub-region specific. In SEE they are outlined as: preferential funding and taxation; support commercialisation and diversification of smallholders; simplify procedures and improve distribution of public subsidies; create incentives for young farmers; create stable and effective business environment, including improved enforcement of laws and standards; introduce rules for and promote local, special etc. products; projects and incentives for land consolidation, including effective lease outs of state lands; and better train and inform farmers. In ECIS priorities are identified as: preferential credit; facilitate direct investments and innovations; promote and assist diversification, including prospective local products; modernize post-harvest, market, processing, storage and information infrastructure, including through public-private partnerships; support farmers cooperation in marketing and branding; protect against monopolistic pricing and terms; train farmers in entrepreneurship and marketing;

³⁴ Challenges, success factors, and priorities for improvement are not ranked by experts. Nevertheless, they are listed according to the order of presentation by participants.

and extend private property rights on farmland. For countries from CA these priorities are specified as: preferential credit, taxation and insurance for smallholders; create environment for local and international long-term investments; improve the use of farmland; promote innovation particularly in appropriate crops, breeds, and water efficiency; promote and support traditional technologies and products; establish farming infrastructure such as slaughter houses, wells etc.; support marketing associations; provide incentives for transfer of user and ownership rights on farmland; and improve contract enforcement.

Table 6. Challenges, success factors, overall assessment, and priority areas for improvement of diversification, enterprise development and value-chain linkages in SEE, ECIS and CA sub regions

	South-East Europe	European CIS	Central Asia
Key challenges	<p>Insufficient adaptation capability to dynamic market, industry and formal standards (rules)</p> <p>Small (dispersed) operational size and resources</p> <p>Lack of access to outside funding</p> <p>No appropriate education and training</p>	<p>Lack of enabling institutional, support, and (macro)economic environment</p> <p>Ineffective production methods</p> <p>Lack of producers organization</p> <p>Outdated infrastructure</p> <p>Access to information</p> <p>Lack of initiatives in farmers and other agents</p>	<p>Restricted agrarian resources at country and farm level</p> <p>Outdated inputs supply, processing and retailing</p> <p>“Contract failure” in vertical links</p> <p>Lack or ineffective public funding</p> <p>Lack of skills</p> <p>High vulnerability due to lack of risk management</p>
Success factors	<p>Private know-how and capital (incl. foreign direct investment)</p> <p>Natural advantages</p> <p>Consistent public support policies</p> <p>High consumer (market) demand</p> <p>Modernization of processing</p> <p>Inspiring positive experience</p> <p>Globalization opportunities</p>	<p>Good natural potential and reputation</p> <p>Favourable tax, duty and trade regime</p> <p>Industry initiatives (information, networking, training, standards, branding)</p> <p>Low labor costs</p> <p>Infrastructure development</p>	<p>Preferential crediting and taxing</p> <p>Higher productivity and adaptability of stallholders</p> <p>Adaptation of community based approach (production and transaction costs advantages)</p> <p>Giving more decision power to farmers</p> <p>Market prices</p>
Overall assessment	<p>Bad, poor, not satisfactory, space for improvement, incentives for future, promising at present</p>	<p>Bad, great potential for development, promising in future, not diversified</p>	<p>Declining production, poor, satisfactory, government acknowledges the fact, needs for improvement</p>
Priority areas for improvement	<p>Preferential funding and taxation</p> <p>Support commercialisation and diversification of smallholders</p> <p>Simplify procedures and improve distribution of public subsidies</p> <p>Create incentives for young farmers</p> <p>Create stable and effective business environment (incl. improved enforcement of laws and standards)</p> <p>Introduce rules for and promote local, special etc. products</p> <p>Projects and incentives for land consolidation (incl. effective lease outs of state lands)</p> <p>Better train and inform farmers</p>	<p>Preferential credit</p> <p>Facilitate direct investments and innovations</p> <p>Promote and assist diversification (incl. prospective local products)</p> <p>Modernize post-harvest, market, processing, storage and information infrastructure (incl. public-private partnership)</p> <p>Support farmers cooperation in marketing and branding</p> <p>Protect against monopolistic pricing and terms</p> <p>Train farmers in entrepreneurship and marketing</p> <p>Extend private property rights on farmland</p>	<p>Preferential credit, taxation and insurance for smallholders</p> <p>Environment for local and international long-term investments</p> <p>Improve the use of farmland</p> <p>Promote innovation (crops, breeds, water efficiency)</p> <p>Promote and support traditional technologies and products</p> <p>Establish farming infrastructure (slaughter houses, wells etc.)</p> <p>Support marketing associations</p> <p>Incentives for transfer of user and ownership rights on land</p> <p>Improve contract enforcement</p>

Table 7. Challenges, success factors, overall assessment, and priority areas for improvement of diversification, enterprise development and value-chain linkages in countries from South-East Europe, European CIS and Central Asia

