



Food and Agriculture Organization
of the United Nations

**Regional Initiative on
Empowering Smallholders and Family
Farms for Improved Rural Livelihoods
and Poverty Reduction**

Smallholders and family farms in Serbia



Country study report

2019

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Abbreviations

AAS	Agriculture Advisory Service
ADWCA	Areas with difficult working conditions for agriculture
AH	Agricultural holding
ANC	Areas with natural constraints
AWU	Annual working unit
BRC	British Retail Consortium Standard
CAP	Common agricultural policy
CEFTA	Central European Free Trade Agreement
EC	European Commission
EQLS	European Quality of Life Survey
EU	European Union
EU-SILC	European Union Statistics on Income and Living Conditions
FADN	Farm Accountancy Data Network
FAH	Family agricultural holding
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross domestic product
GAP	Good agricultural practices
GORS	Government of the Republic of Serbia
GVA	Gross value added
HACCP	Hazard Analysis Critical Control Point
HBS	Household Budget Survey
HLEUE	Holdings of legal entities and unincorporated enterprises
HNVF	High Nature Value farming
ICT	Information and communications technology
IFC	International Food Standard
ILO	International Labour Organization
IPA	Instrument for Pre-Accession Assistance
IPARD	Instrument for Pre-Accession Rural Development
ISAA	Institute for Science Application in Agriculture
LEADER	French acronym for Liaison Entre Actions pour le Développement de l'Économie Rurale, meaning “links between actions for the development of the rural economy”

LFA	Less-favoured areas
LFS	Labour Force Survey
LSU	local self-governmental units
LU	Livestock units
MAFWM	Ministry of Agriculture, Forestry and Water Management
MESTD	Ministry of Education, Science and Technological Development
MICS	Multiple Indicators Cluster Survey
NARDS	National Agriculture and Rural Development Strategy
NGO	Non-governmental organization
NHIF	National Health Insurance Fund
NPA	National Programme for Agriculture
NPRD	National Programme for Rural Development
PDI	Protected designation of origin
PGI	Protected geographical indication
PPP	Preparatory Preschool Program
RS	Republic of Serbia
SDG	Sustainable Development Goals
SEIO	Serbian European Integration Offices
SEPA	Serbian Environmental Protection Agency
SFRY	The Socialist Federal Republic of Yugoslavia
SHFF	Smallholders and family farms
SIDA	Swedish International Development Agency
SME	Small and medium enterprises
SO	Standard output
SORS	Statistical Office of Republic of Serbia
STAR	Serbian Transitional Agriculture Reform
TSG	Traditional specialities guaranteed
UAA	Utilized agricultural area
UN	United Nations
UNDP	United Nations Development Programme
USAID	United States Agency for International Development

Executive summary



Background

The background for conducting this country study on the challenges, needs and constraints of smallholders and family farms in the Republic of Serbia has been a wish to further strengthen the *Regional Initiative on Empowering Smallholders and Family Farms* and develop it towards a stronger programmatic approach at both the regional and the country level. In order to provide support to smallholders and family farms, there has been a need to develop a better understanding and knowledge platform of the main challenges, needs and constraints of smallholders and family farms in the specific country context. FAO has, during 2017–2018, conducted country studies on the needs and constraints of smallholders and family farms in seven countries of the Eastern Europe and Central Asia region as part of a regional TCP/RER/3601 project. A country study also was conducted of Serbia, according to the letter of agreement between the University of Belgrade Faculty of Agriculture and FAO.

Objectives

The objective of the country study is first to analyse the development trend and current state of smallholders and family farms, second to study the current political priorities and policies affecting smallholders and family farms, and finally, based on the conclusions made, to provide recommendations, mainly at the policy level, on how to further support the development of family farms and at the same time ensure, in general, inclusive growth, improved rural livelihoods and a reduction of rural poverty. This country study will not only be relevant for the formulation of the Country Programming Framework (CPF)¹ but also for governments, donors and other international organizations when formulating policy and preparing programmes.

Methodology

The approach taken in this study is based on two pillars. The first is defined by the overall methodological principles of the Regional Technical Cooperation Programme on smallholders and family farms. The second pillar relates to the methodology applied in the data and information collection, which is shaped by the specificities of the Serbian national political system and the availability of data and information relevant to the study.

¹ The Country Programming Framework (CPF) is a tool for FAO country-level strategic prioritization and overall medium-term country-level programming.

For the collection of primary data, a purposive sampling approach was implemented via the selection of key resource persons, with whom interviews were conducted to collect information specifically related to the topic of interest. The desk research included a review of available legislative and policy documents, academic papers, project reports and studies, among other sources. In addition to qualitative data, the desk research also included the collection of statistical data related to the study objectives.

Due to the lack of a national specific definition of smallholders and family farms, all analyses (unless otherwise indicated) were done based on the definition of “small scale food producer” (FAO, 2017; FAO, 2018), which is used as synonym for smallholders and family farms. This approach was chosen in order to: 1) allow international comparisons with regard to Sustainable Development Goal (SDG) indicators under target 2.3; 2) better reflect the characteristics of the target group of agricultural holdings; and 3) stress the need for further work and debate on a nationally specific, multi-criteria definition of smallholders.

Findings and conclusions

The contribution of the agriculture, forestry and fishery sector to the Serbian gross domestic product, export earnings and employment is considerable. The dominant characteristic of the sector’s output is high volatility in growth rates caused by frequent extreme weather events. The duality of farm structure and supply chain is prominent, with a north–south divide as the prevailing pattern. Land and livestock resources are concentrated on family agricultural holdings and are unequally distributed according to farm size and by regions.

Smallholders and family farms in Serbia are numerous and occupy considerable resources. Yet, the characteristics of farm managers (average age, education and activity) are not conducive to the sustained development of the sector. Smallholders and family farms managed by women are, in many aspects, in an even worse position. Compared to their male counterparts, female managers typically are older, less likely to be pluri-active, less educated and less likely to attend training courses.

Access of smallholders and family farms to inputs and services is not constrained, but demand is highly variable depending on the region and the subsector, and demand is generally low. Most smallholders and family farms rely on barter exchange – which is the most important source of lending, knowledge and technology transfer – and selling. Access of smallholders and family farms to agricultural land, where there is a demand, is limited by land prices.

Most of the smallholders and family farms in Serbia are active market participants. However, they participate in markets mostly with raw products and through informal market channels (spot markets, direct selling, and barter exchange). The key barriers to entry to high-value and

niche markets are food safety standards, hygiene, traceability, the lack of market infrastructure, high transaction costs for some producers, and labour shortages.

The competitiveness and development of rural areas are constrained by serious limitations. Rural households and populations are exposed to higher risks of poverty, material deprivation and social exclusion, whichever measure is applied. Activity and employment rates in rural areas are higher than in urban areas, but the structure of employment and protection of labour rights is less favourable. Salaried workers in rural areas more often work without formal contracts, have no pension or health insurance, and are denied paid sick leave and annual leave.

Social protection is less accessible to those who are exposed to risks of poverty in rural areas due to restrictions related to the possession of land assets (0.5 ha and larger) and to reluctance towards or lack of knowledge on accessing financial social assistance. Progress has been made in promoting gender equality, but mainly with respect to improving legal and policy frameworks.

Despite the abundance of natural resources, there is a weak integration of biodiversity into the economic sector, including into agriculture and related activities. The regulatory framework is fragmented and poorly coordinated by various bodies, while neither environmental cross-compliance measures nor incentives for biodiversity conservation are available.

Both horizontal and vertical policy coordination and coherence in Serbia are questionable. Policy measures and instruments are overlapped at different levels (national/municipality), and there is fragmentation and/or duplication of policy interventions among various institutional bodies. The same is true regarding policymaking and implementation processes, which lack coherence among policy objectives, measures of support and expected effects.

The dual composition of the agrarian structure is not well-reflected in policy practice. The majority of state agricultural budget allocations is used for direct producer support and input subsidies, while the amount of funds allocated for rural development measures is low and narrowly orientated towards farm investment.

The eligibility thresholds of the majority of funding schemes are set at low(est) level, but measures tailored to specific needs of smallholders and family farms are not in place. The lump-sum incentives for all farmers participating in the scheme contribute to equity objectives rather than providing real contributions to broader policy objectives.

Recommendations

The recommendations are formulated and organized under three axes, according to the study objectives, as follows:

Definitional, contextual and analytical issues

The analyses conducted in this study confirm the need for a nationally specific definition of smallholders and family farms and/or categorization of policy beneficiaries. Further efforts towards the development of a national definition should consider: 1) usage of context-specific variables and thresholds when defining agricultural holdings, family agricultural holdings, and smallholders and family farms as statistical categories and/or beneficiaries of various policies and incentives; 2) reassessment of the overall system of collecting data related to smallholders and family farms; and 3) the need to strengthen the national analytical capacities of both staff and researchers dealing with rural issues.

The integration and empowerment of smallholders in markets

The integration and empowerment of smallholders in markets should be focused on four key areas of interventions, as follows:

Access to land and family resources: New mechanisms are needed to accelerate farmers' exit and entry rates and transfer of resources to young farmers. Recommendations are: 1) The current support to young farmers should be revised to precisely define whom to reach, whom to support (and with what support), and what should be the expected outcome; 2) Exit strategies and transfers of resources for older farmers without successors should be assisted by various programmes of both social and agricultural policy; and 3) A mix of policy support should be introduced to accelerate the pace of start-up and to increase the overall performance of newcomers and/or young farmers.

Access to knowledge: There is a need for fostering technology innovation, but even more there is a need to create demand for innovation among farmers. Recommendations are to: 1) Reform the whole agriculture advisory system; 2) Expand the offerings of training modules and programmes and delivery models; and 3) Facilitate new methods of knowledge transfer and information dissemination.

Integration of smallholders and family farms into agricultural value chains: Policy incentives in Serbia are designed to foster productivity and market orientation, but market participation should be better addressed. The recommendations are summarized in the following directions: 1) modernization and technological development upgrade; 2) new investments in farmers' markets and wholesale facilities; 3) building partnerships and strengthening vertical coordination; 4) Encouragement and support by both local and central government for the development of short

food chains and networks of different actors surrounding them; and 5) use of the research system to provide more relevant and better inputs for policy-makers.

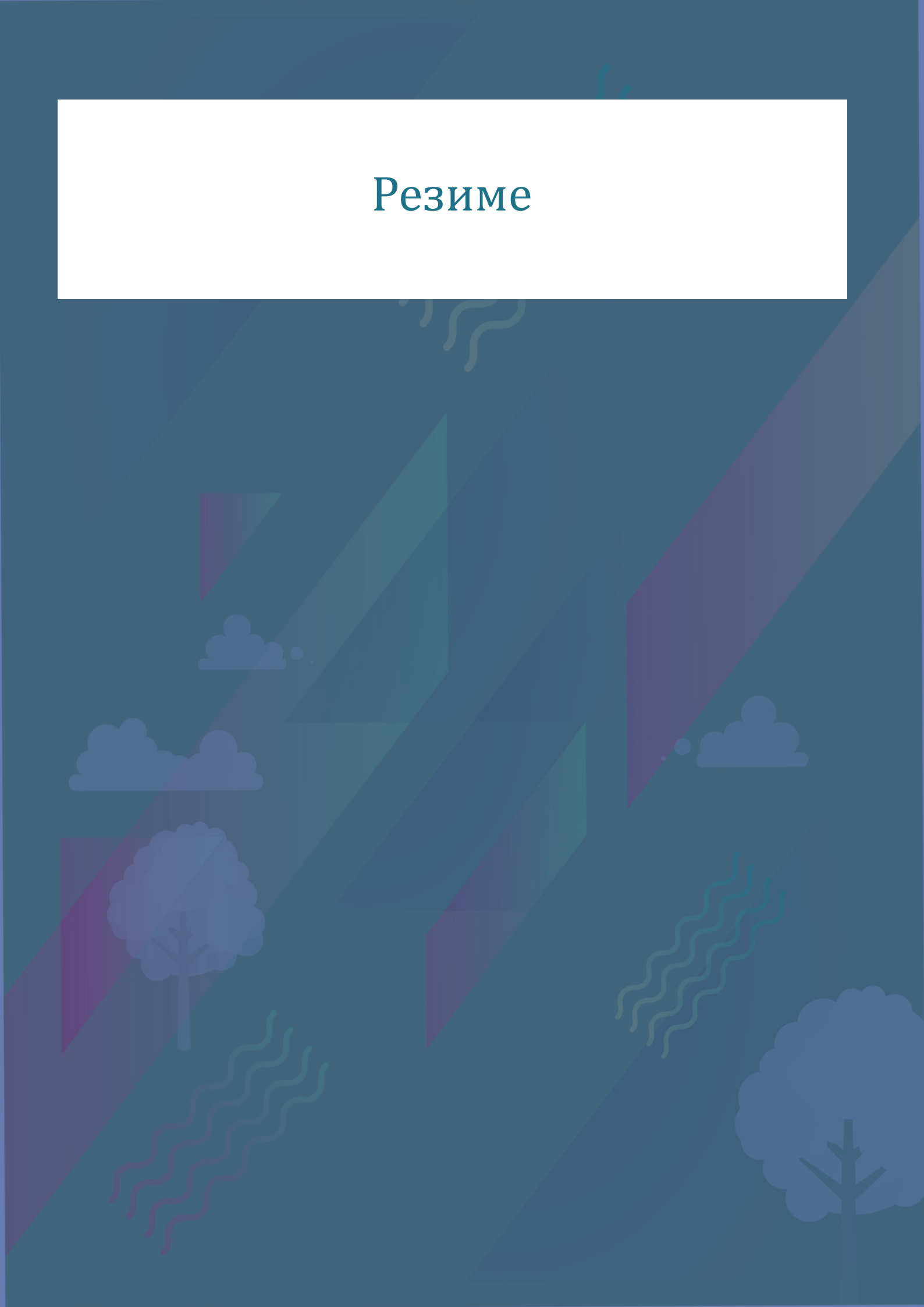
Improving rural labour market prospects: The rural labour market in Serbia is characterized by intense job-induced (out-)migration and the prevalence of informal agricultural employment. Considering these issues, it is recommended that the focus should centre on: 1) formalization of work in agriculture by promoting and encouraging the association and unionization of farm workers and empowering them in their capacity development by enforcing new laws and written contracts; and 2) generation of new employment opportunities for rural labour by the provision of financial support to youth and women and by funding start-ups in social and innovative entrepreneurship.

Policy-making and implementation

Polycentric, better-coordinated and more comprehensive policy responses should be developed to address the complex and multidimensional challenges faced by smallholders and family farms in Serbia. This should be the fundamental priority of local and national policy-makers. Recommendations for policy improvements are grouped in two categories:

1. Policy-making, where better-coordinated and more comprehensive policy responses should be developed to achieve synergies of policies implemented by various governmental bodies.
2. Policy implementation, where the set of interventions aimed at improving the balance between direct support and rural development support measures (productivism” and delivering public goods, in other words) is recommended. Policy-making and implementation must be facilitated and capacities strengthened at the local level, since local self-governmental units need more autonomy and more tools to properly address specific local needs.

Резиме



Предговор

Главни разлог за спровођење истраживања о изазовима, потребама и ограничењима малих власника и породичних пољопривредних газдинстава у Републици Србији била је жеља за даљим јачањем *Регионалне иницијативе за оснаживање малих власника и породичних газдинстава*, али и њен даљи развој у правцу јачања програмског приступа, како на регионалном тако и на државном нивоу. У циљу пружања подршке малим власницима и породичним газдинствима, било је неопходно развити платформе знања и омогућити боље разумевање главних изазова, потреба и ограничења малих власника и породичних газдинстава у контексту специфичном за посматрану земљу. ФАО је током 2017-18 године спровео студије о потребама и ограничењима малих власника и породичних газдинстава у седам земаља региона источне Европе и централне Азије (као део регионалног TCP/RER/3601 пројекта), плус Србија, у складу са Писмом споразума између Универзитета у Београду-Пољопривредног факултета и ФАО-а.

Циљеви

Циљ ове студије, у првом реду је да анализира развојне трендове и тренутно стање малих власника и породичних газдинстава, затим да се анализирају тренутни приоритети и политике које утичу на мале пољопривреднике и породична газдинства, и на крају, да се на основу донетих закључака формулишу препоруке, углавном на нивоу политике, о томе како даље подржавати развој породичних пољопривредних газдинстава и како генерално осигурати општи раст, побољшање услова живота у руралним подручјима и смањење руралног сиромаштва. Ова студија неће бити релевантна само за формулисање Националног програмског оквира (CPF)², већ и за владе, донаторе и друге међународне организације, приликом формулисања њихових политика и програма.

² CPF је алат за утврђивање стратешких приоритета ФАО-а на нивоу земље и свеукупно средњерочно програмирање на нивоу државе

Методологија

Методологија примењена у овом истраживању заснована је на два приступа. Први је дефинисан општим методолошким принципима регионалног Програма техничке сарадње везаног за саме мале власнике и пољопривредна газдинства. Други приступ се односи на методологију прикупљања података и информација, а која је обликована према специфичностима националног политичког система Србије и доступности података и информација релевантних за студију.

За прикупљање примарних података спроведен је приступ циљног узорковања путем одабира кључних ресурсних особа са којима су обављени интервјуи како би се прикупиле информације специфичне за тему која је од интереса. Истраживање је укључило преглед доступних законодавних и политичких докумената, академских радова, пројектних извештаја и студија, итд. Поред квалитативних података, истраживање је укључивало и прикупљање статистичких података у складу са постављеним циљевима.

Због непостојања специфичне националне дефиниције малих власника и породичних газдинстава (МВПГ), све анализе (осим ако није другачије назначено) су извршене на основу дефиниције "малих произвођача хране" (ФАО, 2017; ФАО, 2018), која је коришћена као синоним за МВПГ. Овај приступ је изабран како би се: 1) омогућило поређење између земаља у погледу циљева одрживог развоја (SDG) у оквиру циља 2.3, 2) истакле карактеристике циљне групе пољопривредних газдинстава, и 3) нагласила потреба за даљом дискусијом и настојањима да се утврди специфична национална мултикритеријумска дефиниција малих власника и породичних газдинстава.

Резултати и закључци

Допринос сектора пољопривреде, шумарства и рибарства БДП-у Србије, приходима од извоза и запослености је веома значајан. Доминантна карактеристика аутпута овог сектора су велике осцилације у стопама раста, узроковане честим екстремним временским приликама. Веома је истакнута дуалност у структури пољопривредних газдинстава и ланца снабдевања, са оштром поделом између севера и југа земље као преовлађујућим обрасцем. И земљишни и сточни ресурси концентрисани су на породичним пољопривредним газдинствима, али су неједнако распоређени, како према величини газдинства, тако и по регионима.

МВПГ у Србији су бројна категорија и поседују значајне ресурсе. Ипак, карактеристике власника – менаџера пољопривредних газдинстава (просечна старост, образовање и активност) не доприносе одрживом развоју сектора. МВПГ којима управљају жене у многим аспектима су у још горем положају. Жене менаџерке - власнице су у просеку

старије од мушкараца, мање су активне у другим секторима изван пољопривреде, мање су образоване и мање су заинтересоване да похађају курсеве и обуке.

Приступ МВПГ инпутима и услугама није ограничен, али је тражња за њима неједнака у зависности од региона и подсектора, и генерално је ниска. Већина МВПГ се ослања на бартер аранжмане, који су најважнији извор кредитирања, трансфера знања и технологије, и модел приступа тржишту. Приступ МВПГ пољопривредном земљишту (у подручјима где постоји тражња за земљиштем) ограничен је ценама земљишта.

Већина МВПГ у Србији су активни учесници на тржишту. Међутим, они учествују на тржиштима углавном са сировим производима и путем неформалних тржишних канала (спот тржишта, директна продаја и робна размена). Кључне препреке за улазак на тржишта високе вредности и специјализована тржишта су: стандарди који се односе на безбедност хране, хигијену и следљивост; недостатак тржишне инфраструктуре; високи трансакциони трошкови и недостатак радне снаге.

Конкурентност и развој руралних подручја лимитирани су бројним ограничавајућим факторима. Рурална домаћинства и становништво изложени су већем ризику од сиромаштва, материјалне депривације и социјалне искључености, без обзира на то која се мера примењује. Активност и стопа запослености у руралним подручјима је већа него у урбаним подручјима, али су структура запослености и заштита права радника неповољнији. Радници у руралним подручјима чешће раде без формалних уговора, немају пензијско или здравствено осигурање и немају право на плаћано боловање и годишњи одмор.

Социјална заштита за особе изложене ризицима сиромаштва је мање доступна руралним становницима због ограничења везаних за поседовање земљишне имовине (0,5 ха и више), неспремности да се око тога ангажују или недостатка знања о томе како се може остварити право на финансијску социјалну помоћ. Напредак је постигнут у промовисању родне равноправности, али углавном у погледу побољшања правног и политичког оквира.

Упркос постојању веома повољних природних ресурса, интеграција биодиверзитета у економски сектор, укључујући и пољопривреду и сродне активности, је веома слаба. Регулаторни оквир је фрагментисан и слабо координисан од стране различитих органа, док мере подршке произвођачима не интегришу заштиту животне средине (не предвиђају унакрсну условљеност), нити су доступни подстицаји за очување биодиверзитета.

И хоризонтална и вертикална координација, као и кохерентност политике у Србији су под знаком питања. Мере и инструменти политике на различитим нивоима (национална/општинска) се преклапају. Фрагментација и/или дуплирање политичких интервенција различитих институционалних тела је такође изражена. Исто важи и за

процесе креирања и имплементације политике, где не постоји повезаност између циљева политике, мера подршке и очекиваних ефеката.

Дуална структура аграрног сектора није добро рефлектована у политичкој пракси. Већи део аграрног државног буџета користи се за директну подршку произвођачима и субвенционисање инпута, док је износ средстава намењен за мере руралног развоја низак и уско оријентисан ка инвестицијама за пољопривредна газдинства.

*Критеријуми за кориснике подршке за већину постојећих шема плаћања су постављени на ниском (најнижем) нивоу, али мере нису саме по себи прилагођене специфичним потребама МВПГ. Паушална подршка (*lump-sum*) за све кориснике у одређеној шеми, доприноси једнакости, уместо да има стварни допринос ширим циљевима политике.*

Препоруке

Препоруке су формулисане и организоване у оквиру три осе и у складу са циљевима студије:

Контекстуална, аналитичка и питања дефиниције

Анализе спроведене у овој студији потврђују потребу да се успостави национална специфична дефиниција МВПГ и/или категоризација корисника политике. Даљи напори усмерени ка успостављању националне дефиниције требају узети у обзир: 1) коришћење специфичних контекстуалних варијабли и лимита при дефинисању пољопривредних газдинстава (ПГ), породичног пољопривредног газдинства (ППГ) и МВПГ, као статистичких категорија и/или корисника различитих политика и подстицаја; 2) Неопходно је реорганизовање целокупног система прикупљања података везаних за МВПГ; 3) Евидентна је потреба за јачањем националних аналитичких капацитета, како у погледу административних капацитета тако и компетентности истраживача који се баве руралним питањима.

Интеграција и оснаживање малих власника на тржиштима

Интеграција и оснаживање малих власника на тржиштима треба да се фокусира на четири кључне области, и то:

Приступ земљишту и породичним ресурсима - Потребни су нови механизми који ће убрзати процес напуштања – изласка старијих пољопривредника и процес уласка младих пољопривредника, као и пренос средстава младим пољопривредницима. Препоруке су: 1) Садашња подршка младим пољопривредницима треба да се ревидира, у смислу да се прецизно дефинише коме се треба обратити, кога треба да подржи (и којом врстом подршке) и који је очекивани исход/ефекат; 2) Стратегија изласка старијих

пољопривредника који су без наследника, а тиме и преноса ресурса, требала би бити помогнута разним програмима социјалне и пољопривредне политике; 3) Микс пакет подршки којим би се убрзао темпо покретања start-up-ова у сектору и побољшале укупне перформансе нових и/или младих пољопривредника.

Приступ знању - Потреба за подстицањем технолошких иновација свакако постоји, али је креирање потребе пољопривредника за знањем и иновацијама свакако много деликатнији и важнији задатак. Препоруке су развијене како би се: 1) реформисао целокупни саветодавни систем у пољопривреди, 2) проширила понуда модула и програма обуке али и модела дисеминације знања и информација, и 3) унапредиле методе преноса знања и ширења информација и управљање тим процесима.

Интеграција МВПГ у ланце вредности - Мере подршке произвођачима у Србији креиране су тако да подстичу продуктивност и тржишну оријентацију, али не и тржишно учешће. Препоруке су сажете у следећим правцима: 1) Модернизација и побољшање техничко-технолошких перформанси сектора; 2) Нова улагања у пијаце и veleпродајне објекте, 3) Успостављање партнерстава и јачање вертикалне координације; 4) И локална и централна власт треба да подстичу и подржавају развој кратких ланаца снабдевања храном и мрежа различитих актера који их окружују; 5) Истраживачки систем треба користити за пружање релевантнијих и бољих инпута за креаторе политике.

Побољшање перспектива тржишта рада у руралним подручјима - Рурално тржиште рада у Србији карактерише интензивна миграција (изазвана ограничењима на домаћем тржишту рада) и претежно неформално запошљавање у пољопривреди. Узимајући ово у обзир, препоручује се да фокус усредсреди на: 1) Формализацију рада у пољопривреди кроз промовисање и подстицање асоцијација и удруживања пољопривредника, оснаживање њихових капацитета, примену новог закона и писаних уговора; 2) Стварање нових могућности запослења за руралну радну снагу, кроз финансијску подршку младима и женама, кроз финансирање start-up иницијатива у социјалном и иновативном предузетништву.

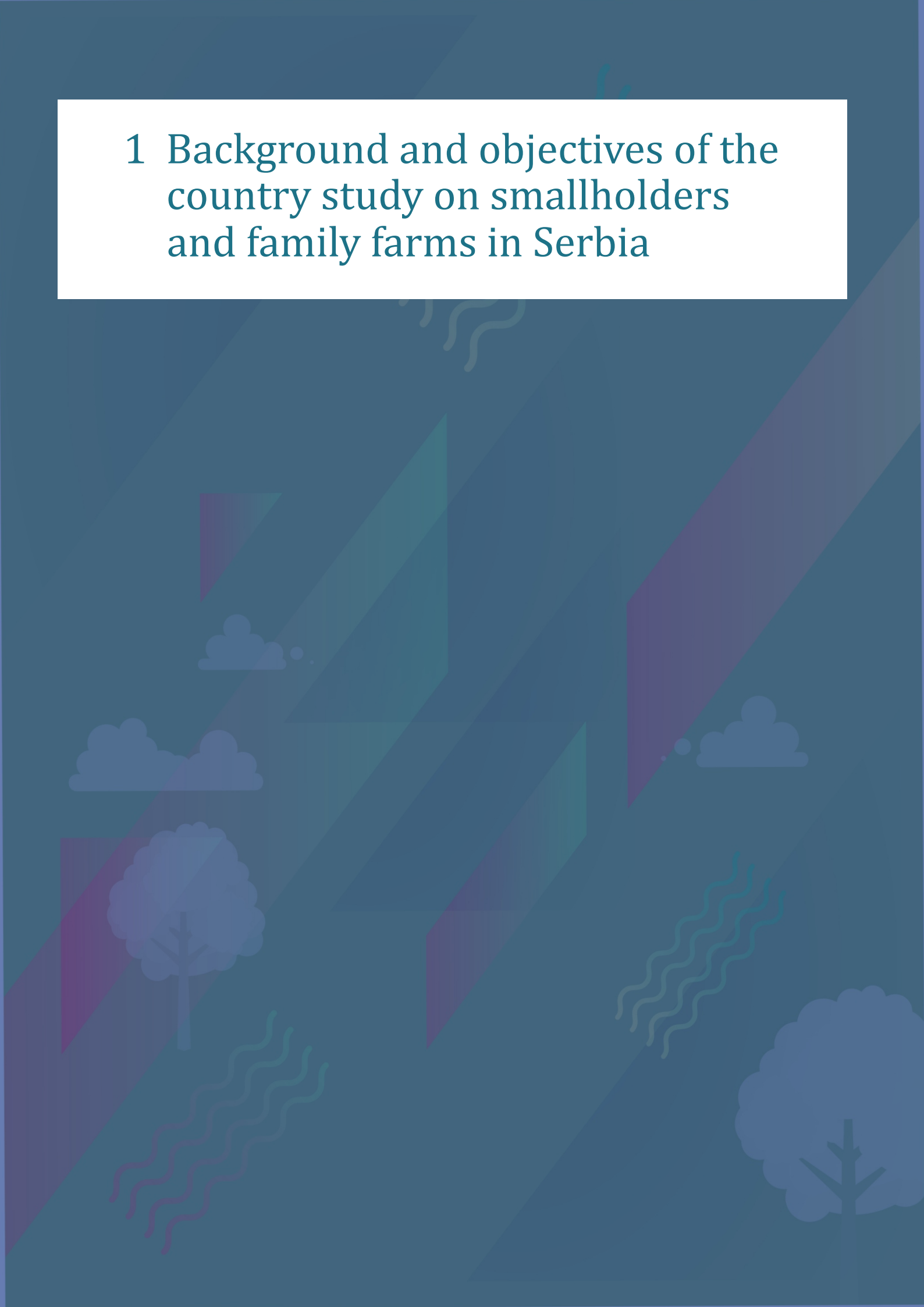
Креирање политике и њена примена

Требало би развити полицентрични, боље координисани и свеобухватнији програм политике како би се одговорило на сложене и вишедимензионалне изазове са којима се суочавају МВПГ у Србији. Ово би требало да буде основни приоритет локалних и националних креатора политике. Препоруке за унапређење политике груписане су у две категорије:

- 1) Креирање политике, где би требало развити боље координисане и свеобухватније одговоре са циљем постизања синергије политика које спроводе различити државни органи.

2) Имплементација политике, где се препоручује низ интервенција са циљем успостављања боље равнотеже између мера директне подршке и мера подршке руралном развоју (тј. продуктивистичких циљева и циљева усмерених на испоруку јавних добара). Креирање политике и њена имплементација морају бити боље руковиђени а капацитети на локалном нивоу се морају ојачати с обзиром да јединицама локалне самоуправе (ЈЛС) недостаје више аутономије и више инструмената за адекватно решавање специфичних локалних проблема.

1 Background and objectives of the country study on smallholders and family farms in Serbia



1.1 Background and objectives of the country study on smallholders and family farms in Serbia

The background for conducting this country study on the challenges, needs and constraints of smallholders and family farms in Serbia has been a wish to further strengthen Regional Initiative I on empowering smallholders and family farms and develop it towards a stronger programmatic approach at both regional and country levels. To provide support to smallholders and family farms, there has been a need to develop a better understanding and knowledge platform of the main challenges, needs and constraints of smallholders and family farms in the specific country context.

From 2017 to 2019, FAO conducted country studies under a regional Technical Cooperation Project – titled *Support to the Implementation of the Regional Initiative on Empowering Smallholders and Family Farms (RI1)* (TCP/RER/3601) – in seven FAO programme countries in the region on the needs and constraints of smallholders and family farms³. From the regional perspective, and through the further development of the programmatic approach of the Regional Initiative, it also was strategically important to analyse the needs and constraints of smallholders and family farms in Serbia.

This study aims to strongly contribute to the establishment of a knowledge platform and to the development of the FAO Country Work Programme in Serbia in a more programmatic way, under the umbrella of the Regional Initiative.

The objective of the country studies is to verify observations through answers to the following research questions:

1. What are the trends in and the current role and weight of smallholders and family farms in economic, social and environmental development in the covered countries?
2. What are the main needs, constraints and challenges for the realization of the economic, social and environmental development potential of smallholders and family farms?
3. Which current administrative procedures, institutional settings and policy interventions are implemented to support or prevent the development of smallholders and family farms?
4. Which future administrative procedures, institutional settings and policy interventions can be developed and recommended to strengthen the role of smallholders and family farms in economic, social and environmental development and in the transformational change process?

These questions are answered following a methodology presented in the section below.

³ The country studies under a regional Technical Cooperation Project – titled *Support to the Implementation of the Regional Initiative on Empowering Smallholders and Family Farms (RI1)* (TCP/RER/3601) conducted in Albania, Armenia, Georgia, Kyrgyzstan, North Macedonia, Republic of Moldova and Tajikistan.

2 Methodology and approach



2.1 Methodology and approach

The approach taken in this study consists of two components. The first includes the following tools: desk research, interviews, case studies and workshops. The second component relates to the methodology applied in the data and information collection, which is shaped by the specificities of the national political system, convenience, and the availability of data and information relevant to the study.

DESK RESEARCH:

The main research method used for this study was desk research, combining documents, literature and data analysis. Qualitative desk research was used to access, collect and analyse existing legislative and policy documents, research papers, reports, and studies from public authorities, academia, and international donors and organizations. A quantitative analysis was performed on data derived from the databases of the Statistical Office of the Republic of Serbia (Census of Population, Census of Agriculture, Labour Force Survey, Household Budgetary Survey), as well as from internal databases collected under various research and/or development projects.

INTERVIEWS:

Desk research was supported by consultations and interviews with key resource persons from various fields of expertise to address gaps, gather insights into good practice examples, and assure the validity of the findings of the desk research. An interview template was prepared and then used when interviewing national stakeholders and resource persons. The template includes the themes covered by the project.

The purposive sampling approach was implemented in the selection of interviewees in order to choose respondents with sufficient knowledge and to collect information specifically related to the topic of interest.

CASE STUDIES:

Case studies were used to illustrate or demonstrate various topics. Based on the documentation and information gathered from these interventions, recommendations are formulated for existing or new policies. These good policy examples are useful not only for Serbia but also for other countries facing similar challenges.

The case studies also include studies of needs, challenges and constraints identified through stakeholder interviews and where the case studies exemplify or illustrate the topics. The case studies were prepared at family/village/municipality level, depending on the selected topic and in order to ensure diversity.

Furthermore, case studies also include examples of administrative procedures and/or institutional settings that prevent or support the development of smallholders and family farms. These cases were also identified through stakeholder interviews.

WORKSHOPS:

A national inception workshop was held 24 April 2018, setting the context of the project and introducing the project objectives and activities. This workshop brought together 36 stakeholders. Among them were farmers; representatives of cooperatives, cooperative unions and farmers' associations; representatives of the Ministry of Agriculture, Forestry and Water Management; and representatives of extension services, academia, the media and civil society organizations dealing with various aspects of rural development such as gender, poverty and local development. The workshop resulted in the identification of a set of challenges faced by smallholders and family farms and in the development of a set of joint recommendations based on input from the participants.

The second workshop was a validation workshop in which the preliminary findings, conclusions and recommendations were presented to the stakeholders who had participated in the first country workshop and to new stakeholders identified through the working process.

The national validation workshop was held on 14 October 2018 to review the draft report and to obtain the consensus of all key stakeholders on the proposed conclusions and recommendations. The workshop took place at the end of the process, but before the finalization of the study. The conclusions and recommendations were agreed on by the participants, and their discussion and feedback were collected and addressed in the final version of the report.

3 Development trends and the current state of smallholders and family farms in Serbia



3.1 Definition of smallholders and family farms in the national context

The understanding of what smallholders and small family farms really are depends in many ways on a wide range of nationally specific contextual issues. Although the literature abounds with studies on measurements of farm size, the application of these methodologies and results to decision-making is limited. The main reason for this is that the results are not always generalizable and not always readily understandable by a wide range of users. Perhaps most important, the results do not always reach the needs of policy-makers. The criteria and thresholds for determining what is a small farm for the purpose of policy development and implementation must be simple, transparent and based on official databases and sources, and they should reflect “small” in the specific national context.

In Serbia, despite the importance of small farms and their contribution to food security and the rural community, they have been left out of the focus of both the scientific community and the policy-makers. On one hand, the models of farming systems and behavioural patterns have not been sufficiently empirically explored, while on the other hand, policy-makers traditionally ignore the diversity of farm structures in terms of farm sizes and types.

The long and uninterrupted tradition of family farming and solid agricultural statistical systems in the past have led to business entities in the agriculture sector being clearly demarcated by type of ownership but not by size class (in other words, there is no definition for a “small” farm nor for any other size of farm).

The formal definition of “family agricultural holding” in Serbia is established by several laws and by-laws regulating the implementation of agricultural policy, as well as by legislation regulating agricultural statistics.⁴

The *Law on Agriculture and Rural Development*⁵ defines a family agricultural holding as an agricultural holding where a natural person – the farmer, together with members of the household – carries out agricultural production. This law foresees that depending on economic strength, a family agricultural holding can be a commercial family agricultural holding or a non-commercial family agricultural holding, but it does not define precise criteria for distinguishing these categories. In accordance with this law, the Ordinance on registration in the Farm Register⁶ envisages that, except for some exceptions, to be registered as an “agricultural holding,” an

⁴ For more on this definition, see Section 6.2 in the Annex.

⁵ Official Gazette of the Republic of Serbia No. 41/2009, No. 10/2013 and No. 101/2016.

⁶ Official Gazette of the Republic of Serbia No. 17/2013, No. 102/2015, No. 6/2016 and No. 46/2017.

agricultural holding should have at least 0.5 ha of agricultural land.⁷ Based on this, for the operationalization of the agricultural policy programmes and support schemes, the Ministry of Agriculture, Forestry and Water Management sets different eligibility criteria in terms of farm size, depending on the type of incentives (Section 4.1.3).

The Statistical Office of the Republic of Serbia (SORS) also uses the concept of the agricultural holding, defined in the *Law on the Census of Agriculture* as a technical and economic independent production unit with single management on which an enterprise, farm cooperative, institution or another legal entity, entrepreneur or family agricultural holding undertakes agricultural production.⁸ In this context, a family agricultural holding is defined as a family or other group of people living together and sharing subsistence expenses out of their respective incomes and which members are engaged in agricultural production as either their primary or supplementary activity, whether they produce solely for their own consumption or both for own consumption and sale.⁹ The Census of Agriculture 2012 (SORS) was carried out on the basis of a definition that describes an agricultural holding as one that:

- has at least 0.5 ha of agricultural land on which it carries out agricultural production, regardless of whether this production is destined for the market; or
- uses less than 0.5 hectares of agricultural land but carries out intensive production of fruits and vegetables, vineyards, flowers (including production under greenhouses), mushrooms or livestock, or performs agricultural production intended for the market; or
- has at least – as of 30 September 2012 – two head of cattle, one head of cattle and two head of small animals (pigs, goats, sheep), five head of sheep or five head of goats, three head of pigs, four head of small cattle (pigs, goats, sheep), or 50 individual poultry animals, or 20 bee colonies.

In 2011, activities began to introduce a Farm Accountancy Data Network (FADN) in Serbia. The FADN sample database covers family agricultural holdings with a standard output of at least EUR 4 000. This means that the FADN excludes nearly 70 percent of all small agricultural holdings, since the majority are below the stated standard output threshold.

⁷ This provision relates to companies, agricultural cooperatives, other legal entities (institutions, schools, monasteries, churches) and other organizations, entrepreneurs and farmers who perform agricultural production.

⁸ Official Gazette of the Republic of Serbia No. 104/2009 and No. 24/2011.

⁹ In addition to family agricultural holdings, the Statistical Office of the Republic of Serbia distinguishes among enterprises, farm cooperatives, unincorporated enterprises and other forms of organization with legal entity status that are registered as mainly dealing with agricultural production, as well as enterprises, institutions and other legal entities registered for another activity, having organized branches or other organizational units in which their agricultural production is carried out.

The aforementioned definitions of agricultural holding and family agricultural holding are complementary to each other and practically use the land size criteria of 0.5 ha as a demarcation threshold for distinguishing between agricultural holdings and farms that produce for their own needs (subsistence households).

Box 1: An example of a research definition of a small rural household with farm holding, by using a multi-criteria definition

- The conducted survey covered small viable rural households with an agricultural holding (farm), defined as households:
- with at least of three members (this limit was set to avoid single-person households – in other words, to include multigenerational households in the analysis);
- with at least one member between 25 and 55 years old (the purpose of this criterion was to focus on households with younger members who likely will stay in the village);
- that have no more than one wage-employed member (it was assessed that households with incomes from more than one wage-employed member in rural areas are not vulnerable or a in risky category);
- that cultivate up to 3 ha of arable land; and
- that breed up to ten head of small farm animals (sheep, pigs, goats) and/or two head of cattle.

Source: Bogdanov, 2007.

In this study, wherever possible, the analysis is based on the FAO definition of small-scale food producers. This approach was chosen in order to allow international comparisons, to better reflect the characteristics of the target group of agricultural holdings, and to stress the need for further work and debate on nationally specific multi-criteria definitions of smallholders (see Section on *Approach used in this study*).

3.2 Structural characteristics and analysis of the sector

This chapter discusses and demonstrates the structural characteristics of the agriculture sector and of agricultural holdings in Serbia. Particular attention is devoted to the characteristics and role of smallholders and family farms in the agrarian structure of the country.

To do this, we first briefly describe the basic indicators of the importance of the agriculture sector to the national economy. Next, we will analyse the structural characteristics of agricultural holdings in order to better understand the overall environment in which smallholders and family farms operate. Finally, the approach used in defining smallholders and family farms for the purpose of this study is explained, and the results are presented. The relevance and characteristics of smallholders and family farms will be analysed from the perspective of their land resources, production structure, labour distribution, profile of managers and income diversification.

3.2.1 An overview of the agriculture sector in the economy

The contribution of the agriculture sector to the Serbian economy is considerable in comparison with neighbouring countries and the European Union average. This is explained by abundant land resources, favourable natural conditions and the continuity of family farms as a dominant form of farming, but also due to delays in structural reforms in other sectors of the national economy.

In the period 2008–2017, the share of agriculture, forestry and fishery in total gross value added was 9.2 percent, on average, employing 21 percent of the workforce (Table 1). Agriculture accounts for a considerable share of foreign trade (21.1 percent in export and 7.3 percent in import), revealing a record high trade surplus of EUR 1 496.7 million in 2016.

The general trend over the studied period is that there was a relative decline of the contribution of agriculture to output, employment and export, while its share in total import increased.

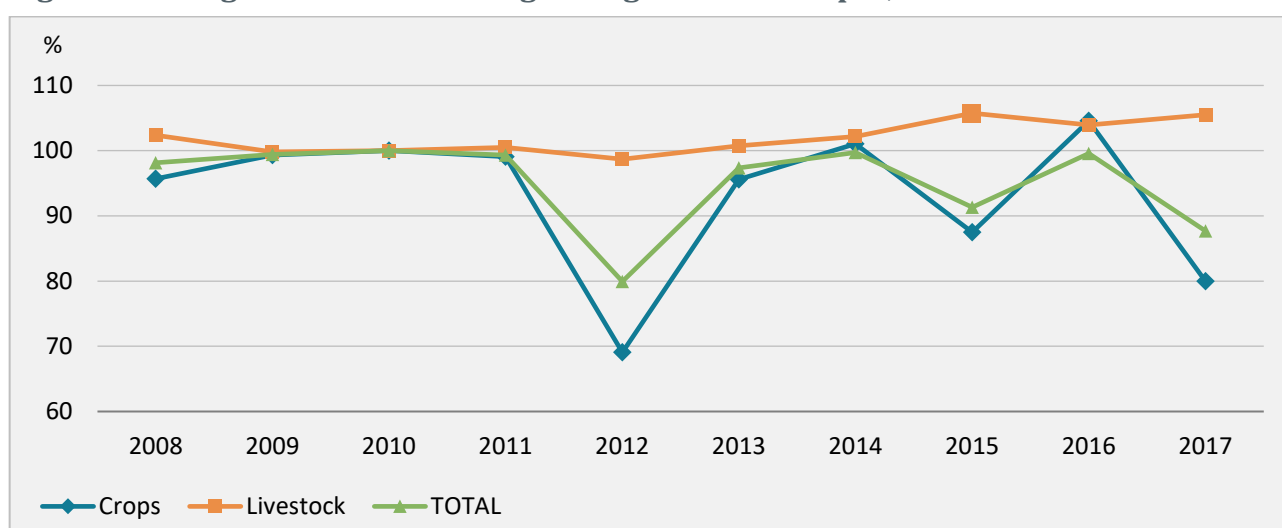
Table 1: Key agricultural statistics, 2008–2017

	Units	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Gross value added of the agriculture, forestry, hunting and fishery sector (A)											
GVA (at current prices)	millions EUR	2 928	2 466	2 538	3 007	2 387	2 700	2 576	2 268	2 245	2 211
Share in GVA of all activities	%	10.3	9.6	10.2	10.7	9.0	9.4	9.3	8.2	7.9	7.3
Employment in the agriculture, forestry, hunting and fishery sector (A)											
Number	thousands	706	623	533	478	467	492	506	498	506	481
Share in total employment	%	25.0	23.8	22.2	21.2	21.0	21.3	19.9	19.5	18.6	17.2
Trade in food and agricultural products											
Export of agrifood products	millions EUR	1 328	1 381	1 672	1 920	2 084	2 078	2 295	2 560	2 890	2 819
Share in export of all products	%	17.9	23.2	22.6	22.7	23.8	18.9	20.6	21.3	21.5	18.7
Import of agrifood products	millions EUR	754	711	896	1 001	1 137	1 196	1 283	1 360	1 393	1 575
Share in import of all products	%	4.6	6.3	7.2	7.0	7.7	7.7	7.8	8.5	8.2	8.1
Trade balance in agrifood products	millions EUR	574	670	776	919	947	882	1 012	1 200	1 497	1 244

Source: SORS, 2018c.

