



**Government of Montenegro  
Ministry of Agriculture and Rural Development**

**STRATEGY FOR  
THE DEVELOPMENT OF AGRICULTURE AND RURAL AREAS 2015-2020**

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## 1. INTRODUCTION

The agricultural sector plays an important role in Montenegro's economy and is responsible for a significant share of the Gross Domestic Product (8% in 2013, including forestry and fishing). Despite being both a developmental and economic priority of the national economy, together with the tourism sector, based on official statistics (data obtained from administrative sources), agriculture employs only 1.6% of the total number of employed persons in Montenegro<sup>1</sup>. However, according to the Agriculture Census 2010<sup>2</sup>, out of Montenegro's 620,029 inhabitants, 98,341 are engaged in agricultural activities on family agricultural holdings. In other terms, that represents 46,473 annual working units (AWU-equivalent of number in full-time employment), which indicates that people actually engaged in agriculture account for almost 30% of total number employed in the country.

By adopting the Strategy of Food Production and Rural Development in 2006, Montenegro chose to accept the concept of sustainable development<sup>3</sup>; this means achieving a good balance between economic development, environmental protection and other social aspects. The starting point for the strategy was the recognition of the multi-functional role of agriculture; it was evident that agriculture should be viewed in a broader context than just as a contributor to GDP.

The multi-functionality of Montenegrin agriculture can be broken down as follows<sup>4</sup>:

- ✓ **Sustainable rural and regional development** – investing in agriculture also means investing in rural development, as it is impossible to prevent the depopulation of villages without agricultural development. The development of sustainable agriculture influences the balancing of differences in the development of specific areas;
- ✓ **Ecological function** – managing agricultural land in an optimal and sustainable manner guarantees the preservation of the environment in the broadest sense;
- ✓ **Economic role** – agriculture is based on the development of the food industry but it also supports the development of numerous other sectors (input industry, providers of equipment, mechanisation, packaging, transport, and numerous other services);
- ✓ **Support for tourism development**– areas common to both agriculture and tourism are increasingly seen as important; a broad range of domestic products produced by the Agricultural Sector enriches what the Tourism Sector has to offer and the Tourism Sector, by establishing an interest in national cuisine and in Montenegrin specialities, in turn, supports the development of the Agricultural Sector;
- ✓ **Social aspects** – agriculture, along with other related activities, ensures employment and a constant source of revenue to a large segment of the population; this mitigates pressure for jobs in other areas whilst also contributing to the fight against poverty in rural areas. Additionally, the potential for the production of food on family holdings decreases social tension;
- ✓ **Food production** – it is of prime importance for any country to ensure that standard quality food is available at affordable prices;
- ✓ **Preservation of traditions and cultural heritage** in villages is also very important, particularly bearing in mind the richness and diversity of traditions and the overall heritage of Montenegrin villages.

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<sup>1</sup>MONSTAT, Statistical Yearbook 2014

<sup>2</sup>MONSTAT, Agriculture Census 2010

<sup>3</sup>Later confirmed by adopting the National Strategy for Sustainable Development (2007), recently revised to cover the period 2015-2020

<sup>4</sup>Source: Montenegro's Agriculture and European Union: Food Production and Rural Development Strategy, Ministry of Agriculture, Forestry and Water Management, 2006

### **1.1. Why is there a need for a new Strategy for agriculture and rural development?**

As the Agriculture Sector is one of the three most important sectors in terms of Montenegro's development<sup>5</sup>, it requires the full attention of policy makers and of the relevant authorities. In addition, the overall framework has changed significantly both at country and EU levels since the adoption of the first Strategy for Agriculture and Rural Development (2006).

The New Strategy for Agriculture and Rural Development has been developed in order to properly define the path of the future reform process in the sector. It will respond to changes in the environment, caused by both external and internal factors, as well as preparing the ground for meeting any forthcoming challenges on Montenegro's path to accession.

In addition, following the screening of the *acquis* in Chapter 11 of Montenegro's Accession Negotiations with the EU on Agriculture and Rural Development, Montenegro was invited to present a comprehensive national strategy on Agriculture and Rural Development, including an action plan, which will serve as the basis for the transposition, implementation and enforcement of the *acquis* in the area of Agriculture and Rural Development.

In that sense, a comprehensive national Strategy on the Development of Agriculture and Rural Areas, along with an action plan, will serve as a basis for the transposition, implementation and enforcement of the *acquis*. The Action Plan will, among other issues, include the development of a land parcel identification system and a unique identification system for farmers (Farm Registry) which will manage and control agricultural payments (IACS).