Sub regions, countries	Key challenges	Success factors	Overall assessment	Priority areas for improvement
<i>SEE</i>				
Albania	Delayed rural development policies (no measures) Low resource endowment (mountain and less favoured areas) Lack of territorial development in RD Lack of cooperation between farmers No legal framework for brand promotion and start up business in new areas Poor business planning Lack of training for poor households No local market for “niche” products No system for quality control Strong preference for non-industrial products	Entrepreneurship Private knowledge and money Rich cultural heritage High diversity in landscape High demand for tourism Traditional products in small farms Existing export demand	Limitations in value-chain EU IPA measures in future	Identification of vulnerable areas and criteria for rural development Introduce legislation on geographical origins, local and traditional products Promote rural tourism, brands, and origins abroad Training farmers (especially young farmers) Improve community management of natural resources (new products, forests, mountainous areas) Promoting environmental measures – forestry, anti land erosion etc. Introduce LEADER like program Increase consumer awareness
Bulgaria	Strong competition from cheap foreign products Pressure from big food chains to reduce prices	Renewed processing facilities Good examples of diversification in some rural areas	Poor state (especially for small operators)	Better access to credit Simplification of procedures for participation in rural development programs
Macedonia	Small, dispersed, and subsistence farms Limits of funding Lack of public support and protection to small farms Lack of knowledge in diversification and integration No extension for smallholders No overall policies favouring businesses	Increased farming subsidies Bigger adaptability and growth of small and middle size enterprises Good and clear sectoral (e.g. tobacco) policies	Bad Progressing but not satisfactory	Land reforms (projects and incentives for land consolidation, transfer to farmers, use of state lands) Reform public subsidy system (simplify complicated payment system, support sectors with competitive advantages, focus on rural development) Improve enforcement (particularly Inspectorates) Improve information availability and exchange
Serbia	Lack of stable and predictable policies and environment - confusing signal for farmers and business	Farmers realised that agriculture is not the only activity – focus to other businesses Rural development connected with economic (business zones in villages)	Good direction Space for improvement	Remove obstacles for doing business Improve activity and predictability of administration Improve land and credit market Support young farmers initiatives (rural measures, land lease, subsidies) Effective use of state land (different lease out criteria)
Turkey	Small size of farms and fields Limited resources of farms (land, knowledge) Insufficient farmers education Lack of initiatives in farmers Low adaptability to industry requirements (e.g. uniform product) Market instability in some sectors (e.g. meat) Traits from globalisation	Good support policies targeting all chain actors (base on agricultural basins) and alternative crops Climate, soil, and human resources Accessible regional administration Entrepreneurship Food safety awareness of consumers Access to credit Foreign direct investment Globalisation opportunities	Promising at present and in future Diversification is ok Vertical integration to be improved	Improve analysis of otherwise available information Share knowledge and experiences Support introduction of GAP through cooperation of MA, retailers and farms Support to organic production Support to rural and agri-tourism Support certification of local products (geographical indications)

<i>European CIS</i>				
Armenia	<p>Monopolistic structure of (agri) economy Lack of know-how and initiatives in farmers Lack of rural statistics and information Lack of capability and willingness No clear priority in policy Agriculture is not a priority in rural community Vacant farmland not leased out (fear to be taken) Bad communication research institutes and MA</p>	<p>Natural conditions Initiatives and networks of processors and exporters informing, educating and integrating farmers, contracting, introducing modern standards and branding, searching for markets, diversifying into new areas (e.g. degustation tours, catering)</p>	<p>Not diversified Bad</p>	<p>Develop entrepreneurship in farmers and business Fight against monopolistic positions (use positive Georgia experience) Support rural development and productivity measures Set us clear priorities</p>
Belarus	<p>Unlike conditions for small and big farms for taking part in state programs Lack of access to state financial resources Smallholders are incapable to compete with big farms and get good prices Decreasing farm numbers Depreciation of national currency Difficult to start up new business (costly machinery) Lack of full private ownership rights on farmland Insufficient farmland in Northern part of country</p>	<p>Good legislation, state control and monitoring Flexible pricing mechanism Access to markets including value chain Tax preferences for smaller farms (up to 60 ha) - 3 year gratis period, after that 1% of gross income Lower costs in small farms</p>	<p>Share of small farms in overall production is 1% (40% in cereals, 30% in vegetables and potatoes, 5% in fruits)</p>	<p>Develop market relations (improve pricing) Build infrastructure (including market) Increase competitiveness assisting introduction of new machineries (in crop production) and innovations Improve farmland legislation introducing full private ownership rights Promote investment including foreign direct investment Improve coordination between different institutions introducing innovations</p>
Georgia	<p>Lack of financial resources Small local market Insufficient processing facilities and export capability Lack of knowledge Low productivity High material costs Lack of mechanisation</p>	<p>Good location Reforms, agriculture - priority sector Infrastructure development Favourable tax and trade regime (0% for small farms and property transfer, no VAT on primary products, no duty for equipment import) Low labor costs Trade agreements with EU and WTO</p>	<p>Promising in future</p>	<p>Prospective areas - vine sector, mineral and table water, fishery, citrus, herbs, Georgian beef Farms association (overcome land fragmentation, build storage and slaughter houses) Farm credit</p>
Moldova	<p>Lack of access to (affordable) finance Land fragmentation (collateral problem) Unstable policies (new strategy every 2 years) Low incentives for development of agri-business Low mechanisation and inputs application Difficulties to get imported fertilisers, machineries, seeds (no subsidies) Fragmented information system Lack of cooperation and trust Lack of “future” contracts (only local sells) No prices in contracts Destroyed post-harvest and market infrastructure (only for 20% of fruits storage capacity) Lack of market access Not enough qualified labor in agriculture Decapitalisation (3 times)</p>	<p>Good agriculture and education Natural conditions (soil, climate) Established image and trademark (CIS) Good reputation of traditional products</p>	<p>Great potential for development (currently only 20% is realised) Large gray economy Vulnerable to climate change (droughts) Remittances are used for agriculture</p>	<p>Post harvest and market infrastructure Export promotion Education in trade Support cooperation for trade, branding, product standardisation Facilitate (make attractive) direct capital investment Linkages in value chain (dairy, food safety) Improve pastures Projects for public-private partnership at all levels Overcome information asymmetry (developing market information system, livestock registration)</p>