Production trends and structure

From 2008 to 2017, the volume of agricultural production varied considerably, mainly due to frequent extreme weather events (Figure 1). The sharp declines of gross agricultural output in 2012, 2015 and 2017 were the results of adverse impacts of droughts on crop production. The volume of livestock production slightly increased over the period.

Figure 1: Changes in the volume of gross agricultural output, 2008–2017

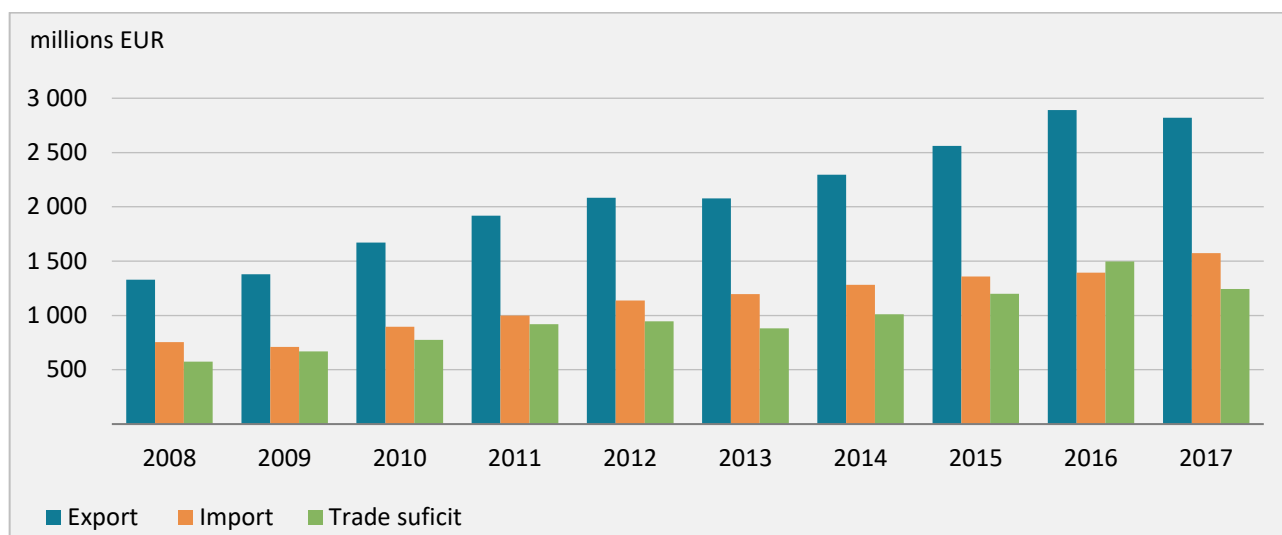
Source: SORS, 2018c.

Roughly two-thirds (67.0 percent) of Serbian agriculture production value comes from plant production, with cereals are the most important crop. The remaining one-third of agricultural output belongs to livestock production, in which the rearing of cattle is the most important sector.

Agrifood trade

Agriculture is the only sector in the Serbian economy with a positive trade balance. The external trade in agrifood products has been constantly growing, reaching a peak of EUR 4 394 million in 2017 (Figure 2). Average annual rates of both export and import growth were high (8.7 percent and 8.5 percent, respectively) and resulted in a record export-to-import coverage ratio in 2016 (207.5 percent).

Figure 2: Trade in food and agricultural products, 2008–2017



Source: SORS, 2018c.

The majority of the external trade relies upon bilateral free trade agreements, such as the Stabilization and Association Agreement with the European Union, the Central European Free Trade Agreement (CEFTA), and agreements with the Russian Federation and Turkey. The main export destinations, ranked from the largest to the smallest, are EU countries (receiving 45.5 percent of the total exports of agrifood products), followed by the CEFTA countries (32.4 percent) and the markets of other countries (22.1 percent). From 2012 to 2017, the share of export to EU countries decreased (by 10.4 percentage points), while export to other countries increased (by 12 percentage points).

The import of agrifood products is dominated by the EU (60 percent), followed by other countries (30 percent) and the CEFTA market (10 percent). The changes in the structure of imports by groups of countries indicate an increase in the share of imports from other countries (by 13.1 percentage points from 2008 to 2017) and a decrease in the share of imports from CEFTA (by 17.6 percentage points over the same period).

Regarding the main groups of products, exports are dominated by fruit (20.1 percent on average for the period 2015–2017), cereals (15.6 percent), tobacco and tobacco products (9.7 percent), various beverages (6.4 percent) and animal or vegetable fats and oils (6.1 percent). These top five tariff headings accounted for 57.8 percent of the total export value of agricultural and food products, with corn, cigarettes, and frozen raspberries as the most important individual products. The changes in export composition over the time period 2008–2017 indicate a decline in the share of cereals, sugars and sugar confectionary, beverages, spirits, vinegar and others, while the share of edible fruit, tobacco and oilseeds increased.

Imports were dominated by fruit (12.5 percent), followed by tobacco and tobacco products (11.6 percent), miscellaneous food products (8.8 percent), various beverages (6.1 percent), and oilseeds and oleaginous fruits (5.7 percent).

Forestry

The total forest area in Serbia covers 2 168 746 ha, or 29.1 percent of the country's territory. Serbia is considered to be a middle-forested country, compared to the average world forest coverage of about 26 percent, but it is still below the European average of 47 percent (MCPFE, 2003). In relation to the population, forests cover 0.3 ha per inhabitant. Regional differences in forest coverage are apparent: In Vojvodina Region, forests cover 7.1 percent of the territory, whereas in Central Serbia forests cover 37.6 percent (Banković, S. *et al.*, 2009).

The state-owned forest area covers 896 400 ha (40 percent of the total forest area), and the remaining is in private ownership (52.2 percent) or used by other types of owners (8 percent) (Table 2). The public enterprise Serbia Forests manages 889 691 ha of forests in Central Serbia, while approximately 1 million ha are privately owned. Forests in Vojvodina are managed by the public enterprise Vojvodina Forests, which owns 114 266 ha of forests and forest land, while about 5 percent is in private ownership.

Table 2: State of the forest fund by ownership, 2007

	Area		Timber Trees			Volume		
	Total ha (000)	%	Number (mill.)	%	Trees/ ha	Cubic meters (mill.)	%	Cubic meters/ha
State-owned	896.4	39.8	768.1	36.3	856.9	176.0	48.5	196.3
Private	1 175.2	52.2	1 186.8	56.1	1009.9	162.8	44.9	138.5
Other	180.8	8	159.7	7.6	883.4	23.7	6.5	131.1
Total	2 252.4	100	2 114.6	100	938.8	362.5	100	160.9

Source: SORS, 2018b.

Private ownership of forests has never been restricted, but treating forests as good for the public interest and obliging forest owners to preserve and improve forests as ecosystems have limited their rights to exploit forest resources. In spite of declarative concerns about public goods, the state actually has not paid attention to private forest owners. Numerous responsibilities in the field of forestry have been given to municipalities, which has required the establishment of appropriate services at the local level. However, many municipalities have not fulfilled this

obligation, primarily due to a lack of competent forestry staff. Basically, legal provisions related to the improvement of forests in private ownership have not been implemented.

Forest land is exempted from the privatization process. This has resulted in thousands of hectares of forests having unclear ownership rights, exposing them to degradation and damages, including illegal logging.

According to the *Law on Forests*,¹⁰ public enterprises are obliged to carry out professional and technical tasks in private forests (cultivation, forest protection, production of wood assortments and other activities) if there are private forests in the territory. However, to improve the situation in the forestry sector, better coordination of policies is needed, including cadastre, soil data, demarcation of protected areas, water management and infrastructure plans.

Fishery

Aquaculture represents a small segment of the Serbian economy. Aquaculture and freshwater fishery provide jobs for about 2 000 workers and contribute about 0.2 percent of the gross value added. The share of fishery products in the structure of agrifood exports is low (0.5 percent), while it is 5 percent of imports. The average consumption of fish in Serbia of 7 kg per capita is among the lowest in Europe, but in recent years this figure has been increasing.

The total area covered by fish farms is approximately 14 000 ha, out of which approximately 20 percent is out of use (Marković and Poleksić, 2011). The Vojvodina Region accounts for 97 percent of the area under fish farms. The number of fish farms in Serbia is more than 200 (85 carp farms, 120 trout farms, 10 cage systems for warm-water fish species culture, three cage systems for cold-water fish (rainbow trout), and one for beluga and Danube sturgeon of small capacity).

The overall trends in the fishery sector are positive, both in terms of fish farm area (which increased 10 percent in the first decade of the 2000s) and the number of newly built fish farms (approximately 100 small, family fish farms have been established in the last decade). However, production growth is based on the growth of carp production and is a result of the better management of fish farms after privatization. Until 2016, the production continued to grow due to the fact that new feeding technology was introduced. Production on carp farms has increased by more than 100 percent, and carp meat quality is significantly improved. Since 2016, the koi herpesvirus (KHV) has affected carp production, which has dropped to the level of the beginning of the 2000s.

The further improvement of fish feed quality, selective breeding programmes, carp farming and carp meat quality are among the key challenges of this sector. Serbia still does not have any policies in place for small-scale fisheries, while full alignment with the European Union's *acquis communautaire* concerning illegal, unreported and unregulated fishing needs to be ensured.

¹⁰ Official Gazette of the Republic of Serbia No. 30/2010, No. 93/2012 and No. 89/2015.

3.2.2 Development of the role and importance of smallholders and family farms

Main structural characteristics of agricultural holdings

The objective of this chapter is to present the main structural characteristics of agricultural holdings in the Republic of Serbia. The indicators used to describe the farm structure and its characteristics include the distribution of agricultural holdings by legal status and by region, the size of the agricultural land, the size of the livestock herd, farm labour, and combinations of these indicators.

The structure of agricultural holdings by legal status

In Serbia, similar to other countries with a continuity of private farms since the pre-transition period, the land reform of the 1990s did not bring significant changes in farm structures.

The available official data do not allow precise comparisons of distribution of agricultural holding and farm land by type of ownership between two censuses, since the methodology of the Census of Agriculture conducted in 2012 was changed (definitions related to agricultural holdings and land categories). However, an indicative picture can be drawn by looking at data from the Census of Population, Households and Dwellings 2002 (SORS, 2002). According to this source, there were 778 000 households with agricultural holdings (threshold was set at 0.1 ha), while according to the Census of Agriculture 2012, there were 628 000 family agricultural holdings (more than 0.5 ha) and more than 112 000 households with some agricultural resources but that were below defined threshold values. Such a trend is indicative of declining farm numbers and increasing farm consolidation, but there is not sufficient reliable evidence supporting that claim. The share of family agricultural holdings in total land area at the end of the 1990s was 85 percent, as it is nowadays (Table 3).

Table 3: Agricultural holdings by legal status, by region, 2012

Regions	Number of agricultural holdings			Utilized agricultural area (thousand ha)		Number of cattle (thousand heads)		Number of pigs (thousand heads)	
	Total	Of which (%):		Total	Of which: in FH (%)	Total	Of which: in FH (%)	Total	Of which: in FH (%)
		Family holdings (FH)	Holdings of legal entities						
Serbia	631 552	99.5	0.5	3 355.9	83.9	909.0	91.7	3 403	80.0
Belgrade Region	180 868	99.2	0.8	134.1	76.8	53.2	55.0	202	70.9
Vojvodina Region	33 244	99.6	0.4	1 598.1	73.5	252.3	85.9	1 396	62.9
Šumadija and West Serbia Region	147 624	99.1	0.9	975.7	96.5	414.4	97.3	1 151	98.2
East and South Serbia Region	450 684	99.7	0.3	648.0	92.3	189.2	97.3	65	87.6

Source: SORS, Census of Agriculture 2012.

Counts of agricultural holdings by legal status in Serbia reveal that family agricultural holdings dominate over holdings of legal entities and unincorporated enterprises (HLEUE), both in terms of the percentage (99.5 percent) and in terms of agricultural resources. Still, HLEUE in Vojvodina Region and Belgrade Region occupy a significant part of the land area and livestock totals (Table 3).

The structure of agricultural holdings according to size classes of land and herds

The structure of agricultural holdings in Serbia according to the physical size of farms points to its duality.

Table 4: Agricultural holdings and land distribution, by land size class, 2012

Indicator		Land area (ha)						
		Total	≤ 1	1.01–2	2.01–5	5.01–10	10.01–50	<50
Agricultural holdings	Number (thousands)	631.6	184.7	123.7	182.5	89.1	45.3	6.2
	%	100	29.2	19.6	28.9	14.1	7.2	1.0
UAA	ha (thousands)	3 437	92	182	596	617	825	1 125
	%	100	2.7	5.3	17.3	18.0	24.0	32.7
UAA per AH, ha		5.4	0.5	1.5	3.3	6.9	18.2	180.2
Unutilized agricultural area, ha (thousands)		424	106	37	59	27	16	179
Wooded area, ha (thousands)		1 023	191	72	209	199	181	170
Other land, ha (thousands)		462	34	15	42	21	44	307
Total available area, ha (thousands)		5 347	423	306	906	864	1 066	1 781

Source: SORS, Census of Agriculture 2012.

Agricultural holdings with less than 2 ha make up 49 percent of the total number and cultivate 8 percent of the utilized agricultural area (UAA), whereas at the other end of the range, the 1 percent of farms with more than 50 ha use 33 percent of the land (Table 4). The average farm

size is 5.4 ha of UAA. Unutilized agricultural land amounts to 424 000 ha and is similarly distributed among the agricultural holdings of the smallest size (up to 2 ha) and big holdings (over 50 ha) (143 000 ha vs. 179 000 ha, respectively).

This pattern is even more striking when it comes to the distribution of livestock. Twenty-two percent of agricultural holdings do not breed livestock. Among those with livestock, 80 percent have fewer than five livestock units (LU), and their share in the total number of livestock is 34.7 percent (Table 5). On the other side of the scale, 33 percent of the total number of livestock units is concentrated on farms with more than 20 LU.

Table 5: Agricultural holdings with livestock and distribution of LU by herd size class, 2012

Indicator	Total	>0-<5	5-<10	10-<15	15-<20	20-<50	50-<100	100-<500	500-<	
Agricultural holdings	Total	489 364	391 468	67 063	16 169	5 897	6 904	1 200	522	141
	%	100	80.0	13.7	3.3	1.2	1.4	0.2	0.1	0.0
Livestock units	Total	2 019 889	700 981	388 149	174 070	92 048	191 061	79 360	94 731	299 489
	%	100	34.7	19.2	8.6	4.6	9.5	3.9	4.7	14.8

Source: SORS, Census of Agriculture 2012.

Regional differences in farm structure

Another aspect of the duality of the Serbian farm structure is reflected in its regional characteristics.

The lowland rural areas (Pannonian and Peri-Pannonian Plain) in the north of the country are characterized by favourable soil quality and structure for capital-intensive agricultural production, and they have well-developed upstream and downstream industries. Along with small subsistence and semi-subsistence farms, there are very large family agricultural holdings and a significant number of enterprises of more than several thousand hectares, established mostly through the privatization process of the former agro-kombinats and cooperatives. In the rest of territory, small family agricultural holdings prevail, with fragmented land parcels and lower-quality soil.

As a result of heterogeneity of relief, differences in pathways of farm development, and restructuring, there are significant regional variations in the distribution of agricultural holdings and utilized agricultural area (Figure 3). If the Belgrade Region is excluded as atypical, the smallest number of agricultural holdings is in Vojvodina Region (23 percent of the total in Serbia), which dominates the total utilized agricultural area (48 percent). On the other side, agricultural holdings from the Šumadija and West Serbia Region make up 41 percent of the total number of agricultural holdings and use 29 percent of the total utilized agricultural area. Consequently, average farm sizes vary significantly, ranging from 3.6 ha in the high-mountain regions of Eastern and Southern Serbia to 10.9 ha in Vojvodina Region (Figure 4).

Figure 3: Distribution of agricultural holdings and UAA, by regions, 2012

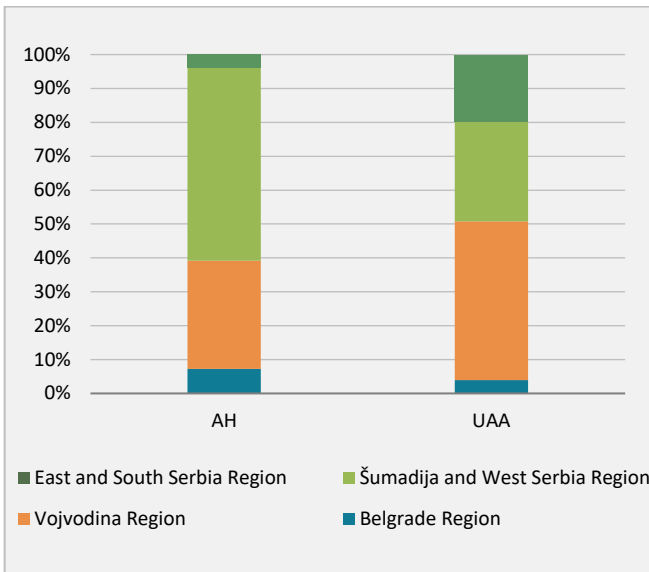
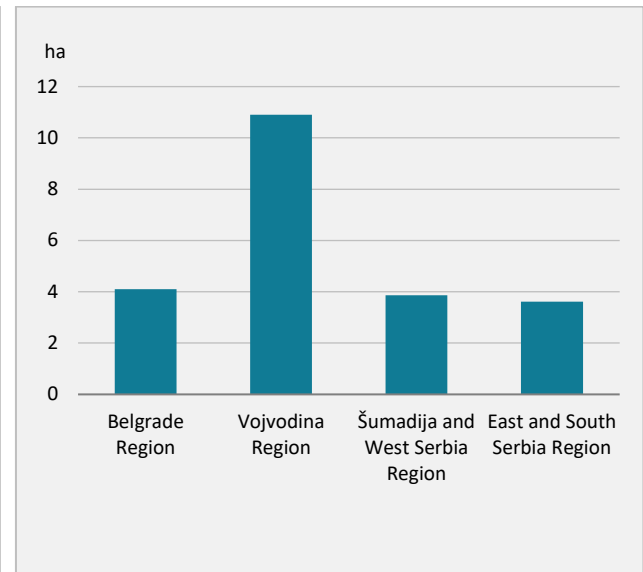


Figure 4: Average farm sizes, by regions (ha), 2012

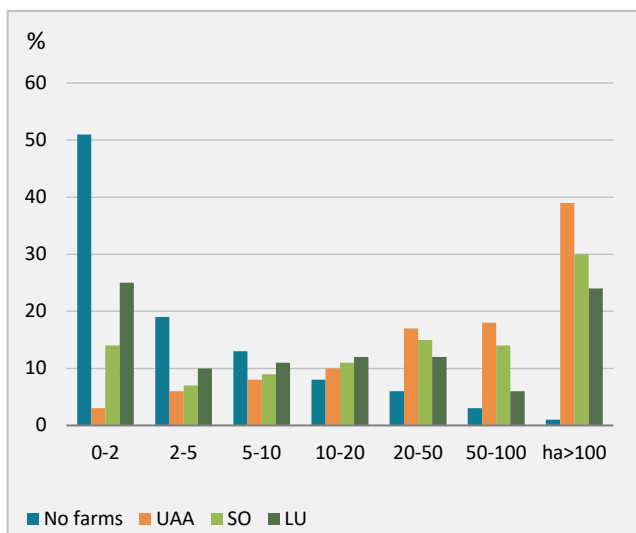


Source: SORS, Census of Agriculture 2012.

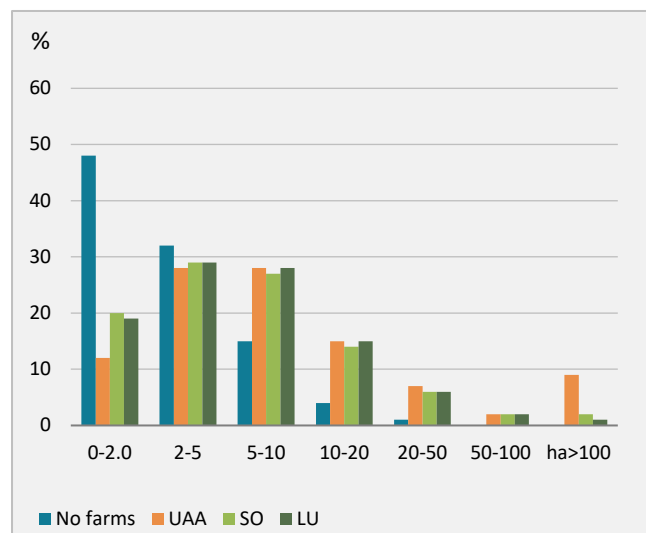
In terms of the distribution of agricultural holdings by land size, small farms (up to 2 ha) prevail in both Vojvodina Region and Central Serbia. The distinct differences between the regions appear in the category of agricultural holdings with more than 2 ha (Figure 5). In Vojvodina Region, a significant concentration of resources and output is on agricultural holdings larger than 10 ha, while in Central Serbia they remain on agricultural holdings of up to 10 ha.

Figure 5: The share of AH in resources and output, by land and economic size class, 2012

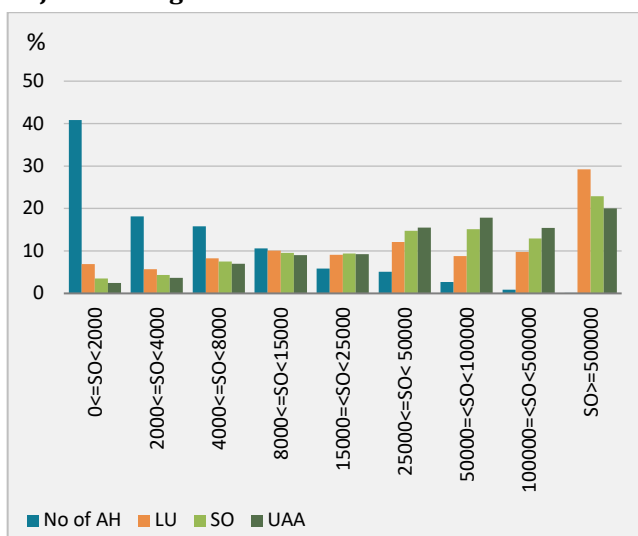
Vojvodina Region



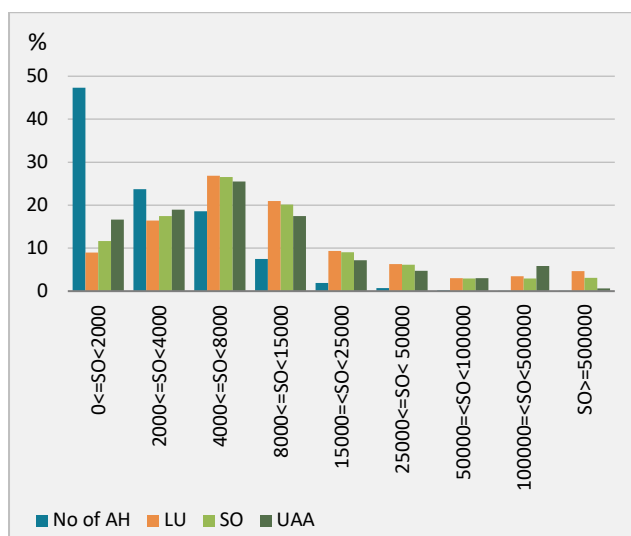
Central Serbia



Vojvodina Region



Central Serbia



Source: SORS, Census of Agriculture 2012.

The same picture is obtained for distribution of agricultural holdings according to their economic size. The economically smallest agricultural holdings (with a standard output of up to EUR 2 000) prevail in both regions. However, these agricultural holdings use little land and livestock units in Vojvodina Region and make up a small part of the total standard output. The situation is the opposite in Central Serbia, where resources and output are predominantly concentrated on small and mid-sized agricultural holdings, with standard outputs of up to EUR 15 000.

Figure 6: Distribution of agricultural labour by land size class, 2012

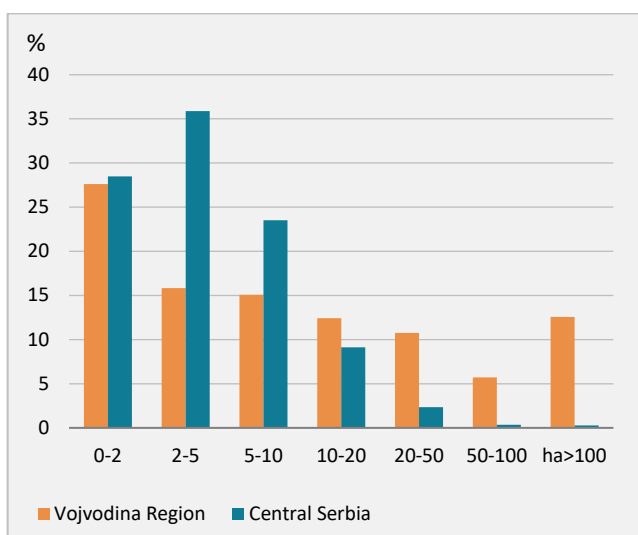
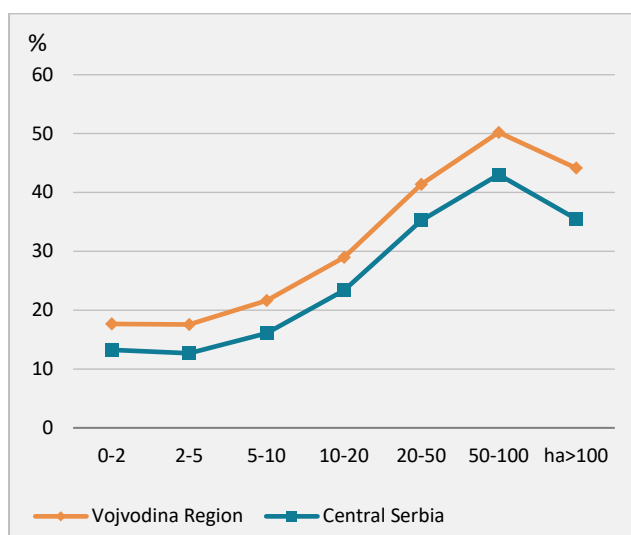


Figure 7: Managers 45 years old or younger, by land size class, 2012



Source: SORS, Census of Agriculture 2012.

An important segment of the agrarian structure is the distribution of farm labour (Figure 6). In Vojvodina Region, the largest part of the labour force is used by small agricultural holds (up to 2 ha). The amount of labour used in this region decreases with the growth of the farm’s size,

increasing again in the category of largest agricultural holdings (over 100 ha). On the other hand, in Central Serbia, the main concentration of labour is on agricultural holdings with less than 10 ha.

There also are regional differences in the characteristics of farm managers and in the dynamics of inter-generational transfers of farm ownership. The share of younger managers (45 years old and younger) grows with the size of the agricultural holding, but it is generally higher in Vojvodina Region than in Central Serbia (Figure 7). A larger share of younger managers in Vojvodina Region suggests that in this region, structural reforms – including transfers of family farm assets – are taking place more dynamically than in Central Serbia.

Smallholders and family farms in Serbia

Approach used in this study

Due to the lack of a national specific definition, in this study the FAO approach in defining small-scale food producers was taken as an example.

Box 2: FAO proposal for defining and identifying “small-scale food producers”

“The FAO proposes to define small-scale food producers using a combination of two criteria, namely the physical size of the food producer, as expressed by the amount of operated land and number of livestock heads in production, and the economic size of the food producer, as expressed by its revenues. These criteria are applied in relative terms.

In practice, FAO proposes to define small-scale food producers as producers who:

1. Physical size

- operate an amount of land falling in the first two quintiles (the bottom 40 percent) of the cumulative distribution of land size at national level (measured in hectares); and
- operate a number of livestock falling in the first two quintiles (the bottom 40 percent) of the cumulative distribution of the number of livestock per production unit at national level (measured in Tropical Livestock Units – TLUs); and

2. Economic size

- obtain an annual economic revenue from agricultural activities falling in the first two quintiles (the bottom 40 percent) of the cumulative distribution of economic revenues from agricultural activities per production unit at national level (measured in Purchasing Power Parity Dollars).”

Source: FAO, 2018.

The three different variables (FAO, 2018, p. 3) used for selection criteria are: 1) land size (utilized agricultural area); 2) herd size (livestock units); and 3) revenue (standard output). To these variables is added a variable on labour input, expressed in annual working units, or AWUs, since the monitoring of SDG 2 requires the monitoring of labour productivity (FAO, 2017, p. 16).

The threshold that separates “small-scale food producers” from other agricultural holdings is set in relative terms, at the level of the bottom 40 percent. Namely, the “small-scale” producers are those that fall in the bottom 40 percent of the cumulative distribution for each of considered variables (land, livestock, labour and revenue).

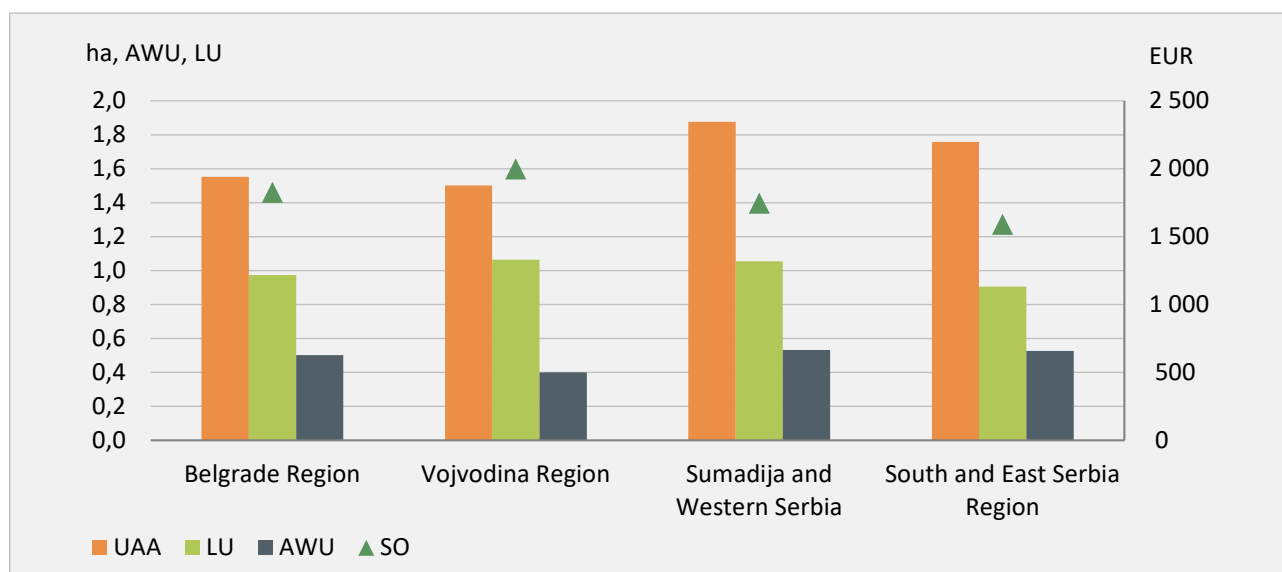
The selection of agricultural holdings belonging to the group of smallholders and family farms was done in a two-stage procedure. The first step was to extract from the database of the Census of Agriculture all agricultural holdings that meet each criterion separately. By doing this, four subgroups of between 459 000 and 536 000 agricultural holdings were obtained, depending on the variable (Table 6). In the next step, the agricultural holdings belonging to all of the four subgroups – in other words, those that meet all criteria simultaneously – were identified. By applying this approach, 403 462 agricultural holdings were found that fall into the category of smallholders and family farms (Table 6).

Table 6: Population of smallholders and family farms, by various definition criteria

	UAA	LU	AWU	SO
	By each criterion separately			
	40% of UAA	40% of LU	40% of AWU	40% of SO
Number of agricultural holdings	506 638	536 200	458 961	510 145
Average size	2.23	1.27	0.54	2 448
Maximum	23.02	7.32	1.44	19 562
	By all criteria simultaneously			
	40% of UAA, LU, AWU, SO			
Number of agricultural holdings				403 462
Average size	1.73	1.01	0.50	1 762
Maximum	6.70	4.80	1.34	7 425

Source: authors' elaboration based on SORS, Agriculture Census, 2012.

Basically, the holdings with less than 6.7 ha of utilized agricultural area, with 4.8 livestock units (LU) or fewer, with a labour input of up to 1.3 annual working units (AWU) and a standard output of up to EUR 7 425 fit into the definition of small-scale food producers. The smallholders and family farms defined in that way, on average, use 1.73 ha of utilized agricultural area, have a labour input of 0.5 of AWU, breed 1 LU and have a standard output of EUR 1 762 (Table 6). As shown in 8, considerable regional differences exist in terms of the average size of smallholders and family farms.

Figure 8: Average size of smallholders and family farms, by region, 2012

Source: authors' elaboration based on SORS, Census of Agriculture 2012.

Further analyses of the structural characteristics of smallholders and family farms were performed on the selected sample of 403 462 agricultural holdings that meet the given criteria of small-scale food producers.

Relevance and main structural characteristics of smallholders and family farms

A significant part of agricultural land resources in Serbia are in the hand of smallholders and family farms, which have over 1.06 million ha of agricultural land (24 percent of the total utilized agricultural area) and 699 803 hectares (21 percent of the total UAA) (Figure 9).

The structure of available agricultural land is dominated by UAA (66 percent), followed by wooded areas (20 percent) (Figure 10). Unused land makes 10 percent, which is slightly above the national average and indicates that smallholders and family farms use their land resources to the same extent as others.

Figure 9: Share of land resources held by smallholders and family farms, by category, 2012

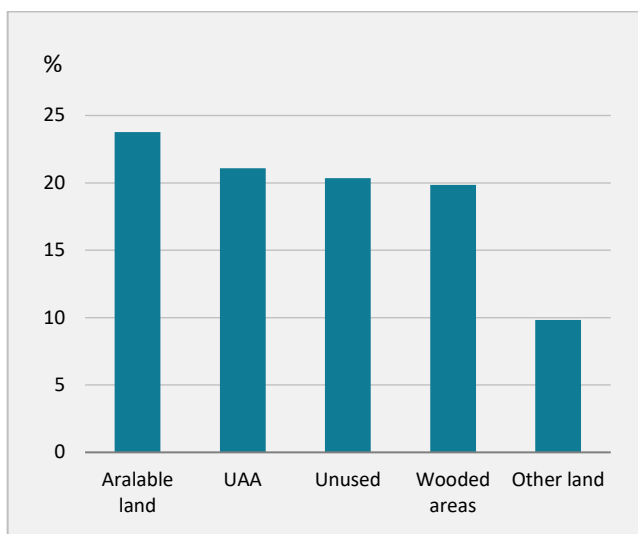
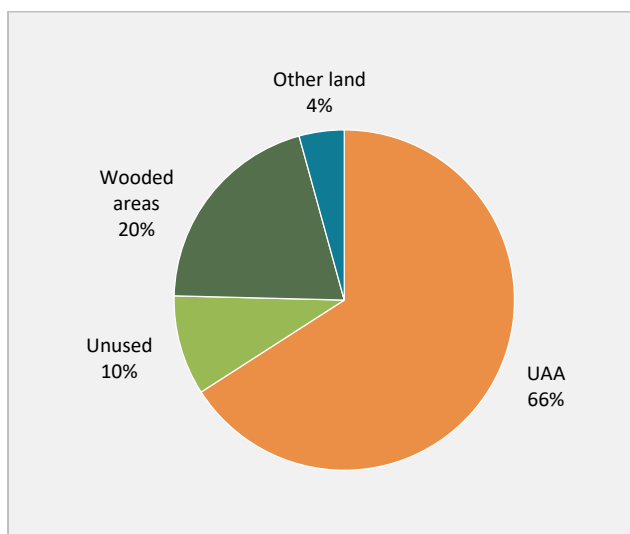


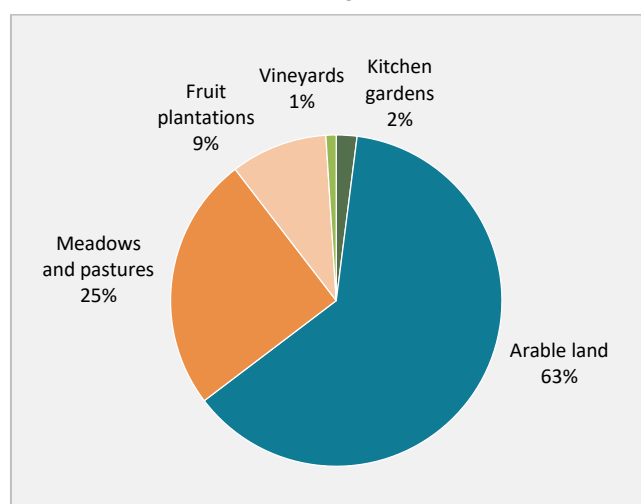
Figure 10: Structure of agricultural land held by smallholders and family farms, 2012



Source: SORS, The Census of Agriculture 2012

Arable land makes up the largest share of the UAA of smallholders and family farms (63.5 percent), followed by meadows and pastures (25 percent) and fruit plantations (9 percent) (Figure 11). Kitchen gardens, which by definition are areas devoted to cultivation of agricultural products intended for self-consumption of household members, occupy 14 106 hectares. This indicates that smallholders and family farms, on average, do not use the majority (as usually understood) of the total UAA to provide self-sufficiency, but rather just 2 percent.

Figure 11: Structure of the UAA of smallholders and family farms, 2012



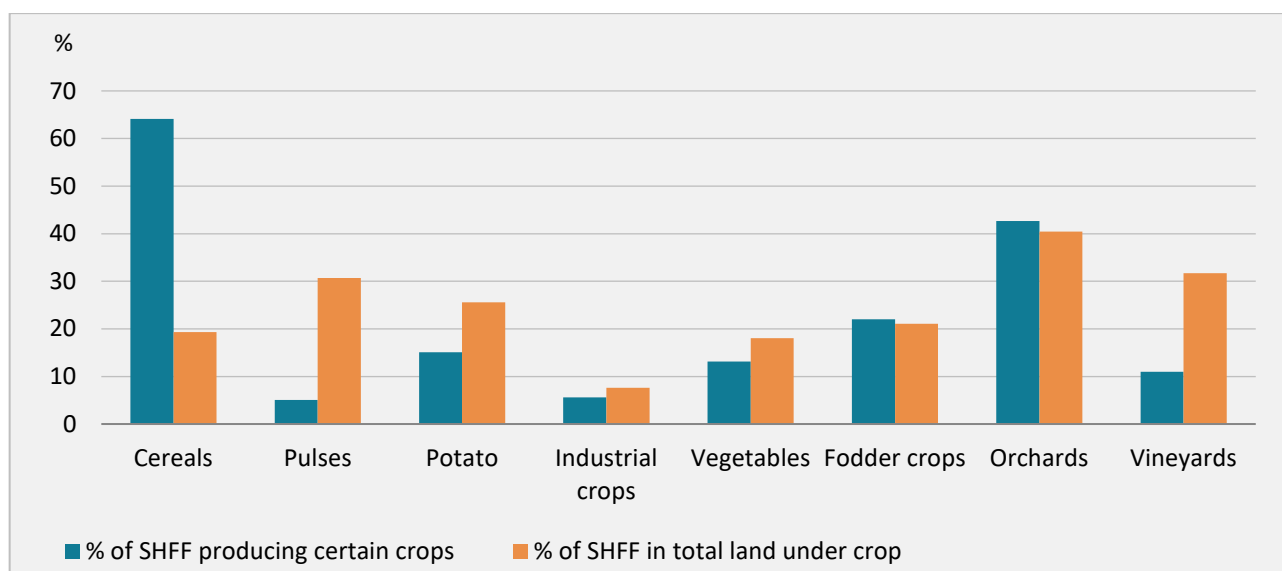
Source: SORS, The Census of Agriculture 2012.

Production

Due to an absence of data on the volume of agricultural production by type and size of agricultural holdings, the contribution and relevance of smallholders and family farms to the sector's output can be assessed only by their share of the total land and animal resources and by the number of smallholders and family farms dealing with certain products.

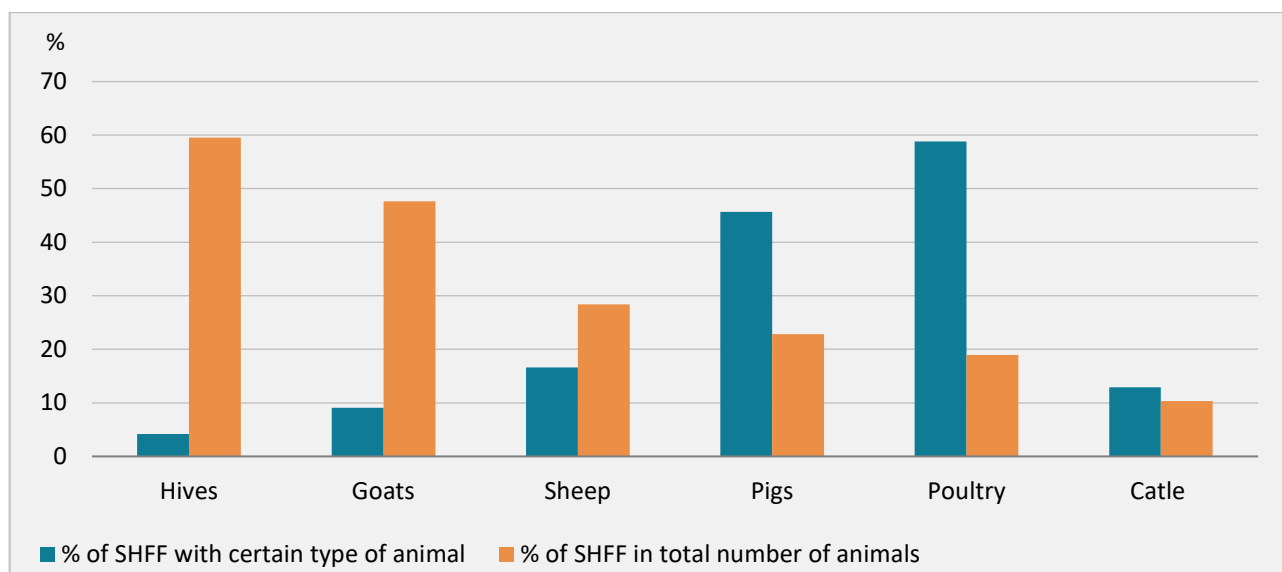
Smallholders and family farms have high shares in total area of orchards (40 percent), vineyards (32 percent), pulses (31 percent) and potatoes (26 percent) (Figure 12). However, the number of smallholders and family farms that produce these crops indicates that high shares of smallholders and family farms in the total areas of vineyards and pulses are formed by a small number of smallholders and family farms. This is not the case with fruit production, where smallholders and family farms have a high share in both total number of agricultural holdings growing orchards (42.7 percent) and total area under fruit crops (40.4 percent).

Figure 12: Percentage of smallholders and family farms producing certain crops and their shares of total area, 2012



Source: SORS, The Census of Agriculture 2012.

When it comes to the number of livestock, the results show that many smallholders and family farms have poultry (59.8 percent) and pigs (45.7 percent). Sheep, cattle and goats are less represented (16.6 percent, 12.9 percent and 9.1 percent, respectively). Smallholders and family farms with beehives are rare (4.2 percent of the total number) (Figure 13). However, data on the share of smallholders and family farms in the total number of livestock give a somewhat different picture. Results reveal that regardless of the small number of smallholders and family farms with goats and beehives, 60 percent of the total number of beehives and 47 percent of the total number of goats are raised on smallholders and family farms (Figure 13).

Figure 13: Smallholders and family farms with livestock, and their share of the total number, 2012

Source: SORS, The Census of Agriculture 2012

From the above, it can be concluded that smallholders and family farms are relevant in total production of fruits, wine, honey and goats, but these sectors are concentrated (except for fruit production) on a relatively small number of specialized smallholders and family farms.

Agricultural labour

Almost a third of the total farm labour force (32.5 percent) works on smallholders and family farms. The contribution of the farm family's labour to the total labour employed in agricultural production on smallholders and family farms is 95.5 percent, out of which 58 percent is the work of the farm holder, with an additional 21.6 percent of the work done by their spouses (Table 7). The share of female labour force, in any capacity, is about 37 percent.

Table 7: Members and regularly employed labour force on smallholders and family farms, by sex, 2012

	AWU		AWU of female labour
	Total	%	
Holder	117 163	58.3	22 489
Holder's spouse	43 481	21.6	39 265
Family members and relatives	31 431	15.6	11 851
Regularly employed labour on holding	91	0.0	n.a.
Seasonal workers	8 772	4.4	n.a.
Contractual workers	147	0.1	n.a.
Total	201 085	100.0	73 605

Source: SORS, The Census of Agriculture 2012.

Managers of smallholders and family farms

The majority of smallholders and family farms are managed by men (80 percent). The average age of these holders is 59 years (Figure 14). The share of female managers of smallholders and family farms (20 percent) is above average for Serbia (17 percent). However, the average age of female managers is higher (64 vs. 59 years), and they are less represented among managers under the age of 40 (10 percent). All these confirm the thesis about the prevalence of traditional patterns of inheritance, where women inherit the farm after the death of their husbands.

Figure 14: Managers of smallholders and family farms, by age and sex, 2012

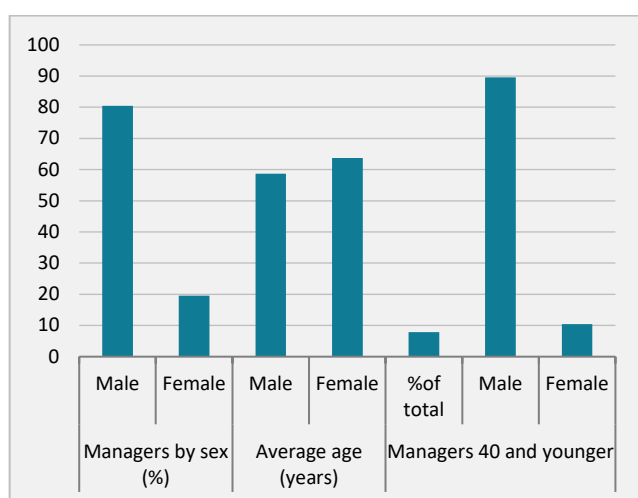
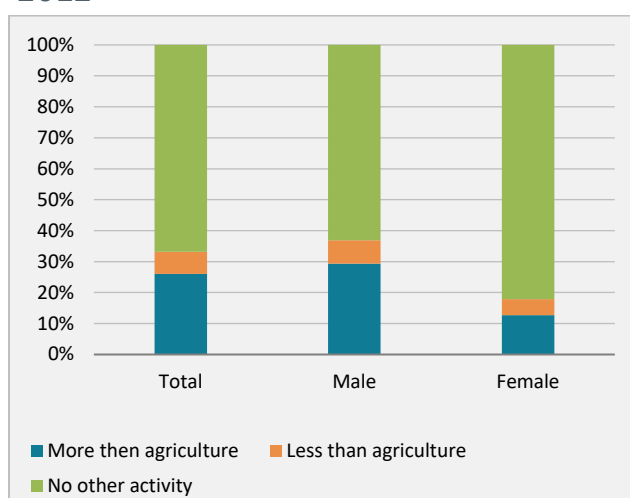


Figure 15: Pluri-activity of managers of smallholders and family farms, by sex, 2012

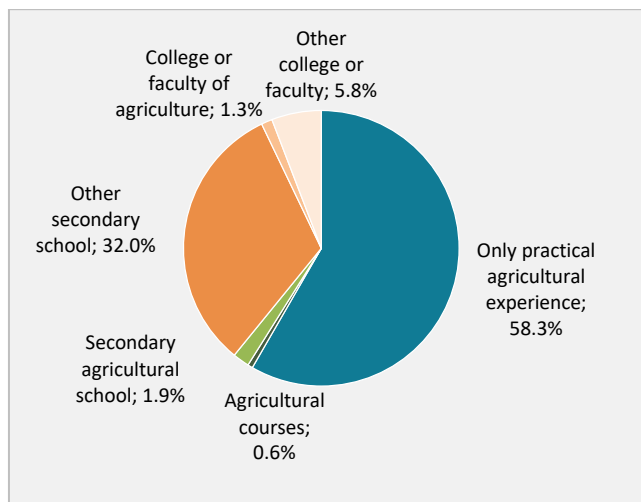


Source: SORS, The Census of Agriculture 2012.

More than two-thirds of managers of smallholders and family farms (67 percent) have no other activity out of agriculture (Figure 15). This particularly applies to smallholders and family farms with female managers. Among the 33 percent of smallholders and family farms whose managers have another activity (in other words, are pluri-active), 92 percent have an additional activity not related to agriculture.

The majority of managers have acquired agricultural knowledge only through practical experience (58 percent), and only a few of them have attended secondary agricultural school (1.9 percent) or college (1.3 percent) (Figure 16). The data indicate that the competences of women managers of smallholders and family farms are even more unfavourable, since 73 percent of them rely only on practical experience.

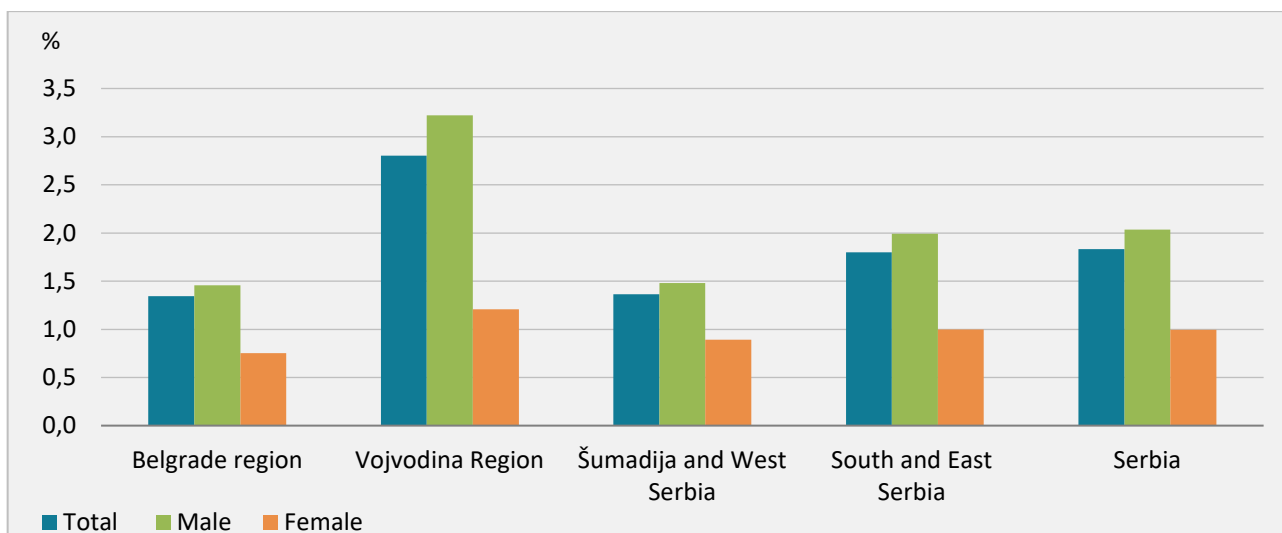
Figure 16: Educational structures of managers of smallholders and family farms, 2012



Source: SORS, The Census of Agriculture 2012.

There are no data available for recent years, but according to data from Census of Agriculture, in 2012 only 2 percent of managers of smallholders and family farms attended the trainings organized by various extension and advisory service providers (Figure 17). In Vojvodina Region, this percentage was much higher (3.2 percent), while in all regions, female managers of smallholders and family farms were less likely to attend these trainings.

Figure 17: Managers of smallholders and family farms who attended agriculture-related training in 2012



Source: SORS, The Census of Agriculture 2012.

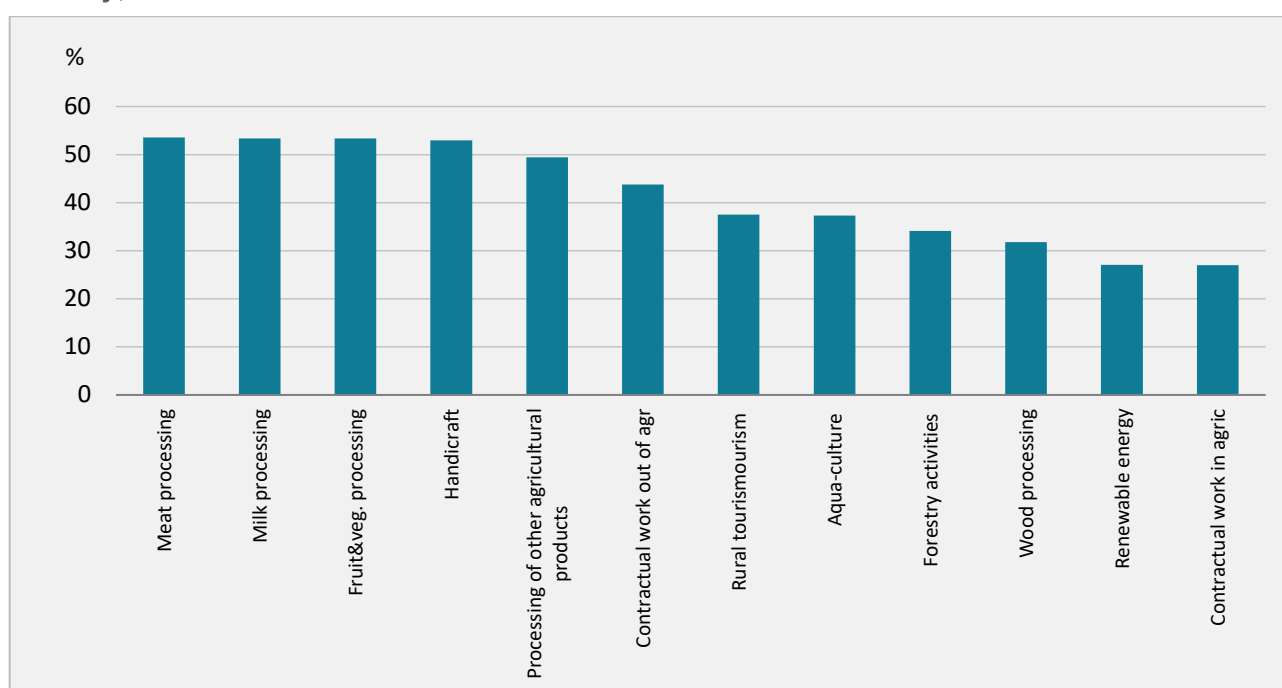
Income diversification of smallholders and family farms

The general understanding is that smallholders and family farms have very little surplus produce and therefore do not participate in markets. It also is understood that their income sources are

more diversified in terms of non-farm activity engagement of farm members. The data for Serbia, however, show deviations from those patterns:

- Sixty-seven percent of smallholders and family farms sell their products on the market. Among them, 21 percent sell less than 50 percent of their total production and could essentially be considered very small farms.
- There are 30 982 smallholders and family farms (just 7 percent of the total number), that are engaged in on-farm income diversification activities outside of primary agricultural production. The most common diversified activities are fruit and vegetable processing (done by 41 percent of the smallholders and family farms that have diversified activities), followed by milk processing (39 percent) and wood processing (7.7 percent) (Figure 18).

Figure 18: Smallholders and family farms with diversified on-farm activities, by type of activity, 2012



Source: SORS, The Census of Agriculture 2012.

- A small number of smallholders and family farms are engaged in labour- and capital-intensive types of agricultural production. Data are scarce, but as an indication we can use the figures related to organic production and production in controlled conditions (greenhouses). Only 214 smallholders and family farms deal with organic production – on less than 200 ha – while 5 222 grow vegetables and flowers in controlled conditions, on a total area of 225 ha.
- Finally, only 33 percent of managers of smallholders and family farms are pluri-active, meaning that they also are employed outside of agriculture. No data are available for other farm members. It can be assumed that behind such a relatively small number of small farms with pluri-activity is a high average age of farm managers.

Owners of small forests

According to the Census of Agriculture 2012, in Serbia, 337 804 agricultural holdings own a forest, for a total area of 1 026 023 ha.¹¹ The key characteristics of the private forest sector are the fragmentation of areas under forests, a large number of parcels and owners, a high percentage of poor-quality forests, and insufficient organization of the forest owners themselves.

Smallholders and family farms make up 58 percent of the total number of agricultural holdings with forests and occupy 21.1 percent of the wooded land, with an average size of 0.5 ha (Table 8). Regional differences are prominent. They indicate that in Central Serbia, the majority (55 percent) of smallholders and family farms have forest land, while in Vojvodina Region this percentage is lower (45.7 percent). However, the share of smallholders and family farms in total forest area varies even more by region, from 1 percent of forest land in Vojvodina Region to over 41 percent in South and East Serbia.

Table 8: Forest land owned by smallholders and family farms

	No SHFF forests		Forest land owned by SHFF	
	Total number	% of total number of AH with forests	Ha	% of total forest land of AH
Belgrade Region	10 982	62.3	6 750	25.5
Vojvodina Region	2 543	45.7	1 487	1.0
Šumadija and West Serbia Region	108 093	56.6	117 430	18.6
East and South Serbia Region	76 114	61.6	90 123	41.3
Serbia	197 732	58.5	215 791	21.1

Source: SORS, Census of Agriculture 2012.

Owners of small forests face many challenges, including lack of knowledge, weak integration into the value chain, and the absence of state support for their businesses. Expert and technical services in private forests are financed from the budget of the Forest Administration. In addition, private forest owners receive support from the Forest Protection and Improvement Program for afforestation of bare forests in private forests.

3.2.3 Agricultural land market and property rights

This chapter presents the development of agrarian relations and land rights in Serbia as factors that influenced the creation of a fragmented farm structure and the operation of the current land market. In addition to describing the evolution of property rights, this chapter addresses the legislative framework that regulates the land lease and land selling market and legislation that governs state land.

¹¹ Based on the Inventory of Private Forest Resources and the National Forest Inventory, the total area of private forests in Serbia is 47 percent and extends to 1 058 400 ha. For more information, see: <http://upravazasume.gov.rs/wp-content/uploads/2016/10/2016-10-16-NFPS-Report.pdf> and the GIZ project “Development of a sustainable biomass market in Serbia.”

Evolution of land tenure and property rights

The evolution of agrarian relations and the associated land ownership distribution is a complex social and economic process, especially for countries and societies that are deeply reliant on agriculture, as is the case with Serbia.

Land tenure in the territory of present-day Serbia was legally established with the first Civil Code, which was enacted in 1844 and remained in force until 1946. The Civil Code defined the farming land minimum (approximately 0.8 ha, increased to 5 ha in the 1870s) to be prohibited from mortgaging and from selling (Calic, 2013). It had a decisive influence on the creation of a fragmented farm structure and on the “freezing” of the agrarian structure within a small family estate, and it slowed the consolidation of farms and their technical and technological progress. Perović (2006) argues that the land minimum was introduced to facilitate social relations, as it aimed at preventing the creation of a rural proletariat at the cost of “equality in poverty.”

After the First World War, among the first measures of the economic policy was agrarian reform. Estates larger than roughly 35 ha were divided and distributed free of charge to peasants, war volunteers and colonists. In total, 193 300 ha was distributed to 111 100 peasant families. Those who received land plots were allowed to rent it, but further subletting was prohibited. The agrarian reform resulted in the liquidation of feudal relations in southern parts of the country, while in Vojvodina the reform resulted in the reduction of large capitalist farms.

Under the communistic system, farms owned by natural persons (so-called “individual farms”) were constrained by such elements as limitations on their size, taxing policies, government price control over key crops, limited access to the markets, and others. The agrarian reform of 1945 (*Law on Agricultural Reform and Colonization*) was aimed at the elimination of big farms owned by natural persons, including the expropriation and seizure of agricultural land larger than the land maximum (25 ha of arable land and 45 ha in total, including non-cultivated land). A land fund of 1.6 million ha was created, of which 53 percent was transferred to the state sector or to peasant cooperatives, with 47 percent distributed to poor farmers and colonists. The next step in reforming agrarian relations was the *Law on Agricultural Fund of State-owned Property* from 1953, which reduced the farm size to a maximum of 10 ha (20 ha in mountainous regions). A land fund created in this way was allocated to agricultural organizations (cooperatives, state kombinats and enterprises). From the newly formed agro-industrial complex, the state possessed about 18 percent of all arable land, and private household farms had about 82 percent.

After the political changes that started in the 1990s, the ownership structure of agricultural land began to be reorganized and has since become increasingly complex. The land re-privatization process started with the adoption of the *Law on the manner and conditions of recognition of rights*

and restitution of land.¹² On the basis of this law, former owners or their successors were compensated only for the land confiscated in 1953, up to land maximum of 10 ha. The result was that a substantial area of agricultural land remained state-owned. Agricultural enterprises and individuals, however, had great difficulties in claiming their land, as the land registry and cadastre were outdated and/or incomplete. Additionally, the state applied the principle that all land would be considered state property if companies were unable to prove they were the owners. Currently, about 400 000 ha of agricultural land is in state ownership and is leased by municipalities. Most of this land (300 000 ha) is located in Vojvodina Region.

The *Law on Property Restitution and Compensation*¹³ uses the basic principle of restitution in kind. Nevertheless, the application of this principle is limited by numerous exceptions (for example, the subject of the restitution in kind cannot be land that was meanwhile privatized, given to the long-term leasing, built and reserved by planning regulation, etc.).

Land market

The majority of the 3 437 000 hectares of utilized agricultural area (UAA) in Serbia is used through ownership (70 percent). In comparison with European countries, the Serbian market of agricultural land sale is moderately developed, as 1 percent to 3 percent of the total UAA is sold and purchased annually. There are no exact data on the number of transactions, but according to some sources (Kovačević, 2018), in 2015 there were more than 42 700 land-sale transactions on 35 000 ha to 50 000 ha of privately-owned agricultural land.

Average farmland prices vary across the regions, and even within regions, depending on micro-location. According to data from the Republic Geodetic Authority (RGA), the average sales price is about EUR 7 500 per ha.¹⁴ The price of arable agricultural land of higher quality in Vojvodina Region ranges from EUR 10 000 per ha to EUR 15 000 per ha, while for land of lower quality, the average is EUR 5 000 per ha. The price of arable agricultural land of average quality in the Šumadija and West Serbia region is between EUR 2 000 and EUR 5 000 per ha. There are many examples of speculative transactions of agricultural land, usually when it is purchased for conversion into construction land, to be used for infrastructural purposes and the like.

There are no restrictions on the purchase of private agricultural land by physical and legal persons. The tax on agricultural land transactions, paid by the seller, is 2.5 percent of the sales

¹² *Law on the manner and conditions of recognition of rights and restitution of land that was transferred to public property from agricultural land fund and the confiscation of the outstanding commitments from the compulsory purchase of agricultural products* (Official Gazette of the Republic of Serbia No. 18/1991).

¹³ Official Gazette of the Republic of Serbia No. 72/2011, No. 108/2013, No. 142/2014 and No. 88/2015 – The Constitutional Court decision.

¹⁴ Records are kept only on the amount of the transaction and the number of parcels; the culture, class and area of agricultural land are not listed.

price. Local self-governmental units determine the property tax to be paid by the owner of the agricultural land, which by law may not exceed 0.4 percent of the market value of the land.¹⁵

After intense public debate about restricting foreign ownership of agricultural land, amendments to the *Law on Agricultural Land*¹⁶ entered into force that have introduced new conditions for non-residents (both natural persons and legal entities) to be fulfilled in order to become owners of agricultural land in Serbia. The law stipulates that the owner of private agricultural land cannot be a foreign physical or legal entity, except in the case of citizens from European Union countries, who may acquire privately-owned agricultural land up to 2 ha in size by legal transaction, with or without compensation, if have been permanently settled in the local self-governmental unit for at least ten years, if they cultivate the agricultural land that is the subject of the transaction, and if they are registered in the farm register for at least ten continuous years, among other restrictions.

The *Law on Agricultural Land* stipulates that farmers (natural persons, citizens of Serbia) may purchase state-owned agricultural land up to 20 ha in size. Besides many other restrictions related to potential buyers (status in farm register, size of land owned and more), this law stipulates that state-owned land that may be the subject of sale cannot exceed 20 percent of the total area of state-owned agricultural land that may be the subject of lease in the particular local self-governmental unit. However, implementation of this provision has not yet begun.

The land lease market is even more active than the land trading market. According to the Census on Agriculture 2012, agricultural holdings rent about 1 million ha in total. The agricultural land rented for money or in kind is about 875 000 ha, and the other 144 000 ha are common lands, are rented for free, or are used in other ways. An estimated additional 5–10 percent are rented in the “grey zone” without formal contracts verified by a public notary.

Farmland leasing prices of privately-owned agricultural land vary depending on demand and are formed without any restriction. In the Šumadija and Western Serbia regions, the average price is EUR 50 to EUR 100 per ha, while in Vojvodina Region, leasing prices range from EUR 300 to EUR 500 per ha.

The lease of state-owned agricultural land is regulated by the *Law on Agricultural Land*. It is in the jurisdiction of local self-governmental units, which are responsible for carrying out the procedure, while the Ministry of Agriculture, Forestry and Water Management has the authority to approve and sign contracts with tenants. State-owned land can be leased to individuals and

¹⁵ Tax on agricultural land, as well as taxes on other real estate, is under the jurisdiction of local self-governmental units (LSUs). They tax land according to the distance from the city centre and quality. The amount of tax differs from municipality to municipality, but the law stipulates a maximum tax rate of 0.4 percent of the market value of agricultural land. The price is determined on the basis of contracts signed with notaries from the previous year in certain LSUs. When determining the amount of taxes, the average is calculated according to the zones (3 or 4) in which the agricultural land is located.

¹⁶ Official Gazette of the Republic of Serbia No. 80/2017.

legal entities for a period not shorter than one year and not longer than 30 years for arable land or not longer than 40 years for fishponds and vineyards. However, due to the unfinished restitution process, land still is leased for one-year periods (except for land rented to legal entities based on investment per hectare, in which case the renting period is up to 30 years).

In 2016, the average rental price for state-owned arable land of average quality was EUR 197 per ha, and this cost is increasing. The initial price is determined on the basis of the farmland leasing prices paid in the previous year, where the starting rental price in the first round of auction is set at 80 percent of the market price (in the second round, it decreases to 60 percent). There are several options for renting state-owned agricultural land: a) the right of priority lease; b) the right of first refusal; c) the first or second round of public bid; and d) use of state-owned land without reimbursement.

Box 3: Land grabbing

“It is estimated that 90,000 hectares purchased by companies, that were previously registered in Serbia are in the hands of foreigners. Most of them are companies from European countries, from Hungary, Croatia but also from Russia and the United Arab Emirates.

More openly, market liberalization opens the door for growth of speculative demand. This has already happened partly, with about 100,000 hectares of arable land being in the hands of domestic and foreign tycoons.”

Source: <http://www.politika.rs/sr/clanak/404039/Za-hektar-zemlje-u-proseku-6-000-evra>
(19 May 2018)

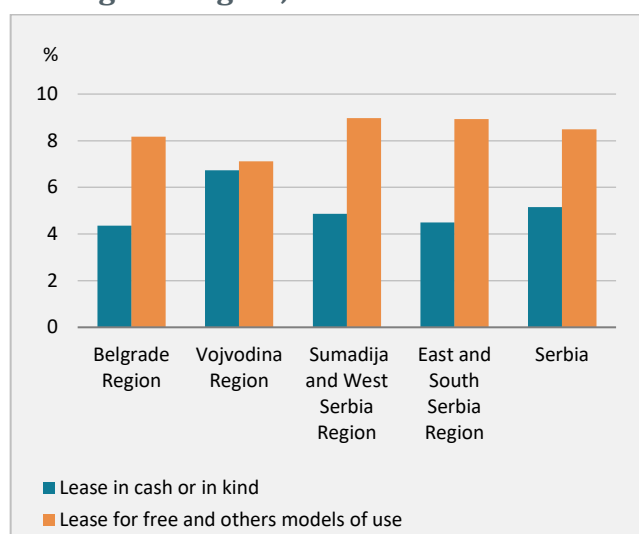
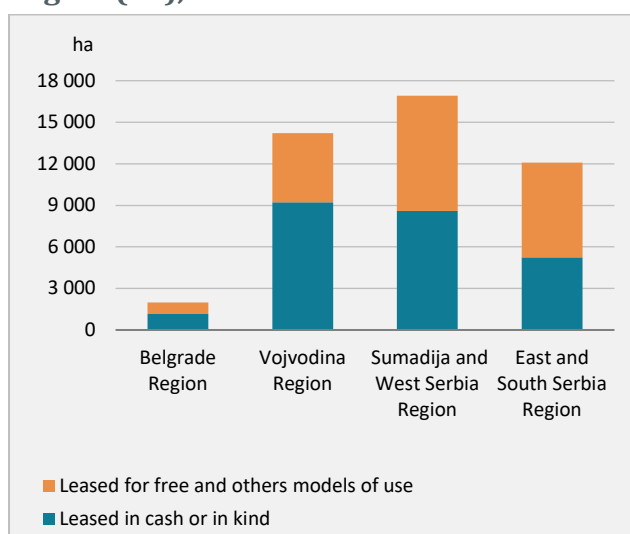
“The three largest Serbian businessmen in agriculture own more than 50,000 hectares of land in Serbia and rent 20,000 hectares.”

Source: <https://www.blic.rs/vesti/drustvo/cija-je-srpska-zemlja-medu-pet-najvecih-zemljoposednika-u-srbiji-dva-su-stranci/86ydx8l>
(24 August 2016)

“There are real latifundia in Vojvodina, as several large owners have thousands of hectares of arable land, as in the Austro-Hungarian Empire. The introduction of capitalism in agriculture precluded the economic viability of the small holdings, which in the Banat villages led to a drastic increase in poverty. The villages are empty, the property of the locals loses its value, and the state does not have any strategy for the survival of the village” the ZSF (Zrenjanin Social Forum) said in a statement.”

Source: <http://agrosvet.rs/clanak/3472/u-vojvodini-sve-vise-latifundija>

When it comes to smallholders and family farms, out of the total 403 462 agricultural holdings that belong to this category, 5.2 percent lease land in cash or in kind, and 8.5 percent lease for free or other models of use. In total, smallholders and family farms rent 45 205 hectares of utilized agricultural area, a total of 4.4 percent of the total rented land in Serbia (Figure 19).

Figure 19: Percent of total rented land used by smallholders and family farms, by type of leasing and region, 2012**Figure 20: Utilized agricultural area leased by smallholders and family farms, by region (ha), 2012**

Source: SORS, The Census of Agriculture 2012.

Looking by regions, leases in cash or in kind are used by smallholders and family farms in Vojvodina Region more than in other regions, but the amount of leased utilized agricultural area is highest in the Šumadija and West Serbia Region, where agrarian density (measured as the ratio of agricultural labour to productive resources) is relatively high (Figure 20).

In period 2002–2005, the Ministry of Agriculture, Forestry and Water Management provided support for the expansion of farm size in the form of grants for purchase of every third hectare. Currently, the Development Fund of Autonomous Province of Vojvodina provides long-term loans with favourable interest rates for the purchase of agricultural land, but just to farmers in Vojvodina Region.

Other measures related to land use and management include state support for land consolidation (see the Section 4.1), building and maintenance drainage and irrigation systems, field roads, control and improvement of land quality, and other similar measures.

Land consolidation

Although Serbia has a long history of land consolidation, activities on improving land management and farm consolidation have neither been permanent nor covered the whole territory.

Since 1956, land consolidation measures have been applied as an attempt to create more favourable conditions for intensive land cultivation, while the main driver was the desire to consolidate landholdings in the social (state) sector. It started first in Vojvodina, and later on (in the mid-1960s) in Central Serbia and then in Kosovo and Metohia (1980s). Land consolidation projects at that time were accompanied by large-scale projects on land infrastructure, related to

building drainage and irrigation systems, field roads, wind barriers and more (Van Berkum and Bogdanov, 2012; Hartvigsen, 2013).

Land consolidation has been carried out on 1.9 million ha of agricultural land. Land consolidation covers most of the countryside in Vojvodina (60 percent of all territory), followed by Central Serbia (9 percent) and in Kosovo and Metohija (5 percent). In the whole territory of Serbia, a single record of fixed assets was established in an area of about 87 percent of the territory. In the remaining part of Serbia, the ownership right is kept in cadastral registers, books of title deeds, or encumbrance books. Up to now, there has been no special record of agricultural parcels, only of records of cadastral parcels (Van Berkum and Bogdanov, 2012).

Table 9: Agricultural holdings by separate plots of utilized agricultural area, by region, 2012

	% AH by separate lots of UAA		Average number of lots by AH		Average lot size, ha	
	AH	SHFF	AH	SHFF	AH	SHFF
Belgrade Region	98.7	98.5	4	3	1.0	0.5
Vojvodina Region	95.9	94.5	5	2	2.3	0.7
Šumadija and West Serbia Region	99.3	99.1	5	4	0.8	0.5
East and South Serbia Region	99.1	98.8	7	6	0.5	0.3
Serbia	98.4	97.9	6	4	1.0	0.4

Source: Authors' elaboration based on SORS, Census on Agriculture, 2012.

On average, 98 percent of the agricultural holdings in Serbia have separate land lots (Table 9). The smallest and most fragmented land plots are in East and South Serbia Region, where 99 percent of agricultural holdings with more than one parcel have, on average, seven plots of 0.5 ha each. In Vojvodina Region, the percentage of farms with separate plots is 96 percent, while the average plot size is 2.3 ha. A similar pattern appears when it comes to smallholders and family farms, where the average plot size varies from 0.3 ha in East and South Serbia Region to 0.7 ha in Vojvodina Region.

The *Law on Agriculture Land* prohibits the division of land plots to cadastral parcels smaller than 0.5 ha (1 ha if the agricultural land is arranged by consolidation or arrondissement). Were someone to want to divide parcels to a smaller size, the public real estate register would refuse the request.

3.2.4 Value chain organization, standards and access to markets

This chapter discusses the agriculture value chain by considering different players, their roles and the position of smallholders and family farms.

The chapter starts with a brief overview of agriculture value chains in Serbia and continues with an elaboration on market access for smallholders and family farms, with particular focus on short food chains and direct selling. The chapter concludes with a section on facilities and services available to farmers with regard to input supply, cold storage and warehousing.

Value chain organization

Apart from the duality of the farm structure, the structural features of the agrifood value chain in Serbia also point to a dual structure in each of its segments. There are a large number of small to very small agents that dominate both the primary agriculture sector and the industries upstream and downstream. In parallel with these are a few medium- and large-scale operators.

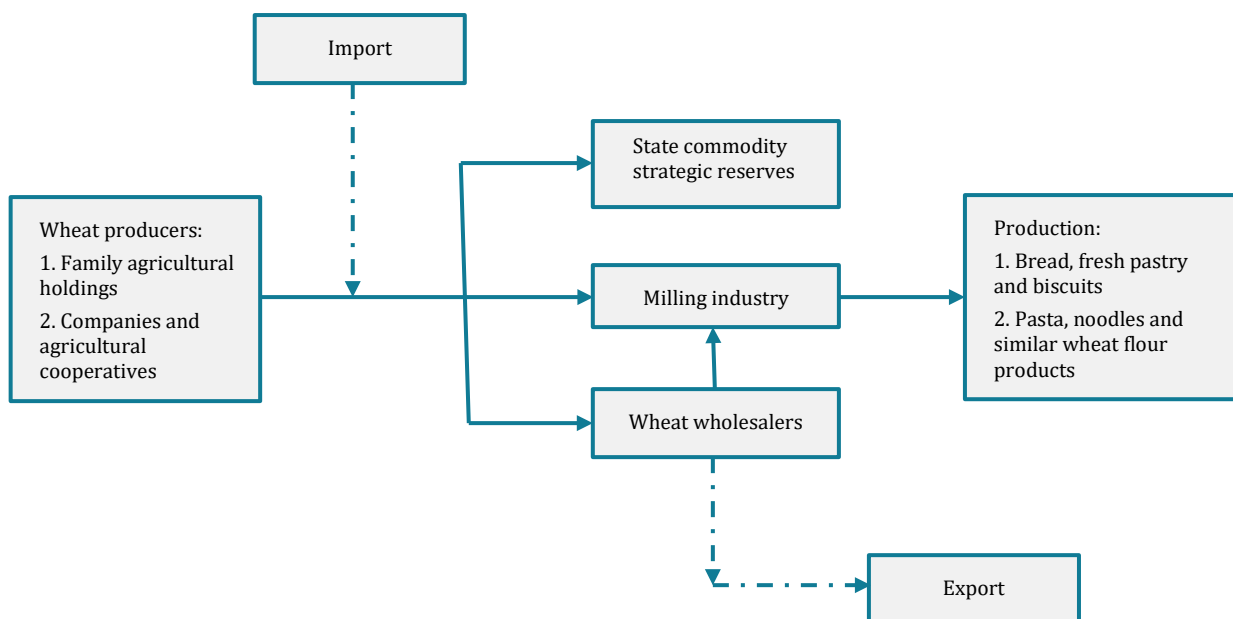
Input supply – Serbian agriculture production is generally a low-input system, using few agrochemicals and compound feed. Major companies active in input supply are traders and importers, while a few firms produce and distribute fertilizers and/or pesticides domestically. Most of the major buyers and traders of agricultural products are engaged in input purchase arrangements with agricultural producers and cooperatives. Agricultural cooperatives also offer input financing in exchange for final products from the producers.

Primary agricultural sector – A large part of the primary agricultural sector is excluded from the commercially oriented agrifood supply chain because its small scale of production cannot provide the industry with a uniform quality of raw material in sufficient volumes and in efficient ways. Still, better-structured vertical coordination and contract farming occur in export-oriented sectors or when agricultural products have to go through processing.

Generally, for the export-oriented products (such as cereals and oil seeds), the market chains are rather simple – most of the production is marketed by producers to organizers of production and/or to processors – and concentrated among a few traders and exporters. The commercially oriented fruit and vegetable producers sell their products directly to retail chains or via production organizers to processors or exporters.

In the meat industry, there is a complex network of companies engaged in wholesale trade. These companies sell to retailers (small retail and butchers) and to processors. The market chain in the dairy sector varies, depending on herd size and the quantity of milk. Large dairies have contracted suppliers and purchase milk based on such parameters as milk fat, protein and somatic cell count, while small dairies operate locally and pay for milk only in accordance with the quantity of milk fat.

Figure 21: Wheat value chain



Source: Stojanović, Manić, *et al.*, 2018.

A vast number of intermediaries operate in the agrifood market in Serbia. Their role and economic power vary across value chains and regions. Improvements in the regulatory framework for their operations, together with the inflow of financial capital in this segment of value chain and export growth, have contributed to expansion of their businesses. The activities of these intermediaries have contributed to consolidation of the domestic purchase market and expansion into new export markets. Due to strong competition among the organizers of production, contracts with producers have become more transparent, and payment deadlines are respected.

Analysis of the raspberry value chain can serve as a relevant example of the role of intermediaries in local and global value chains in Serbia. Insight into the distribution of power among players in the value chain is provided in Table 10, in which data on the value added for farmers indicate the unfavourable annual average ratio of retail to farm-gate prices (Stojanović, Dragutinović-Mitrović, *et al.*, 2018).

Table 10: Value-added creation and distribution for the raspberry food chain

	2006	2008	2010	2012	2014	2016
Farm gate price	0.68	2.107	1.264	1.104	1.298	1.578
Farm costs	0.7	0.7	0.7	0.7	0.7	0.7
Wholesale price	0.975	2.787	2.087	1.591	2.430	2.599
Retail price	2.342	3.684	4.270	2.652	3.325	3.322
Value added						
Farm gate – costs	-0.02	1.407	0.564	0.404	0.598	0.878
Wholesale – farm gate	0.295	0.68	0.822	0.487	1.131	1.022
Retail – wholesale	1.367	0.896	2.184	1.061	0.895	0.723
Total value added per kg	1.642	2.984	3.570	1.952	2.625	2.622
Value added for the farmer	-1%	47%	16%	21%	23%	33%
Value added for the Wholesaler	18%	23%	23%	25%	43%	39%
Value added for the retailer	83%	30%	61%	54%	34%	28%
Farm gate/retail price	29%	57%	30%	42%	39%	47%
Wholesale – farm gate retail price	13%	18%	19%	18%	34%	31%
Retail – wholesale/retail price	58%	24%	51%	40%	27%	22%

Source: Stojanović, Dragutinović-Mitrović, et al., 2018.

The results of food chain network analysis (Stojanović, Manić, *et al.*, 2018) reveal that intermediaries and farmers are the most important players in the local value chain. Still, as the farmers are atomized in comparison to the relatively small number of intermediaries, intermediaries seem to be the ones with the highest market power. When it comes to the global chain, that chain is partly domestic and partly related to the international players (Stojanović, Manić, *et al.*, 2018). The key players within the domestic group include input suppliers, farmers, intermediaries, domestic processors, domestic retailers and domestic consumers, while the international players are foreign importers, foreign processors, foreign retailers and international consumers. The authors conclude that the largest number of significant relationships in the international value chain belongs to intermediaries, which makes them the most important part of the network.

Retail sector – The retail sector in Serbia has been expanding since the 2000s, confirming the “retail revolution” trend. This sector has been characterized by the strengthening positions of the large regional/international players,¹⁷ who demand strict guarantees on quality and food safety at competitive prices. These guarantees are enforced by contracts, and a major challenge for farmers is to meet the growing number of requirements and standards. For example,

¹⁷ The leading retail chains are Delhaize (Shop & Go, Maxi and Tempo) and Mercator S (Idea, Roda and Mercator). Other international retail chains currently operating in the Serbian market are Metro, Lidl, Super Vero and more. The leading domestic retail trade chains in Serbia are DTL, DIS, Amman, Univerexport and Gomex.

Delhaize Serbia has a partnership with more than 200 suppliers for fresh fruits and vegetables, which should provide at least 70 percent of what Delhaize Serbia needs. Suppliers are required to monitor predefined product and packaging specifications and product certifications such as GlobalG.A.P. and the British Retail Consortium standard, and they are expected to sign contracts and offer competitive prices and discounts

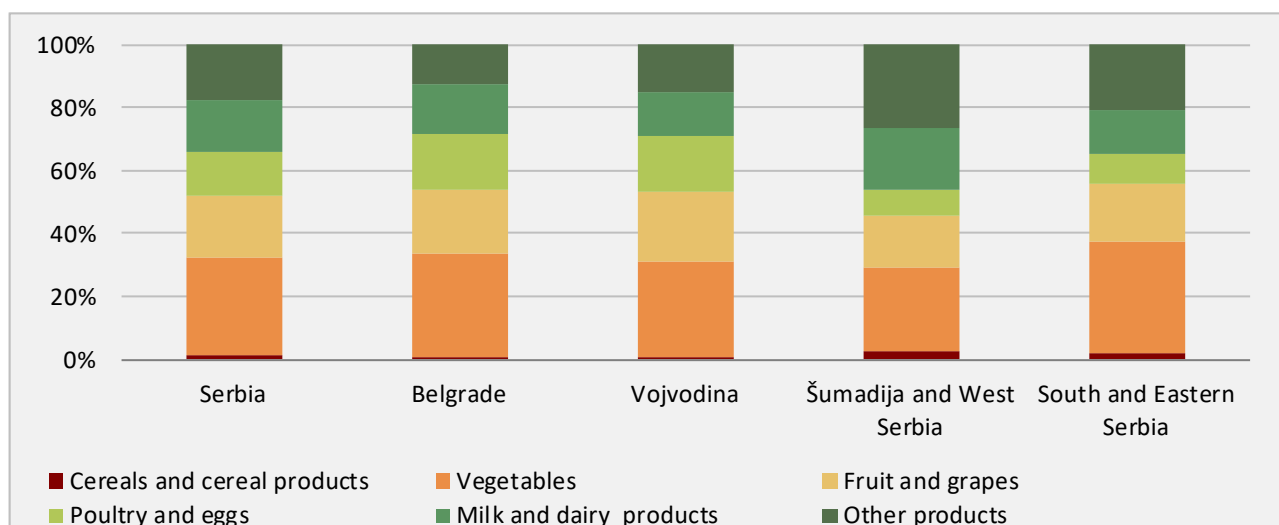
Access to market for smallholders and family farms

Regardless of the products they deliver, smallholders and family farms in Serbia – as in many other developing countries – are often involved in informal chains that deliver products to local traders/buyers or via farmers’ markets. Home consumption and direct sales of food are significant. This implies that a large part of the agricultural sector is not integrated in the agrifood supply chain, neither by contracting nor by (any other means of) sustainable commercial interactions.

For the majority of smallholders and family farms, direct sale – despite its form – is the most important market channel. Which types of direct sales are chosen by farms (including direct selling at farmers’ markets, pick-your-own operations, roadside stands and others) highly depends on the available farm labour, which in many parts of Serbia becomes a critical factor.

Farmers’ markets – Direct sale at farmers’ markets is the most common selling channel for most small and mid-sized producers. The total turnover of agrifood products at farmers’ markets constitutes around 20 percent of the total value of the sales and purchase of agrifood. Among products sold at farmers’ markets, vegetables are the most common (31 percent), followed by fruit (19 percent), milk and dairy products (16 percent) and poultry and eggs (14 percent) (Figure 22). The remaining 20 percent are various other products, including flowers, nursery plants, fish and pasta.

Figure 22: Sale of agricultural products at farmers’ markets, by groups of products and by region, 2016



Source: SORS, The Statistical Yearbook, 2016.

The transaction costs of selling at farmers' markets might be too high for many smallholders and family farms. Farmers need to have certificates that are registered with the Farm Register, and they must rent the stand at least three months in advance, pay the daily expenses for putting goods on the stand, and fulfil sanitary and other requirements. The costs of selling at farmers' markets are slightly higher in Belgrade than in other cities, and these costs can reach EUR 150 per month.¹⁸

Farmers' markets are within the jurisdiction of local self-government units, which occasionally lower costs by providing free use of stands on some days of the week or offering lower rental rates during years affected by extreme weather events, among other examples. On the other hand, there are examples of higher costs, such as with non-transparent tenders for renting stands in attractive locations.

In some smaller towns in remote areas, the sale of live livestock can be found at organized livestock markets. To sell animals in these places, farmers must provide an animal passport, a certificate of vaccination, and the animal's registration. Only small quantities are traded in this way, usually small-sized farm animals such as lambs, pigs and poultry.