Ukraine	Monopolistic structures Monoculture Production losses Small farm size Lack of farmers organisations Outdated infrastructure Undeveloped integration	Good potential of farming and agri-business (soil, water, adversely unaffected by climate change) Human potential	Undeveloped links and diversification for small farms Political instability	Apply community based approach Enhance personal ability Financial support Promote local products Improve safety and quality control Modernize infrastructure Public planning and information
<i>Central Asia</i>				
Kazakhstan	How to manage funding (1-2 billion for farming) Provide support to all areas Yields dependence from weather variations Fluctuation of market prices Stabilise income through livestock production Land ownership concentrated in urban population	High state support Microfinance for machinery and livestock Preferential tax (single, 80% discount) Favourable market prices (meat)	Low productivity and quality 80% of livestock in households Declining production	Direct subsidies for smaller producers Develop pasture farming (nomadic culture) Infrastructure (slaughter houses, wells) Regulations and incentives for farmland management (buying instead of renting, sublease only to state) Special support for livestock (e.g. import breeds)
Kirgizstan	Small farm size and subsistent character Limited capability and income of smaller farms unable to specialise and integrate No willingness to take risk and diversify Low skills Low or no bargaining power Infective contract enforcement (only costly court) Unsustainable processing (e.g. sugar beat) No support to unemployed No modern retail system nationwide	Accumulated experience in working in market environment Understanding importance of long-term relations and investments Expanding new export markets for local agro products (Iran, Saudi Arabia) Favourable situation on international and local food markets	Poor Need to be improved	Develop and increase capability of associations of small producers (bargaining power, finding markets) Improve contract enforcement Creation of social safety net for farmers providing minimum survival level Promote long-term investment of processors and buyers advancing seeds and credit to farmers Attracting large foreign investors in processing Promote non agricultural diversification
Tajikistan	Lack of initiatives in rural population Lack of contract market schemes with advance crediting Underdeveloped processing sector Insufficient arable land Undeveloped external transportation network (only Russia, blocked during tensions with Uzbekistan) No labor in villages due to migration (Russia) Lack of funding and insurance Outdate machineries Illegal import (China) of high quality seeds and fertilisers Decreasing price of cotton	Community based approach for natural and market systems minimizing (negotiation, transportation) costs Changing policies of local government giving more freedom to farmers to chose other (than cotton) crops	Big demand for improvement Government acknowledged fact Welcome international help International assessment for investment projects Foundation for marginal lands and poor Legislation signal to livestock farms	Appropriate use of land (not just cotton, crop rotation) Development of dry fruits production Livestock marketing Support export oriented activity Promote international and local investments Favourable business oriented tax policy (tax free mechanisms for farmers and other agents) Reliable credit system (current rate 44%)
Uzbekistan	Insufficient water resources Climate changes Undeveloped processing and marketing Few inputs use and research support Highly specialised (cotton and wheat) production	Preferential credit New farms - no tax for 3 years Higher productivity and adaptability of smaller farms	Satisfactory	Improve credit and insurance system for small farms Enlarge farm size and improve productivity Projects for water shortages and improving water efficiency (appropriate crops and livestock) Introduce international standards and certification Land reclamation

Source: FAO Consultation, November 29-December 1, 2011, Ankara

OPTIONS AND AREAS OF INTERVENTION TO FOSTER DIVERSIFICATION AND VALUE CHAIN INTEGRATION

Increasingly, market forces and trade liberalization are impacting significantly on rural livelihoods. Whilst these changes lead to new opportunities they can also increase the vulnerability of smallholder farmers and rural entrepreneurs to market pressures. Diversification into market-oriented income generating activities and better inclusion in modern markets is unavoidable if rural communities are to survive. The key issue is how to support engagement in the market in a way that promotes equitable and sustainable growth in the local rural environment.

Given the globalization that the agriculture and rural economies are exposed to, it is assumed that stakeholders (i.e. rural households) need to be informed in and their adaptation assisted for developments in national and international markets, trade policies and rules, food safety, hygiene standards and other private quality standards and schemes, in order to have the capacity to exploit growing market opportunities.

Feasible and effective options of interventions are country, region, sector specific and depend on particular socio-economic, institutional and natural environment (formal and informal rules, resource endowment, state of development, education etc.). On the basis of case studies' recommendations and experts consultation a non-exhaustive set of possible options and areas of intervention is specified for EECA (Table 8).

Table 8. Options and area of intervention to foster diversification and market inclusion in EECA

Area of intervention	Options
Farm modernization and adaptation capability	Provide preferential funding, taxing and insurance for farmers and vertical partners Effectively disseminate research and innovations Increase efficiency of extension, training and other (veterinary, quality tests etc.) services Expend and better assign and enforce rights on major farm (land, water) resources and activities (including environmental preservation, selection of production structure and counterparts) Protect against monopolistic pricing and terms Support projects for land consolidation and effective state farmland utilisation
Research, extension, training and information	Direct research and extension programs to smallholders needs, diversification and integration alternatives Establish system of continuous training in farm, risk and eco-management, innovation, quality standards and control, formal regulations, contracting, grant application etc. Improve information on markets, technologies, public programs, adaptation needs Multidisciplinary research and assessments on approaches, factors, benefits, costs, impact(s), and trends for the specific conditions in individual countries, regions, subsectors and segments of population Share positive and negative experiences Improve data collection and public disclosure of available information
Producer cooperation and vertical integration	Provide support to producers organisations and prospective forms of vertical integration Assist critical activities like inputs and know-how supply, crediting, marketing, processing, quality control, risk-sharing, environmental conservation, certification etc. Improve enforcement of individual and groups rights and contracts
Infrastructure modernisation	Develop: wholesale and terminal markets irrigation system processing and storage facilities transportation network telecommunication Create legal conditions and incentives for private and collective investment, and public-private partnerships

Public programs design and management	<ul style="list-style-type: none"> Support commercialisation, diversification, public goods provision, and prospective ventures Facilitate criteria for smallholders access Simplify procedures and reduce costs for participation Create incentives for young farmers Improve transparency and farmers involvement in management at all levels Establish public insurance scheme
Public-private partnership	<ul style="list-style-type: none"> Jointly define opportunities, constrains, and strategies Effectively divide responsibility in strategies implementation and management Jointly promote new (organic, branded, protected) products, (eco-system) services, and relevant standards United combat counterfeit products, brands, and services Jointly popularise prospective models Better coordinate national and donor agencies activities
Institutional modernisation	<ul style="list-style-type: none"> Create stable and effective regulatory environment for local businesses and foreign direct investments Give full property rights on farmland and decision-making power to farmers Introduce new rights on intangible (brands, origins), infrastructural development, natural resources, eco-system services etc. Better enforce laws, and absolute and contracted rights of all agents Introduce protection against (semi)monopolistic pricing and terms Establish effective court and out of court system for dispute resolution Harmonise with prospective international standards and norms

Small farms' (technology, management, performance) modernisation and adaptation capacity is to be promoted by effective public and food-chain actions – preferential funding, taxing and insurance; research and innovation dissemination; extension, training and other (e.g veterinary, quality tests etc.) services; expansion and better assignment and enforcement of rights of farm (land, water etc.) resources and activities (including production and trade decision-making, environmental conservation, eco-system services); and effective protection against monopolistic pricing and terms.