The sale of home-grown winter stores of vegetable and fruits is not allowed at farmers' markets or at the farm gate. The sale of home-processed meat products such as bacon, ham and sausages also is not allowed. In order to operate in accordance with the law, producers must have a registered craft shop or company and fulfil all the technical and other requirements prescribed by the laws regulating food safety. Since 2018, these rules are, at least as far as livestock products are concerned, regulated by the *Regulation on small quantities of primary products used to supply consumers, areas for performing these activities, and deviations related to small entities in the business with animal origin food*.¹⁹

The farm gate sale – The farm gate sale has traditionally been used by smallholders and family farms for selling vegetables, fruits, raw milk, cheese, eggs and alcoholic beverages. This selling channel (as well as selling at farmers' markets) is largely grounded on social norms and trust that consumers have acquired.

Roadside sale – This type of sale is used during the summer season for the sale of fresh fruits and vegetables and of fruits and vegetables that have been processed for winter storage. Regardless of the fact that selling costs are reduced to a minimum, the prices of these products usually are not lower. In

¹⁸ Monthly renting costs for stands in Belgrade are around EUR 90, which should be added to the daily rental cost of EUR 5 to EUR 9. Assuming that farmers sell their products one or two times per week, the monthly cost of sales reaches approximately EUR 150. These costs do not include the seller's time, transportation costs, small material costs (package and packaging), goods tasting, waste, and other risks associated with the sale of fresh products.

¹⁹ Official Gazette of the Republic of Serbia No. 111/2017.

addition, there is another model of roadside sale in which high concentrations of suppliers sell the same goods during seasonal peaks. Freshly harvested products are directly brought to such places, and buyers are thus able to choose from products of different quality and quantity (early fruits, watermelons, potatoes and more) while farmers lobby for – and can manage to achieve – higher prices.

Sale through tourism and catering – Several donor projects in recent years have aimed at facilitating the integration of small farms into local tourism in key tourist destinations in Serbia.²⁰ The key challenges identified by entities in the food service industry regarding this model of sale have been the low level of connectivity and networking of local service providers and the lack of standardization (Rodin and Miletić, 2014).

Budgetary incentives for investments in the on-farm processing of agricultural products and marketing have been implemented through support for improving the quality of wine and brandy, incentives for control stamps and record stamps for wine, and for the procurement of equipment in the meat, milk, vegetables and grapes sectors.

The level of support amounts to a maximum of 40 percent of the investment (55 percent for agricultural holdings in areas with difficult agricultural working conditions), while for beneficiaries who are authorized users of some of the designations of geographical origin or who have certified organic production, the level of support amounts to 50 percent (65 percent for agricultural holdings in areas with difficult agricultural working conditions).

Standards

In terms of institutions and legislation related to food safety and control, Serbia has made some progress in alignment with the European Union's *acquis communautaire*, but regardless of the implemented reforms, marketing standards are still problematic. Even those elements of the EU food safety system that are transposed into national legislation and policy practice are in a very rudimentary form, with an incomplete regulatory framework and/or other constraints that make them non-functional. The European Commission's 2018 progress report for Serbia emphasizes that "Serbia should take steps towards aligning with the other elements of the [common market organisation], including sector specific schemes, marketing standards, support for public and private storage, marketing and producer organisations, market intervention" (EC,

²⁰ Some examples of such projects are:

- The project "Sustainable tourism in the function of rural development," implemented by five United Nations agencies in four pilot regions of Serbia: Southern Banat on the Danube, Eastern Serbia, Central Serbia and the Lower Danube region.
- The project "Regional value chain in the field of inter-municipal cooperation," implemented with the financial support of the United States Agency for International Development's Sustainable Local Development Project and led by the Regional Development Agency Zlatibor in Serbia (2013).

2018). Moreover, the report's chapter on food safety warns of slow progress in the areas of food safety, veterinary and phytosanitary policy.

Hazard Analysis Critical Control Point (HACCP) certification is a mandatory precondition for export-oriented food processing companies in Serbia. Major European certification companies have their offices in Serbia, along with the domestic certification bodies. The majority of export-oriented companies possess such certifications as ISO 9001:2008, ISO 14001:2008, ISO 22000:2009, British Retail Consortium (BRC) Standard, International Food Standard (IFS), Halal, Kosher, PDO/PGI/TSG systems²¹ or GOST-R, depending on the buyer's demand. Currently, there are between 450 and 500 producers in Serbia who are certified by the GlobalG.A.P. standard, and this number is constantly increasing. Most of them are export-oriented and engaged in the production of fruits and vegetables.

A national strategy for upgrading agrifood establishments has been adopted, but its implementation has yet to begin. The same is true of the national monitoring and control programme for food of animal origin, while a strategy for the management of animal by-products has yet to be adopted. The annual programmes of plant health measures have been adopted, but legal framework for the sustainable use of pesticides and a national action plan to reduce their impact are still missing.

The main institutional shortcomings in implementing laws regulating agriculture and food products are in the capacities of agricultural inspections and the unfinished system of national reference laboratories. Generally, the main advancements achieved are in the field of designations of geographical origin, wine, and the certification of organic products.

There is a network of authorized state-owned laboratories dealing with food safety, and there are authorized national reference laboratories responsible for diagnosing certain infectious animal diseases and examinations of residues of veterinary drugs, pesticides and other harmful substances in food. The competences of these laboratories are confirmed by accreditation and continuous external quality checks by EU reference laboratories. Due to insufficient technical facilities and equipment, some tests cannot be carried out in the country. The national reference laboratory for milk testing was opened in 2017, but it is yet to be accredited. In accordance with the *Food Safety Law* (Article 18) of Serbia,²² the Directorate of National Reference Laboratory was established as an administrative body within the Ministry of Agriculture, Forestry and Water Management to perform tasks within the field of food safety, animal health, plant health, agricultural and decorative plants, residues, milk, and the plant gene bank.

²¹ Protected designation of origin (PDO), protected geographical indication (PGI), and traditional specialties guaranteed (TSG).

²² Official Gazette of the Republic of Serbia No. 41/2009.

Access to services

Services such as logistics, transportation, crop harvesting, and post-harvesting handling, distribution and sale, together with research and development, are crucial in enabling access to markets for farmers. In order to understand the challenges faced by smallholders and family farms in assessing these services, two aspects are relevant:

- the availability of agriculture-related services and the demand for them; and
- service providers and the quality of services they offer.

The available agriculture-related services

Although the available agriculture-related services and logistical support to farmers have increased in recent years, this is mostly the case only with export-oriented sectors and producers. For smallholders and family farms that do not produce marketable commodities, the matter is still complex and challenging.

This section briefly describes the availability of some of the most important services by subsectors.

Agricultural Holdings in Serbia are generally well-equipped with tractors (the average amount of utilized agricultural area cultivated with farmers' own tractors is 8.5 ha), but this is not the case with the pre-harvesting and seeding machinery or with specialized agricultural machinery intended for fruit and vegetable production. Smallholders and family farms are equipped mostly with used and technologically outdated mechanization (99 percent of tractors are more than ten years old), with relatively higher fuel consumption and operating losses. For smallholders and family farms, the average amount of utilized agricultural area per own two-axle tractor is 4.4 ha. Smallholders and family farms that do not have their own machinery must pay for services that don't have problems to come to them. Machine rings, cooperatives and similar models of the joint use of machinery have been established, but these are not common practice. The supply of agricultural machinery and equipment, as well as models of financing, is rich. Smallholders and family farms, however, usually opt for simpler machines, produced domestically by small and medium enterprises and private workshops. There is a well-developed sector of metal workshops that produce agricultural machine tools, spare parts and equipment at competitive prices (EIB, 2016).

Large livestock farms have made significant investments in improving standards and in building and expanding existing capacities. These facilities are technically well-equipped and meet the majority of the requirements of the environmental and animal welfare standards. Nevertheless, the handling and storage of manure remains one of the key problems faced by both large agricultural holdings and smallholders and family farms.

Institutions that supply support activities for livestock production perform various services, such as breeding, pedigree record services, boarding horses, livestock spraying and more.

According to the available data, there are more than 150 veterinary stations. Artificial insemination of cattle is common, but artificial insemination in pig breeding is carried out on large farms, while small producers usually opt for natural mating. Subsidies for artificial insemination of livestock are available from agricultural budgets of local self-governmental units. Seed for artificial insemination is derived from animal reproduction centres, as well as from semen storage and distribution centres, which have been formed in recent years.

The input market for fruit and vegetable production has been improved with the growth of investments in these sectors. Subsidies for establishing new plantations and expanding existing ones, as well as for investments in anti-hail nets, irrigation equipment and more, are available from national and local agricultural budgets. In the fruit, vegetables and grapes sector, critical points are the lack of labour during seasonal work peaks, the high costs of harvesting, and the lack of storage capacities and collecting centres that have cooling facilities to preserve fruits and vegetables. The development of wholesale markets is particularly important, since these are places where food safety standards and food storage standards are being monitored.

The system of public warehouses and storage services is underdeveloped. The number of certified public warehouses is small, and their regional distribution is inadequate. FAO and the European Bank for Reconstruction and Development have supported institutional capacity-building to promote the use of warehouse receipts and have assisted in the creation of an indemnity fund to cover fraud risk in warehouses (see Section 4.2). This resulted in the adaptation of the *Law on Public Warehouses for Agricultural Products*²³ and the establishment of licensed warehouses (in other words, the ability for short-term loans to be disbursed based on warehouse receipts). However, after some initial success, the system still is not fully functional.

The service providers

The whole logistics and service activities were in the past performed by farmers cooperatives, which played key roles in improving access to markets and information and in providing financial services. Although cooperatives have a long tradition in Serbia, their activities since the 1990s has been hampered by legislative challenges, insufficient support mechanisms and other factors. The cooperatives sector in Serbia has remained outside the focus of institutional and economic reforms. The status of collective property remained unregulated for too long, which significantly reduced the chances of effectively adapting to new market conditions. Official data on the number of farmers' cooperatives vary according to the source, but the total is somewhere around 1 600, with roughly 1 100 of them in active status. Many of these cooperatives are fictitious, organized as cooperatives while in reality counting no more than a few members. It is estimated that the number of members of agricultural cooperatives in Serbia is about 31 000, while 115 000 subcontractors cooperate with them. These subcontractors do not to take part in

²³ Official Gazette of the Republic of Serbia No. 41/2009.

sharing the income provided by cooperatives. Many cooperatives were established after 2000 within donor projects; these mostly remain small, with insufficient capital.

In the environment created after the collapse of cooperatives, the “empty space” was partially filled by private companies, newly established cooperatives and associations, and civil sector organizations. Currently, they are playing increasingly more important and diverse roles in delivering logistical support and services. There are examples of non-governmental organizations, local self-governmental units and farmers’ associations establishing functional linkages and partnerships related to the promotion of local products. However, few of these initiatives remained sustainable after the initial enthusiasm, with the majority reducing their activities to the organization of local events and trade fairs, supported by municipality agricultural budgets. Partnerships formed in the process of registering geographical designations of origin or other forms of the branding of local products are often for “one-time use,” guided most often by the expected benefits of the right to use the protected designation and less frequently by the objective capacity for creating stable business connections and expanding the networks of participants.

The general impression is that efforts and funds have been invested in promoting domestic or local product quality, but that these products often are not available in stores. Simply put, promotion has been an objective in and of itself, without contributing to such things as higher supply, greater sales or the involvement of a larger number of holdings.

3.2.5 Access to finance

This chapter describes the agricultural financial services market in Serbia and provides deep insight into the access of smallholders and family farms to each of the subsectors.

Poor access to finance is recognized worldwide as a critical inhibiting factor to the development of the agriculture sector and the survival of smallholders. This is the case in Serbia, too. According to The World Economic Forum’s *Global Competitiveness Report 2018*, access to financing is a major constraint for business in Serbia (World Economic Forum, 2018). The country’s position is relatively low (78th out of 137 countries), and the financial market development (101st position) and the affordability of financial services (116th) are identified as being among the most problematic factors. The World Bank’s flagship report *Doing Business 2018: Reforming to Create Jobs* ranks Serbia No. 101 with regard to the development of the financial market, stating that further improvements – including in the field of accessing credit – remain to be made (WB, 2018).

Agricultural loans subsidized by the Ministry of Agriculture, Forestry and Water Management

Lower interest rates, particularly for investments in less-developed regions and in the agricultural sector, have been widely used policy instruments in Serbia. The first agriculture loan programmes for family agricultural holdings in Serbia were launched in the 1970s as part of the

“Green Plan” of the former Yugoslavia. Besides providing a comprehensive framework for agricultural development, the Green Plan stimulated the development of family farms by providing low-interest loans through social (state) sector organizations with which the farmer had a cooperative agreement. Basically, until 1994, the financing of agriculture was entirely under state control, as the loan fund was covered by the emission of primary money.

Political and economic instability in the 1990s resulted in a significant decline in the Serbian economy, the collapse of the financial system, and hyperinflation. After the reconstruction of the financial system in 1994, agriculture lost its privileged status. At that time, the financing of agriculture through loans from the National Bank was abandoned, and agriculture had to rely on commercial banks for loans. The sector was left without any permanent and safe financing source for its specific use.

In 2004, the Ministry of Agriculture, Forestry and Water Management (MAFWM) reintroduced a model of subsidized short and long-term loans for agriculture, under more favourable conditions than the market conditions. Short-term loans were granted to registered family agricultural holdings, with the interest rate of 5 percent and a repayment period of 12 months. Long-term loans (three to five years) were granted through commercial banks for investments in farm modernization. This model of lending was very popular with both banks and agricultural holdings, and it continued to exist (with some minor changes) until 2010.

In 2010, a new model of long-term loans was established in which interest rate subsidies were provided in order to encourage banks to lend to the sector. The participation from banks was 60 percent of the capital, with the other 40 percent coming from the MAFWM. The model was such that banks’ funds had to be repaid in the first three years of the repayment period, at the interest rate according to the bank’s business policy, while the amount of the MAFWM had to be repaid in the two subsequent years, without interest charged. This model (in which only the interest rate was subsidized, but not the principal), was less popular with banks – though quite appreciated by farmers, as the annual interest rate was 5 percent and loans were dinar-oriented with flexible repayment terms.

In 2017, a new model of subsidized loans was introduced, with an interest rate of 3 percent. Interest rates of 1 percent are applied to young farmers (40 years old or younger), female holders and farmers residing in areas with difficult agricultural working conditions. Repayment periods are from one to three years, except for the purchase of agricultural machinery for crop production, in which case it is possible for loan repayment terms to be as long as five years. The budgetary support for subsidized interest rates for long-term loans in 2017 was EUR 5.4 million, which was granted to about 5 700 applicants. However, many businesses and farmers are not able to access these programmes, and the number of loans that have been subsidized is a very small segment of the overall lending.

Loans offered by banks

The total agricultural loan portfolio of banks in Serbia has recorded steady growth and diversification of credit products offered to farmers. This includes short-term business loans for working capital and investment loans for such purposes as the purchase of a house, machinery, equipment or land or for the construction and renovation of farm buildings. Lending conditions are tailored to the specifics of agriculture and are flexible in terms of grace periods, differing repayment periods, variable repayment schedules, contract collateralization and more.

According to Kovačević (2018), the total portfolio of agricultural loans approved by commercial banks in November 2017 was about EUR 1.035 billion, out of which loans granted to registered agricultural holdings were about EUR 470 million (45.4 percent), while loans granted to companies in the agriculture, forestry and fishery sector amounted to EUR 565 million (54.6 percent).²⁴ About 22 percent of the total lending was in short-term loans, a relatively low figure; many farmers prefer using barter agreements.

The factors determining banks' credit decisions include the borrower's creditworthiness, the business performance of clients, and historical data. As for natural persons, only employed people and farmers are eligible for bank loans.²⁵ A farmer as a natural person is understood here as a holder or member of a family agricultural holding, in accordance with the *Law on Agriculture and Rural Development*. This assumes that the farmer is registered in the Farm Register. Most of the banks are unwilling to provide loans to unregistered farmers due to the high estimated risk of losses. According to the European Investment Bank, the problems farmers face in obtaining bank credit are related to lack of financial information and high debt-to-asset ratios (as the value of their assets, usually related only to land and livestock, is low) (EIB, 2017).

It is estimated that around 70 000 to 80 000 farmers have credit history, while about 50 000 farmers have credit debt. Banks are more active in lending to farmers in Vojvodina Region, where the demand for finance is highly concentrated. It is estimated that less than 5 percent of all agricultural lending is made in Southern Serbia, with over 70 percent in Vojvodina and the remaining in Central and Western Serbia (USAID, 2013). This can be explained by better information for farmers, better institutional preparedness to provide collateral (such as land records and development funds), and a larger number of market-oriented agricultural holdings in Vojvodina Region.

Since the 2000s, the agricultural financial market in Serbia has expanded and improved significantly. The typical constraints – limited trust in the banking sector among farmers (as a result of previous bad experiences from the 'pyramidal' schemes in the 1990s), lack of

²⁴ According to data from the National Bank of the Republic of Serbia, at the end of 2017 the total amount of bank claims in the corporate sector was EUR 640 million (6.8 percent of the total bank claims on enterprises).

²⁵ According to the *Law on the protection of users of financial services* (Official Gazette of the Republic of Serbia No. 36/2011 and No. 139/2014).

experience and expertise in preparing business plans, too-high interest rates indexed to the EUR, collateral problems (unfinished cadastre, non-existent credit history) and others – have been overcome. This is partly due to higher engagement of banks and advisory services in the farmers' education (Van Berkum and Bogdanov, 2012). The biggest limitation is market volatility, which makes farmers unsure and reluctant to get credit.

Box 4: Behavioural analysis of farmers' decision-making on credits and investments

According to research conducted via behavioural analysis in Bosnia and Herzegovina, North Macedonia and Serbia, farmers intend to invest but do not get credit.

“The intention to invest on the farm in the next three to five years is moderate to strong (mean 3.4 in Bosnia and Herzegovina, 3.5 in North Macedonia up to 4.0 in Serbia). However, the intention to get credit to co-finance an RD investment is weak in all countries (mean 2.3 in Serbia and Bosnia and Herzegovina, and 2.6 in North Macedonia). This corresponds to the strong risk perception by farmers to get credit to co-finance a RD project (mean 1.8 in Serbia, 2.1 in North Macedonia and 2.3 in Bosnia and Herzegovina).”

Source: Martinovska Stojcheska *et al.*, 2016.

Barter transactions

Barter transactions between value chain players (food-processing companies, cooperatives, buyers/traders, integrators) are the most important source of lending for family agricultural holdings in Serbia. This financing system for agricultural inputs was widely used in the 1970s and 1980s, and particularly in the 1990s, when it was the only source of lending at the time of inflation.

Under this system, farmers that hold contracts with processing companies, cooperatives or integrators are provided necessary inputs in exchange for crop surplus sales upon harvest. These contracts are mostly used in the production of wheat, sunflowers, sugar beets, raspberries, some types of vegetables and, to some extent, soybeans and maize. In livestock production, these types of contracts are rare.

Although farmers are aware that this type of lending is more favourable to the other party, they see an advantage in having a guaranteed market for their output. In this system, however, not just the lending interest rates are often unclear, but also the input prices. The terms of lending are set based on the price parity ratio defined before sowing and are not transparent to borrowers, making it difficult for them to compare interest rates with credit offered by banks. The cost of such loans is, in most cases, higher than with bank credit, and farmers are poorly informed of the levels of credit indebtedness in connection to the input prices. This form of

barter agreement sometimes leads to situations in which buyers (integrators, cooperatives and processors) would earn greater profit from these hidden interest rates than from actual product sales. The system usually binds the farmer to a single processor or integrator, reducing choice when it comes to sale or credit options. There are no official data on the amount of this type of lending, but estimates are that it accounts for at least EUR 100 million (USAID, 2013).

Leasing companies, microfinance and the agricultural insurance system

The financial leasing operations in Serbia are regulated by the provisions of the *Law on Financial Leasing*.²⁶ There are 16 registered leasing companies, of which eight are under the ownership of foreign legal entities, while other eight are domestic. Financial leasing companies mainly deal with transport and car financing. Agricultural leasing is a small segment of lessors' operations and is limited to tractors, combines and medium-sized equipment investments. It is estimated that at the end of 2015, the agricultural sector represented 4.5 percent of all transactions, amounting to more than EUR 433 million (EIB, 2017).

The legal and regulatory framework in Serbia prevents the existence of a microfinance sector (i.e. direct lending by non-banks), so basically the supply of microfinance services is very limited. As for now, microcredits are provided only through banks, while control is performed by donors and tax authorities. The two microcredit institutions, AgroInvest and Micro Development, operate in a semi-grey zone. Complex operational procedures lead to higher costs which, in the end, result in higher interest rates being charged to already more vulnerable consumers (USAID, 2013).

The agricultural insurance system in Serbia is generally rated as undeveloped. There are no official and consistent data on the number of insured farmers according to farm size, but most sources state that insurance is mainly used by big, professional agricultural producers and agricultural companies. It is estimated that insurance covers only 10 percent of the total sown area.

There are two forms of agricultural insurance on the insurance market in Serbia:

1. *Insurance of crops and fruits from natural hazards*, in which the risks covered by insurance include basic risks (insurance against hail, fire and thunder damage), and additional risks (floods, storms, and spring, autumn and winter frost). Some companies recently have included new products, such as insurance against the loss of quality in seed corn due to autumn frost, insurance against the loss of quantity and quality of table grapes, insurance against the loss of quantity and quality of fruits, and insurance of crops against excessive precipitation and droughts.

²⁶ Official Gazette of the Republic of Serbia No. 55/2003, No. 61/2005, No. 31/2011 and No. 99/2011.

2. *Animal insurance* also covers basic risks (sickness, death, forced slaughter, forced slaughter for economic reasons, forcible killing) and additional risks (loss of calves at birth, loss of reproductive ability of cows and sheep, etc.).

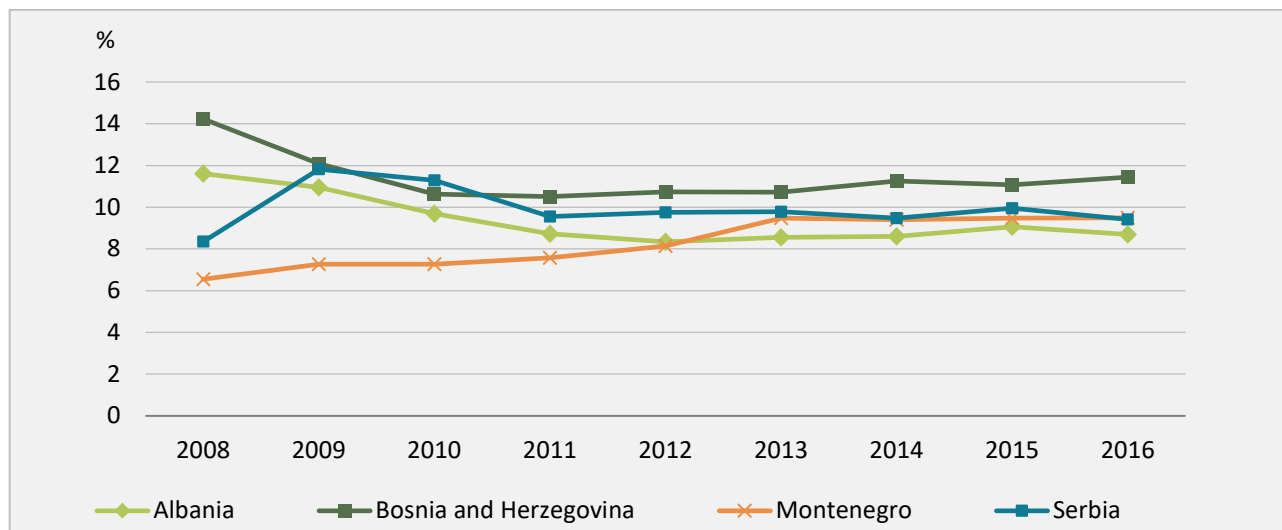
The MAFWM began to subsidize insurance premiums for registered agricultural holdings in 2007. In the first two years, the subsidies accounted for 30 percent of the premium, only to be increased to 40 percent starting in 2009 (45 percent for areas with natural constraints), with a limited maximum amount of incentives depending on the types of crops. The number of agricultural insurance policies is increasing, but it still is relatively small. According to data from the National Bank of Serbia, there were about 30 000 insurance policies in crop production in 2016 and more than 5 500 for animal insurance.

Remittances

Serbia has huge diaspora population and therefore a significant inflow of remittances. The national literature on rural outmigration is vast, but investment patterns, especially of migrant-sending rural households, are not investigated (Bogdanov and Babovic, 2016).

According to United Nations Conference on Trade and Development data, remittances account for about around 9 percent of Serbia's gross domestic product (Figure 23).

Figure 23: Percentage of personal remittances in Serbia's gross domestic product



Source: UNCTAD (<http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx>) [Cited 26 August 2018].

More recent data are not available, but it was estimated by the former Ministry of Diaspora in 2012 that the Serbian diaspora invested about EUR 550 million into approximately 1 000 small and medium enterprises in the country, which employ about 25 000 people (Grečić, 2016).

Box 5: Diaspora investments in agriculture

The “hometown investors” segment of the diaspora invests money in Serbia because it is their place of birth or origin, and such funds are focused on organizing small businesses in agricultural production or manufacturing in other industries, but with a low level of sophistication in the production chain.

Mr. Mile Jovanović, from Despotovac, invested the money he earned by working in Italy into blueberry production in Serbia. He imported blueberries from Holland and planted them on a plot of land that his father in Despotovac owns by using the latest technology in blueberry cultivation. He continues working in Italy but comes back to Serbia twice a year to help in the enterprise’s business organization and development.

Mr. Danijel Trajković, from Veliko Gradište, returned from Austria to invest his money and knowledge in the production of fresh eggs. Today, his company has 18 000 chickens and produces 15 000 eggs per day. The company, which has six employees, is in solid financial shape, with revenue increasing year after year. He chose Veliko Gradište for investment because he was born there.

Source: Pavlović, 2017.

3.2.6 Education, research and development, and innovation in the agricultural sector

This chapter is about institutions dealing with agriculture-related knowledge generation and transfer, and it also covers the access of smallholders and family farms to their services. This chapter will present the overall system of institutional structures, from the performances of education and research institutions to the ways in which farmers can access a variety of information sources.

Education and research

Serbia has a comprehensive agricultural education system, organized through a number of secondary agricultural schools and faculties. The whole system is under the authority of the Ministry for Education, Science and Technological Development (MESTD), which is responsible for the design and implementation of the curricula.

The network of secondary agricultural schools consists of about 60 schools dealing with certain aspects of agricultural production, veterinary, forestry and food processing. The agricultural schools are evenly distributed throughout the country, and after grammar schools, are the most widespread. These schools have their own experimental fields for practical training, and they usually have student dormitories.

Box 6: Secondary agricultural schools

The Agricultural School in Pozarevac is the oldest secondary agricultural school in Serbia. The school was opened in 1872 under the name The Agricultural Forestry School. A dormitory for students was opened in 1996. Today, it is one of the most modern secondary vocational schools. The Institute for the Protection of Cultural Monuments has declared this school, with its surrounding area, for the cultural heritage of the Republic of Serbia. Annually, the school enrolls more than 400 students for eight education profiles in the fields of agriculture, veterinary, horticulture and food processing. Practical classes are carried out in the “school economy” (experimental field), which has 80 ha of land, and in the facilities for livestock, the veterinary clinic, the bakery, the fruit and vegetable processing workshop, and the greenhouses.

Source: <http://www.poljsk.edu.rs/index.php>.

The state-owned institutions of higher education in the field of agriculture include faculties of agriculture (Belgrade, Novi Sad, Čačak, Novi Pazar), faculties of veterinary medicine (Belgrade and Novi Sad) and a faculty of forestry (Belgrade). All of these faculties have various units specialized in agricultural sciences, such as crop science, zoo techniques, food processing, horticulture, land management and agro-economics. In addition to the state agricultural faculties, there also are private universities that educate professionals of different profiles related to agriculture, and a great number of their departments are located in smaller cities.

The publicly financed research and developmental institutes that registered (accredited) by the Ministry for Education, Science and Technological Development include (besides academic institutions) several institutes dealing with specific topics of agriculture, such as animal husbandry, vegetables, plant protection and food technology. Most of them are well-equipped, with modern facilities, but a large emigration of the best-educated young people may soon cause a research capacity gap.

Besides the “brain drain,” another challenge faced by higher education is the lack of any linkage with practical experience. Most agriculture students lack practical knowledge, even if practical work and training in the field are an obligatory part of the curricula. This is because students hardly have the chance to conduct practical lessons in privatized companies, which are reluctant even to allow daily visits of students.

The funding of research and development in relation to the gross domestic product in Serbia is less than 1 percent, well below the EU-28 average of 2.06 percent, according to Eurostat. However, new knowledge and technologies in the agrifood sector are, for the most part, generated by projects funded by the MESTD and the Secretariat for Science and Technological Development of the Autonomous Province of Vojvodina.

The public research system gives little attention to applied research related to the specific needs of family farms. Priorities often are not aligned with the real needs of farmers and industry, since the research activities agenda is largely driven by academic achievements and recognition by scientific community (papers published), much less by practical relevance and successful adoption and implementation.

In general, there has been a visible increase in the degree of innovation in the agriculture sector, with several enterprise start-ups beginning to provide new technology related to climate change mitigation and adaptation. Recent data from MESTD show that electronics, telecommunications and information technologies are the most successful research areas in terms of the number and commercialization of new technical results, while biotechnology and agriculture are the most successful in the number of patents. Of the total number of patents in technological development projects funded by MESTD, 57 percent belong to biotechnology and agriculture (MESTD, 2017).

Box 7: BioSense Centre of Excellence for Agriculture and precision agriculture

Through collaboration with the Serbian Ministry of Education, Science and Technological Development (MESTD), the BioSense Institute at the University of Novi Sad is set to become the European Centre of Excellence for Agriculture. Moreover, with the opening of the new centre, Serbia will become the first non-European Union country to be granted free access to the EU's satellite data.

As part of this initiative, a digital platform, AgroSense, has been made available for all farmers via their mobile phones. The AgroSense digital platform provides support for farmers and agricultural companies in monitoring the growth of crops and planning agricultural activities. It represents an important step in the digitalization of agriculture and an increase in efficiency and competitiveness of Serbian producers.

The following basic services are available to users:

- diary of agricultural activities;
- weather forecast for the location of the parcel;
- satellite indices of crops that describe plant growth, photosynthesis intensity and the availability of water and nutrients;
- overview of soil analysis;
- overview of photographs of crops;
- information about smart technologies used in agriculture; and
- latest information about the occurrence of pests and plant diseases.

Basic services are completely free of charge.

Source: <https://agrosens.rs/#/app-h/about>.

Extension and advisory services

According to the *Law on the provision of advisory and professional activities in the field of agriculture*,²⁷ advisory work in agriculture can be performed by companies founded by the state, as well as by legal entities and entrepreneurs, if they are registered for such activities in the Register of Business Entities. Agricultural advisors may carry out advisory work in agriculture if they are licensed to perform advisory services in agriculture, if they are registered in the Register of Agricultural Advisers, and if they are employed by a company or legal entity or with an entrepreneur registered for these activities.

The Serbian Agriculture Advisory Service (AAS) is organized in a network of 35 agricultural advisory centres, with more than 250 advisors employed. The activities of the AAS in Central Serbia (22 regional centres) are coordinated by the Institute for Science Application in Agriculture (ISAA). There are 13 regional centres in the territory of Vojvodina Region (out of which one is private), and control and coordination of their activities is conducted by the Provincial Secretariat for Agriculture, with assistance from the Agriculture Advisory Service of Novi Sad. In accordance with the law, ISAA and AAS Novi Sad are the authorized organizations to develop annual plans for the training of advisors. The Expert Advisory Council approves the plans, and the realization of those plans is financed from the state agricultural budget and from the budget of the Autonomous Province of Vojvodina.

The advisory services' activities include trainings, farm visits, workshops, winter schools, promotion of the agricultural policy measures of the Ministry of Agriculture, Forestry and Water Management (MAFWM), organization of field days, and more. Besides that, they provide inputs for the market information system of the MAFWM and the Farm Accountancy Data Network. However, priority is given to information and education of producers, and in particular the monitoring of "selected" agricultural holdings. Selected agricultural holdings are those on which the effects of innovative practices (managerial, farm finances, technical and technological modernization, etc.) are monitored and analysed. Advice, assistance and other activities that producers receive from extension agents are free of charge to all beneficiaries.

Individuals, institutes, and private domestic and foreign companies also deliver consultancy services to the agrifood sector. Their activities are mostly oriented to the needs of commercial agricultural holdings.

Linkages among researchers, extension services and farmers in Serbia exist, but interactions among them are weak. The whole system faces many shortcomings unrelated to scarce funding. Research and extension are insufficiently linked with agricultural holdings. This is not just because they are separate structures driven by different agendas and interest, but also because of linkage problems. Education and research are missing feedback from the field, and they face resource deficiencies and inefficiencies in their management structures.

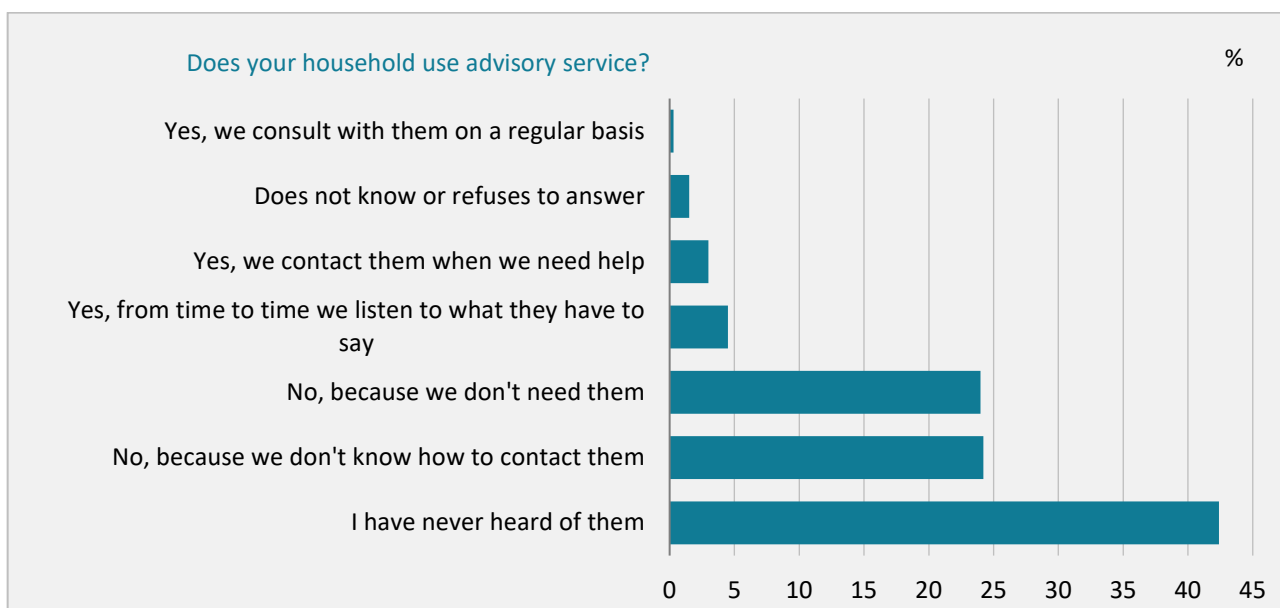
²⁷ Official Gazette of the Republic of Serbia No. 30/2010.

Access of agricultural holdings to knowledge and extension services

The farmers’ needs for advisory services, in addition to the availability of these services, depend on the sector, region and farm size. Big, commercially oriented farms and companies mostly rely on direct links with input suppliers and importers and on the latest foreign technology. This particularly happens when they also act as traders or integrators and distribute inputs to farmers with whom they have barter agreements. These agricultural holdings often cooperate with brand companies dealing with such things as agrochemicals and seeds, and they certainly influence farmers’ demands for new technologies. As such, they have important roles in the transfer of knowledge. The types of services for which these agricultural holdings and enterprises hire domestic experts are mostly those related to legal and regulatory issues, financial management and information technology, among others. When they invest in new businesses, such as with plantations, machinery and equipment, they hire domestic consulting companies or experts to obtain specific expertise and to support their management.

When it comes to smallholders and family farms, research has shown that smallholders in Serbia highly prioritize the need for new knowledge and technologies, but they themselves do not take the initiative to get information. Research on a sample of small rural households with agricultural holdings (Bogdanov, 2007) indicates that fewer than 8 percent of them have occasional contact with the Agricultural Advisory Service. The results also reveal that more than 40 percent of smallholders were not aware that extension services exist, and an additional 24 percent had a need for such services but did not know how to reach them (even though the network is public, widespread and has a long tradition). Moreover, another 24 percent of respondents said they do not have a need for professional services.

Figure 24: Farmers’ interest in extension services



Source: Bogdanov, 2007.

Farmers primarily reported informal channels as their main source of knowledge and information. “Communication with neighbours” was listed by 35.4 percent of respondents, and “electronic mass media” was listed by 25.6 percent. In addition, 15.5 percent of respondents said that they do not obtain any information (Bogdanov, 2007).

The type and quality of information provided by mass media also merits attention, since this source of knowledge and information is often ranked highest by farmers. In Serbia, broadcasts focusing on agriculture topics have been made since the emergence of national television in 1958 and are very popular among farmers. The research conducted by Šarković (Šarković, 2016) was designed to evaluate the content of television programmes intended for farmers, with a focus on their educational function. This research has shown that educational subjects rarely have been present in these programmes, but also that public (national) television broadcasts these topics more often than do commercial television stations.

3.3 Environment, nature and climate change

This chapter describes the environmental setting and problems and challenges that impact the agriculture sector. It deals with environmental matters of key relevance for smallholders and family farms, including soil characteristics and degradation, climate change, irrigation and drainage infrastructure, and agrobiodiversity.

3.3.1 Soil

The territory of Serbia covers an area of 88 361 km², of which the lowland (up to 200 metres above sea level) occupies about 37 percent, while high mountain area (above 1000 metres above sea level) covers 11 percent. Flat ground and slightly sloped terrain (with grades between 0 and 10 percent) make up about one-third of the land, while the proportion of steep and very steep land (slopes with grades greater than 30 percent) occupy over 40 percent. It is estimated that about 60 percent of agricultural land has soil that belongs in Class I through Class IV, while the rest is in class IV through VIII, which are neither suitable for tillage nor profitable crop production, because of its limited quality. The soil is characterized by favourable pedological characteristics, where chernozem, cambisol, vertisol and wetland black soil cover over 3 million ha, putting this land into classes of very high quality.

The main threats to the soil in Serbia include a decline of organic matter content (due to a reduction in the number of cattle), sealing, salinization, acidification, and erosion. No analytical data are available for soil salinity or sodicity for the entire territory of Serbia. The major agents of erosion are wind (in Vojvodina) and water (in Central Serbia), affecting 80 to 85 percent of the agricultural land. Terrain instability, with occurring landslides and landfalls, is present in about 25 to 30 percent of the territory.

Unsustainable land use and poor agricultural practices have resulted in soil erosion, a reduction of nutrients and organic matter, and soil degradation. As an example, modern manure management practices are rarely applied; 95 percent of agricultural holdings keep manure in heaps in open spaces, without any protection against leakage into surface waters or groundwater. In addition, manure from livestock farms is used on 12 percent of the utilized agricultural area, while 21 percent of the utilized agricultural area receives no fertilization (Agricultural Census, 2012).

The Ministry of Agriculture, Forestry and Water Management, through the Serbian Agricultural Advisory Service, provides recommendations for fertilizing and assistance in controlling soil fertility, and farmers are obliged to control the fertility of agricultural land. However, supervision is not carried out sufficiently, due to the lack of resource capacity (human and budget resources) of the inspectorate.

3.3.2 Climate change

The climate in Serbia is moderate continental, with diverse local specificities. Climate change projections indicate that Serbia faces a high probability of continuing temperature increases, along with more frequent and prolonged droughts and wildfires.

Table 11: Historical and future climate in Serbia

Historical climate	Future climate
<p>Climate trends since 1960 include:</p> <ul style="list-style-type: none"> • The average annual temperature increased by 0.15 °C per decade from 1960 to 2015. • The average annual rainfall exhibited no significant trend from 1960 through 2015. • Drought severity increased from 1990 to 2016 relative to 1960 to 1989. 	<p>Projected changes by 2050 include:²⁸</p> <ul style="list-style-type: none"> • An increase in the average annual temperature of between 1.5° C and 2.2 °C. • A decrease in the average annual precipitation of between 1.1 and 3.5 percent, with the largest reductions occurring in July and August. • An increase in the number of consecutive dry days²⁹ by 11 (to 18 percent of the year). • An increase of between 21 to 31 percent in total annual precipitation on extreme rainfall days.³⁰

Source: USAID, 2017.

Over the past two decades, Serbia has been exposed to more frequent natural disasters, compared with the second half of the twentieth century. Previous studies report that there were 2 000 occurrences of natural disasters from 1980 to 1990, whereas 2 800 occurrences were noted in the 1990s (Kovačević *et al.*, 2012; Lukić *et al.*, 2013; Anđelković and Kovač, 2016). These

²⁸ Relative to the data from 1986 to 2015.

²⁹ Maximum number of consecutive days per year with less than 1 mm of precipitation.

³⁰ Annual total precipitation when daily precipitation exceeds the ninety-ninth percentile (calculated from days when precipitation was at least 1 mm).

trends have continued over the past two decades, as the intensity and frequency of extreme weather events have increased and become more severe.

The flooding of large rivers (Danube, Sava, Morava) and flash floods are frequent and challenging hazard events. It is estimated that the potential flooding area in Serbia comprises about 1.57 million ha, out of which 30 percent is agricultural land (GORS, 2014). Over the past few decades, harsh floods have hit Serbia in 1999, 2002, 2005, 2006 and 2014. The majority of these floods occurred during the growing season (April–June), causing severe losses to agricultural production. Still, some recent studies have pointed out more frequent and severe drought (Kovačević *et al.*, 2012), arguing that extreme temperatures and droughts tend to result in more significant economic losses, particularly in the agriculture, energy and water sectors.

Above-average temperatures followed by drought affected Serbia in 2003, 2007, 2012, 2015 and 2017. Furthermore, the years of 2012 and 2017 were among the driest years ever in Serbia, with extremely low amounts of rainfall, heavily affecting Serbia's agricultural production. In 2012, for more than 50 days in row, temperatures exceeded 35 °C, resulting in more than one million hectares of lost agricultural production and damages amounting to more than EUR 130 million.

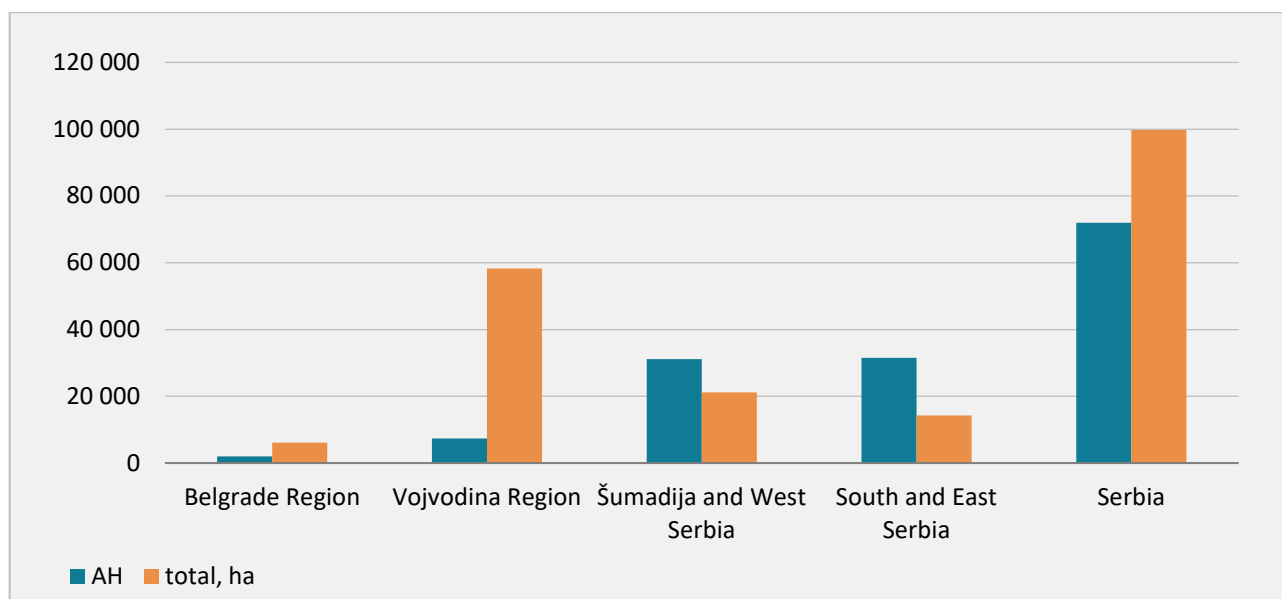
Regardless of harsh consequences of droughts – particularly those of 2012, the prolonged effects of which are still being felt – MAFWM did not provide any direct support to farmers. Risk management measures are not available within the national agricultural budget. The responsibilities of responding to climate change are transferred to local governments so that they can, according to their own needs and capacities, meet the challenges they face.

3.3.3 Drainage and irrigation

Approximately 50 percent of Serbia's agricultural land is affected by poor drainage. The agricultural area covered by a drainage system in 2017 was 1.9 million ha, representing 55 percent of the total utilized agricultural area (UAA). The total area protected from floods was 1.588 million ha, which is an increase of 14.6 percent compared to 2016. The UAA makes up 75.7 percent of the total defended area. Drainage channels and associated structures have been deteriorated by siltation and weed growth, and some pumping stations are inactive. Basically, the whole system has ceased to function totally or efficiently due to lack of maintenance and a breakdown in operational management.

Serbia's irrigation system was built to cover an area of about 150 000 ha, but it is not operational in its full capacity. According to Census of Agriculture data, in 2012 the area that was possible to irrigate was 483 595 ha, and 179 924 agricultural holdings had access to irrigation. However, on average, 107 142 ha were irrigated (3.2 percent of the total UAA) by 11 percent of agricultural holdings during 2010–2012. Besides the low portion of the cultivated area that is irrigated, another problem is the absence of control over the quality of water used for irrigation.

Figure 25: Irrigated land and agricultural holdings that have used irrigation, by region, 2012



Source: SORS, Census of Agriculture, 2012.

The Government of Serbia plans to start the construction of 14 irrigation systems across the country, with financial support from the Abu Dhabi Fund for Development (ADFD). The systems will provide irrigation for 50 000 ha of arable land in Serbia, with 11 of the systems to be located in Vojvodina Region (Ralev, 2017).

3.3.4 Agrobiodiversity

Although it is a relatively small country, covering about 1.5 percent of the European territory, Serbia has a diverse landscape and rich ecosystems with protected areas. Among these are Ramsar sites; biosphere reserves; many important bird areas, important plant areas and prime butterfly areas; and seven UNESCO World Heritage cultural and natural sites. There are 1 200 sorts of agricultural plants and more than 700 species of medicinal plants (out of which some 400 are officially registered and 280 are the subject of trade) (SEPA, 2007; GORS, 2010).

According to the Serbian Environmental Protection Agency (SEPA), the High Nature Value Farming (HNVF) area in Serbia covers 1.2 million ha (19 percent of the agricultural land and 13 percent of the total territory of the country). The dominant type of agricultural land of high natural value is grasslands (about a million hectares). Most of the grasslands classified as HVNF are semi-natural, formed in the forest zone as a result of wood cut. Within the Support for Agri-environment Policies and Programming in Serbia project, a study was conducted to investigate the types of farming systems in Serbia that are likely to be HVNF and important for the conservation of biodiversity, as well as their general characteristics. Ten examples of low-intensity livestock systems in Serbia were described, many of which have the potential to be HVNF systems (Cooper and Pezold, 2010).

The interest in local breeds and varieties, organic production and wild plants has increased in the past two decades, since the market has shown increasing demand and potential. The growth of these sectors is largely dependent on the enthusiasm of local people who are trying to rehabilitate traditions for their own sake, to increase the attractiveness of their tourist and gastronomic offerings, or to make a profit through the reintroduction of traditional or innovative products for niche markets of special food products (Dajić-Stevanović and Đorđević-Milošević, 2018).

Despite the great diversity of natural resources, the wider benefits of agro-environmental products largely are not integrated into the local economy. The exceptions are organic products and products with a protected geographical indication (PGI). PGI has been recognized by donors, local self-governmental units and the Ministry of Agriculture, Forestry and Water Management as a valuable marketing tool to improve market access and promote niche products. For this reason, many projects have been funded to improve the regulatory frame and to support activities related to this certification. Currently, Serbia has 49 products with a registered PGI, including a variety of food products such as processed meat, cheese, wine, honey, fruits and vegetables. However, the fact that only 19 products with PGI have authorized users indicates the necessity for further activities in strengthening the business sector involved in the value chain or in the marketing of PGI products.³¹ In 2016, organic crops occupied a total area of 15 298 ha of utilized agricultural area (including areas in the conversion period) from about 2 000 agricultural holdings. Organic products are usually sold to wholesalers and/or to processors, with whom almost 70 percent of growers conclude contracts prior to the start of the season (Kalentić *et al.*, 2014).

The agro-environmental policy in Serbia is addressed in most strategic and programming documents. The legal framework is in place and in the area of horizontal legislation, which is highly aligned with the European Union's *acquis communautaire*. However, administrative and financial capacities, coordination among national and local institutions, and implementation and enforcement of legislation are critical.

³¹ The registered name of origin, or geographical indication, can only be used by persons who have the status of authorized users of that name or geographical indication and who are registered in the appropriate register. This means that there are 30 products with a registered PGI that cannot use the name because there is no registered interest in production, or the registered users are not active, or they cannot fulfil the standard, etc.

3.4 Rural areas: population, economy and quality of life

Rural development is understood as a complex process that includes the improvement not only of the quality of the physical and natural environment and human capital, but also of the quality of life and the well-being of the population.

In order to overview these diverse aspects of rural development that affect the livelihoods of smallholders and family farms in Serbia, this chapter entails the analysis of population trends and rural demography, characteristics of rural infrastructure, employment, access to and quality of social services (including education, social protection and health care) and outcomes related to human capital in terms of education level and health conditions. It also presents how the rural population perceives different aspects of rural communities and what is their level of satisfaction with different aspects of life.

3.4.1 Population trends

The population trends in Serbia basically reflect the situation of semi-modern society, with still-high percentages of rural populations and of agriculture’s contribution to the overall economy. The society is facing the challenges of a delayed and not very successful post-socialist transformation. The overall population of Serbia is declining, with a negative natural growth rate (-5.1 percent in 2016). Key demographic challenges are population ageing (the average age of the population is higher than 42) (SORS, 2017a), low fertility rates (1.5 children per woman in 2016), depopulation of rural areas, and negative migration balance (Rasevic, 2016).

Figure 26: Population of Serbia by gender and age, estimates for 2016

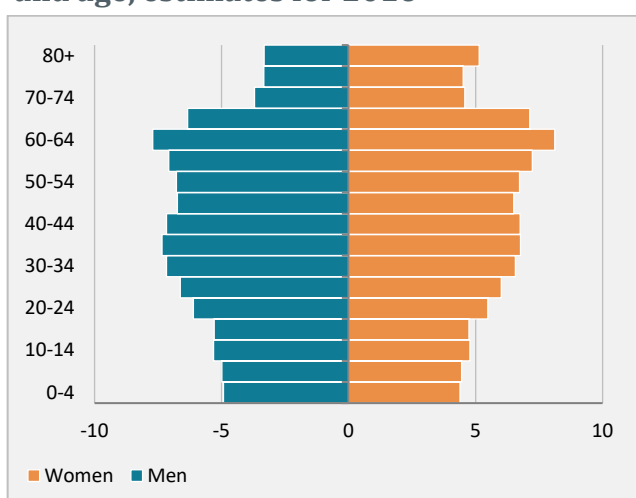
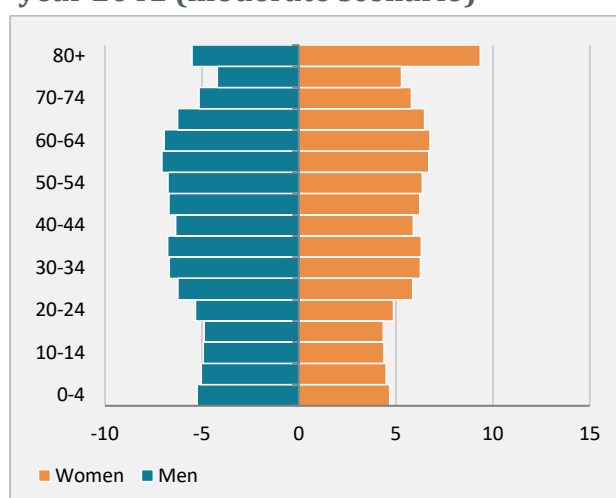


Figure 27: Population projections for the year 2041 (moderate scenario)



Source: SORS, Population statistics.

The ageing index³² was 139.5 in 2016, and according to population projections, the oldest age cohorts (particularly of women) will significantly increase their share of the total population, outbalancing young generations.

Population statistics disaggregated by type of area/settlement are directly available (from open data sets and publications of the Statistical Office of Serbia) only from population censuses. The lack of population statistics related to rural areas represents an important gap in monitoring the situation in rural areas, conducting specific analyses, and grounding rural development policies in a solid evidence base.

In comparison to the overall demographic picture of Serbia, the situation in regard to population and demographic trends in rural areas is worse. Between two population censuses (2002 and 2011), the total population of Serbia declined 4.15 percent (Table 12) due to the negative growth rate and outward migration.

Table 12: Changes in population by type of settlements and regions, 2002–2011

	Regions				
	Serbia	Belgrade	Vojvodina	Šumadija and West Serbia Region	East and South Serbia Region
2002					
Total population	7 498 001	1 576 124	2 031 992	2 136 881	1 753 004
Urban	4 225 896	1 281 801	1 152 295	959 331	832 469
Other	3 272 105	294 323	879 697	1 177 550	920 535
2011					
Total	7 186 862	1 659 440	1 931 809	2 031 697	1 563 916
Urban	4 271 872	1 344 844	1 146 731	963 548	816 749
Other	2 914 990	314 596	785 078	1 068 149	747 167
Index 2011/2002					
Total	95.9	105.3	95.1	95.1	89.2
Urban	101.1	104.9	99.5	100.4	98.1
Other	89.1	106.9	89.2	90.7	81.2
Share of rural population (%)					
2002	43.6	18.7	43.3	55.1	52.5
2011	40.6	19.0	40.6	52.6	47.8

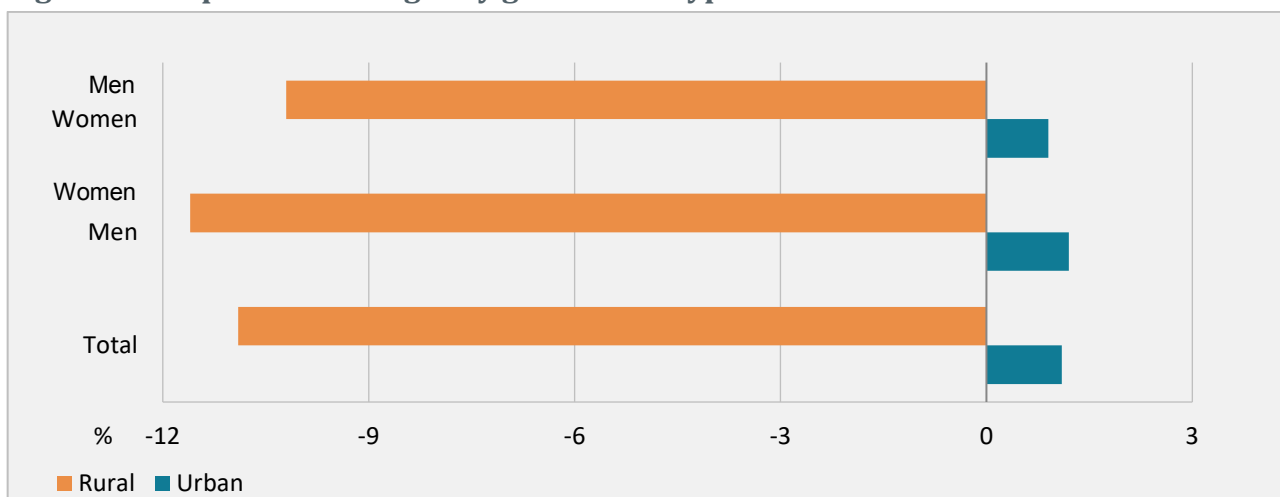
Source: SORS, Population census in the Republic of Serbia 2011.

During this period, the rural population declined by 357,115 inhabitants (10.9 percent). For the first time, the rural population dropped below 3 million, and its share in the total population was 40.6 percent in 2011. There are significant regional differences, with the region of East and South Serbia recording the strongest depopulation trends in rural areas; during these nine years, the

³² The ageing index measures the proportion of the population who are 60 years old and older to the young population (between 0 and 19 years old).

number of inhabitants there declined by 19 percent. The region of Šumadija and West Serbia was the only prevalently rural region in Serbia, according to the 2011 population census, with 52.6 percent of its population being rural (Bogdanov and Babović, 2014).

Figure 28: Population changes by gender and type of settlement. 2002–2011



Source: SORS, Population census in the Republic of Serbia 2011.

The rural depopulation is not gender neutral, as the decline between 2002 and 2011 was higher among rural women (-11.6 percent) than among rural men (-10.2 percent) (Figure 28). One reason for this is the traditional pattern of land and estate inheritance being mainly passed to male descendants, leaving women with few opportunities and few bonds to rural areas. However, there are opportunities in the service economy in cities, and this attracts women from rural areas. Decreases in the female population in rural areas not only influences the further decline of natality, but it also influences changes in the structure of the rural economy. In areas facing these trends, declines were recorded in diary, in the growing of vegetables, and in other forms of agricultural production that traditionally have engaged the female labour force (Bogdanov and Babovic, 2014, p. 25).

This change in the age structure of the rural population indicates a significant decline in the younger population and an increased share of the older population (Table 13). This creates pressure on the rural labour market, particularly in agriculture, and it prolongs the activity of the older population after working age.

Table 13: Population by age and type of settlement

Age	Urban		Other	
	2011	% change, 2002–2011	2011	% change, 2002–2011
0–14	14.5	-6.0	13.9	-21.6
15–29	19.0	-10.3	17.6	-16.1
30–49	28.3	-2.8	25.2	-15.7
50–64	22.7	20.0	23.2	13.3
65 and older	15.6	12.7	20.1	-10.0
Total	100	-	100	-

Source: SORS, Population census in the Republic of Serbia 2011.

Comparisons of urban and rural areas according to some main demographic indicators reveal much a more unfavourable situation in rural areas: The average age of the population is higher, as are the ageing index and the dependency index for the elderly (Table). Every fifth inhabitant of rural areas is older than 65, and for every 100 inhabitants older than 65, there are only 69 inhabitants younger than 15 (and only 52 in East and South Serbia) (Bogdanov and Babovic, 2014, p. 27).

Table 14: Different demographic indicators for urban and 'other' settlements, 2011

Indicators	Urban	Other
Average age	41.3	43.6
Ageing index³³	107.3	144.3
Dependency index – total³⁴	43.0	51.5
Dependency index for children³⁵	20.7	21.1
Dependency index for elderly³⁶	22.3	30.4
Mortality rate³⁷	12.6	16.5
Average number of household members	2.77	3.05

Source: Bogdanov and Babovic, 2014.

³³ Ratio of the population age 65 and older to the population between 0 and 14 years old.

³⁴ Ratio of the population between 0 and 14 years old and 65 years old and older to the population of working age (15 to 64 years old).

³⁵ Ratio of the population between 0 and 14 years old to the working-age population (age 15 to 64).

³⁶ Ratio of the population age 65 and older to the working-age population (age 15 to 64).

³⁷ Number of deaths per 1 000 inhabitants.

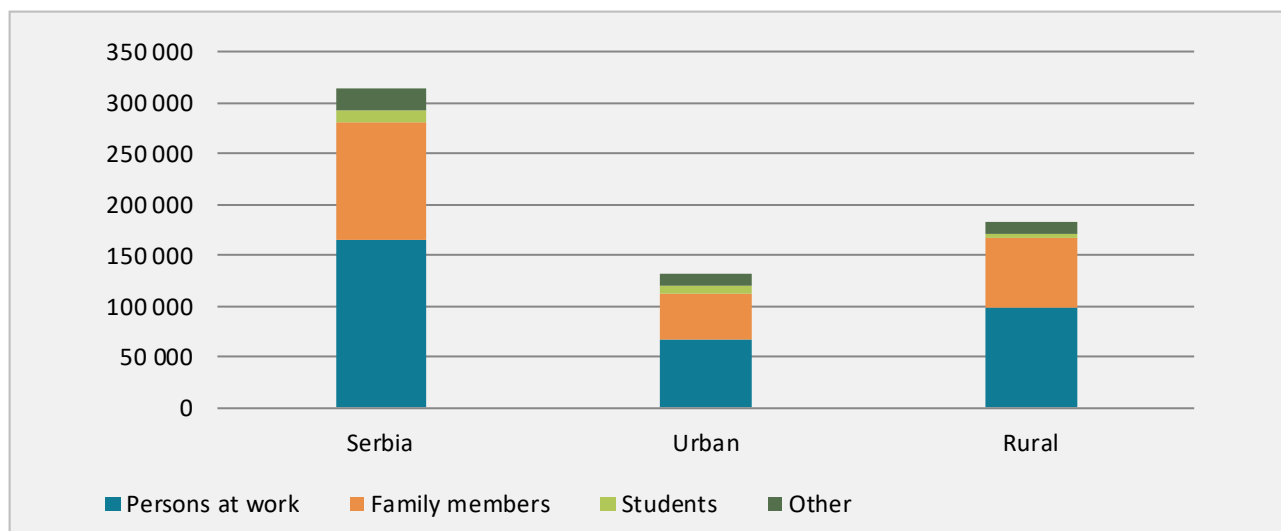
3.4.2 Migration

The emigration of the Serbian rural population is rooted in labour migration policies of Western European countries and special bilateral agreements with southern and south-eastern European states from the mid-1960s. The intense emigration started with the first wave of migrants to Western Europe, and during the 1960s and 1970s, Serbia was one of the most important migrant-sending countries, mostly from its rural areas (over 70 percent of emigrants from the 1970s to 1990s were rural workers, out of which approximately 80 percent migrated to France, Austria and Germany) (Bogdanov and Babovic, 2016).

In the past few decades, the rural areas of Serbia have experienced both outward and inward migration flows. The period after the dissolution of the Socialist Federal Republic of Yugoslavia (during the 1990s) was marked by the largest wave of immigration (refugees and internally displaced persons from ex-Yugoslavian republics), but also by emigration from Serbia. Various “push” factors encouraged emigration and the formation of the Serbian diaspora at that time (Bobić and Babović, 2013): (1) political (disagreement with the prevailing ideology, fear of military recruitment); (2) economic (unemployment, poverty); and (3) humanitarian (refugees and asylum seekers).

The 2011 population census registered 311 400 individuals in emigration, which makes 4.2 percent of total population. Out of the total number of emigrants, there were 181 266 (57.8 percent) rural inhabitants. Among the rural emigrants, the highest numbers were persons working abroad (54.2 percent) and their family members (38.5 percent), followed by students (1.5 percent) and other types of emigrants (5.9 percent) (Figure 29).

Figure 29: External migrants by type of status and type of settlement, 2011



Source: SORS, Population census in the Republic of Serbia 2011.

Research in rural regions with the most intense out-migration has identified two common patterns, driven by different factors (Bogdanov and Babovic, 2016). In East Serbia, the continuous and long-lasting emigration of rural people is closely related to push factors and the

existence of social and family networks. On the other side, a newly emerged ethnic pattern of emigration of national minorities in Vojvodina (South-East Banat) is driven by pull factors and economic opportunities that are not available in the area of origin (Table 15).

Table 15: Out-migration patterns from rural areas of Serbia

	Region with long-lasting migration (LLM)	Region with the new ethnic pattern of emigration (NEEM)
local economy and agriculture system	<ul style="list-style-type: none"> • Remittance-driven family economies; lack of jobs out of farming • Farm structure dominated by medium-sized, mixed family farms • An inactive land market (land left uncultivated) • Unfavourable investment environment of recipient communities • Environmental degradation due to lack of human activity in the area 	<ul style="list-style-type: none"> • Lack of job opportunities out of agriculture • Sharply dual farm structure • Capital-intensive agriculture • Agricultural land leasing market more active than sales • Higher share of income arising from leasing of farmland
Migrant profile, type and patterns of migration	<ul style="list-style-type: none"> • Massive and long-lasting out-migration (from the 1970s) • Different types of migrant families in terms of employment status of members abroad, length of stay, stage of life • New wave of migrants: seasonal workers in middle age; low and semi-skilled; family reunification purposes 	<ul style="list-style-type: none"> • Out-migration of national minorities since 2010s • Migratory flows influenced by immigration policies of destination countries • Pull factors draw migrants towards motherlands (EU countries) • Migration driven by pull factors to settle permanently in destination country • Young people to continue higher education in one of the EU countries • Middle-aged people with families; people with mostly technical job experience (craftsmen entrepreneurs)
Remittance patterns and the impact on household well-being	<ul style="list-style-type: none"> • Remittances mostly spend on consumption and housing • Migration and remittances foster entrepreneurial non-farm activities, farm investment (including farmland expansion) and agricultural production until the 1990s • Unfavourable business environment resulted in decreased investment • A large percentage are saving for retirement • Risk of poverty of retired returnees, disabled, and single persons • Possibility of losing social and economic security • Personal security and safety issues 	<ul style="list-style-type: none"> • Remittances are less important for migrant sending household well-being • Migrants have (some) savings and are more likely in the position to find a better job in the destination country • Remittance transfer and migrant earnings enabling the saving of money for family reunification, for the purchase of houses and apartments, and for starting own business in destination country

Source: Bogdanov and Babovic, 2016.

3.4.3 Rural infrastructure and access to water and sanitation

Physical, communal and social infrastructure – roads, water, sanitation, energy and basic services such as shops, pharmacies, childcare facilities and more – set the economic potential of rural areas and influence the quality of life.

Sustainable Development Goal (SDG) 6 emphasizes that access to safe water and sanitation and the sound management of freshwater ecosystems are essential to human health and to environmental sustainability and economic prosperity. One of the key targets (6.1) of this SDG is to achieve universal and equitable access to safe and affordable drinking water for all by 2030.³⁸ The indicator for measuring the progress is defined as the proportion of the population using safely managed drinking water services.

According to Statistical Office of Republic of Serbia data (based on UNICEF's 2014 Multiple Indicators Cluster Survey), almost all of the population in Serbia (99.5 percent) have access to improved water sources.³⁹ There is a small difference between urban and rural populations (99.9 percent vs. 98.9 percent⁴⁰). Some groups of the population have below-average access to improved water, such as Roma (97.7 percent) and, in particular, those who belong to the poorest wealth quintile (92.4 percent) and those who live in rural areas (92.2 percent) (SORS and UNICEF, 2014, p. 83).

SDG 6 Target 6.2 sets the objective of achieving access to adequate and equitable sanitation and hygiene for all and ending open defecation by 2030, paying special attention to the needs of women and girls and those in vulnerable situations. The indicator for monitoring this target measures the proportion of the population using safely managed sanitation services.⁴¹ In Serbia, access to improved sanitation is available for 97.6 percent of the population. Again, there is a difference between urban and rural populations (99.4 percent vs. 94.7 percent). A lower share of the population with access to adequate sanitation is recorded among the poorest quintile in the national sample (90.3 percent). The worst situation was found among Roma populations living in substandard settlements (80.9 percent) and Roma living in rural settlements (71.1 percent) (SORS and UNICEF, 2014, pp. 87–93).

SDG 7 is related to access to affordable, reliable and modern energy services.⁴² In Serbia, 99.7 percent of households in regular settlements have access to electricity (99.8 percent in urban areas and 99.4 percent in other areas), while in Roma settlements 89.7 percent have access to

³⁸ For more information, see: <https://sustainabledevelopment.un.org/sdg6>.

³⁹ Improved sources of drinking water are those using any of the following types of water supply: piped water (into dwelling, compound, yard or plot, to neighbour, public tap/standpipe), tube well/borehole, protected well, protected spring, and rainwater collection. Bottled water is considered as an improved water source only if the household is using an improved water source for handwashing and cooking (SORS and UNICEF, 2014, p. 75).

⁴⁰ Source : SORS, sustainable development indicators
<http://data.stat.gov.rs/Home/Result/SDI090402?languageCode=en-US>.

⁴¹ According to the UNICEF MICS methodology, improved sanitation includes: piped sewer system, septic tank, pit latrine, ventilated improved pit latrine, and pit latrine with slab (SORS and UNICEF, 2014, p. 87).

⁴² For more information, see: <https://sustainabledevelopment.un.org/sdg7>.

electricity (90.7 percent in urban areas and 87.2 percent in rural areas) (SORS and UNICEF, 2014, pp. 15–25).

Research on social exclusion in rural areas⁴³ in Serbia has explored different aspects of infrastructure, including social infrastructure.⁴⁴ The survey revealed that 10.4 percent of rural settlements from the sample had fewer than two of the listed facilities, while 42.8 percent had between two and four facilities and 46.7 percent had five or more facilities. According to subjective indicators regarding the perception of rural inhabitants from the sample about their quality of life in regard to different aspects, the survey findings revealed that 41.8 percent of people were not satisfied with the quality of water, 21.9 percent were not satisfied with the quality of the air, 25.6 percent were not satisfied with the quality of the soil, 37.6 percent were not satisfied with the waste management, 47.1 percent were not satisfied with the illumination of the settlement, 14.2 percent were not satisfied with the security, and 48.4 percent were not satisfied with the roads (Cvejic *et al.*, 2010, pp. 42–43).

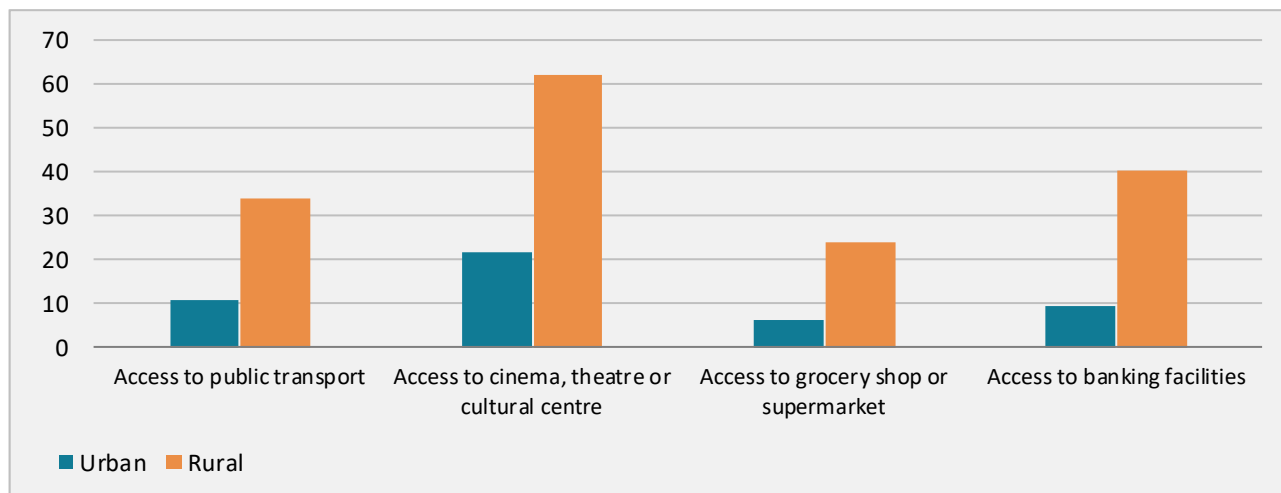
The European Quality of Life Survey (EQLS), implemented by Eurofound, provides data on access to certain public services and evaluations of the quality of services in urban and rural areas (Figure 30).⁴⁵ From the data presented in Figure 30 is obvious that the rural population is experiencing more difficulties in accessing some basic services, such as public transportation, banks, groceries or supermarkets. When cultural services such as cinema or theatre are at stake, the difference becomes even more prominent, with the majority of respondents from rural areas emphasizing that they face difficulties in accessing these services.

⁴³ It should be kept in mind that this research was focused on rural areas, applying a definition of rural areas as areas that have a population density of fewer than 150 inhabitants per square kilometre, that do not include territorial units in which more than 50 percent of the local population lives in urban settlements, and that do not include administrative centers with 20 000 or more inhabitants (Cvejic *et al.*, 2010, pp. 27–28). So, unlike the official statistical category of “other,” these are real rural settlements, and the picture obtained more precisely depicts the situation in rural Serbia.

⁴⁴ The service infrastructure was explored through registering the existence of the following facilities and services in rural settlements: health care centre, elementary school, kindergarten, grocery, veterinary ambulance, agricultural pharmacy, post office, cultural center and regular bus line.

⁴⁵ It is important to note that definitions of urban and rural areas are not the same as the definitions applied across the European Union by Eurostat. Living areas are classified in the data set as urban and rural according to self-reported indicators. Respondents answered the question, “Would you consider the area in which you live to be: 1) open countryside; 2) a village/small town; 3) a medium to large town; or 4) a city or city suburb?” Respondents who answered 1 or 2 are classified as respondents from rural areas.

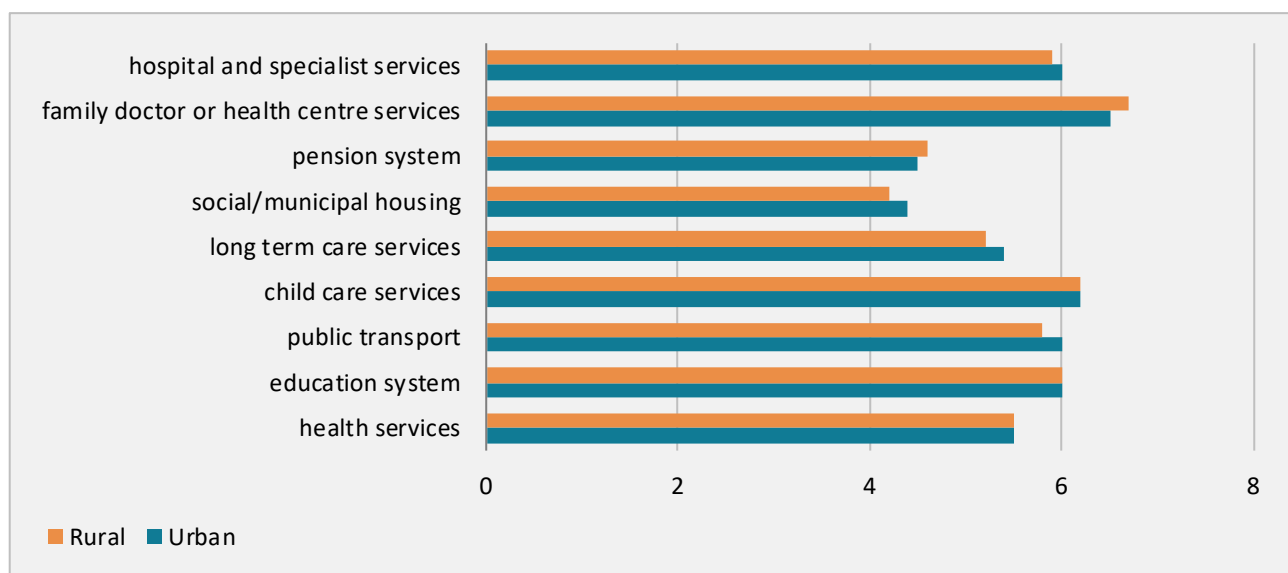
Figure 30: Percentage of urban and rural population who reported that access to different services is 'very difficult' or 'rather difficult', 2016



Source: Eurofound, 2016.

In Figure, 31 an evaluation by rural and urban populations of the quality of various services is presented. The education system and health services are evaluated in the same way by respondents living in urban and rural areas. Respondents from rural areas gave slightly better evaluations to family doctor or health centre services and to the pension system, while at the same time giving lower marks to hospital and specialist services, social housing, long-term care and public transportation.

Figure 31: Evaluation of the quality of services in urban and rural areas, 2016



Source: Eurofound, 2016.

The data presented from various sources indicate poorer infrastructure in rural areas and more difficulties in access to basic or other social and cultural services. This less-favourable infrastructure in rural areas acts as important set of “push” factors stimulating the outward migration from rural to urban areas that was evidenced in section 3.4.2).

3.4.4 Education in rural areas

Education is of key importance for the development of human resources, as one of the key assets for development. This is recognized by the 2030 Agenda for Sustainable Development, as Sustainable Development Goal 4 sets the objective of ensuring inclusive and equitable quality of education and promoting lifelong learning opportunities for all. SDG Target 4.2 sets the objective of ensuring that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.⁴⁶

Data from the Multiple Indicators Cluster Survey show a very uneven picture in kindergarten attendance rates of children between 36 months old and 59 months old. At the national level, half of children of that age attend kindergartens, but the difference between urban and rural areas is huge (Table 16). There also are regional disparities, with Belgrade recording the highest attendance rate, while the lowest attendance rate is recorded in the Šumadija and West Serbia and South and East Serbia regions. Gender differences are present, too, as the share of children attending kindergarten among boys is 51.8 percent and among girls is 48.5 percent.

Table 16: Percentage of children age 36–59 months who are attending kindergarten, 2014

Area/region	% of children
Republic of Serbia	50.2
Type of settlement	
Urban	62.6
Other	27.3
Region	
Belgrade	72.2
Vojvodina	47.4
Šumadija and West Serbia Region	35.9
East and South Serbia Region	35.7

Source: SORS and UNICEF, 2014, p. 146.

The reason for such low attendance rates among children in rural areas could be attitudinal (for various reasons, parents may think that this is not needed for their child) or obstacles to access. MICS data indicate that attitudinal reasons are more frequent than obstacles to access, as the majority of parents claimed that their child is taken care of at home and that therefore there is no need to go to kindergarten. This is the main reason in both urban and rural areas, but from the data presented in Table 17, it can be noticed that in rural areas more frequently than in urban areas, parents report as a reason that the facility is too far away.

⁴⁶ For more information, see: <https://sustainabledevelopment.un.org/sdg4>.

Table 17: Reasons for not attending kindergarten by type of settlement, 2014

Reasons	Total, %	Urban, %	Other, %
Parental attitudes, total	67.3	71.9	62.8
“Not much to learn”	0.5	0.4	0.5
Disabled	1.0	1.2	0.7
Low level of service	0.4	0.8	0.0
Poor treatment	0.2	0.0	0.4
The child is taken care of at home	65.9	70.4	61.5
Access problems, total	38.4	37.8	39.0
Both parents unemployed	4.2	6.1	2.3
Overcrowded facility	9.8	11.0	8.6
Costly services	13.8	20.5	7.3
Other expenses too high	3.2	0.8	5.5
The facility is too far/no organized transport for children	9.6	0.2	18.7
Other reasons	11.4	10.5	12.4
Total	100	100	100

Source: SORS and UNICEF, 2014, pp. 146–147.

The early childhood development index⁴⁷ score for children between 36 and 59 months old is higher in urban than other areas (96.8 vs. 92.0), while there is no difference between boys and girls (95.1 for both) (SORS and UNICEF, 2014, p. 163). However, a study on urban–rural disparities in the situation of children and women based on MICS data found that the type of living area has no statistically significant effect on early childhood development. Contrary to that, the study found a significant influence of attending a preparatory preschool programme (SORS and UNICEF, 2015).

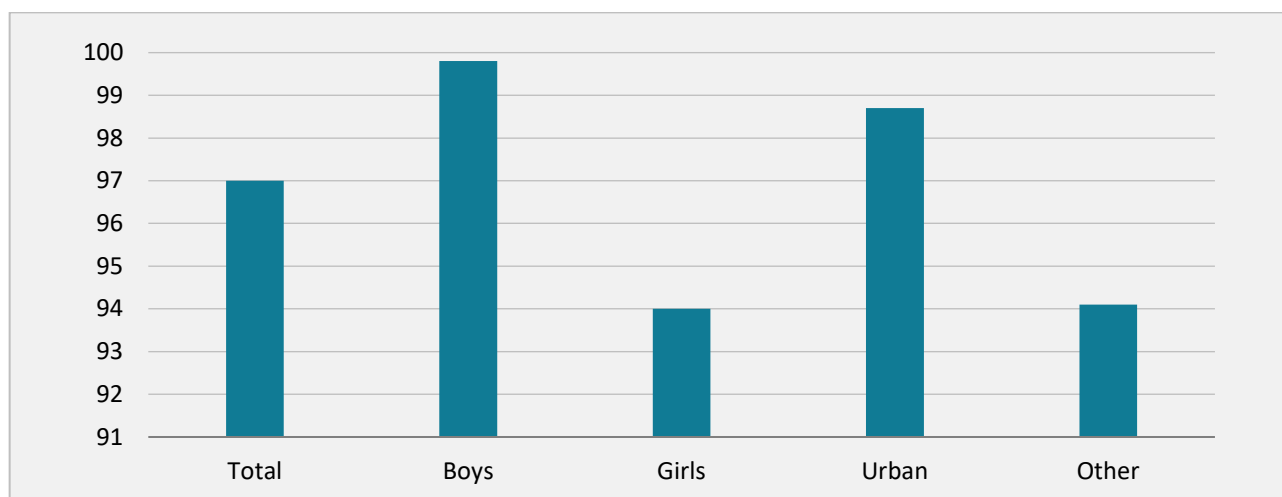
Due to the fact that preparatory preschool programmes are mandatory, attendance rates (98.1 percent of the total population of children) are much higher than for kindergarten. There are small gender differences, as the attendance rate among boys is 97.3 percent and among girls is 99.0 percent. Differences also exist between children from urban and rural areas (98.8 percent vs. 96.8 percent, respectively) (SORS and UNICEF, 2014, p. 168).

SDG Target 4.1 sets the objective of ensuring by 2030 that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes. MICS provides data on net intake rates in primary education, which represents the participation of children of school-entry age who enter the first grade of primary school (SORS and UNICEF, 2014, p. 18). This indicator measures how many children that should enter elementary school actually enrolled in the first grade. Again, it can be noticed (Figure 32) high

⁴⁷ The early childhood development index is a ten-item index that measures literacy and numeracy, physical and social-emotional development, and learning capacity.

net intake rates for the general population of children, but somewhat lower rates for girls than boys and for children living in rural than in urban areas.

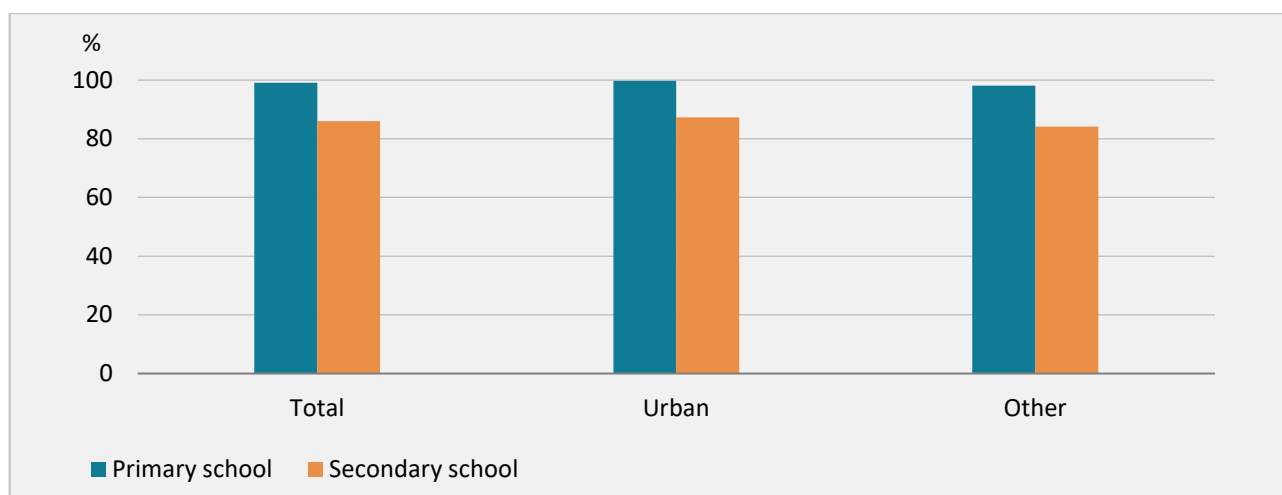
Figure 32: Percentage of children of primary school entry age entering grade 1, 2014



Source: SORS and UNICEF, 2014, pp. 146–147.

The primary school completion rate was 93.4 percent in 2014, and it was higher for girls than for boys (97.9 percent vs. 90.5 percent, respectively) and in rural than urban areas (95.2 percent vs. 91.9 percent, respectively). Attendance of secondary education is lower than attendance of primary education for both urban and rural children, and the urban–rural gap is relatively bigger in regard to secondary school education (Figure 33).

Figure 33: Primary and secondary school attendance by type of settlement, 2014



Source: SORS and UNICEF, 2014, pp. 178–181.

Differences in educational attainments are much more prominent when adult populations of urban and rural areas are compared. Data from the population census indicate a less-favourable education structure of the population in rural areas, with a higher share of persons without any school – particularly among women, and mainly older women. Additionally, the share of persons

with higher and university education is much lower among rural than among urban populations (Table 18).

Table 18: Population by attained education level and type of settlement, 2011

Education level	Urban, %		Other, %	
	Men	Women	Men	Women
No school or uncompleted elementary school	3.8	9.9	16.6	30.4
Elementary school	14.2	17.7	28.0	27.6
High school	58.2	49.4	49.1	36.0
Higher and university education	23.5	23.0	6.2	6.0
Total	100	100	100	100

Source: SORS, Population census in the Republic of Serbia 2011.

A study on farm labour based on agricultural census data provides insights into the educational attainment of farm managers (Bogdanov and Babović, 2014). Their educational profile indicates a low importance of formal education as well as systematic education and training in agriculture. Only 1.4 percent of farm managers have completed higher school for agriculture or faculty of agriculture, while 2.6 percent have completed secondary agricultural school and 0.7 percent have attended specialized courses related to agriculture. On the other hand, 60 percent have acquired their knowledge on agriculture only through practical experience. From the perspective of the impact of human capital on development, and particularly in the area of dynamic technological changes, this is not a favourable situation, and it requires significant improvements in terms of systematic education and training of farm managers on new technologies and lines of production.