The role of diversification in sustainable use and management of natural resources is unquestionable. For example, agricultural land needs to be protected and its structure improved. Spatial or physical planning, land use planning or urban planning will influence the availability of quality agricultural land for farming. Furthermore, the issues affecting land tenure and land consolidation need also to be addressed in order to maintain the agricultural base of rural areas, and to provide income and opportunities for livelihoods diversification. Land consolidation will need to be applied differently in specific situations. But regardless of the context in which land consolidation is applied, it can be used to introduce integrated, participatory and cross-sector approaches into rural development. The effective utilisation of state owned farmland is to be also considered.

Public research and extension is to be enhanced and oriented to smallholders modernisation, diversification and inclusion needs. Effective system of continuous training is to be established in farm, risk and eco-management, innovation, quality standards and control, formal regulations, contracting, grant application etc. Adequate and internationally comparable data collection, and proper assessments on markets, technologies, experiences, programs, adaptation needs and associated costs, benefits and likely impact(s) are to be organizationally and financially secured. Also mechanisms for comprehensive and timely disclosure of available information are to be assured, and effective methods for communication to decision-makers and stakeholders at all levels and public at large introduced.

Vocational training and information actions need to assist in the diffusion of scientific knowledge and innovative practises for persons engaged in agricultural, food and forestry sectors. Innovation will increasingly become important for region's farming, agrifood and forestry sectors. While large agrifood

companies are often at the cutting edge of new trends, the introduction of new products and processes could significantly contribute to the performance of smaller processors and farm businesses.

Many issues related to forms, (socio-economic, institutional, behavioural, natural etc.) factors and impacts of farm and enterprise diversification, smallholders value-chain integration, relations between agricultural-non-agricultural activities etc. are still not well studied and understood in the region. Remaining gap in knowledge is to be filled by multidisciplinary research and assessments involving local and international experts and modern methods of analysis. Moreover, studies are to focus not (only) on past trends but on specific driving factors effecting current and future development in individual countries, regions, subsectors and segments of population. It is also important to build on the positive (and negative) experiences of countries that have developed competitive agricultural sectors and vibrant rural economies in order to improve the understanding of trends and contribute to the formulation of sound policies and strategies for fostering agricultural and other rural enterprises.

The desire to increase income by taking advantage of market opportunities requires farmers to become better at decision-making and competing in the new environment. Although there are numerous programmes and support initiatives to offset diseconomies of scale and improve farmers' bargaining power and position in a food chain, due to the inappropriate extension and consulting services, knowledge about potentials and benefits of cooperation, commercialization and diversification is still limited. Advisory services need to be adapted accordingly and to provide specific and relevant advice. The use of business development and advisory services should allow farmers to improve sustainable management of their holdings.

Diversification is the main tool that farmers have to reduce their individual farm risk. Although frequently easily suggested as an option farm diversification is not always easy to achieve as there are often no clear profitable options and the financial costs of changing/adding enterprises are high. Well researched farm diversification strategies are needed to guard against price shocks and other risks.

Further integration can be expected in the agrifood value chains. Increasing emphasis will need to be placed on further developing and strengthening buyer/producer linkages and in the development of supply contracts. To gain competitive advantage in the global marketplace, and to create and market new products and develop new outlet key ingredients will be high quality, planning and evaluation, perseverance, focus and building long-term relationships with customers. Measures need to be put in place aimed at improving the quality of agricultural production to help farmers to adapt to demanding standards and to support farmers who participate in food quality schemes.

Cooperation between producers and between producers and other stakeholders in a value chain should assist in the development of new products, processes and technologies and in particular to determine and monitor common rules and standards as well as to inform consumers and promote products provided under quality schemes.

Therefore, public support to producers' organisations and prospective forms of vertical integration is to be provided. Critical activities such as inputs and know-how supply, crediting, marketing, processing, quality control, risk-sharing, environmental conservation, certification etc. are to be assisted. Furthermore, enforcement of individual and groups rights and contracts in vertical chains is to be improved through public and collective actions.

Evidence from a number of countries indicates that diversification contributes to increase of household incomes in a period of stagnating farming revenues³⁵. The main external factors affecting farm-based diversification are related to the development of the local economy and the local labour market, as well as

³⁵ Barghouti S., Kane S., Sorby K. and Ali M. (2004). *Agricultural Diversification for the Poor, Guidelines for Practitioners*, Agriculture and Rural Development Discussion Paper 1, World Bank; Copus A., C. Hall, A. Barnes, G. Dalton, P. Cook, P. Weingarten, S. Baum, H. Stange, C. Lindner, A.Hill, G. Eiden, R. McQuaid, M. Grieg, M. Johansson (2006). *Study on Employment in Rural Areas, Final Deliverable*, SAC.

the state of infrastructure, particularly wholesale, processing, storage, irrigation, transport and telecommunication facilities. Education levels, age, capital availability, social capital and networks and farmers' perception and preferences are the most important internal factors that need to be strengthened to enable successful diversification.