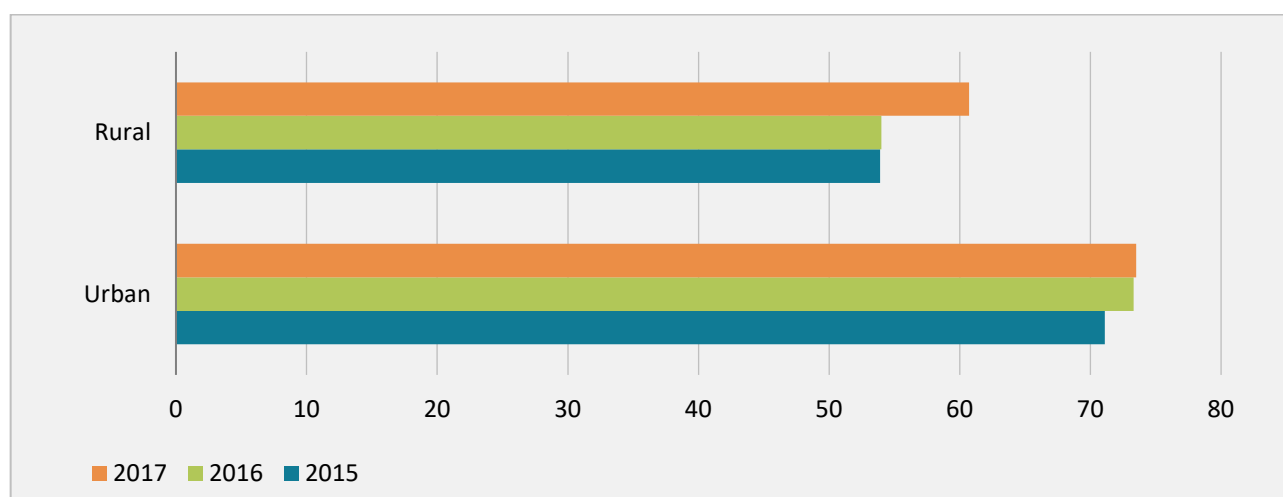
According to data from the Survey on Education of Adults in Serbia in 2011,⁴⁸ rural populations have participated less in lifelong learning activities than have urban populations. While 20.9 percent of adults had participated in formal or informal education in urban areas, among the rural population, only 10.3 percent had participated in these forms of education (SORS, 2013, p. 13).

Possession of computers, access to the Internet and familiarity with information and communications technology skills are important, as they are crucial for access to information for learning and networking with others on the market and in the community. Statistical data indicate that a lower percentage of households in rural areas possess computers (Figure 34). However, there has been a significant increase since 2016. Access to the Internet requires further improvement in rural areas, and it is lagging behind the possession of computers, as only 59.8 percent of households in rural areas have access to the Internet (compared to 72.9 percent in urban areas). Data indicate a narrowing gap in access to the Internet, as in urban settlements the

⁴⁸ There was, more recently, a second wave of surveys in 2016, but data are not available disaggregated by type of living area.

prevalence of an Internet connection increased by 0.4 percent between 2016 and 2017, while in rural settlements it increased by 6.0 percent (SORS, 2013, p. 15).

Figure 34: Percentage of households possessing a computer, by type of settlement, 2015–2017



Source: SORS, Use of ICT in the Republic of Serbia, 2017, p. 13.

Rural populations use the Internet less frequently than do urban populations (Table 19).

Table 19: Use of the Internet by type of settlement, 2016

Frequency of use	Urban, %	Rural, %
Every day or almost every day	52.3	27.9
At least once a week	10.7	11.0
One to three times a month	5.3	4.6
Less often	6.1	7.9
Never	25.6	48.7
Total	100	100

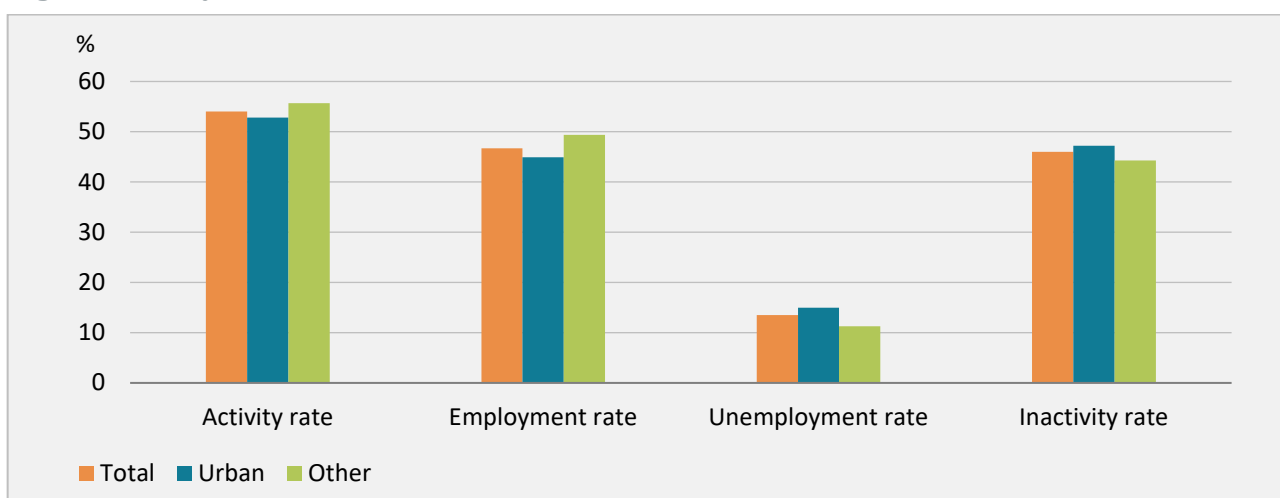
Source: SORS, Use of ICT in the Republic of Serbia, 2017.

Investment in human resources in rural areas should be prioritized. Although in new generations of children, the urban–rural gap is narrowed at least in terms of enrolment attendance (quality is not covered by research), the levels of educational attainment, development of knowledge and skills for agriculture, and use of new technologies, including information and communications technologies, are not satisfactory.

3.4.5 Employment and sources of income

Activity and employment levels in rural areas are traditionally higher than in urban areas. From the Labour Force Survey data on key labour market indicators presented in Figure, higher activity and employment rates can be noticed for rural (“other”) populations, along with lower unemployment and inactivity rates. However, Labour Force Survey data for 2017 indicate a drop in employment in agriculture; 10 800 fewer persons were employed in this sector in comparison with the previous year (SORS, 2018a, p. 9).

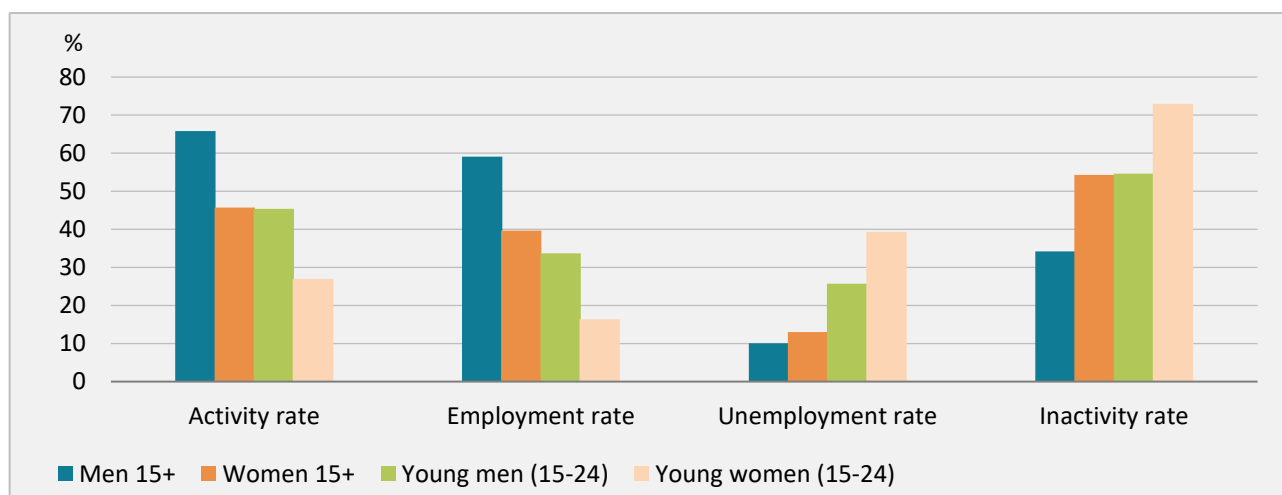
Figure 35: Key labour market indicators, 2017



Source: SORS, 2018a, p. 14.

Significant gender and generational gaps are present when activity and employment are analysed among the rural population. Women 15 years old and older have much lower activity and employment rates than do men, and at the same time they have a much higher inactivity rate. Young men have a much worse position on the labour market than the total population of men 15 years old and older. The worst is the position of young women (aged 15–24), who have the lowest activity and employment rates and much higher unemployment and inactivity rates. Data indicate that they enter the labour market in small numbers, and even these small portions of the rural, young, female labour force faces large obstacles in finding jobs.

Figure 36: Key labour market indicators by gender and age, 2017



Source: SORS, 2018a, p. 16.

There are distinctive features of the status of employment of rural men and women. When compared to employed persons in urban areas, rural men record much higher employment in the status of self-employed without employees. Rural women record a higher share of self-employed, but also have the highest share of helping family members (family members who help out in the family business) (Figure 37).

Figure 37: Employed persons by employment status, gender and type of settlement, 2017

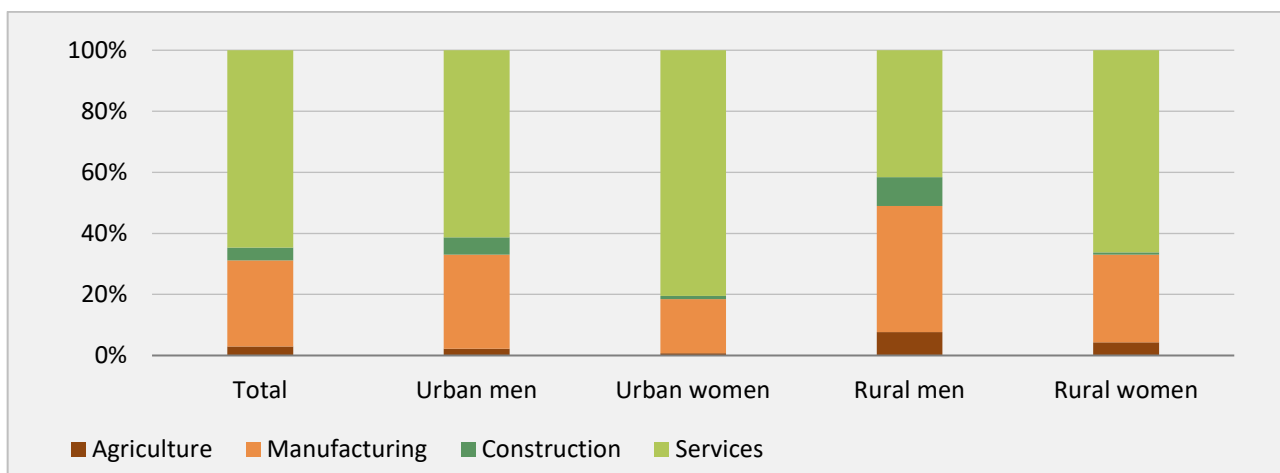


Source: SORS, 2018a, p. 29.

Findings based on the analysis of data on farm labour from the agricultural census reveal that women are rarely heads or managers of registered farms: They are heads in 17.3 percent of cases, and in 15.9 percent of cases they are managers. At the same time, they represent the main share of helping family members on farms (62.9 percent) (Bogdanov and Babovic, 2014, p. 47).

In the salaried workers sector of employment, differences are evident between urban and rural areas (Figure 38). Among salaried rural employed men, the highest percentage of persons are employed in manufacturing and construction, and lowest share are employed in services. Rural women have higher employment in manufacturing than do urban women, who are predominantly employed in services.

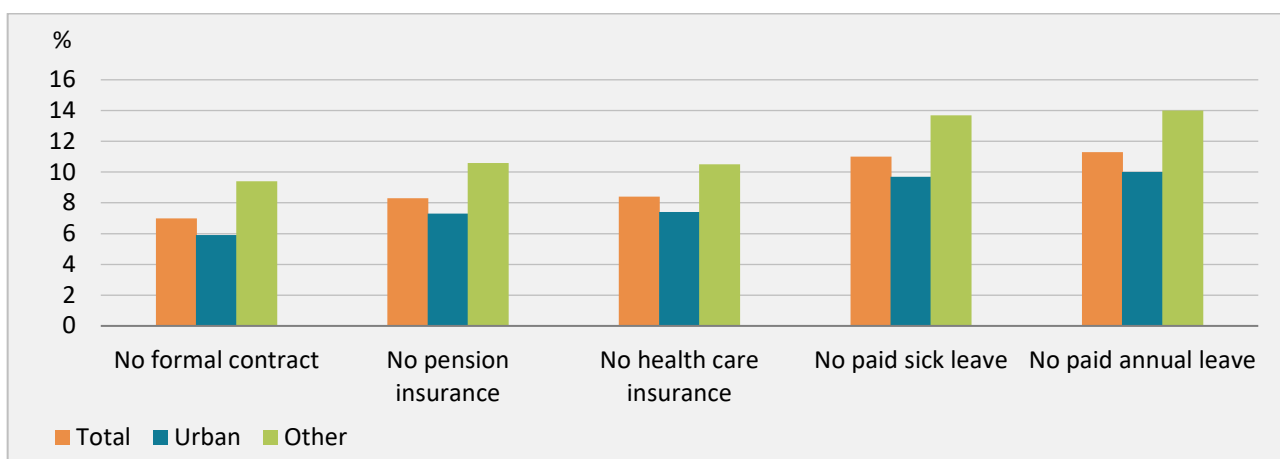
Figure 38: Salaried workers by sector, type of settlement and gender, 2017



Source: SORS, 2018a, p. 41.

For rural development, not only the level of activity and employment counts, but it is of equal importance to look at the quality of work. Within the 2030 Agenda for Sustainable Development, Sustainable Development Goal 8 is dedicated to the promotion of sustainable, inclusive economic growth, full productive employment, and decent work. Target 8.8 sets as an important objective the protection of labour rights and the promotion of safe and secure working environments for all workers. Data presented in Figure 39 indicate a lower level of protection of labour rights among salaried workers in rural areas. In comparison to salaried workers from urban areas, rural workers more frequently work without formal contracts, with no pension or health care insurance, and are denied rights for paid sick leave or paid annual leave.

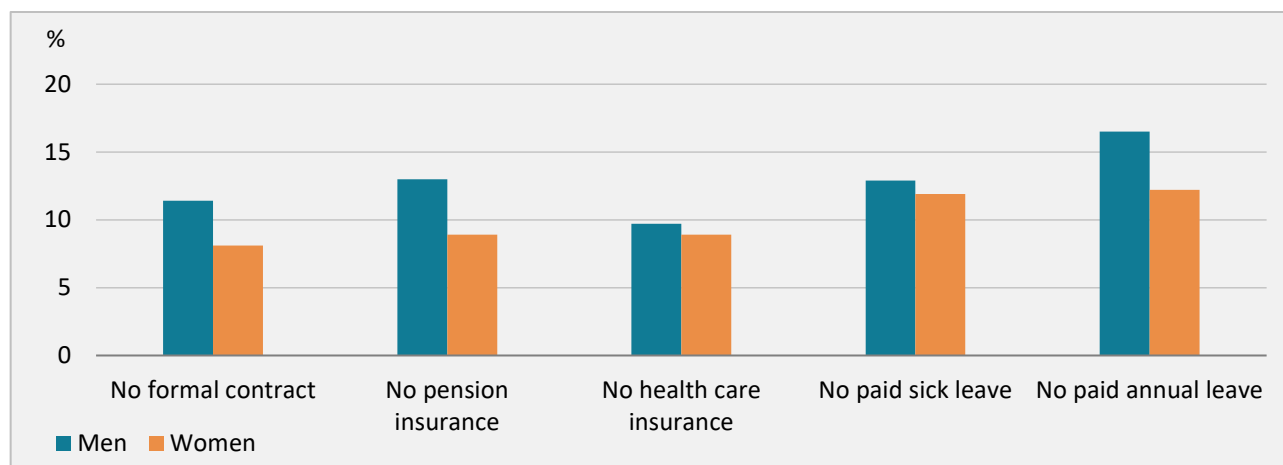
Figure 39: Percentage of salaried workers without a formal labour contract and welfare benefits from employment, by type of settlement, 2017



Source: SORS, 2018a, p. 39.

There are noticeable gender differences in labour protection. It is a known fact that men are more often employed informally than are women, and therefore it is not surprising that protection of labour rights is lower among rural male salaried workers than among rural female salaried workers (Figure 40).

Figure 40: Percentage of salaried workers in rural areas without formal labour contract and welfare benefits from employment, by gender, 2017



Source: SORS, 2018a, pp. 39–40.

Differences in the structure of employment between urban and rural areas and between men and women are manifested in the occupational structure, as well. From data presented in Table 20 it can be noticed that rural salaried male workers are more frequently employed in physical work (as artisans, machine operators or similar, for example) than are urban salaried workers, and they are less frequently employed as professionals (as engineers or technicians, for example). Similarly, rural female salaried workers are more frequently employed as service providers than are urban female salaried workers, and they are much less frequently employed as professionals in occupations that require high levels of education (Table 20).

Table 20: Salaried workers by occupation, type of settlement and gender, 2017

Occupation	Total, %	Urban, %		Rural, %	
		Men	Women	Men	Women
Managers, decision-makers	1.9	3.0	1.8	1.1	0.9
Professionals, artists	17.3	17.9	26.5	4.8	10.6
Engineers, technicians	15.7	16.1	20.3	7.5	14.8
Clerks, administrative workers	10.0	8.3	14.2	6.4	9.4
Services, salespersons	18.3	15.3	21.0	13.7	26.8
Farmers, foresters, etc.	0.4	0.3	-	1.1	-
Artisans	13.0	15.7	4.2	26.9	8.6
Machine operators, drivers, plant workers	12.3	14.8	3.9	24.0	9.3
Simple occupations	10.2	6.9	8.0	13.3	19.6
Military	0.9	1.7	-	1.1	-
Total	100	100	100	100	100

Source: Statistical Office of Serbia, Labour Force Survey 2017.

The rural labour market traditionally integrates children early in agricultural work on farms. Target 8.7 of the Sustainable Development Goals requires, by 2025, the ending of child labour in all its forms. One recent study on child labour in agriculture in Serbia provided insights into this form of child labour (ILO, 2018).⁴⁹

According to the Labour Force Survey 2016, 2.8 percent of children between the ages of 15 and 17 (5 684 out of 198 392 in total) were engaged in economic activities. Among them, 18.9 percent (1 075) were working more than 43 hours per week. According to national legislation, 24.9 percent of children (1 418) worked more than 35 hours per week, which is the legally permissible maximum. This percentage increases to 26.5 percent (1 505) if night hours (prohibited by the *Labour Law*⁵⁰) are included.

Almost two-thirds of all child labour in Serbia (56.5 percent) is found in the agriculture, forestry and fishery sector, and 59.4 percent of total child labour occurs on family farms (Table 21).

Table 21: Sectors of child labour in Serbia, 2016

Sector	Percentage
Agriculture, forestry and fishery	63.9
Manufacturing industry	12.7
Wholesale and retail trade, repair of motor vehicles	6.8
Arts, entertainment and recreation	5.0
Households producing goods and services for their own needs	11.6
Total	100

Source: SORS, Labour Force Survey 2016.

Differences in the structure of employment between rural and urban populations are reflected in the structure of incomes. While among urban populations, more than half of households have regular salaries and wages, in rural households only slightly above one-third have income from these sources. Rural households less frequently have pensions, but they more often have incomes from agriculture, hunting and fishing. About 10 percent of the total incomes of rural households is in-kind (products produced and consumed in the household), which indicates, in general, less disposable monetary income for rural households (Table 22).

⁴⁹ Child labour is defined in line with International Labour Organization standards as economic activity performed at or above a certain time threshold (hours defined differently for different age groups) or engagement in hazardous work.

⁵⁰ Official Gazette of the Republic of Serbia, No. 24/2005, 61/2005, 54/2009, 32/2013, 75/2014, 13/2017, 113/2017, 95/2018.

Table 22: Structure of income in money and in kind, by type of settlement, 2016

	Urban, %	Other, %
Regular salaries and wages	55.8	36.9
Other income	2.4	2.7
Pensions (old-age, survivors', disability and others)	32.1	28.8
Other social insurance receipts	2.8	3.4
Income from agriculture, hunting and fishing	0.9	11.1
External receipts	1.1	1
Real estate-related income	0.7	0.6
Other monetary	3.3	4.6
Earned receipts in kind	0.1	0.2
Natural consumption	0.8	10.7
Total	100	100

Source: SORS, Statistical Yearbook 2017, pp. 161–162.

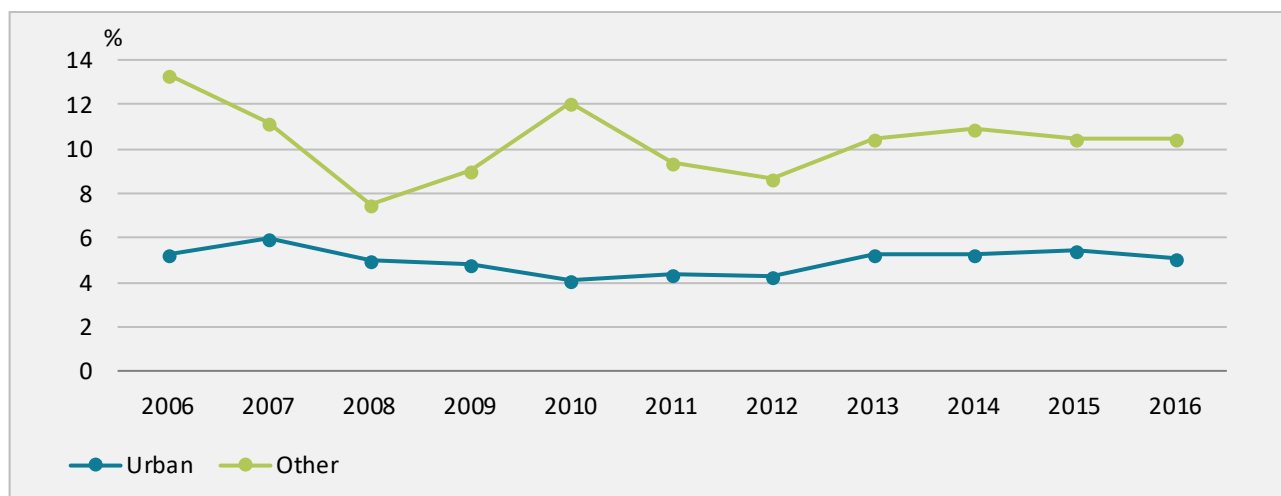
Less favourable employment structures and less favourable structures of incomes are reflected in higher risks of poverty, which are presented in the following section.

3.4.6 Financial poverty and material deprivation

Eliminating poverty has a high priority in the 2030 Agenda for Sustainable Development. Target 1.2 sets the objective of reducing, at least by half, the proportion of men, women and children of all ages living in poverty in all its dimensions, according to national definitions. Poverty is higher in rural areas than in urban, no matter which measure is taken into account. Absolute poverty is only occasionally monitored in Serbia (based on the Household Budget Survey), while since 2012 the European Union Statistics on Income and Living Conditions (EU-SILC) framework has been applied, with relative measures of poverty.

Data on absolute poverty for the period 2006–2016 indicate continuously higher poverty rates in rural areas (Figure 41). A significant decrease of absolute poverty could be noticed prior to the economic crisis in 2008, when the poverty rate in rural areas reached the poverty rate of urban areas and closed the poverty gap. After 2008, poverty in rural areas increased significantly, and the gap widened again. Therefore, while absolute poverty levels were more or less stable in urban areas, rural areas experienced fluctuations until 2013, but at a constantly higher level than in urban areas.

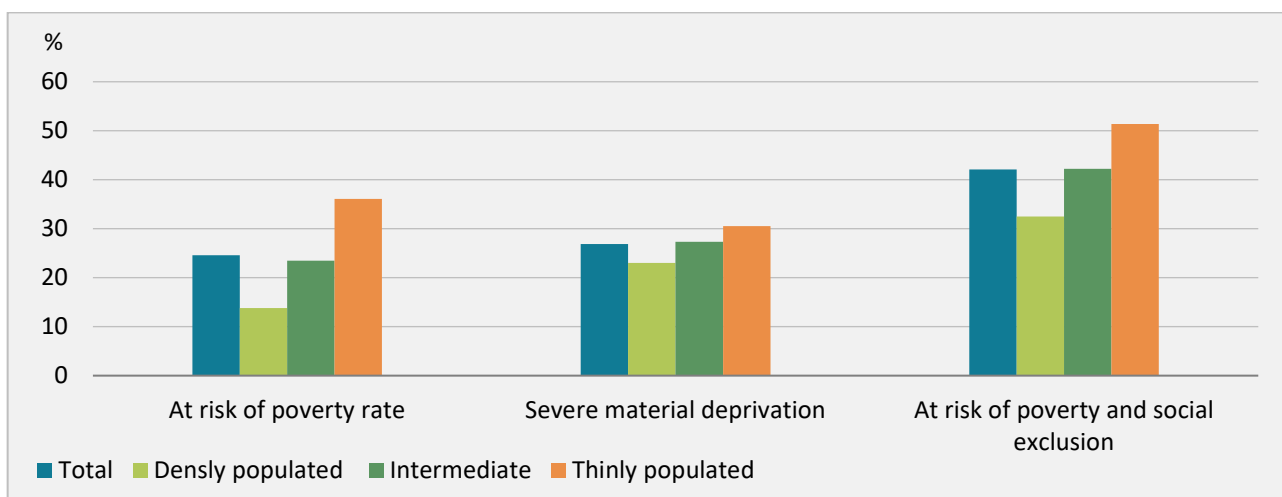
Figure 41: Absolute poverty rates by type of settlement, 2006–2016



Source: Mladenovic, 2017, p. 9.

Relative poverty measures reveal similar tendencies. In Figure 42, types of living areas are classified in three categories, with the third category corresponding to rural areas. In all three of the key indicators presented, the worst situation is in thinly populated areas. Rural populations have the highest rate of being at risk of poverty, with more than one-third of the population at risk of financial poverty and more than half of the population at risk of poverty and social exclusion. Almost one-third of the rural population faces severe material deprivation.

Figure 42: Rates of poverty risk (relative poverty), severe material deprivation, and risk of poverty and social exclusion, by type of settlement, 2013



Source: Matkovic, Krstic and Mijatovic, 2013, pp. 139–140.

3.4.7 Social protection in rural areas

Social insurance

Pensions

The pension system in Serbia is designed as two pillars, with mandatory and additional voluntary retirement and disability insurance. According to the *Law on Pension and Disability Insurance*,⁵¹ salaried workers, self-employed people and farmers are subject to mandatory pensions and disability insurances. Insured farmers are persons working in agriculture as heads or members of agricultural households.

The pension and disability insurance coverage of the rural population is low. A study on social exclusion in rural areas revealed that 18 percent of the rural population aged 65 and older were receiving pensions in 2009 (Cvejić *et al.*, 2010, p. 88). Particularly vulnerable are poor households, as 70 percent of members of poor households are not insured (compared with 49 percent of those above the poverty line). A study on the status of women family helpers in rural Serbia (Babovic and Vukovic, 2008) revealed that women from this category are especially vulnerable, as 93 percent of them were not insured at that time.

⁵¹ Official Gazette of the Republic of Serbia No. 34/2003, No. 64/04, No. 84/2004 – other law, No. 85/2005, No. 101/2005 – other law, No. 63/2006, No. 5/2009, No. 107/2009, No. 101/2010, No. 93/2012, No. 62/2013 and No. 108/2013.

Table 23: Pensioners by category, type of pension, average age and gender, 2016

	Number of women with pension per 100 men with pension	Average age		Average pension of women in relation to average pension of men, %
		Women	Men	
All categories				
Old-age pension	102	69	72	80
Disability pension	66	67	68	86
Employed				
Old-age pension	94	68	71	84
Disability pension	68	67	68	85
Self employed				
Old-age pension	57	65	70	90
Disability pension	29	61	65	92
Farmers				
Old-age pension	195	74	76	95
Disability pension	91	64	65	94

ource: SORS, Women and men in Serbia, 2017, p. 85.

European Quality of Life Survey data for 2016 indicate that the rural population is more worried that their income in old age will not be sufficient to sustain their living (6.64 rural vs. 6.39 urban, on a scale of 0–10).

According to data from the Pension Fund of Republic of Serbia, in 2017 10.4 percent of pensioners were farmers. The number of retired farmers is decreasing (from 229 293 in 2006 to 185 791 in 2017), as is their relative share among all retirees (down by 4 percentage points from 2006). Farmers are entitled to a pension under the same conditions as all other insured persons, which means that in 2017 they needed a minimum of 15 years of insurance for which contributions have been paid, as well as 65 years of age for men or 61 years and six months for women, in order to exercise their right to old-age pension.

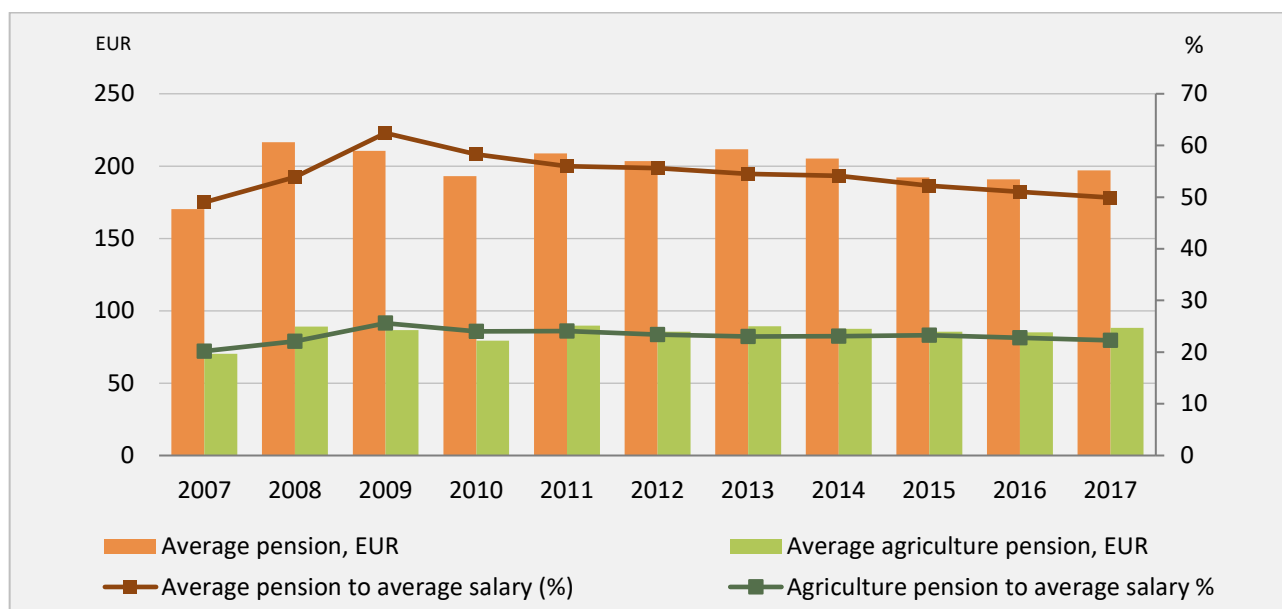
The *Law on contributions to mandatory social insurance*⁵² regulates the base on which people pay contributions. Most farmers pay contributions at the lowest base prescribed by the law, for a monthly contribution of about EUR 200. The contribution rate for compulsory pension and disability insurance is 26 percent, and the contribution rate for compulsory health insurance is 10.3 percent.

The existing legislation does not take into account the size of agricultural holdings, so the level of contributions is the same for all farmers, regardless of their size. According to official data from the Tax Administration, the farmers' debt to the Social Disability and Pension Fund amounts to EUR 1.5 billion, out of which 70 percent is debt to the pension fund. According to

⁵² Official Gazette of the Republic of Serbia No. 84/2004, 61/2005, 62/2006, 5/2009, 52/2011, 101/2011, 7/2012, 8/2013, 47/2013, 108/2013, 6/2014 57/2014, 68/2014, 5/2015 (here, the law was renamed), 112/2015, 5/2016, 7/2017, 113/2017, 7/2018, 95/2018, 4/2019.

data from the National Health Insurance Fund (NHIF, 2018), in comparison to both average pensions and average salary, farmers' pensions are rather low and since 2009 have not exceeded EUR 90 (EUR 88.2 in 2017) (Figure 43).

Figure 43: Agriculture pensions in Serbia, 2007–2017



Source: National Health Insurance Fund, 2018.

Unemployment benefits

According to the *Law on Employment and Insurance in Case of Unemployment*,⁵³ the right to unemployment benefits is based on previous insurance contributions. In order to be eligible for unemployment benefits, a person has to have been insured for 12 months during an 18-month period. The period during which an unemployed person can receive benefits can last from four to 12 months.

As was presented in the section on employment, rural populations often do not have protected labour rights, including formal contracts and paid social contributions, which are preconditions for this benefit. The Government estimates that one in five farmers is insured, with the majority being heads of households. Seasonal workers and supporting family members are in a worse position (GORS, 2014, p. 17).

Maternity allowances and childcare benefits

Maternity allowances last for 12 months, and the benefit can be used by both parents. The new *Law on Financial Support to Families and Children* was enacted in late 2017 and came into force in July 2018.⁵⁴ One of the changes relates to the earnings that are used to calculate benefits.

⁵³ Official Gazette of the Republic of Serbia No. 36/2009 and No. 88/2010.

⁵⁴ Official Gazette of the Republic of Serbia No. 113/2017 and No. 50/2018.

Previously, these were the earnings in the 12 months before the maternity benefit began, while according to the new law, this period has been extended to 18 months. The benefit cannot be lower than the minimum wage.

Maternity leave has been introduced for farmers, the self-employed, and the temporarily employed. The new law envisages (in articles 17 to 21) that heads of registered farms and insured members of agricultural households have the right to other maternity benefits. The length of the benefit is one year. In the case of women insured as members of agricultural households, they need to have been insured for 24 months to be eligible for the benefit.

The child allowance targets low-income families. The right is reserved for the first four children in the family. The benefit is dependent on income and property-based criteria that also include income from land. In September 2017, the amount was set at roughly EUR 70, while the amount for the firstborn child was EUR 24.

Financial social assistance

Financial social assistance is the main social assistance scheme in Serbia. The *Law on Social Protection*⁵⁵ envisages at least six social assistance schemes, but the most important and most comprehensive one is financial social assistance. Targeting is accurate, but coverage is low. The rural population is less likely to receive benefits and services. The share of the rural population among beneficiaries of social assistance is smaller than their overall share in the population. According to 2011 data, 18.7 percent of all beneficiaries were from rural households (4.6 percent were rural old-age households), while 2011 census data show that 41 percent of the population live in rural areas (Stokic Pejin and Bajec, 2015, p. 13).

Previous analyses have indicated that some conditionalities for social assistance have particularly negative impacts on the rural population. Individuals who own more than the basic living area (which is one room per member) and agricultural land of 0.5 ha or more are not entitled to financial social assistance unless the property is mortgaged for valorization of cash benefit costs. The research indicates fear among potential beneficiaries, particularly elderly people from rural areas, to put their land under mortgage. It also indicates a lack of knowledge about this legal requirement. The law does not recognize differences in the quality of land, (in other words, in the categorization of land). Therefore, it treats as equal valuable lands and nearly useless parcels in mountain areas. Furthermore, even when the land is mortgaged, it is often not used and thus further loses its value (Vuković, 2014, p. 14).

Social protection services

Social services are provided by centres for social work, non-governmental organizations and residential institutions. In 2015, there were 175 centres for social work and 102 public residential institutions. Existing surveys indicate low coverage of social welfare services in rural areas (Matković and Stranjaković, 2016).

⁵⁵ Official Gazette of the Republic of Serbia No. 24/2011.

The rural population faces obstacles in accessing social protection services. Some of the obstacles refer to mere physical distance and inability to pay transport. However, qualitative analysis reveals that the burden of everyday household jobs (related both to work on the farm and care for other persons) prevents women in particular from accessing centres for social work and local self-government and employment services. Finally, beneficiaries often complain that procedures are complicated and hard to understand and that professional and administrative workers are often unsupportive and unresponsive (Milutinović Bojanić, Čeriman and Zentner, 2016, p. 86).

A study on social exclusion in rural areas (Cvejic *et al.*, 2009) explored access to social protection services. Respondents from households with specific problems among those listed had the opportunity to report whether they asked for some kind of social assistance for that particular problem and what were the outcomes of that request. The results revealed that only a small percentage of respondents tried to request support, mainly in regard to persons with disabilities and immobile persons. Family problems and care for the elderly are mainly dealt with through capacities of the household. Assistance was asked for from health care institutions in the case of persons with disabilities or from centres for social work in the case of old or immovable persons.

Table 24: Rural households with specific social problems and whether they sought assistance, 2009

Answers	Type of problem, %			
	Elderly person	Immobile person	Person with disability	Family relations
They did not look for support, they can manage alone	43.2	34.2	34.8	69.7
They did not look for support because they did not know where to look	22.6	24.2	15.2	6.1
They asked for support from a centre for social work	16.8	19.2	7.2	12.1
They asked for support from the local government	1.3	1.7	0.7	6.1
They asked for support from a gerontology centre	0.6	0.8	-	-
They asked for support from the Ministry of Social Affairs	0.6	0.8	1.4	-
They asked for support from a health care institution	11.6	16.7	38.4	-
Other	3.2	2.5	2.2	6.1
Total	100	100	100	100

Source: Cvejic *et al.*, 2009, p. 89.

Access to health care

The 2030 Agenda for Sustainable Development sets as one of its goals to ensure healthy lives and promote well-being for all people at all ages (Sustainable Development Goal 3). Target 3.8 envisages the achievement of universal health coverage, including financial risk protection

access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.⁵⁶

One of the measures of health status used in a variety of surveys is subjective health status (self-reported). According to this indicator, inhabitants of rural areas estimate their own health status as worse than inhabitants of urban areas. European Quality of Life Survey data presented in Figure 44 show higher shares of those who assessed their health status as very good among the urban population and those who estimated it as bad among the rural population.

Figure 44: Subjective health status by type of settlement, 2016

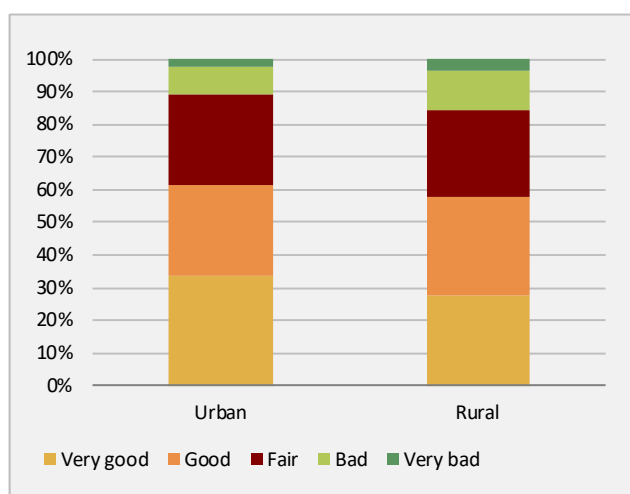
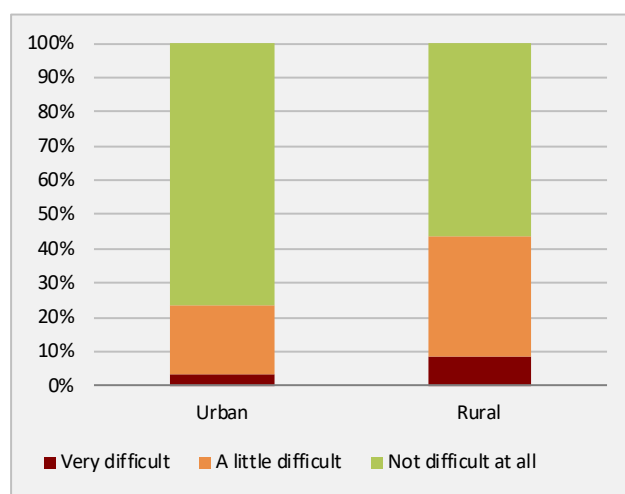


Figure 45: Perception of difficulties in access to a doctor or health care centre, 2016



Source: Eurofound, 2016.

While the health status of the rural population is less favourable, at the same time inhabitants of rural areas report more difficulties in access to a doctor or health care centre (Figure 45).

At the beginning of 2017, in Serbia, compulsory health insurance covered 6 860 667 citizens, out of which 3 percent were farmers.

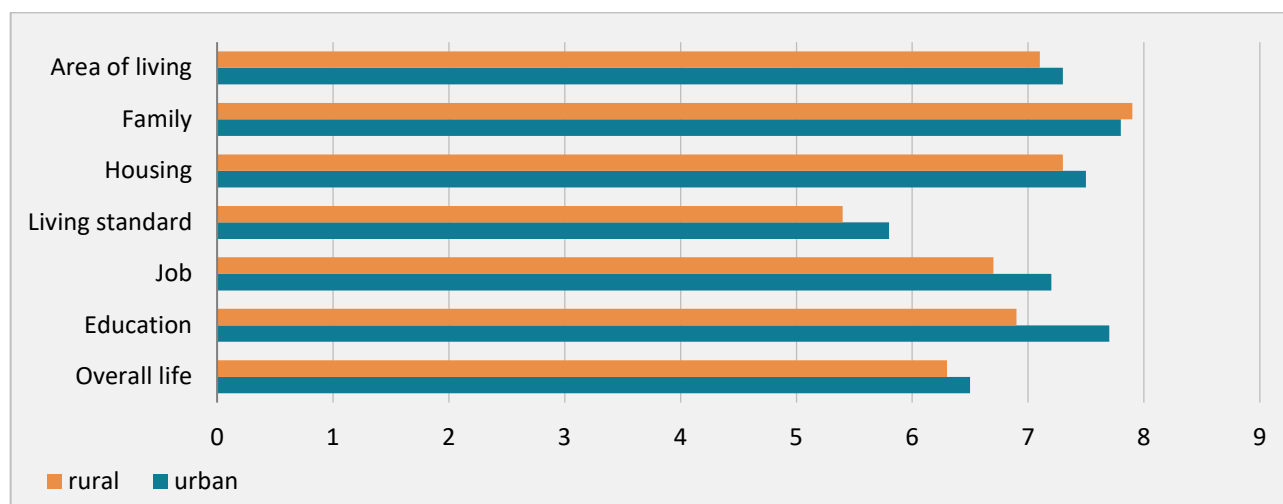
Indicators on life satisfaction and happiness recently became very important as subjective measure of development. In these approaches, happiness is considered as part of human well-being, which expands an individual’s capability to function (Todaro and Smith, 2006, p. 19). Studies show that financial security is only one factor affecting happiness. Richard Layard (2005) identified seven factors related to happiness: family relationships, financial situation, work, community and friends, health, personal freedom, and personal values.

The European Quality of Life Survey provides data on subjective well-being disaggregated by type of settlement. According to these data (presented in Figure 46), the rural population is more satisfied than the urban population only in the category of family life. In all other dimensions,

⁵⁶ For more information, see: <https://sustainabledevelopment.un.org/sdg3>.

they are less satisfied, and the gap is the highest regarding education and employment. Finally, rural inhabitants are less satisfied with overall life than are urban inhabitants.

Figure 46: Subjective well-being by type of living area, 2016



Source: Eurofound, 2016.

4 Current political priorities and policies affecting smallholders and family farms



This chapter explains the overall policy environment affecting smallholders and family farms. By doing so, this chapter provides insights into the relevant national policies and their principles and mechanisms, and it also looks into donor activities related to smallholders and family farms.

The methodological approach used in this chapter combines qualitative content analysis of the strategic and programming documents regulating the current policy framework and quantitative analysis of data on executed budgets. Attention is primarily focused on the operationalization of agricultural policy, i.e. on the regulations governing the implementation of support schemes and policy measures. Quantitative analysis of budgetary transfers by group of measures refers to the national agricultural budget. The analysis is performed on the database of agricultural policy measures implemented in Serbia in the period 2008–2016.⁵⁷

4.1 Sector and focus area specific political priorities for agriculture and rural development

4.1.1 National agricultural policy related to smallholders

Agricultural policy framework and implementation

During the past two decades, the agricultural policy of Serbia has been marked by frequent changes in policy frameworks, implementation mechanisms and budgetary transfers to agriculture. However, in spite of often-inconsistent policy measures and shifts in implementation mechanisms, in recent years there has been progress in setting up institutional structures and adjusting the policy concept to the common agricultural policy of the European Union. The most powerful impetus to accelerate the institutional and policy reforms was the opening of negotiations on Serbia's accession to the European Union at the end of 2013. Over the next few years, the legal, strategic and programming documents regulating agricultural policy were updated and adopted, and institutional structures were established to address the requirements of implementation of the Instrument for Pre-accession Assistance for Rural Development (IPARD).

⁵⁷ Support measures, including data on the executed budget, are grouped according to the APM (agricultural policy measures) databases model and do not follow the structure provided for by the national legislation.

The legal framework for agricultural and rural development policy in Serbia is provided by the *Law on Agriculture and Rural Development*,⁵⁸ the *Law on Incentives in Agriculture and Rural Development*,⁵⁹ and the *Regulation on Distribution of Incentives in Agriculture and Rural Development* for the current year. Funds for incentives in agriculture and rural development are defined by the *Law on the Budget of the Republic of Serbia* for the current year and are distributed through the *Regulation on Distribution in Agriculture and Rural Development*.

The strategic direction of agricultural policy and rural development is defined by the *Strategy of Agriculture and Rural Development for 2014–2024 (SARD)*⁶⁰ and the IPARD II programme,⁶¹ both of which provide a stable and transparent basis for policy implementation. The SARD defines the direction of Serbian agricultural and rural development over the next ten-year period, considering the EU integration process. The following development objectives are defined:

- increased production growth and stability of producers' incomes;
- improved competitiveness achieved through adjusting to the requirements of domestic and international markets and through the technological and technical improvement of the sector;
- sustainable resources management and environmental protection;
- improvement of the quality of life in rural areas and a reduction of poverty; and
- efficient public policy management and improvement of the institutional framework for agricultural and rural development.

In order to realize these objectives, 14 priority areas of intervention have been defined, some of which target the needs of smallholders and family farms. The priority area “Strengthening the social structure and social capital in rural areas” directly refers to smallholders and to objectives of FAO’s Regional Initiative on small-scale family farming. The operational goals within this priority (among others) include:

- reduce rural poverty and improve the status of the deprived rural population;
- improve the social status of agricultural labour;
- improve access to state support for small agricultural holdings; and
- promote rural women’s and youth entrepreneurship.

The SARD served as a basis for the adoption of *The National Programme for Agriculture (NPA)*⁶² and *The National Programme for Rural Development (NPRD)*,⁶³ which define the course of mid-term policy developments.

⁵⁸ Official Gazette of the Republic of Serbia No. 41/09, No. 10/2013 and No. 101/2016.

⁵⁹ Official Gazette of the Republic of Serbia No. 101/2016.

⁶⁰ Official Gazette of the Republic of Serbia No. 85/2014.

⁶¹ Official Gazette of the Republic of Serbia No. 84/2017, No. 112/17 and No. 84/2017.

⁶² Official Gazette of the Republic of Serbia No. 320-6670/2018.

⁶³ Official Gazette of the Republic of Serbia No. 320-6670/2018.

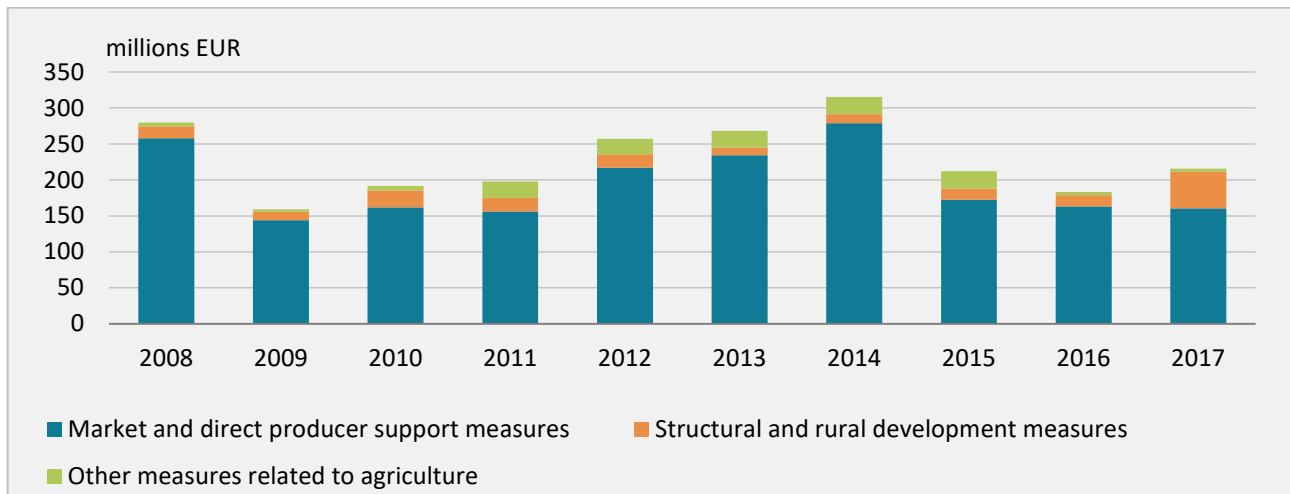
In order to more efficiently address the requirements arising from the EU integration process, an action plan for the transposition, implementation and enforcement of the EU *acquis* on agriculture and rural development was adopted in October 2018. The action plan, a multi-annual planning document, defines the activities to be taken up by specific elements of the common agricultural policy.

4.1.2 Budgetary support to agriculture and rural development

The intensification of the EU integration process (since 2013) has brought progress in terms of policy formulation, but its implementation still is a challenging task.

The concept and regulatory framework of agricultural policy in Serbia over the past ten years were strongly marked by the general political and economic developments. In this setting, the priorities and funding schemes were selected in a predominantly pragmatic manner, rather than in compliance with the policy objectives. The amount of state funding, the structure of budgetary allocations and the implementation mechanisms all were unstable, reflecting the lack of clear direction and messages to potential users. In general, agricultural policy has been driven largely by the need to accelerate productivity growth, while the wider public interests (survival and viability of smallholders and family farms, delivering public goods related to environment, etc.) were of secondary importance (Bogdanov, 2014).

Over the period 2008–2017, annual transfers to agriculture and rural development were unstable, with a decreasing trend starting in 2015. The stable and constant growth of budgetary support, which started in 2009, stopped in 2015, when the support fell by 33 percent compared with 2014. This tendency continued in 2016 (-2.3 percent), and there was a slight increase in 2017 (Figure 47).

Figure 47: Total budgetary support for agriculture, by type of measures

Source: Bogdanov and Stevović, 2018.

Annual transfers to the agriculture sector in the period 2008–2017 amounted, on average, to EUR 230 million. The market and direct producer support measures prevailed (with an average of 85 percent of the total budgetary support), whereas rural development support (9 percent) and general support for agriculture (5 percent) accounted for only a small proportion of the total agricultural budget.

The largest proportion of the agricultural budget has been directed to first-pillar measures (market and direct producer support). Within this group of measures, production-coupled direct payments (price aid for milk production) and direct payments per hectare and per animal have been implemented (Figure 48). Alongside the change in the total amount of support for first-pillar measures, there also have been significant changes in allocation per unit and by commodity groups, number of schemes, and eligibility criteria. In general, the changes went in the direction of reducing support for crop production, while direct support for livestock producers and for the number of schemes increased.

The funds allocated to rural development measures increased in 2017, as did their proportion of the total budget (from 8 percent in 2016 to 24 percent in 2017) (Figure 49). The majority of the funds for this policy pillar were assigned to on-farm investment, while the funds for other two components of rural development policy (the agro-environment and rural economy and population) were insignificant. Within agro-environmental measures, support for organic farming (defined as a supplement to payments for conventional production, in percentage terms) and endangered livestock breeds were implemented.

Figure 48: Direct producer support, by types of measures

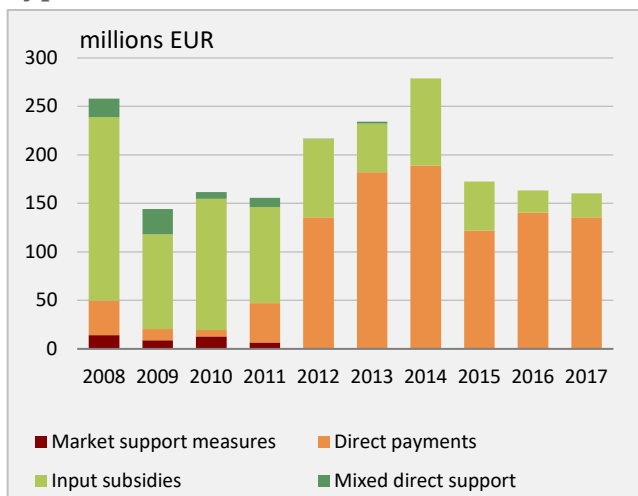
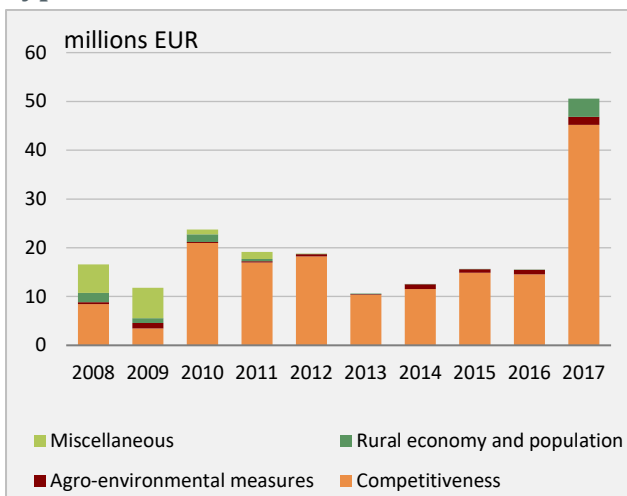


Figure 49: Rural development support, by types of measures



Source: Bogdanov and Stevović, 2018.

Budgetary funds for other measures related to agriculture are relatively low but stable. These measures include budgets for research, development, and advisory and expert services, but the majority of funding goes to food safety and quality control and veterinary services.

In addition to budgetary support for agriculture and rural areas at the national level, the Autonomous Province of Vojvodina and local self-governmental units create and carry out their own subsidy programmes in their own territories.⁶⁴ These programmes are adopted and implemented with the approval of the Ministry of Agriculture, Forestry and Water Management, as well as with the obligation to report on the implemented support. In 2016, support was provided in the amount of around EUR 61 million, of which the largest part was realized in the Autonomous Province of Vojvodina (68 percent), while 110 local self-governmental units realized, in total, 32 percent.

The strong orientation towards direct payments and input subsidies resulted in unbalanced distribution of funding among various sectors and regions, which ultimately led to the low level of investments of small and medium-sized farms, particularly in lagging regions. Although higher compensatory allowances were introduced for farmers in areas with difficult working conditions for agriculture (ADWCA), the support measures have not been adjusted to their specific needs.

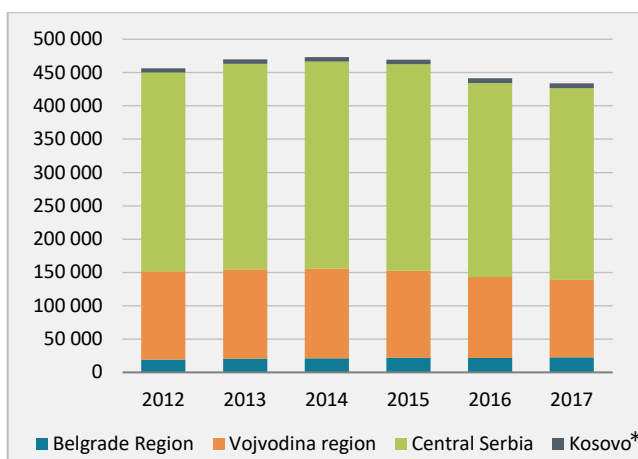
⁶⁴ Article 13 of the *Law on Subsidies in Agriculture and Rural Development*.

4.1.3 Access of smallholders and family farms to state support for agriculture

According to the *Law on Incentives in Agriculture and Rural Development*,⁶⁵ beneficiaries of state support for agriculture and rural development can be agricultural holdings and family agricultural holdings registered in the farm register, units of local self-government, and other persons and organizations. Furthermore, the eligibility criteria include the obligation to register all animals eligible for direct payments and registration in official registers by processors, exporters and buyers.⁶⁶

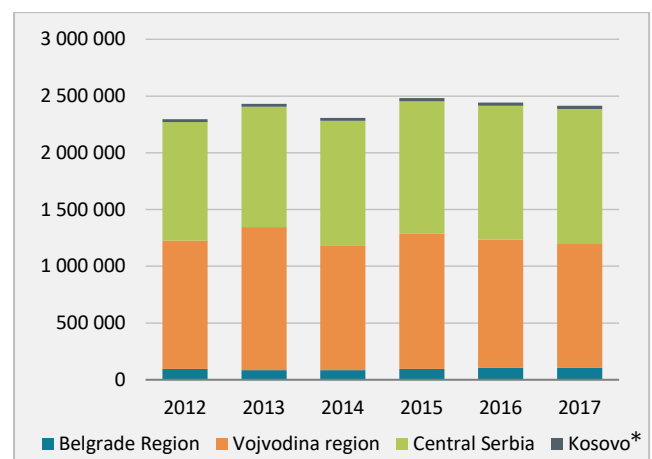
The total number of agricultural holdings registered in farm register is 430 904, and this number has decreased since 2015 by 30 000. The number of registered commercial agricultural holdings is about 342 000 (55 percent of the total number of agricultural holdings), and the number is steadily increasing. Of the total number of registered active commercial agricultural holdings, 22 percent are holdings owned by women. Multiple factors have impacted divergent tendencies in the number of registered agricultural holdings and those in active status, such as possibility of access to state land, the fabricated division of agricultural holdings among spouses after the eligibility criteria for direct payments was limited to farms of up to 20 ha, etc. However, what is much more important is the fact that out of 3.4 million hectares of utilized agricultural area, only 2.4 million are registered land. Practically, 32 percent of the utilized agricultural area is not qualified/covered by budgetary support to agriculture (Figure 51).

Figure 50: Number of registered agricultural holdings, by region, 2012–2017



*References to Kosovo shall be understood to be in the context of Security Council resolution 1244 (1999)

Figure 51: Registered agricultural land, by region, 2012–2017



Source: MAFWM, Directorate for Agrarian Payments.

⁶⁵ Official Gazette of the Republic of Serbia No. 10/2013, No. 142/2014, No. 102/2015 and No. 101/2016.

⁶⁶ In 2010 and 2011, direct support recipients (with the exception of farmers in areas with difficult working conditions for agriculture) were obliged to pay mandatory pension and disability insurance contributions.

The specific eligibility criteria related to the quantities produced, hectares under cultivation and number of livestock differ by support scheme (Table 25). In general, eligibility criteria are set to exclude the smallest farms from receiving support, but the reasons behind this approach might also be pragmatic (lack of funds or complex implementation).

Table 25: Minimum requirements regarding the quantities sold, hectares under cultivation and number of animals, by main direct payment schemes

Description/	Specific requirements
For raw milk (from cows, sheep and goats) delivered to dairies	Minimum 3 000 l of cow's milk per quarter. Maximum 3 000 000 l per quarter; for less-favoured areas, minimum 1 500 l per quarter
Payments for fattened lambs delivered to slaughterhouses or intended for export	minimum 10 animals in fattening
Payments for fattened young goats delivered to slaughterhouses or intended for export	minimum 5 animals in fattening
Payments for fattened pigs delivered to slaughterhouses or intended for export	minimum 10 animals in fattening
Cows and primiparous intended for milk and meat production or for reproduction on the farm	minimum 2 cows
Pure breed cows for meat production or cross breeds	minimum 2 cows
Intended for milk and meat production or for reproduction on the farm	minimum 10 sheep or 5 goats
Intended for meat production or for reproduction on the farm	minimum 3 breeding pigs
Support for honey production	minimum 10 beehives

Source: Authors' elaboration.

A maximum threshold is not set for livestock-related payment schemes, while the eligible area for per-hectare payments for crops (and insurance subsidies) is limited to a maximum of 20 ha, as of 2015. The limit of 20 ha of land was introduced in an attempt to restrict the funding of big producers. Still, the criteria related to class and category of land eligible for support have not been defined and harmonized with the land cadastre.

When it comes to rural development support, eligibility criteria are more complex. The eligibility criteria of both IPARD II and National Programme for Rural Development (NPRD) limit support to priority sectors and target groups based on the necessity of upgrading to EU standards, production level, sustainability of production, and size of potential recipients. Recipients supported under both programmes also should meet the relevant national rules and standards as regards registration in the farm register, animal welfare and environmental protection, food and feed hygiene, and identification and registration of animals (Table 26). Besides all of this, agricultural holdings eligible for IPARD II are also required to:

- prove that they have no outstanding tax or social security payments against the state;
- submit a signed statement that there is no application of the same investment in another public grant or subsidy scheme;

- fulfil all contractual obligations under previously approved investments financed by the MAFWM, in the case of application for investment; and
- present a lease or rent contract for a period of at least five years from the date of the final payment, in cases where the recipient is not the owner of the agricultural holding or the land on which the investment is carried out.

A parallel overview of eligibility criteria for support schemes available in NPRD and IPARD II is presented in Table 26. Basically, the conditions laid down in NPRD are relatively comfortable and do not restrict the access of smallholders and family farms, since a threshold value of farm size is not set or is very low. Yet, there still is a wide diversity of farm types and farming systems, operating at different scales, that do not benefit from state policy. Their contribution to environmental objectives and the provision of other public goods is not yet acknowledged and supported by agricultural policy.

IPARD II, however, was created for large commercial agricultural holdings, with the idea of directing these farms to this source of financing so that the national budget remains available to smaller farmers. At this point, it is impossible to say whether and by what dynamics this mechanism of redistribution of agricultural holdings to sources of financing will be established.

Table 26: Specific eligibility criteria for access to IPARD II and NPRD, per type of measure and sector

Measure	Sector	RECIPIENTS OF IPARD II Official Gazette No. 84/2017, No. 112/2017 and No. 84/2017	RECIPIENTS OF NPRD Official Gazette No. 320-6670/2018	Comment
Investments in physical assets of agricultural holdings ⁶⁷	Milk sector	<ul style="list-style-type: none"> - Agricultural holdings with 20 to 300 cows at end of investment. - Agricultural holdings with more than 300 cows at beginning of investment. 	<ul style="list-style-type: none"> - Agricultural holdings with 1 to 19 cows. - Agricultural holdings with fewer than 20 cows at the beginning of the investment. - In case of procurement of new machine and irrigation equipment, recipient or member of the registered household should have not more than 100 milking cows. - In case of procurement of breeding cows, recipient should have 3 to 100 milking cows at the end of the investment. <p>Not eligible</p>	No specific criteria for investments in the milk sector for goats and sheep in the NPRD.
	Meat sector	<ul style="list-style-type: none"> - Agricultural holdings with a minimum farm capacity of 20 and up to a maximum of 1 000 cattle, or a minimum of 150 and up to a maximum of 1 000 sheep and goats, or a minimum of 100 and up to a maximum of 10 000 pigs, or a minimum of 4 000 and up to a maximum of 50 000 broiler chickens, at the end of the investment. 	<ul style="list-style-type: none"> - Agricultural holdings with facility capacities of fewer than 20 cattle and/or fewer than 150 sheep/goats and/or fewer than 100 fattening pigs and/or fewer than 30 sows and facilities with capacities of fewer than 1 000 broiler chickens. - In the case of the purchase of animals for breeding, the recipient or member of the agriculture holding should have: 5–100 cows or 10–300 sheep/goats or 10–400 pigs at the end of the investment. 	<p>NPRD measures are designed to support all registered agricultural holdings that have the minimum number of animals.</p> <p>The difference between the support to milk and meat production is that in the milk sector, requirements are linked to the number of animals at the end of investment, which opens space for every single household that will obtain the required IPARD limit. For the meat sector, the requirement is linked to the capacity of the facility at the end of investment.</p>
	Meat sector	<ul style="list-style-type: none"> - Agricultural holdings with more than 1 000 cattle or more than 1 000 sheep and goats or more than 10 000 pigs or more than 50 000 broiler chickens, at the beginning of the investment. 	Not eligible	
	Egg production		<ul style="list-style-type: none"> - Have a registered facility for the breeding of hatching chickens. 	Agricultural holdings must have registered animals in the Register of Agriculture holdings and HID number.

⁶⁷ For all support under this measure, the general eligibility criteria include: natural persons, entrepreneurs, legal entities, agriculture cooperatives, secondary schools, and scientific organizations.

Table 26: Specific eligibility criteria for access to IPARD II and NPRD, per type of measure and sector (continued)

Measure	Sector	RECIPIENTS OF IPARD II Official Gazette No. 84/2017, No. 112/2017 and No. 84/2017	RECIPIENTS OF NPRD Official Gazette No. 320-6670/2018	Comment
Investments in physical assets of agricultural holdings ⁶⁸	Beekeeping		- Recipient must have registered 5–500 beehives in the central database of animal identification register of the Veterinary Directorate	
	Aquaculture		- Recipient must have in the register of agriculture holdings the area of the land occupied by fish ponds.	
	Fruit and vegetables	- Agriculture holdings with a minimum of 2 ha and up to a maximum of 20 ha of soft fruit and a minimum of 5 ha and up to a maximum of 100 ha of other fruit.	- Agriculture holdings with less than 2 ha of soft fruit and hops or less than 5 ha of other fruit, or 0.1–50 ha of flowers, or 0.2–100 ha of grape production. - In case of the planting of new or the renovation of existing orchards and vineyards (eradication and planting of new) and production of mother plants for orchards and grapes, recipients must have at the end of the investment 0.1–50 ha of soft fruit and hops or 0.3–100 ha of other fruit or 0.2–100 ha of grapes. - Have less than 0.5 ha of greenhouses or less than 3 ha of vegetable production in open space.	Procurement of new plants is not foreseen under the IPARD. For investment in grape production, recipients must be registered in the vine register. For investment related to production for planting material, recipients must be signed in the register of producers of planting material
	Vegetables	Agricultural holdings with a capacity of at least 500 square metres and up to 10 000 square metres of greenhouses or a minimum of 0.5 ha and up to a maximum of 50 ha of open-space production of vegetables.	Agricultural holdings with a capacity of less than 500 square metres of greenhouses for vegetable/floriculture/nursery production or less than 0.5 ha of vegetable/floriculture production in the open field.	
	Other crops (cereals, oil crops, sugar beets)	Agriculture holdings with a minimum of 2 ha and up to a maximum of 50 ha of land under other crops. Agriculture holdings with 50 ha to 100 ha of land under other crops. Agriculture holdings with more than 100 ha of land under crops.	Agriculture holdings with less than 50 ha of land under the crop sector or less than 100 ha under other crops for investments in the purchase of machines and equipment for irrigation.	
Investments in processing and marketing of agricultural and fishery products		Measure is designed for legal entities. Natural persons (agriculture households) are not eligible for support.		

⁶⁸ For all support under this measure, the general eligibility criteria include: natural persons, entrepreneurs, legal entities, agriculture cooperatives, secondary schools, and scientific organizations.

Table 26: Specific eligibility criteria for access to IPARD II and NPRD, per type of measure and sector (continued)

Measure	Sector	RECIPIENTS OF IPARD II Official Gazette No. 84/2017, No. 112/2017 and No. 84/2017	RECIPIENTS OF NPRD Official Gazette No. 320-6670/2018	Comment
Diversification of rural economy	Economic activities through support to non-agriculture activities	<ul style="list-style-type: none"> - Natural persons registered as agricultural producers in rural areas or members of the farm household diversifying on- or off-farm activities. - Private legal entities established or operating in rural areas in the range of micro- and small-sized enterprises, as defined in the Law on Accounting (Official Gazette of the Republic of Serbia No. 62/2013 and its subsequent modifications). 	<ul style="list-style-type: none"> - Recipient provides the services of accommodations and the serving of food and beverages in facilities with accommodation capacity up to 30 beds. - Recipient provides services of food preparation and saving for organized touristic groups of up to 50 tourists, where the group is not using the accommodation service. 	<p>Natural persons registered in the register of agricultural holdings, micro and small enterprises, cooperatives, associations.</p> <p>There are no specific requirements for agriculture households related to the size of the agriculture household or the number of animals in the NPRD.</p>
	Competitiveness of products through added value, systems of quality and geographical indications	There are no specific requirements for agricultural holdings related to the size or the number of animals in the NPRD.		
	Rural Infrastructure	There are no specific requirements for agriculture households related to the size of the agriculture household or the number of animals in the NPRD.		
	Support to young people in rural areas		<ul style="list-style-type: none"> - On the day of application, the applicant must be at least 18 years old. - In the calendar year during which the application is submitted, the applicant must have be more than 40 years old. 	Requirements for agriculture households are the same as those in the NPRD measure “investments in physical assets of agricultural holdings.”
Agro-environment	Organic farming	<ul style="list-style-type: none"> - Active registered agricultural holdings – natural persons (including entrepreneurs). - Legal entities. 	- Natural persons registered in the register of agricultural holdings, legal entities, research and educational institutions, social institutions, monastery, church and foundation, subcontracted producer.	There are no specific requirements for recipients related to the size of the agriculture household or the number of animals in the NPRD.
	Plant genetic resources		Agriculture holdings are eligible only for <i>in situ</i> conservation of genetic resources, with the specific requirement that the size of the land plot is larger than 0.1 ha and that the other requirements related to planting density are fulfilled.	

Table 26: Specific eligibility criteria for access to IPARD II and NPRD, per type of measure and sector (continued)

Measure	Sector	RECIPIENTS OF IPARD II Official Gazette No. 84/2017, No. 112/2017 and No. 84/2017	RECIPIENTS OF NPRD Official Gazette No. 320-6670/2018	Comment
Agro-environment	Animal genetic resources		Agriculture holdings are eligible for support for <i>in situ</i> and <i>ex situ</i> conservation of animal genetic resources. There are no specific requirements for agriculture households related to the number of animals.	
	Agro-environment measures (GAP and environment protection)		- Recipients manage a minimum 1 ha of permanent pastures, and individual land plots can't be smaller than 0.3 ha. - Recipients must regulate the burden of the pastures for which incentives are paid for at least 0.2 conditional heads, and not more than 1.0 conditional heads, per hectare (requirement only for support for grazing on permanent pastures).	
	Erosion control	There are no specific requirements for agriculture households related to the size of the land or the number of animals.		
	Sustainable utilization of forest resources		- The size of the agricultural holding for which support is required will be taken in consideration only as one of several bullets for scoring, where the bigger size will bring a maximum of 5 out of a possible 200 points.	
LEADER		Selected LEADER Local Action Groups	- Citizens' associations representing local partnerships for territorial rural development.	
Risk management in agriculture		No specific requirements related to the size of the agricultural holdings.		
Support for the creation and transfer of knowledge			Entrepreneurs and legal entities that fulfil the conditions for carrying out advisory and expert activities in agriculture, as well as legal entities authorized to train agricultural advisors and agricultural producers, in accordance with the law regulating the advisory and expert activities in agriculture.	Agricultural holdings are foreseen as beneficiaries of this measure.

4.2 Donor-funded programmes and projects related to smallholders

Donor assistance to the agriculture sector and rural development in Serbia has focused on the following specific topics:

1. institutional reforms – strengthening the capacity of the Ministry of Agriculture, Forestry and Water Management and other stakeholders to be able to manage and absorb IPARD funding;
2. capacity-building in the area of food safety and animal welfare;
3. local development and cooperation;
4. market reforms and competitiveness; and
5. projects dealing with agro-environmental issues and the management of natural resources.

Besides the Instrument for Pre-Accession Assistance (IPA), bilateral and multilateral projects also contribute to addressing the sector's challenges. Key donors for the sector have included Denmark, Germany, Japan, the Netherlands, Norway, Romania, Spain, Sweden, United States of America, United Nations agencies and the World Bank. Over the period 2007–2013, the agriculture sector received around EUR 90 million of international donor assistance in total.

1. Institutional reforms: Most of the projects on institutional capacity building and harmonization of regulatory and policy frameworks to the EU *acquis* were funded by the Instrument for Pre-Accession Assistance (IPA) (EUR 60 million). IPA assistance supported a range of activities, including: strengthening the capacities of Serbia for the absorption of rural development funds in the pre-accession period (for preparatory work for the IPARD programme), supply of information and communications technology equipment to support the implementation of rural development policies, capacity building for the establishment and implementation of the LEADER initiative in Serbia, and establishment of the Serbian Farm Accountancy Data Network (FADN). The IPA programme also was used to provide capacity for managing rural development and agricultural support schemes and for the development of a strategy and methodology for implementing a land parcel identification system (LPIS), including software development.

Besides IPA funding, other donors also supported policy and institutional reforms. The project *Rural Development: Effective Land Management* was implemented within the framework of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) project “Strengthening Municipal Land Management in Serbia,” under which seven pilot municipalities in South East Serbia reorganized more than 5 000 ha.

2. Capacity-building in the area of food safety and animal welfare was mostly supported by IPA; activities related to the harmonization of national legislation with EU legislation in the field of food safety and standards and capacity building of the Serbian National Reference Laboratories Directorate in the food chain were funded. The IPA 2012 programme, with an allocation of 15.6

million EUR, was streamlined through five measures related to food safety: developing capacity for improving food processing establishments and hence the quality and safety of meat and milk products; developing strategic direction for managing animal by-products; strengthening controls over pesticide use; continuing efforts to reduce incidence of Rabies and Classical Swine Fever (CSF), with consequent potential for improvements in the quality of livestock and processing establishments; and developing capacity for improvements in rural and agriculture development and in food safety and consumer protection in Serbia, in line with EU standards and requirements.

3. Local development and cooperation: Projects aimed at strengthening local governance and cooperation were implemented in various regions with different scopes of territorial coverage, supported by various donors.

Many of the projects aimed at local capacity enhancement in Serbia had a component related to support for the establishment and strengthening of partnerships and dialogue between and among rural actors. Some of most important projects in this field include:

The project “Sustainable Tourism for Rural Development” was implemented in 2009–2012 within the framework of the Joint United Nations Programme, funded by Spain through the Fund for the Achievement of the Millennium Development Goals. The activity was conducted in all 19 local authorities. To further stimulate the participants to practically apply the knowledge acquired during the training programme, the project supported local communities in the design and implementation of projects on rural tourism development. Six local projects were implemented on the territory of 15 municipalities with USD 180 000 in grants.

Through the project “Municipal Economic Development in the Danube Region” (GIZ–KWD), ten municipalities in Eastern Serbia received technical assistance of EUR 4 million in the period 2010–2012. The project objective was to contribute to overcoming social, regional and economic imbalances in the area. The main actions were tourism development, rural development, competitiveness promotion and capacity building at national, regional and local levels.

Besides the abovementioned, there are many cross-border projects of regional relevance, including the European Commission Cross Border Cooperation (EC/CBC), Adriatic programmes, the Standing Working Group for Regional Rural Development (SWG RRD), the Regional Environmental Center for Central and Eastern Europe (REC), FAO, bilateral agreements, and others. One such project is the “Facilitating an area-based development approach in rural regions in the Western Balkans.” This project has been applied in several regions of the Western Balkans. In the course of 2017, the ABD Grant Scheme was supported under the Rural Development through Integrated Forest and Water Resources Management in Southeast Europe (LEIWW) programme and was implemented in the Drina-Tara, Drina-Sava, Prespa and Sharra cross-border regions. The grants scheme was developed in line with the objectives of the LEIWW programme, supporting the development of short value chains for quality food products and rural tourist products and services through the establishment of partnerships and focusing on

innovation, with special focus on women and young people and the sustainable use of natural resources.

4. Market reforms and competitiveness: The United States Agency for International Development (USAID) Agribusiness Project was implemented in 2007–2012 with a total funding of USD 27 million. The aim was to increase the efficiency and competitiveness of Serbian agribusinesses and to improve the enabling environment for the development of the agribusiness sector in Serbia. The project covered the three segments of value chain: production (producing the raw material), processing (transforming it into a marketable form), and marketing (selling the product to buyers). The USAID Agribusiness Project activities were focused on two components:

- Increasing efficiency and competitiveness (strengthening producer organizations; providing technical assistance and training to producers, processors and wholesalers; improving agribusiness development service delivery; encouraging youth involvement in agribusiness; developing women entrepreneurship; enabling access to new markets and increasing export sales; and ensuring environmental compliance.
- Improving the enabling environment for agribusiness (improving livestock and crop production estimates and planning; developing market price information systems; improving animal and plant health and food safety; improving compliance with international standards; improving the dissemination of agricultural information; and mobilizing legislative, policy and regulatory reforms).

The Fruits and Berries Program initiated by Denmark supported the fruits and berries sector in Southern Serbia over a six-year period (from 2010 to 2016), with total funding of EUR 5.36 million. The aim was the development of high-quality and competitive fruit and berry products for the export and home markets. The Fruits and Berries Program supported the improvement of productivity and quality, with a focus on education and training of extension service providers and producers, investments in the fruit and berries sector through its grant programme, capacity building among producers and market initiatives, and improvement of post-harvest management, research and control. A total of 854 beneficiaries received grants from the programme.

The project “Development of the Financial System in Rural Areas” is supported by the German Development Bank (KfW) (2012 to approximately 2022). The overall objective of this EUR 45.5-million grant/loan programme is to promote rural development and the modernization of the agricultural and food processing sectors by providing small and medium enterprises and farms in rural areas with favourable loans through commercial banks and micro-finance institutions. The loans will be complemented by technical assistance to support banks in developing adequate financing products as well as creating awareness among small and medium enterprises and farmers in rural areas to decrease existing barriers to finance.

The European Bank for Reconstruction and Development (EBRD) and FAO have implemented three projects related to vertical coordination and the supply chain. Their activities include cooperation with the Serbian Union of Cooperatives to promote the development of the

cooperative sector and boost their capacities, and training to producers and small and medium enterprises on cooperative structures and financial management (the project „*Supporting the Development of Agricultural Cooperatives in Serbia - Development of a By-law and Promotion of the Benefits of Cooperative Membership* implemented from 2016 to 2018, with total funding of USD 129 870). Besides this, the project “*Support to More Efficient and Inclusive Agrifoods Chains – Development of Origin-Based Labels in the Horticultural Sector*” (implemented from 2013 to 2016 with total funding of USD 444 603) aimed at supporting the registration of geographical indications and at better positioning on the domestic and EU markets for products with geographical origins. Finally, the project “*Improving Food Quality and Safety Standards in Serbia’s Meat Sector*” (from 2013 to 2016 with the budget of USD 455 700) had the aim of developing quality schemes for creating added value for certain meat products, in order to increase the competitiveness of domestic products both in domestic and foreign markets.

5. *Projects dealing with agro-environmental issues and management of natural resources:* Considerable donor support also was allocated to organic production, where major donors were the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)/ACCESS project, Avalon, the Swedish International Development Cooperation Agency (SIDA), Diaconi, the Swiss Import Promotion Programme (SIPPO), the United States Agency for International Development (USAID), the Swiss Agency for Development and Cooperation (SDC), FAO and many others. The majority of these international organizations recognized the potential of organic production and facilitated the establishment of producers’ associations, implementation of food safety standards, projects related to the added value of organic products and more.

From the EU pre-accession funds (IPA 2012), the project “Regional reconstruction and improvement of flood protection infrastructure in the Sava River Basin for rehabilitation and reconstruction after floods” was allocated EUR 8 million for agriculture or direct aid to small agricultural households. The project was implemented by FAO. Initially, the project covered 24 municipalities, or 15 000 households. Finally, in January 2016, a total of 33 784 households in 41 municipalities were provided with different kinds of support.

The “Serbian Transition Agriculture Reform” project, or STAR, from the World Bank, focused its support in four directions, aiming at the conservation of agrobiodiversity and the rural business environment. One component was for the improvement of research and extension services. The STAR project has increased understanding of how sustainable agriculture and rural development might be achieved in Serbia through implementation of a pilot project. In addition, the ecological value of the Stara Planina area has been improved, and local farmers in the area have benefitted from investment. A range of measures have been developed and tested and can be utilized as a basis for developing programmes applicable across other parts of Serbia.

5 Conclusions and recommendations



This chapter first discusses findings and conclusions related to each area in the scope of this study and provides an elaboration of the arguments and reasoning behind them.

It continues with recommendations for specific actions on how to address and overcome the needs, constraints and challenges of smallholders and family farms as well as the policy gaps identified. Recommendations were derived from the findings presented in this study and verified through a multidisciplinary consultation with the participants of the validation workshop. They are formulated around five broad categories and are briefly justified.

5.1 Conclusions

Definitional issues related to smallholders and family farms, data availability and limitations

The legal framework regulating the agriculture sector and agricultural policy in Serbia defines the three following categories: 1) agricultural holding, 2) family agricultural holding, and 3) family agricultural holding according to economic strength (commercial and non-commercial family farm). The latter indicates that policy seeks to more clearly distinguish agricultural holdings by their size, but the division of agricultural holdings according to economic strength still relies on farmers' self-declaration.

Data from the Statistical Office of the Republic of Serbia are publicly available in a format that enables cross analysis of a wide range of information related to agricultural holdings. The applied methodology of data collection in terms of instruments used, coverage and definitions are in compliance with the Eurostat methodology, allowing international comparisons.

As for the existence and availability of data related to the objectives of this study (family agricultural holdings and rural issues), and for the cost/time to gather data disaggregated by various variables, a number of shortcomings were noted. Some of the gaps identified include:

- The generation of agricultural census data by type of legal status of agricultural holdings is not allowed.
- No data are available on sector output at a level lower than national.
- Population statistics disaggregated by type of area/settlement are directly available (from open data sets and publications) only from population censuses.
- Disaggregated data by type of settlements (such as marital status, income sources, labour market and other variables), as well as sex-disaggregated data, are not available.
- The data collected in the Farm Register and other registers are not publicly available and are in a format that is not user friendly (in other words, it takes considerable time to generate results).

The key characteristics of the sector

The relevance of agriculture, forestry and fishery in the economy of Serbia is considerable. This is confirmed by the sector's contribution to the gross domestic product, by its export earnings and by the size of its employment. The dominant characteristics of the sector's output are high volatility in growth rates (attributable to extreme weather events) and the dominance of crop production. Foreign trade and trade surpluses of the agrifood sector have been growing constantly during the covered period. Principal trade destinations are European Union and Central European Free Trade Agreement countries, with fruit, cereals and tobacco as the main export product groups.

The dual structure of farm size and the supply chain in Serbia is prominent. This model is shaped by various types of regional forces, such as characteristics of natural resources, development pathways of agrifood systems and market size and demand. While the North–South divide is the prevailing pattern, there still are significant intraregional differences.

Both land and livestock resources are concentrated on family agricultural holdings and are unequally distributed according to farm size by region. Agricultural land and livestock in Vojvodina Region are predominately used by larger family agricultural holdings and enterprises, while in Central Serbia, they are in the hands of small- to mid-sized family agricultural holdings.

Profile and importance of smallholders and family farms

The profile of smallholders and family farms obtained by applying FAO's proposed definition of small-scale food producers is a bit controversial, as are some of their operational characteristics. The results obtained on the basis of the proposed definition do not appropriately reflect national specificities, particularly those related to the distribution of livestock units according to region and farm size.

Smallholders and family farms are numerous and occupy considerable resources, but the characteristics of farm managers are not conducive to the sustained development of the sector. Smallholders and family farms have a high percentage of the land resources (21 percent of utilized agricultural area), of the total number of small farm animals (60 percent of hives, 48 percent of goats and 28 percent of sheep) and of the total labour fund (33 percent). However, they are managed by older people (males are 59 years old, on average, and the average woman is 64 years old), with the majority of them (67 percent) having no other activity. Besides this, the majority of the managers have acquired agricultural knowledge only through practical experience (58 percent).

Smallholders and family farms managed by women are in an even worse position. The average age of female managers (64) is higher than that of male managers, and women are less represented among managers younger than 40 (10 percent), confirming the thesis about the prevalence of traditional patterns of inheritance in which a woman inherits the farm after the death of her

husband. Female managers are unlikely to be pluri-active, and their competences in agriculture are even more unfavourable (73 percent of them rely only on practical experience).

The level of market participation of smallholders and family farms is significant, but they sell raw agricultural produce without adding value. More than two-thirds (67 percent) of smallholders and family farms sell their products on the market, and out of that figure 21 percent sell less than half of their production. Still, only 7 percent of smallholders and family farms are engaged in on-farm income diversification activities, most often in fruit and vegetable processing (41 percent), milk processing (39 percent) and wood processing (7.7 percent).

Despite low levels of pluri-activity among farm managers, a small number of smallholders and family farms are engaged in labour- and capital-intensive types of agricultural production, such as organic production and production in controlled conditions (greenhouses). Only 214 smallholders and family farms (out of the total of 403 462 in Serbia) deal with organic production, and 4 842 (1.2 percent) grow vegetables and flowers in controlled conditions.

All of the above suggests that smallholders and family farms constitute an extremely diverse category in all analysed aspects of their performances. This general feature of smallholders and family farms is commonly known. What makes it relevant in the context of Serbian agriculture and rural development are the big regional differences in their livelihood strategies.

Land rights and land market

The high fragmentation of farms and land plots in Serbia is the consequence of numerous land reforms and reallocations, none of which aimed at the enlargement of family farm size. The current farm structure in Serbia is a result of the land tenure system and policies that limited both the land minimum (through the nineteenth century) and the land maximum (from the 1920s until the 1990s). Besides this, all agrarian reforms in Serbia were followed by colonization, creating a new army of farmers and farms of the smallest size. The neo-liberal approach of transitional governments to land market and land rights, accompanied with an unsuccessful attempt at privatization, contributed to further land fragmentation.

However, there were – and still are – many other controversies related to the land market in Serbia:

- The liberalization of the land market in the 1990s caused the emergence of newcomers to agriculture, thereby limiting the access to land assets of mid-sized family agricultural holdings and smallholders and family farms. The level of prices for the rental and sale of land confirms this statement.
- The land market in Serbia is active, but this is mostly due to the high demand in Vojvodina Region. In Central Serbia, the land market is not as vibrant as it is in the northern parts, except near attractive tourist destinations and in the valleys of big rivers.

- The changes in the farm structure are not well documented.⁶⁹ Still, it can be indirectly concluded that the transfer of farm land to bigger and more competitive producers in Vojvodina is more or less completed, whereas in Central Serbia the pace of farm restructuring and redistribution of land resources among family agricultural holdings and farm members goes slowly.
- Current law provides various rules and limitations regarding land grabbing but does not facilitate privileges and measures to encourage the participation of family agricultural holdings and smallholders and family farms in the land market.
- Despite rapid and intense depopulation, the ageing of farmers and consequences from the degradation of natural resources, the need to accelerate changes in farm structure and facilitate farms' entry into and exit from the sector are not well addressed by national policy.

Ownership rights to land are still poorly administered in most of the territory, since the land register and cadastre system are outdated and not suitably functional. A large part of the state-owned land is still not recorded as such, while a significant part of the land is not used. Many efforts have been undertaken in the building up of a cadastre and land information system at national and local levels. Certain competencies have been given to local self-governing bodies, and their capacities have improved. Still, the legislation and registration of properties and property rights need to be enhanced, simplified and accelerated.

Access to markets and support services

The agrifood market chain in Serbia has many forms, which are largely determined by the performances of subsectors and the regional market structure.

- The value chain of export-oriented and stock exchange products (cereals, oil seeds, some vegetables and fruits) has evolved and become more closely (and internationally) integrated.
- Still, vertical coordination through contract farming occurs mostly among mid-sized agricultural holdings in sectors in which agricultural products have to go through a processing stage or in the case of high-value commodities for which new niche markets have arisen.
- Direct marketing and spot sales are the most common form of sales for smallholders and family farms. Even when they have larger surpluses, they access markets through extended and inefficient trading chains.
- Both on-farm and off-farm storage capacities are inadequate and prevent farmers from better responding to market offers and demands. This applies to fruit and vegetable production and also to the lack of certified grain storage facilities.

The key barriers preventing not just smallholders and family farms but also a significant part of commercially oriented family agricultural holdings from accessing value chain integration are

⁶⁹ The first comparative results on land distribution by farm size will be available in 2019 from the first national Farm Structure Survey (FSS), which was conducted in 2018.

issues related to knowledge and innovation, food safety, hygiene and traceability. The introduction of standards and certification schemes often requires new investments and services and may raise the running costs, which together discourage farmers from replacing current practices.