To a varying degree, much of rural infrastructure still needs to be upgraded throughout rural areas of the region. Significant investments will need to be made in telecommunications, transport, energy and water infrastructure, as well as rural market infrastructure over the coming years. What is more, in some countries even basic farm related infrastructure (slaughter houses, wells, storage facilities etc.) is to be established to serve better new farming structures. There is broad recognition that rural infrastructure development cannot be seen as solely a government responsibility. As a result of structural adjustment and privatization the public sector has increasingly withdrawn from the construction, management and financing of rural infrastructure works and the private sector has been encouraged to step in. To address today's infrastructure challenges there is a need to look beyond simple solutions and take into account the following: that the private sector is unavoidable; domestic capital needs to be tapped; new (private) property rights to be introduced and effectively enforced on natural resources, eco-system services etc.; that there is a need to improve cost recovery; that there is a need to better understand the legal traditions of a country in order to better design public-private partnership arrangements; that there is a need to improve governance and accountability through effective institutional designs.

There is also a further need to encourage the further take-up and diffusion of information and communications technologies (ICT). The agrifood sector as a whole has been identified as lagging behind in the take-up of ICT technologies³⁶. This is particularly the case for smaller businesses. The take-up and diffusion of ICT is essential in rural areas for diversification as well as for local development, the provision of local services and the promotion of e-inclusion. Economies of scale can be achieved through village ICT initiatives combining IT equipment, networking and e-skills training through community structures. Such initiatives can greatly facilitate IT take-up by local farms and rural businesses and the adoption of e-business and ecommerce. Full advantage needs to be taken of the possibilities afforded by the internet and broadband communications to overcome the disadvantages of remote locations.

In order to increase private and collective investment and public-private partnerships in infrastructural development favourable legal conditions and incentives are to be created.

From the farmers' point of view, based on experiences in developed countries³⁷, policies inhibiting diversification include stabilization of prices of farm outputs, direct payments, investment subsidies, tax exemptions and subsidies to farming credit. Policies and initiatives for encouraging diversification include provision of seed money for business start-up, loan guarantees, tax exemptions for diversified enterprises, advice on completing loan or grant application forms, business training and advice on business planning, as well as non-pecuniary benefits like free health care and training to undertake off-farm employment.

Experience has shown that commercialization and vertical integration in the food chain may be solutions only for a limited number of well organized and equipped farms with credit standing or informal borrowing capacity and skilled management. Lack of start-up capital combined with non-transparency of operational procedures inhibits smaller farmers to commercialize. Possible solutions for those could be alliances with other farmers or contract arrangements with agribusiness.

Therefore, improvement in the design and management of public programs in the region are to be undertaken which is to include: increased support to commercialisation, diversification, public goods

³⁶ COST Foresight 2030, Benefitting from the Digital Revolution, Workshop on Food Security, Workshop Report, 30 June to 2 July 2009 Gent.

³⁷ The Role of Agriculture and Farm Household Diversification in the Rural Economy of Germany, OECD; The Role of Agriculture and Farm Household Diversification in the Rural Economy of Canada, OECD.

provision, and prospective ventures of smallholders, less restrictive criteria for smallholders access in different support measures (e.g. farm size, co-funding requirement), simplifies procedures and reduce costs for participation (registrations, paper work, bribes payments), more incentives for young farmers involvement, improved transparency and farmers involvement in management at all levels, creation of public insurance scheme against natural disasters and extreme weather (hail, frost, drought, slush) etc.

There is also a particular need to encourage investment into technology-based businesses with high growth potential, small businesses, start-ups and spin-outs and clean environmental technologies. Improvements in the processing and marketing of primary agricultural and forestry products should be encouraged by means of support for investments aimed at improving efficiency in the processing and marketing sector, introducing new technologies and innovation, placing emphasis on quality, improving environmental protection, occupational safety, hygiene and animal welfare, as appropriate, by targeting, as a general rule, micro-, small- and medium sized enterprises.

A greater cooperation between public and private sector is to be promoted through joint definition opportunities, constrains, and strategies; effective division of responsibility in strategies implementation and management; joint promotion of new (organic, branded, protected etc.) products, (eco-system) services, and relevant standards; united combat against counterfeit products, brands, and services; joint popularisation of prospective diversification and integration models; better coordination of national and donor agencies activities etc.

Last but not least important, efforts to modernise institutional environment for the specific socio-economic, cultural, natural etc. conditions of individual countries, regions, sub-sectors and segments of population is to be carried out. The later is to create a stable and effective regulatory environment for local businesses and foreign direct investments alike; give full property rights on farmland and decision-making power to farmers; introduce new rights on intangible (brands, origins), infrastructural development, natural resources, eco-system services etc.; better enforce laws and absolute and contracted rights of all agents; introduce protection against (semi)monopolistic pricing and terms; establish effective court and out of court system for dispute resolution; and harmonise regional with prospective international standards and norms.

CONCLUSION AND RECOMMENDATIONS

Despite unprecedented transformation of EECA agrarian sector during the last two decades, there are significant challenges for small farmers' integration into modern market chains. They are caused by slow farm modernisation and adaptation to changing regional and global agri-business environment, and inadequate public support policies for smallholders' inclusion in dynamic market chains. Farm and enterprise diversification is perceived as a prospective strategy for market integration, employment and income expansion, and sustainable rural development in the region.

There is a big variation in the states, approaches, opportunities, constraints, and effects of farm enterprise diversification in individual countries caused by the specific farming organisation, resources endowment, markets development, and regulatory, support and infrastructural environment. Nevertheless, proper estimation of extent and factors of farm diversification throughout the region is impeded by the lack of appropriate data and comprehensive studies.

In NMS of EU pluriactivity is practised by 40% of farmers mainly by smallholders. On the other hands, diversification concerns 13% of farms varying between 1% in Lithuania to 22% in Romania. Structure of diversification activities differs considerably processing being the most preferable one. Principally, small farms tend to set up processing of agricultural products, while the larger ones contractual work. Farmers dealing with livestock are more inclined towards on-farm diversification. Contractual work is more frequent on farms specialised in field crops while processing on farms specialised in permanent crops. Farms specialised in grazing livestock may be located in places which are attractive for diversification activities such as tourism. Impact on employment and income is rather positive – diversification increase demand for labour and diversified holdings occupy on average more people than non-diversified ones.

The tentative assessment on the evolution of agricultural diversification in EECA though the Index of Crop Diversification indicates that agricultural sector in Central Asia is the less diversified with Kazakhstan being with the least diversified agriculture, and Tajikistan and Kyrgyzstan with the most diversified one. In the Caucasus there is a hectic trend in crop diversification with Georgian agriculture the most diversified and Azerbaijan the least diversified. In Central Europe and European CIS countries a stable tendency in agricultural diversification is experienced, and Poland and Belarus are the leaders in crop diversification while Bulgaria and Russian Federation are lagging behind. The only subregion where a significant improvement in crop diversification is demonstrated is South East Europe, and FYRM agriculture is the most diversified while Turkish one the least diversified. All these trends are a consequence of the specific reforms (market liberalization, privatization, public support), and the more favorable socio-economic and natural environment (tradition, demand, climate etc.) for mono or multi-crop agriculture in individual countries and subregions.

In South-east Europe, Central Asia, and Caucasus countries the expansion of agricultural diversification is associated with increased Agricultural Value-added per Worker and presumably with enlarged income of employed in the sector. Progression of crop diversification in these subregions is also associated with improvement of land productivity and thus with the overall farm income. Nevertheless, only in the Central Asian subregion the higher income from the expansion (growth) of cultivated area is likely coming as a result of deepening the crop diversification. What is more, process of improvement of agricultural diversification in South-east Europe is connected with increased agricultural income of rural population. However, no indication exists that dynamics of rural population is affected by the process of agricultural diversification in the entire EECA region.

There are big similarities in the state of agricultural and rural income diversification in South-East Europe, European CIS and Central Asia countries. In general, there are no reliable data on current farming structures in the region. Nevertheless, it is estimated that post-privatisation agriculture consists of large

number of small scale, subsistence and semi-market farms. In most cases, small holdings manage and often compete for the insignificant amount of critical resources such as land, water etc. In a number of countries, private property rights on farmland are restricted (to user rights, leasing terms) and in certain instances disputed. There is a slow “process” of modernization and restructuring of farms as many smaller size holdings have been highly unsustainable in changing market, institutional and natural environment.

Small scale farms are important for household food supply throughout the SEE, ECIS and CA region. There is a partial commercialization of stallholders but in some cases they are a major and “specialized” market supplier of certain basic products such as milk, vegetables etc. Commonly, low productivity and primitive technologies dominate among small farms. These holdings capability to adapt to evolving market, formal, and natural (climate) changes is insignificant. Principally, vertical integration is not developed and mostly farm (crop, livestock) diversification is practiced. However, there are individual success stories for effective market inclusion and enterprise diversification in all countries.

There are not enough data for the rural employment and poverty in the SEE, ECIS and CA and the picture for the state of unemployment and poverty in rural areas is not full. Commonly, there is higher poverty and less employment opportunities in rural areas. Generally, agriculture is a or the major (self)employer. There is significant official as well as hidden unemployment throughout the region. Nevertheless, there is increasing needs for high qualified labor and young entrepreneurs in many countries. Agriculture is a major income source along with the pensions and remittances from abroad. Predominantly income diversification in other regions, industries and countries is practiced. Despite that food security is an essential problem in the region (particularly access to food), no specific “rural” food security issues has been identified.

The major issues of small farmers integration in agricultural value chains in EECA are associated with enabling environment, skill and knowledge, identified market gaps and niche markets, extent of horizontal cooperation, and integration in value-chains.

The main challenges for market inclusion of stallholders identified through a number of case studies relate to: efficiency of vertical links; increased funding needs; undeveloped markets; inadequate infrastructure; insufficient public support; increased market, business institutional, production and environmental risks; abilities of farmers; quality and safety control; small farm size; aged farm managers; low contracting power; absence or inefficient producers organization; innovation; and (in one case) political instability.

Key lessons learned from the case studies are: personal ability plays a role, promoting local products, public financial support, training farmers, improving infrastructure, associating producers, system of control, improving vertical coordination, and third-party assistance and cooperation. Main recommendations withdrawn from case studies include: improve efficiency of public programs, continuous training programs, public support to producer associations, improve infrastructure, improve collective organization, modernizing farms, risk management, environmental management, enhance public-private partnership.

There are considerable differences in major challenges for farm diversification, enterprise development and value-chain integration in South-East Europe, European CIS and Central Asia. According to experts the key challenges in SEE are: insufficient farm adaptation capability to dynamic market, industry and formal standards and rules; small and dispersed operational size and resources; lack of access to outside funding; and lack of appropriate education and training of farmers. For ECIS the most important challenges are associated with: lack of enabling institutional, support, and (macro)economic environment; widespread ineffective production methods; lack of producers organizations; outdated infrastructure; insufficient access to information; and lack of initiatives in farmers and other agents. In countries from CA major challenges relates to: restricted agrarian resources both at country and farm level; outdated inputs supply, processing and retailing systems; widespread “contract failure” of farmers vertical links; absence or available but ineffective public funding; lack of skills in farmers; high vulnerability of farms due to lack of risk management.

According to experts, success factors for farm diversification, enterprise development and value-chain integration are also sub-region specific. For SEE they are identified as: private know-how and capital including foreign direct investment; natural climate, soil, product etc. advantages; consistent public support policies; high consumer (market) demand; modernization of processing industry; inspiring positive experience; and globalisation opportunities. In ECIS these factors are specified as: good natural potential and established international reputation; favourable tax, duty and trade regime; industry initiatives providing effective information, networking, training, standards, branding; low labor costs; and infrastructure development. In CA factors for success are: preferential crediting and taxing; higher productivity and adaptability of stallholders; adaptation of community based approach giving both production and transaction costs advantages; giving more decision-making power to farmers for selecting crops and counterparts; and positive dynamics of market prices.