The subsector of commercial agricultural support services has grown significantly, but it doesn't reach many family agricultural holdings. The growth of export opportunities, investment inflows in some subsectors (fruits, vegetables, wine, oilseeds) and the emergence of newcomers in agriculture business have contributed to progress. When it comes to smallholders and family farms, they still mostly rely on informal channels of knowledge and information transfer and public services.

The risk-averse behaviour of family agricultural holdings in Serbia can be attributed not only (if at all) to the conditions of the financial market, but above all to the risks related to weather events, climate change and market price volatility. A wide range of funds and financial services, as well as loans with subsidized interest rates, are available in the agriculture sector, but smallholders and family farms generally seem reluctant to take loans, even though they are ready to invest.

The abovementioned information indicates that, without a doubt, there is a need for structural reforms to boost the growth of smallholders and family farms. It also indicates that the factors affecting farmers' decisions to replace traditional practices are complex and multidimensional. The common understanding is that smallholders and family farms lack access to new technology, finance, knowledge and information, which further implies that if those things were available, farmers would be able (and ready) to produce more (efficiently). Yet, the use of inputs, including technology, knowledge and financial means, is part of endogenous factors of the farming system (in other words, those controlled to some extent by individual holdings). The analyses conducted in this study have confirmed that farmers' choices, perceptions and willingness to invest are determined by cultural factors (such as inheritance patterns) and personal preferences (such as resistance to borrowing), not only by the overall business climate.

Agro-environmental issues

Serbia is facing difficulties in implementing adequate agro-environmental measures that encourage farmers to implement appropriate farming practices. The intensity of farming ranges from relatively intensive farming (Vojvodina Region), through moderate farming (Šumadija and West Serbia), to very extensive farming (South Serbia), but, generally, the application of fertilizers and crop protection products is low. However, population decline, ageing and lack of human activity in some areas have resulted in both degradation and exhaustion (such as overgrazing) of these resources and the related biodiversity loss. Neither environmental cross-compliance measures nor incentives for biodiversity conservation are available.

Recent trends have shown that climate change, mismanagement of natural resources and rapid population declines have great impact on rural people and the environment. Climate change and the increased frequency of extreme weather events have brought new risks for farmers, while

the mismanagement of natural resources and biodiversity has resulted in adverse effects on the rural landscape and in the degradation of resources, among other things.

Agro-environmental issues are not properly addressed and still to be resolved within the context of agricultural policy. The regulatory framework is fragmented and poorly coordinated by various bodies. The policy and institutional framework has been established only very recently (or is still in development) and lack appropriate institutional structures for the implementation and enforcement of regulations.

Despite the variety and abundance of natural resources, there is a relatively weak integration of biodiversity concerns into the economic sector, including into agriculture and related activities. An exception to this rule is organic production, which is one of the fastest growing subsectors. Measures on the preservation and utilization of local varieties and breeds, as well as for organic production, have been put in place, but the regulatory mechanisms, safety standards, guidelines and operational requirements prevent farmers from capitalizing on products with added value based on local varieties, breeds and local knowledge.

Rural population and rural areas

The competitiveness of rural areas is constrained by serious limitations, and this is not only the case with the remote and mountainous regions.

Population trends are generally unfavourable in Serbia, but rural areas experience much worse trends in comparison to urban areas, such as low birth rates, outward migration, ageing of the population and an increase of the older-age dependency ratio. Depopulation has resulted in large areas of land being abandoned, in the loss of many services and activities in rural areas, and in the degradation of landscapes. These problems cannot be left to the spontaneous developments of the labour market, due to high social, economic and environmental costs and threats.

With respect to the gender demographic factor, imbalances are apparent, and they are the consequence of the higher migration of female inhabitants and younger generations from rural areas. The decline of the number of the female population leads to falling birth rates, not only, but also limits the abilities of family agricultural holdings to benefit from products with higher added value and income diversification through food processing (including some vegetables, dairy products and poultry).

Both the quality and coverage of rural infrastructure are critical. Not only do rural inhabitants evaluate as worse (than do urban inhabitants) such diverse aspects of infrastructure as public transport, waste management, shops, banking system and social service facilities, but they also evaluate as worse some aspects of living that traditionally have been considered advantages of rural areas, such as the quality of air, soil and water. The greater part of the administrative responsibility for infrastructure investments was transferred to local governments, but the financial resources are insufficient for the scope of investments that need to be made.

The educational gaps between rural and urban populations and between males and females are not big, but still there is an issue of farmers' education and training. In the present generation of children, the gap in education – at least in terms of the level of attendance in primary and

secondary education – has narrowed. There remains low coverage of preschool education in rural areas, and the educational structure of the rural population (the share of persons with primary, secondary and/or tertiary education) is still significantly less favourable than among the urban population. The agricultural education of farm managers is poor, whether formal or informal. The low level of education and over-reliance on own experience and traditional practices is particularly visible among managers of smallholders and family farms, partially due to their being older.

Activity and employment in rural areas are higher than in urban, but the structure of employment and protection of labour rights is problematic. Among the employed rural population, a much higher percentage of people are recorded as self-employed and helping family members, with the last category reserved mostly for rural women engaged on family farms.

Employment is dominated by agricultural workers, whereas the share of wage-employed and non-farm self-employed is low. Yet, when it comes to the income structure of rural households, the model is somewhat different: The largest shares have wages/salaries, followed by pensions. Income from agriculture is positioned in third place and counts slightly above 11 percent of the population, while another 10 percent is attributed as in-kind income (produced goods that are consumed in the household).

Salary-paid workers in rural areas often work without formal contracts, have no pension or health insurance and are denied rights to paid sick leave and annual leave. Child labour is traditionally present in rural areas, but the economic engagement of children is classified as child labour more because of the hazardous types of work than because of long and excessive working hours.

People in rural areas assess their personal health as generally worse than do people in urban areas, and the worst health status is reported by older rural women (65 and older). The rural population also reports more difficulties in access to health care.

Subjective well-being is also consistently evaluated with lower marks among rural inhabitants, except in the dimension of family life. Comparing to the urban population, rural inhabitants are less satisfied with their area of living, housing, living standard, job and education. Overall life satisfaction is lower among rural inhabitants than among urban.

In recent years, evident progress has been made in promoting gender equality, but mainly with respect to improving the legal and policy framework. Yet, the implementation remains scarce and fragmented. The most systematic work in developing and implementing gender equality has been achieved within the Provincial Government of the Autonomous Province of Vojvodina and is coordinated by the Provincial Secretariat for Economy, Employment and Gender Equality in cooperation with the Provincial Secretariat for Finance.

Social protection

Rural households and populations are exposed to higher risks of poverty, material deprivation and social exclusion, whichever measure is applied.

On the other hand, social protection is less accessible to those who are exposed to risks of poverty in rural areas, due to restrictions related to assets and the reluctance or lack of knowledge of the rural population on how to access financial social assistance.

The lack of knowledge and information is also present regarding social protection services and in facing different social risks. Rural households more often revert to family resources instead of approaching institutions for support.

Agricultural policy

The driving force behind the acceleration of agricultural policy formulation and development in Serbia is the process of European Union integration. The wave of reforms started with Serbia's acquisition of the status of a candidate country for EU membership (2012) and the opening of the first negotiation chapters (2013). Since then, Serbia has made significant progress in aligning long-term programming documents, legislation and administrative infrastructures with EU requirements.

The objectives and priorities of agricultural policy are largely in line with the EU acquis and highly prioritize issues related to the sustainable management of natural resources, the development of the value chain, the competitiveness of the agrifood sector, farm structure, rural poverty and vulnerable groups, and the need to harmonize institutional and legal frameworks with EU standards.

Yet, when it comes to policy implementation, agricultural policy is failing to properly address many concerns, particularly those related to social and environmental domains:

- The majority of state agricultural budget allocations are used for direct producer support and input subsidies, still without an agro-environmental cross-compliance mechanism.
- The amount of funds allocated for rural development measures is low and narrowly orientated towards farm investment.
- The bimodal composition of the agrarian structure is not well reflected in policy practices:
 - Eligibility thresholds are set at a low level for the most of national measures. This provides an opportunity for vast numbers of farmers to apply, but still the funds are disproportionately captured by larger agricultural holdings.
 - Lump-sum incentives for all farmers participating in the scheme (irrespective of farm size and specialization) contribute to equity objectives rather than having real contributions to broader policy objectives (such as structural changes, higher competitiveness, public goods, etc.).
 - Specific support measures for agricultural holdings located in areas with difficult working conditions for agriculture (e.g. relatively low minimum eligibility threshold applied for milk premium and higher subsidies for on-farm investments) are in place, but the question is whether these measures are sufficient to address the structural development needs of small farms.

Both horizontal and vertical policy coordination and coherence are questionable. The reason for this claim lies in the overlapping of policy measures and instruments at different levels (national/municipality) and the fragmentation and/or duplication of the policy interventions and projects of various ministries and institutional bodies.

The policy-making process lacks the proper planning, particularly when it comes to monitoring and evaluation and the coherence among policy objectives, measures of support and their effects. The absence of monitoring and evaluation guidelines and absent or poorly defined benchmarks and targets limits policy development and raises the question of consistency and effectiveness of agricultural policy. Though the statistical databases, the Farm Accountancy Data Network and the internal registries of the Ministry of Agriculture, Forestry and Water Management are improved, these resources are not used to establish transparent and systematic baseline indicators.

5.2 Recommendations

Definitional and analytical issues

The need for a nationally specific definition of smallholders and family farms and/or a categorization of agricultural holdings has been confirmed by the analysis conducted in this study. The results obtained based on the FAO definition of small-scale food producers could be useful for international comparisons, but they are debatable from the perspective of the Serbian farm structure and its regional characteristics.

- *Further efforts towards the development of a national definition should consider:*
 - usage of both relative and absolute thresholds when defining smallholders and family farms;
 - several other combinations of variables and thresholds, particularly those related to livestock units and annual working units;
 - different thresholds for North and South Serbia;
 - the particular need for deeper insights into household income levels, income composition, and socio-economic profiles of farm members; and
 - the need for the results of several scenarios, with different variables and thresholds, to be tested by appropriate statistical tools and evaluated from perspectives of different policy contexts before being put into practice.
- *The overall system of collecting data related to smallholders and family farms should be reconsidered.* Carrying out an agriculture census on a population of more than 630 000 agricultural holdings, and carrying out a Farm Structure Survey every third year on a sample of 120 000 agricultural holdings, is a quite expensive procedure. Regarding this, it is important to re-examine:

- the currently used threshold for agricultural holdings (0.5 ha vs. 1.0 ha); and
- the usage of sample surveys on population of smallholders and family farms. Instead of collecting large amounts of data by census surveys, some of which are not relevant for smallholders and family farms, surveys of representative samples of smallholders and family farms (defined according to nationally specific variables and thresholds), with questions related not just to agriculture but also to other aspects of their livelihoods, seems to be more efficient and useful. This approach would save resources, provide in-depth insights into livelihood strategies of smallholders and family farms and, above all, would be more useful for evidence-based policy making.
- *Statistical data sets disaggregated by sex, type of settlement, size of agricultural holdings and ownership should be publicly available* on the open data portal in order to save the resources of both the statistical office and users.
- *The data from various registers need to be linked and set in a user-friendly format in publicly available databases.*
- *There is a need for strengthening the national analytical capacities of both staff and researchers dealing with rural issues,* in order to enable the effective use of policy analysis and ability for comprehensive assessment of policy implications.

The integration and empowering of smallholders in markets

The integration and empowering of smallholders in markets should be focused on three key areas of interventions, as follows:

Access to land and (family) resources

The results of the analytical part of this study (although based on very few indicators related to the farmers' profile and farming system), show that the physical resources and age structures of managers of smallholders and family farms in Serbia are not conducive to the sustained growth of the agriculture sector. New mechanisms to accelerate farmer exit and (new/young) farmer entry rates, as well as the transfer of resources to young farmers, should be introduced.

- *The young farmer scheme should be revised to precisely define whom to reach, whom to support (and with what support), and what should be the expected outcome.*
 - The age limit for young farmers is set at 40 years old or younger, as it is in European Union countries in which young farmers and early retirement support schemes have existed for decades. In Serbia, support for young farmers was introduced recently, so farmers in middle age do not benefit from the system, although they are the most plentiful (and more likely will remain in agriculture sector).
 - The scheme should clearly distinguish between “newcomers” (farmers starting agriculture businesses) and “young farmers,” whose profiles and needs are different.
 - The one-off support scheme for new farmers (in addition to investment support) should be introduced to accelerate the pace of start-up and increase the overall performance of the farm.

- *Land and/or farm transfer to young farmers and agricultural workers should be taken into consideration and assisted by various programmes of social and agricultural policy.* Long-lasting, multigenerational migration (in some regions), degradation of natural resources and prevalence of traditional patterns of inheritance (all well documented in the analytical part of this study) require being handled with an integrated approach.
 - Exit strategies of aged farmers without successors in Serbia have not been examined in depth for decades. Farmers' decision-making behaviours in this respect need to be explored and understood prior to any further step.
 - Support should be given to local pilot programmes aimed at encouraging older farmers to look outside the family for someone who could take over the farm.
 - The joint use of farm resources and facilities should be facilitated by connecting older and younger farmers; such informal collaboration practices are already in place but need to be supported and formalized.

Access to knowledge

There is a need for fostering technology innovation, but even more for creating demand for innovation among farmers (particularly in the few value chains in which smallholders and family farms can find profitable niche markets). This is not just because of rigorous food safety and health standards, but also due to increased economic losses caused by extreme weather events.

- The whole Agriculture Advisory Service system should be reconsidered, starting from its main role, since it includes the quite-broad list of extension activities.
- The offer of training modules and programmes (financial management, risk analysis, good agricultural practices, etc.) should be expanded, and delivery models should be developed with greater use of local resources, volunteers, staff and resources of secondary agricultural schools, lead farmers and more.
- New methods of knowledge transfer and information dissemination should be facilitated, tailored to the needs of smallholders and family farms. Development should be supported of more diverse mobile applications and marketing platforms for farmers. The development of demonstration farms, training centres and on-ground extensions also should be supported, along with training programmes to enhance the entrepreneurial and technology skills of rural women.

Food chain

The heterogeneity of smallholders and family farms' participation in the labour market and the market of goods and services is well confirmed by the results of the analytical part of this report. Yet, policy incentives in place are designed to foster farm productivity, competitiveness, and (to a certain extent) market orientation. On the other side, market participation is not properly addressed by policy.

- Modernization and technological upgrading are needed to ensure the implementation of quality and health standards and to enable smallholders and family farms to capture value-added through on-farm processing. The one-off investment support scheme for establishing a base for new businesses, combined with operational support for marketing activities (labelling, certification and control) should be facilitated by various funds and donors, promoted and financially supported (“the package of support” schemes).
- Investments in farmers’ markets and wholesale facilities are needed. Public–private partnership and other collaborative models of local self-governmental units, regional development agencies and the business sector should be considered, and the same attention should be given to investments into “soft” infrastructure and services – human capacities, information technologies, marketing, promotion, financial skills, etc.
- Partnerships should be built and vertical coordination strengthened among supply chain actors to enhance the market access of smallholders and family farms. To ensure the sustainability of cooperation and stable links within the local food system, new forms of relations need to be developed and/or empowered. This is the way to overcome the disadvantages and limitations of short-term informal transactions and high transaction costs, and for enabling smallholders and family farms to respond to emerging niche-market opportunities.
- The development of short food chains and networks of different actors surrounding them (different types of SMEs, service providers, farmers associations and cooperatives) should be encouraged and supported. Short food supply chains are promising market channels for the many smallholders and family farms that currently operate in (semi)informal channels of direct selling.
- National legislation and rules on placing food of animal origin on the market are relaxed, but further work is needed to develop an official, flexible definition of “short food supply chain” and to make it operational.
- The creation of awareness and trust among consumers is needed, assessing their interests, attitudes and demand for local and/or traditional food products.
- Research systems should be integrated and used to provide relevant inputs for policy-makers. Research studies and analyses should consider the following tasks:
 - Assess the determinants of farmers’ choices with regard to market participation, their motives and the obstacles they face. Also, there is not enough research on a representative sample of consumer attitudes towards farm products, nor about what guides them when buying local products.
 - Identify and map the models of smallholders and family farms and supply chains with the capacity to be successful within given social, economic and environmental contexts or criteria.
 - Map the actors in logistical support, along with their interest and capacities to take part in short food supply chains.

Labour market

The rural labour market in Serbia is shaped by two main features: 1) intense job-induced out-migration; and 2) the prevalence of informal agricultural employment. It offers few wage-employment opportunities in the formal sector, especially for woman and youth. The informal sector absorbs rural labour with low levels of education and school drop-outs, but in low-wage jobs with salaries that do not provide decent livelihoods. Yet, the shortages of farm labour are visible and, in some regions, becoming acute (and not only during the peak season).

Thus, considering the current state of the rural labour market and its perspective, we suggest that focus should centre on two respects:

1. Formalization of work in agriculture

- According to the draft *Law on seasonal work*,⁷⁰ workers will have to be registered and have a pension and health insurance during engagement in seasonal jobs in agriculture. Since many seasonal workers actually are retired people, pensions and health insurance are not relevant for them.⁷¹ However, welfare grants, minimum wages and worker safety standards that equal those of workers in other sectors are relevant. This may include provisions for sick leave and maternity leave, living conditions for seasonal workers, basic first aid and sanitary facilities on farms, and more.
- The support of civil society organizations, donors and farmers' associations will be needed in the promotion and encouragement of the associations and unions of farm workers, along with the empowerment of their capacity and the enforcement of new laws and written contracts.

2. The generation of new employment opportunities for rural labour. The creation and development of new jobs, businesses and investments in non-agricultural activities is a challenge that requires a broad set of policies. The key interventions should be centred on:

- As the first step, more detailed monitoring of unemployment beneficiaries from rural areas and the impact of state support on this particular group is needed. There is no evidence of the effects of active labour market programmes and measures on rural populations and vulnerable rural groups. The low education level of the inactive rural population implies that an increase in their labour market activity is possible if they are offered better programmes of vocational education or training. The widespread practice of delivering general training programmes should be replaced by shifting the focus to practical skills.
- It is important to prioritize the employment of women and youth in the formal sector, whenever investments in new businesses are supported by the state budget. With regard

⁷⁰ The *Law on seasonal work* has been announced for more than two years but has not yet been adopted.

⁷¹ It has been announced that the law will not be restrictive towards beneficiaries of some form of social assistance, and that they will not lose previously acquired rights.

to this, childcare services should be offered not only for rural families, but also to unemployed women to enable their active job seeking.

- Regarding the creation of conditions for maximizing the economic potential, creativity and entrepreneurship of women, the national “Strategy on Gender Equality” envisaged the introduction of the principle “think first of small” into the work of legislative and executive authorities in the planning, drafting, adoption and implementation of laws and mechanisms related to economy and business. Encouraging the wider implementation of this approach requires facilitating policies and improving transparency and impact monitoring.
- Financial support is needed for youth in starting their own businesses, especially by funding start-ups in social and innovative entrepreneurship. Also, elder-care programmes should be stimulated, since they ensure job creation for unemployed women without qualifications or with very low qualifications.
- The primary agricultural sector still can be an important source of jobs for marginalized and poorly employable rural populations. This may include various forms of pooling resources by connecting older and new farmers and families.

Policy-making and implementation

Policy-making

All of the presented results clearly indicate the need for a polycentric approach in rural development policy-making to properly address the complex and interrelated needs, constraints and challenges faced by smallholders and family farms in Serbia.

- Better policy coordination across governmental bodies and various levels of policy-making, as well as a more comprehensive policy response, should be developed to address rural issues in general. There is no sufficient synergy among the policies implemented by various ministries/governmental bodies, on one side, and the lack of coherence between policy (quantified) objectives, mechanisms, funding and outcomes, on the other side.
- To enhance the quality of life and social inclusion of the rural population, the efficiency and effectiveness of the social protection system should be improved. It must prioritize the quality and accessibility of social services to rural people, and it must also provide a “safety net” and cover basic needs for those who do not have a job and for elderly people and other vulnerable groups. Increased capacities for the creation of community-based social service policies and for their delivery are needed. The focus should be on strengthening the implementation of existing mechanisms and the development of more innovative and integrated solutions.
- An effective policy response to more frequent extreme weather events is needed to reduce the vulnerability of agriculture and smallholders and family farms to climate change. There is a need to create an integrative and proactive policy (instead of reactive, which is the current practice) towards climate change, with a clearly defined agenda and preconditions for activating state aid measures. In addition, large-scale investments in environmental change mitigation and adaptation actions are needed.

- The evidence-based policy approach must be strengthened, and national capacities must be built, to support evidence-based policy making. Policies at all levels are often formed on an ad hoc basis and driven by various interests and pressures, rather than by systematic monitoring, evaluation and adaptation.⁷²
- Cross-sectoral cooperation, policy-making and implementation must be facilitated, and capacities for that must be strengthened at the local level. It is particularly important for departments dealing with social (including employment and social reform programmes), agricultural and environmental issues in local administration, since the responsibilities in those fields were transferred to the local level.
- In general, local self-governmental units need more autonomy and more tools than those defined by the *Law on Incentives for Agriculture and Rural Development*, to properly address specific local needs. Policy design and decision-making processes at the local level should be guided and assisted, and they should involve farmers and the business sector to ensure that their real needs are responded to.

Policy implementation

The current system of policy coordination, design and implementation does not guarantee the rational allocation and effectiveness of budgetary support.

- Context-specific variables should be used when defining beneficiaries of various policies and incentives. This applies both to agricultural and social policy. The usage of a statistical definition of agricultural holding ensures the equity of policy beneficiaries, but it calls into question policy objectives and effectiveness in reaching target groups. The “one (size/definition) fits all” approach has led to a large percentage of rural households being excluded from social assistance programmes and consequently has resulted in increase of rural poverty rates.⁷³
- For effective advocating in favour of specific policy measures for smallholders and family farms, the disaggregation of the agrarian structure based on various criteria – where farm size is just one of them, in addition to region, farm manager and farm owner profile, commodity subsector, and income size and composition – is needed when defining both beneficiaries and priority measures.
- Access should be facilitated for rural vulnerable groups to community-based social services. This needs to be improved by strengthening and diversifying social services and service providers in dealing with day care for children and healthcare services for elderly rural residents, etc.
- There is a need for a better fit of funding between coupled direct payments (still with no cross-compliance requirements, as in the common agricultural policy), on one side, and

⁷² Preconditions have been created for better harmonization of public policies by the adaptation of the *Law on the Planning System of the Republic of Serbia*.

⁷³ The definitions of “agricultural activity,” “farmer,” “agricultural holding” and “family agricultural holding” all together need to be revised and aligned with the European Commission regulation.

policy objectives related to competitiveness and the provision of public goods (environmental, social), on the other side.

- Greater focus should be placed on the development of “greening” policies, on the introduction of good agricultural practice policies and regulations, and on the initiation of the Nitrates Directive compliant with European Union practice.
- Payments for environment services in agriculture and forestry, to support land users for the public externalities they provide through the adoption of sustainable resource management practices, should be developed and implemented.
- Support measures tailored to address specific needs of smallholders and family farm and farms in areas with natural constraints should be developed. Measures of support for the acceleration of structural changes of these farms have been poorly chosen, poorly funded and/or occasionally implemented. Evidence in support of this recommendation is the current compensatory payment scheme for farmers in areas with natural constraints, which do not contribute to structural reforming or environmental and social benefits. Promising niche markets are vegetables, fruit production, small farm animals and on-farm processing.
- The building of capacity of the Ministry of Agriculture, Forestry and Water Management (MAFWM) and the establishment of functional systems for administering common agricultural policy-like support should be intensified. This is mainly related to the reorganization of the existing ones and the development of missing administrative structures related to the Land Parcel Identification System (LPIS), Integrated Administration and Control System (IACS), food safety, and others.
- More farmers, more hectares, and a more diversified list of activities and products should be covered by state support and registered in the administrative databases (client register and farm register). The number of registered farmers and, even more, the number of hectares covered by the farm register, confirm this recommendation.
- The regulatory framework for the implementation of LEADER-like measures should be developed and put in place. The rural civil society should be involved in private–public partnerships and in the preparation and implementation of local strategies through the LEADER method. Even though some efforts have been made by the MAFWM and the donor community in establishing local partnerships and strengthening their capacities, the absence of the necessary regulatory framework has led to significant operational difficulties and an institutional vacuum. The existing Local Action Groups are not officially recognized by the MAFWM and are still applying for projects independently or as a part of networks that operate in the capacity of civil society networks.
- Large investments in infrastructure – including land consolidation, maintenance and the improvement of soil quality, energy supply, water management and the like – must be prioritized and planned within more a comprehensive context as an integral part of the entire local economic system. Not only could such investments boost sector productivity, but they could also attract new investments.

6 Annex



6.1 References

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6.2 National definitions of agricultural holdings and family agricultural holding

	Source	Definition
Ministry of Agriculture, Forestry and Water Management	<p><i>Law on Agriculture and Rural Development</i> (Official Gazette of the Republic of Serbia No. 41/2009, No. 10/2013 and No. 101/2016); and <i>Law on Incentives in Agriculture and Rural Development</i> (Official Gazette of the Republic of Serbia No. 10/2013, No. 142/2014, No. 102/2015 and No. 101/2016)</p> <p><i>Ordinance on registration in the Farm Register</i> (Official Gazette of the Republic of Serbia No. 17/2013, No. 102/2015, No. 6/2016 and No. 46/2017)</p>	<p>Article 2 <i>Family agricultural holding</i> is an agricultural holding where a natural person - the farmer, together with members of his household - carries out agricultural production;</p> <p>Article 16 Depending on their economic strength, the family farm can be: 1) commercial family farm; 2) non-commercial family farm.</p> <p><i>A commercial family holding</i> is an agricultural holding that is market-oriented and which, under the conditions determined by this law, can exercise the right to incentives</p> <p>A non-commercial family farm is an agricultural holding that is not market-oriented and whose beneficiary is a beneficiary of a pension based on agricultural production.</p> <p><i>An agricultural holding</i> with at least 0.5 hectare of agricultural land in the territory of the Republic of Serbia can be entered in the Register of Agricultural Holdings, where a company, a farmer's cooperative, another legal entity such as an institution, a school, a monastery, a church and another organization (legal entity), entrepreneur and farmer - natural person, perform agricultural production.</p> <p>An agricultural holding with less than 0.5 hectares can also be entered into the Register, i.e. agricultural land or other land or building unit on which the person referred to in paragraph 1 of this Article performs livestock, vineyard or vegetable production (greenhouses and greenhouses), carries out other forms of agricultural production (farming of fish, mushroom cultivation, snails, bees, etc.), performs processing of agricultural products, or other non-agricultural activities (rural tourism, old crafts, etc.).</p> <p>In the case of registration of a family agricultural holding, it is the farmer - the natural person who is the holder of the family agricultural holdings, who is registered, while family members can be listed as well.</p>
Statistical Office of the Republic of Serbia	<p><i>The Law on the Census of Agriculture</i> (Official Gazette of the Republic of Serbia No. 104/09 and No. 24/11)</p>	<p>Article 3 <i>Family agricultural holding</i> is every family or other community of people living together and sharing subsistence expenses out of their respective income (including single households), which members (one or more) are engaged in agricultural production, being either their primary or supplementary activity, having a single management, sharing joint production means (land, machinery, buildings) and its members' labour, whether they produce solely for their own consumption (non-commercial agricultural holding) or both for own consumption and sale (commercial agricultural holding).</p> <p>Article 4 The Census shall cover: 1) family agricultural holdings with at least 0.5 hectares of agricultural land (area) on which they perform agricultural production; 2) family agricultural holdings having less than 0.5 hectares of agricultural land, which they utilize for crop farming, livestock breeding, fruit growing, vineyards, vegetable production, flower growing (glass and plastic protective covers), and for other forms of practices of agricultural production, intended for marketing, as well as fish farming, mushroom growing, snail farming, bee-keeping, etc.;</p>

6.3 Case studies

Case Study 1: Revitalization of agricultural cooperatives

1. THE PROBLEM DESCRIPTION

Institutional and policy reforms of first transitional phase have bypassed the cooperative sector. Farmers' cooperatives were exempted from the privatization process. However, the unresolved problems of property rights, limited access to financial markets, and the devastating effects of the grey economy have caused the slowing down of the reform of cooperatives. All of this caused the loss of the identity of cooperative property, as well as the loss of confidence and trust in the cooperative system. Support programmes for the cooperative sector that have been provided by various governmental bodies and donors in recent years have been ad hoc and incompatible. However, most of support measures of the Ministry of Agriculture, Forestry and Water Management for rural development gave the possibility of investments to cooperatives but didn't provide a sound foundation for their establishment, initial growth and development.

2. OBJECTIVES AND ACTIONS

The cabinet of the minister in charge of regional development, in cooperation with local self-governmental units, launched in 2017 the three-year project "500 villages – 500 cooperatives," aiming to establish new cooperatives and strengthening their market position. The programme provides grants for the establishment of new cooperatives, as well as investment support for projects of existing cooperatives. Grants are intended for the purchase of equipment and machinery and of storage and processing facilities for milk, meat, fruits, vegetables, cereals, honey and medical herbs. The total funding in 2017 was about EUR 1.67 million, which in 2018 increased to EUR 6.9 million. The maximum amount of grants for existing cooperatives is EUR 150 000 and EUR 60 000 for newly established cooperatives.

3. RESULTS AND IMPACTS

In 2017, 270 new cooperatives (each of them with several tens of members and co-operators) were registered, and 22 cooperatives have received grants (among which are 12 cooperatives from less-developed regions).

Moreover, since 2018, grants have been conditioned on signed contracts on rights and obligations between the cooperative and the co-operators.

The results of these positive impacts are that, in addition to the support provided in 2017, the programme for 2018 also includes grants for the establishment of secondary cooperatives dealing with production, processing and trade of specific cooperatives' final products.

4. LESSONS LEARNED, CONCLUSIONS AND RECOMMENDATIONS

The results of this initiative confirm the advantages of simultaneous, synchronized support from different sources (local, national) and for various purposes. Providing a range of services (technical, administrative, logistical assistance) in parallel with investment grants contributes to enhancing the overall capacities of newly established and existing cooperatives in a relatively short period of time. Recommendations:

- Facilitate the provision of grants and support programmes that target emerging cooperatives.
- Improve the professional management of cooperative businesses.

Enhance the participation of women and youth in cooperatives.

5. CONTACTS/REFERENCES

<https://www.ebrd.com/news/2018/ebd-and-fao-aim-to-boost-serbian-cooperatives-through-training.html>

Case Study 2: Improving the regulatory environment for the access of small producers to markets

1. THE PROBLEM DESCRIPTION

The livestock sector in Serbia is dominated by large numbers of small- to middle-sized agricultural holdings, traditionally managed in low-intensity farming systems. These agricultural holdings are still the main suppliers of raw livestock products (with the exception of poultry meat) on the national market. However, the tendencies in the dairy and processed meat market show that modern consumers tend to be concerned with safety standards but also to choose local food products of high quality. This trend represents a huge potential for the growth of small food processing businesses.

However, according to the applicable legal provisions, the sale of meat and meat products is allowed only for registered craft shops or companies that meet all the requirements prescribed by the laws and by-laws regulating food safety (in other words, that it is produced in the approved facilities listed in the Registry of approved establishments). This led to the fact that most of them were selling their products on alternative markets and local manifestations.

2. OBJECTIVES AND ACTIONS

In order to give small producers/processors the chance to capture the value-added benefits of local products and traditional knowledge, it was necessary to create a more favourable legal environment for small food businesses and facilitate their access to markets. As part of overall efforts to improve the competitiveness of meat products, the Ministry of Agriculture, Forestry

and Water Management, with support from FAO and the European Bank for Reconstruction and Development, has launched the project “Improving the quality and safety of food in the meat production sector,” which has following outcomes:

- The “Regulation on small quantities of primary products used to supply consumers, areas for performing of these activities, and deviations related to small entities in the business with animal origin food.” This regulation includes flexibility measures and derogations for small-scale meat producers, processors and distributors. Producers will be allowed to sell their products and will be themselves responsible for the health and safety of products.
- A new voluntary quality scheme, the Serbian Quality Label, was set up. The label guarantees the quality of products of specific characteristics, produced from raw materials exclusively taken from the territory, with feed free from genetically modified organisms (GMOs).
- An association for the development of the quality of meat and meat products was established as an association of producers of meat and meat products that fosters high quality and tradition.
- The process was followed by an organization of trainings and workshops for the building of capacity among stakeholders and for the production of guidelines for applying the flexibility measures.

The certificate lasts one year, and the controls are carried out by the authorized services of the state, union associations and competent inspection services. The state refunds about 50 percent of the quality control assets from the budget.

3. RESULTS AND IMPACTS

Benefits from the flexibility of the regulation on small quantities are expected by producers and processors currently operating in (semi) grey zones, as well as by producers of traditional food products currently using technologies and raw materials that are not officially acknowledged or approved.

The Serbian Quality Label for meat is currently managed by the Meat Quality Association. The label "Serbian Quality" received eight products from the meat and processing industry. It is expected that other products (honey, dried peppers and others) will get soon the quality label.

4. LESSONS LEARNED, CONCLUSIONS AND RECOMMENDATIONS

In order for small producers to benefit, it is necessary to mobilize other actors surrounding them in the food supply chain. The availability of services supporting smallholders and family farms is critical (extensions, logistics), and there is risk that the lack of a critical mass of producers will increase transaction costs associated with labelling, certification, control and selling. Recommendations:

- Local self-governmental units should support the development of collective institutions for smallholders and family farms, to diminish the transaction costs of market access. This could sustain partnerships among local businesses (food suppliers, sellers and consumers), since these initiatives would contribute to creating new jobs.
- More close relationships should be pursued in the local value chain, to boost more formalized relationships (contracting) between local supply chain systems.

5. CONTACTS/REFERENCES

<http://www.eastagri.org/meetings/index.php?id=116>

<http://www.fao.org/europe/news/detail-news/en/c/1099204/>

<http://www.agronews.rs/faoebrd-fokus-na-agrobiznis-u-srbiji/>

Case Study 3: Small producers to benefit from protected geographical indications

1. THE PROBLEM DESCRIPTION

Serbia is one of the world's leading producers of raspberries. The raspberry production is concentrated in two regions, the Arilje-Požega region and the Valjevo region, with long traditions of growing. Raspberry growing in Arilje region is carried out in every village and almost on each farm (95 percent of the total production is produced by more than 4 500 family farms, on small plots of about 0.3 ha, on average). It engages about 15 000 workers during the harvest season, and around 5 500 non-local workers are hired (Paraušić and Simeunović, 2015).

The challenges have emerged from growing competition from neighbouring regions and countries, causing further fragmentation and decomposition of the value chain and making it more difficult to ensure quality and safety standards. Besides this, *Phytophthora* (root rot), to which the predominate Serbian cultivar (Willamette) is susceptible, has affected the raspberry orchards.

2. OBJECTIVES AND ACTIONS

In order to preserve their leading position on the international market, export-oriented, large-scale growers have focused on food safety and quality standards and maintaining the traditional technology of growing Arilje raspberries. With the support of the Ministry of Agriculture, donor projects, development agencies, certification providers and extension services, HACCP, GLOBALG.A.P. and International Organization for Standardization (ISO) standards were adopted by most of the actors in value chain. In addition, the General Association of Entrepreneurs Arilje, with the support of the Innovation Centre for Agriculture Arilje, launched an initiative to obtain protected geographical indications (PGI) for fresh, frozen and dried raspberries, and in the Intellectual Property Office of Republic of Serbia recognized "Ariljska malina" ("Raspberry from the Arilje") as a product with geographical indication.

3. RESULTS AND IMPACTS

The authorized user of the geographical indication “Ariljska malina” is the local cooperative Agro Eco Voće, with its 167 cooperative members producing raspberries on over 100 ha. The cooperative took part in the activities of establishing the first national secondary-cooperative, which involves five cooperatives from whole territory of Serbia dealing not only with storing and processing the fruit, but also with the placement of final and semi-final products directly on the market, without intermediaries. This vertical integration of primary production, processing and marketing of a high-quality product, avoiding intermediate channels and middlepersons, will enable producers to reach wider markets, achieve higher prices and benefit from value-added processing activities.

It is expected that 70 percent of total production will be exported (fresh or frozen), while the other 30 percent is processed in cooperative processing capacities.

4. LESSONS LEARNED, CONCLUSIONS AND RECOMMENDATIONS

Both cooperatives and agribusinesses in Serbia are becoming more networked, but it is mostly the case with large players and sectors oriented to export. The processors/exporters gain the advantage of such arrangements, due to the lack of horizontal and vertical integration of cooperatives, poor entrepreneurship skills, etc. These processes should be promoted, guided and supported.

- More efforts on capacity building and technical assistance to producer organizations are needed, aimed at enabling them to take control of the value chain. Representatives of secondary cooperative structures should be trained in business management (communication/negotiation, finance, marketing, etc.).
- Engage in joint lobbying and advocacy initiatives in order to achieve critical mass and influence in local, national and regional politics.
- Establish a strong professional body able to manage the certification process and product.
- Adopt regional labelling for protected designation of origin (PDO) and protected geographical indication (PGI) and certification schemes for increased concertation among the producers and stakeholders over the vertical chain.
- Provide financial support for the upgrading of processing facilities in line with the EU *acquis communautaire*.
- Establish support to make the process of certification possible for smallholders.

5. CONTACTS/REFERENCES

<http://arilje.org.rs/lokalna-samouprava/projekti/projekti-u-realizaciji/446-ariljska-malina?language=sr-YU>
<https://www.agrarije.com/hrana/proizvodi-sa-oznakom-geografskog-porekla/ariljska-malina/>
http://www.eastagri.org/docs/group/364/Arilje%20Raspberry_ENG.pdf

Case Study 4: Economic empowerment of female victims of violence

1. THE PROBLEM DESCRIPTION

The problem that was targeted by this initiative is the economic dependence of female victims of violence, which prevents them from exiting the violent situation in the intimate partner relationship or in the family. As indicated on the Web site of the programme,⁷⁴ one-fifth of women in Serbia are financially dependent on their partners, and many of them are deprived from financial support when needed or, when requested, declined money for their consumption. These women do not participate in the financial decision-making in the household and, when they are exposed to violence, one of the main obstacles is this financial or broader economic dependency (which can include property ownership, housing, possession of important household equipment, cars, and more).

2. OBJECTIVES AND ACTIONS

The project “She-empowerment” was implemented by Fund B92, a non-governmental organization established in 2004 with the mission of implementing humanitarian, cultural, philanthropic and socially responsible campaigns and projects. Reacting to the difficult situation in regard to the high prevalence of violence against women, Fund B92 established seven safe houses around Serbia for the protection of women victims of violence. Project “She-empowerment” was aimed at the economic empowerment of female victims of violence. The programme was supported by the UN Trust Fund to End Violence against Women.

3. RESULTS AND IMPACTS

Through this project, the social enterprise “Dobra basta” (“Good garden”) was established for the production of organic food, and more than 60 women were economically empowered with the purpose of exiting the circle of violence. The introduction of the economic empowerment component was an important part of the integrated response to violence against women. Social enterprises founded through this project are profiled for the production of organic food and catering. In addition to education and trainings in business, the project delivers financial support to 15 business initiatives of women. The best women entrepreneurs also will be rewarded with micro grants.

⁷⁴ <http://sigurnakuca.net/onasnazivanje/ekonomsko-nasilje/>

4. LESSONS LEARNED, CONCLUSIONS AND RECOMMENDATIONS

The results are best and have the most sustainable effects when women are supported by a combination of measures – such as training, networking, business assistance and support in initial access to market – and when they have the opportunity to gradually become self-reliant. The provision of mentoring and advice during the first three years helps sustain the efforts, as does the provision of free assistance in bookkeeping and legal advice and of the recognizable label of social business.

5. CONTACTS/REFERENCES

Web site: <http://fondb92.org/en/she-empowerment.1.65.html>

Video clip: <http://sigurnakuca.net/onasnazivanje/>

Social enterprise “Dobra basta”: <http://sigurnakuca.net/onasnazivanje/dobra-basta/>
<https://www.facebook.com/somborskadobrabasta/>

Case Study 5: Support to local partnerships keeps them active

1. THE PROBLEM DESCRIPTION

The first initiative aimed at raising the awareness of local communities about the LEADER programme was launched by the Ministry of Agriculture, Forestry and Water Management (MAFWM) in 2005. In the following years, donors supported the building of capacity for the development, implementation and administration of LEADER support, both among MAFWM and local actors. Sixteen regional rural centres were formed, with 149 regional offices covering the whole territory of Serbia. Since 2010, MAFWM has ceased supporting the activities of local action groups, while international donors have downsized activities and programmes related to rural areas, leaving the majority of rural civil society organizations struggling to survive. Many of the previously established local partnerships, in the meantime, have ceased to exist, and their capacities (primarily human) are irrevocably lost.

2. OBJECTIVES AND ACTIONS

In the Autonomous Province of Vojvodina, there is continued support to local partnerships provided from the budgets of each secretariat of the Autonomous Province of Vojvodina.⁷⁵ After support for LEADER initiatives was no longer financed by the national budget, the Provincial Government continued funding these activities from its own resources.

The total amount of funds allocated for every year was EUR 85 000, with a maximum amount per beneficiary of approximately EUR 8 000. Registered associations of citizens had the right to use incentives, as did other forms of non-profit organizations with legal status. Local partnerships in Vojvodina that met the evaluation criteria proposed the EU-funded project LEADER Initiative Serbia (LIS), which was assessed as having the capacity to become the Local

⁷⁵ The first activities on the implementation of the LEADER approach in the Autonomous Province of Vojvodina was initiated by a donor project of the Government of Romania titled “Strengthening Rural Social Capital and Networks” (2008–2009). The project was implemented in five pilot municipalities in the territory of Vojvodina: Zitiste, Coka, Mali Idjos, Alibunar and Irig.

Action Group (LAG) and having the opportunity to be financially supported in order to overcome the funding gap.

The Provincial Secretariat for Agriculture, Water Management and Forestry supports the development of LAGs and the preparation of local strategies for rural development (LSRD) based on annual regulations that define the eligible activities, conditions and criteria for the use of incentives, as well as the criteria for the approval of LSRDs.

3. RESULTS

Previous initiatives to establish strategic partnerships of the public, private and civil sectors and to promote the LEADER programme in Serbia resulted in considerable human resources having been trained and made functional in territorial planning and development, participatory governance and decision-making. Local, subregional, regional and cross-border development strategies and/or action plans have been drafted and are available. Yet, the capacity building process and the institutional memory have not been sustainable, due to unstable funding. Local Action Groups in the Autonomous Province of Vojvodina established during the mid-2000s are active and take part in a wide range of activities in their regions, but they also often change focus depending on the current trends and available options for funding.

The majority of local partnerships and networks formed through donor projects in Central Serbia strive to maintain their activities. Their operations and engagement in rural development are less visible, while some (human) resources are irretrievably lost.

4. LESSONS LEARNED AND CONCLUSION

A funding gap has discouraged stakeholders from remaining involved in the LEADER programme and has caused the majority of LAGs and civil society organizations dealing with rural issues to downsize their activities in Serbia. Some of them were heavily supported by local self-governmental units and had political support (which no longer exists), while some lost interest due to the lack of progress. Getting them back to similar activities will be a difficult process.

- Local governments and development agencies have to create more solid ground for meaningful local cooperation. In the absence of regulatory provisions, they will need to develop, establish and maintain their own schemes. Different models of networking should be practiced to promote local partnerships and contribute to increased awareness about the role of local stakeholders in the decision-making processes, thus motivating them to take part.
- Raising awareness and building the capacity of local self-governmental units and the business sector is needed. Conducting a broad awareness campaign for the rural population and strengthening the skills for project cycle management – supplemented by grants for specific, small-scale investments – should be facilitated.

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