As far as the overall assessment of the process of farm diversification, enterprise development and value-chain integration is concerned, the picture is quite similar across the region. It is described by experts as “bad”, “poor”, “not satisfactory”, “satisfactory”, “space” or “needs for improvement”, “great potential for development”, , “incentives for future”, “promising at present” or “in future”, “declining production”, “acknowledged by government”.

Most of priority areas for improvement outlined by experts are also sub-region specific. In SEE they are determined as: preferential funding and taxation; support commercialisation and diversification of smallholders; simplify procedures and improve distribution of public subsidies; create incentives for young farmers; create stable and effective business environment, including improved enforcement of laws and standards; introduce rules for and promote local, special etc. products; projects and incentives for land consolidation, including effective lease outs of state lands; and better train and inform farmers. In ECIS priorities are identified as: preferential credit; facilitate direct investments and innovations; promote and assist diversification, including prospective local products; modernize post-harvest, market, processing, storage and information infrastructure, including through public-private partnerships; support farmers cooperation in marketing and branding; protect against monopolistic pricing and terms; train farmers in entrepreneurship and marketing; and extend private property rights on farmland. For countries from CA these priorities are specified as: preferential credit, taxation and insurance for smallholders; create environment for local and international long-term investments; improve the use of farmland; promote innovation particularly in appropriate crops, breeds, and water efficiency; promote and support traditional technologies and products; establish farming infrastructure such as slaughter houses, wells etc.; support marketing associations; provide incentives for transfer of user and ownership rights on farmland; and improve contract enforcement.

Feasible and effective options of interventions to foster diversification and value-chain integration are country, region, sector specific and depend on particular socio-economic, institutional and natural environment. Based of the outcome of case studies and experts consultation a list of prospective options of intervention recommended in EECA includes:

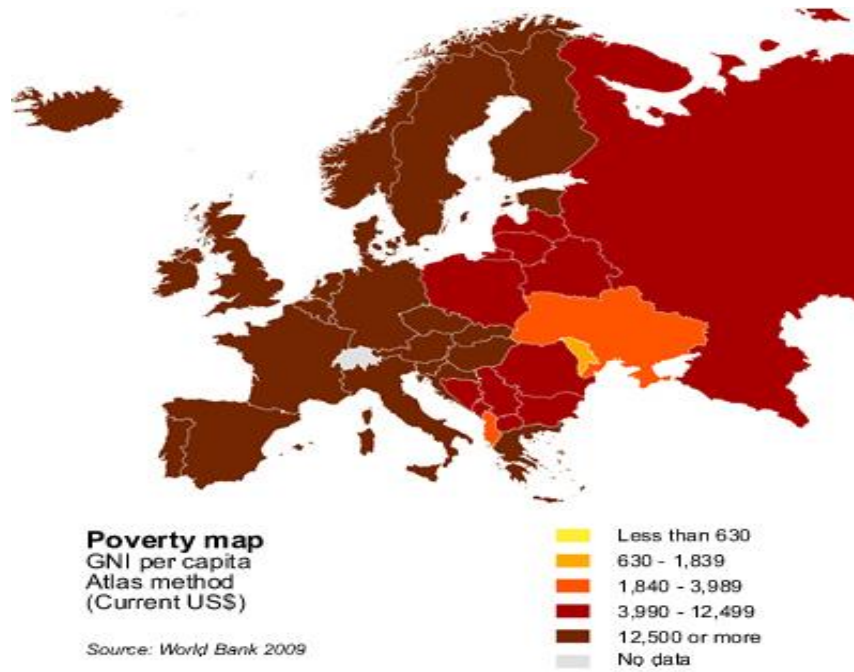
- in the area of farm modernization and adaptation capability: provide preferential funding, taxing and insurance for farmers and vertical partners; effectively disseminate research and innovations; increase efficiency of extension, training and other (veterinary, quality tests etc.) services; expend and better assign and enforce rights on major farm (land, water) resources and activities (including environmental preservation, selection of production structure and counterparts); protect against monopolistic pricing and terms; and support projects for land consolidation and effective state farmland utilization.
- in the area of research, extension, training and information: direct research and extension programs to smallholders needs, diversification and integration alternatives; establish system of continuous training in farm, risk and eco-management, innovation, quality standards and control, formal regulations, contracting, grant application etc.; improve information on markets,

technologies, public programs, adaptation needs; multidisciplinary research and assessments on approaches, factors, benefits, costs, impact(s), and trends for the specific conditions in individual countries, regions, subsectors and segments of population; share positive and negative experiences; improve data collection and public disclosure of available information.

- in the area of producer cooperation and vertical integration: provide support to producers organisations and prospective forms of vertical integration; assist critical activities like inputs and know-how supply, crediting, marketing, processing, quality control, risk-sharing, environmental conservation, certification etc.; improve enforcement of individual and groups rights and contracts.
- in the area of infrastructure modernisation: develop wholesale and terminal markets, irrigation system, storage and processing facilities, transportation network, and telecommunications; create legal conditions and incentives for private and collective investment, and public-private partnerships.
- in the area of public programs design and management: support commercialisation, diversification, public goods provision, and prospective ventures; facilitate criteria for smallholders access; simplify procedures and reduce costs for participation; create incentives for young farmers; improve transparency and farmers involvement in management at all levels; establish public insurance scheme.
- in the area of public-private partnership: jointly define opportunities, constrains, and strategies; effectively divide responsibility in strategies implementation and management; jointly promote new (organic, branded, protected) products, (eco-system) services, and relevant standards; united combat counterfeit products, brands, and services; jointly popularise prospective models; better coordinate national and donor agencies activities.
- in the area of institutional modernisation: create stable and effective regulatory environment for local businesses and foreign direct investments; give full property rights on farmland and decision-making power to farmers; introduce new rights on intangible (brands, origins), infrastructural development, natural resources, eco-system services; better enforce laws, and absolute and contracted rights of all agents; introduce protection against (semi)monopolistic pricing and terms; establish effective court and out of court system for dispute resolution; harmonise with prospective international standards and norms.

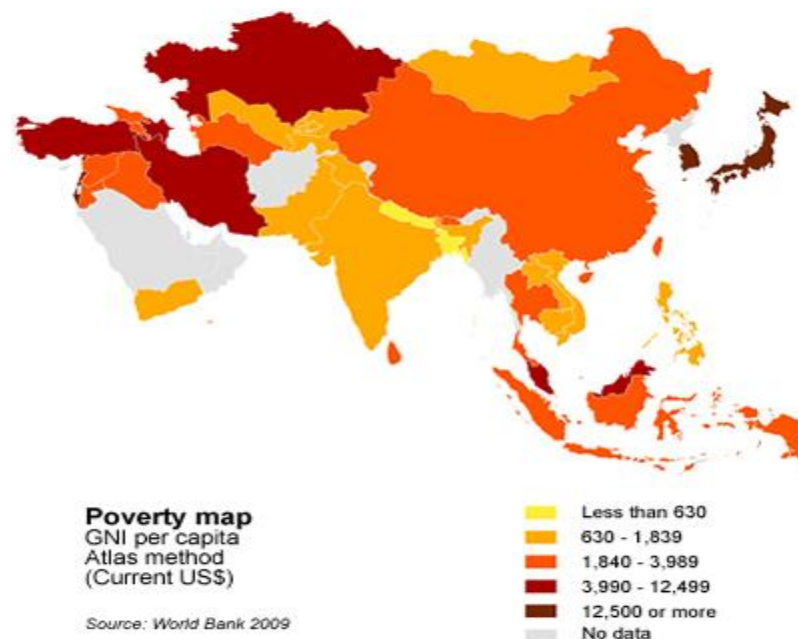
ANNEXES

Annex 1. Map of Rural Poverty in Europe



Source: <http://www.ruralpovertyportal.org/web/guest/region/home/tags/europe>

Annex 2. Map of Rural Poverty in Asia



Source: www.ruralpovertyportal.org/web/guest/region/home/tags/asia

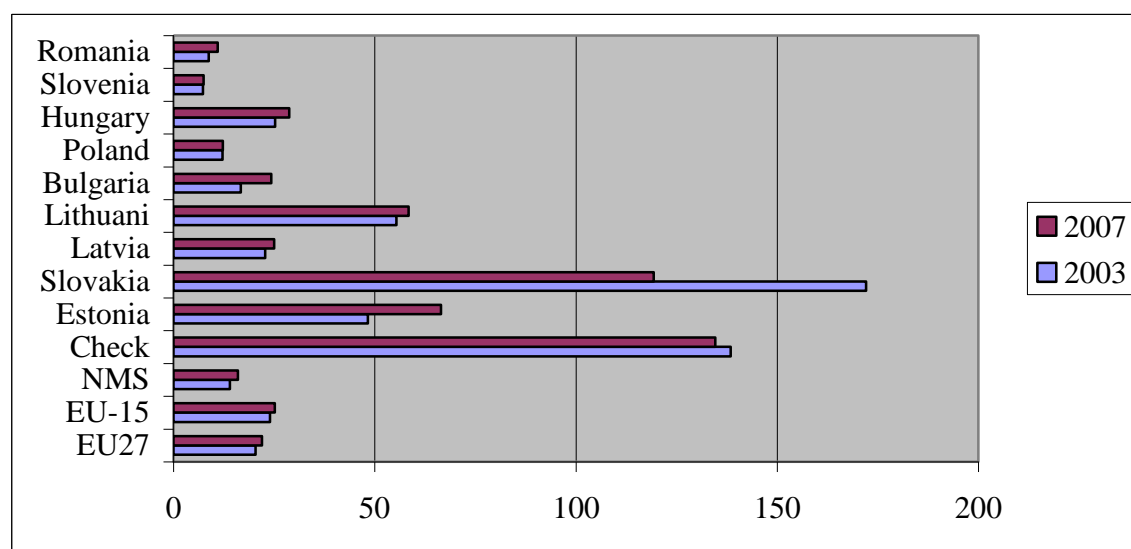
Annex 3. Poverty headcount ratio at rural poverty line in EECA (% of rural population)*

Countries	2001	2002	2003	2004	2005	2006	2007	2008	2009
Albania		29.6			24.2			14.6	
Armenia	47.9							22.9	25.5
Azerbaijan	42.5							18.5	
Bosnia and Herzegovina	19.9			22			17.8		
Georgia							29.7		
Kazakhstan	23.2	21.7							
Kosovo			34.4	44.2	37.2	49.2			
Kyrgyz Republic			57.5		50.8				
Latvia		11.6		12.7					
Macedonia, FYR		20.7	18.9	20.6	21.2	21.3			
Montenegro					16.5	17.6	12	8.9	
Romania	44.7	42.4	38	27.3	23.5	22.3			
Russian Federation		30	29	25.2	22.7	21.2			
Serbia		17.7		20.2		13.9	9.8		
Tajikistan			73.8				54.4		49.2
Turkey		34.5	37.1	40	33	32	34.8	34.6	38.7
Ukraine			25.1	18.1	11.3				

*Rural poverty rate is the percentage of the rural population living below the national rural poverty line

Source: data.worldbank.org/indicator/SI.POV.RUHC/countries?display=default

Annex 4. Average size of agricultural holdings bigger that 1 ESU in NMS of EU (ha)



Source: Eurostat, Agricultural statistics 2008-2009