As defined in the Law on Amendments to the Law on Agriculture and Rural Development, which defines a framework for drafting the strategy, the main objectives in the areas of Agriculture and Rural Development are as follows:

- 1) The long-term management of agricultural resources in a sustainable way, along with the preservation of the environment,
- 2) Ensuring a stable supply of safe food that is affordable both in terms of quality and price;
- 3) Improving both the standard of living of the rural population and the standard of rural development in general, whilst preserving traditional values; and
- 4) Strengthening the competitiveness of food producers.

### **1.2. Overall strategic orientation**

The Strategy for the Development of Agriculture and Rural Areas in Montenegro 2015-2020 needs to take into account the fundamental characteristics of the country such as the preserved nature of its environment, its rich level of biodiversity, its available natural resources, its current level of agricultural development, and its European orientation. When developing the strategy, the principles of the multi-functionality of agriculture were taken in consideration.

The aim of this strategy is to set up a framework and to define targets, priorities and a sustainable path for the development of agriculture and rural areas. All of this should be achieved within the context of Montenegro's aim to implement EU accession policy during the period 2015-2020.

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<sup>5</sup>Acknowledged in the strategic document Directives for Montenegro Development 2013-2016, adopted by the Government of Montenegro. As indicated in this document, the most relevant sectors for development in the Montenegrin economy are Tourism, Agriculture and Energy.

In an international market with large-scale production, low unit costs and standardised products, Montenegro will have very little chance to compete in terms of both quantity and price. This is exactly why Montenegro, in addition to conventional production methods, should focus on the development of agricultural and food products based on traditional methods of production, thus securing for itself a niche for high quality. Considering the afore-mentioned facts, it is clear that Montenegro cannot focus its development on large-scale production, but rather needs to develop the production of high quality traditional products, which will be marketed through tourism. One opportunity for the development of Montenegrin agriculture, both in domestic and international markets, is to direct as many products as possible into quality assured schemes that provide added value. In this way, the Agriculture Sector will benefit from significant sale opportunities whilst also contributing to the development of tourism in Montenegro.

It is important for Montenegro to be able to meet the demand for agri-food products that can be produced locally all year round.

In order to achieve the afore-mentioned targets during the program period, it will be necessary to provide support for farmers to meet minimum national standards. The main type of support required is education to help farmers to meet the minimum national standards in order to qualify for pre-accession funds for rural development (hereinafter referred to as IPARD). It will be necessary to work intensively on informing farmers on the requirements they are expected to meet throughout the entire accession process and immediately after Montenegro's accession to the EU.

During the program period, Montenegro will work on the improvement and strengthening of its legal and institutional framework in order to achieve efficient use of EU funds. Special attention will be given to improving the conditions for securing favourable credit support so that agricultural producers can better use funds provided by the EU.

### **1.3. Methodology for strategic development**

The methodology for drafting the Strategy for Agriculture and Rural Development 2015-2020 is based on positive experiences from other similar European processes as well as from similar processes within the region; in addition, lessons have been learned from the development and implementation of the previous Montenegrin Agri Strategy and general recommendations regarding strategic planning and public policy creation are also being used.

The team that worked on the preparation of the strategy consisted of representatives from the Ministry of Agriculture and Rural Development (hereinafter referred to as MARD) along with other relevant institutions; together they were responsible for the preparation of the Agriculture Development Policy of Montenegro as well as being responsible for deciding on an institutional framework to support its implementation. Within MARD a small team was formed to coordinate the preparation process. Working groups were also set up to deal with and analyze specific issues/sectors prior to entering information in the final document.

The mentoring role in this process was carried out by the consultants whose engagement was supported by the UN Food and Agriculture Organization (hereinafter referred to as FAO). During the preparation of the strategy a wide spectrum of information sources and analysis were used, as well as carrying out new research in areas where there was insufficient data.

Activities regarding the preparation of the strategy were carried out in several phases:

- **Concept paper phase:** During the first phase, the objectives for the Strategy for Agriculture and Rural Development were defined and a concept paper was developed. The concept paper included a brief overview of the current situation regarding agricultural development in Montenegro, the objectives and tasks of the new strategy and the expected structure of the document.
- **Analytical phase, secondary data sources:** During the second phase, a detailed analysis was carried out on the trends in agriculture since the time of the adoption of the previous strategy. For the needs of the analysis, all available studies, analyses, official statistical data, as well as the internal records of relevant bodies within MARD were all consulted.
- **Primary data collection:** With the support of the MIDAS project, sectorial studies were prepared to collect new information and to learn from the farmers' most recent experience. Sectorial studies (meat processing, milk production and processing, fruits and vegetables, olive oil production, wine and viticulture and honey production) included individual and group consultations with farmers, their associations, both directly and through focus groups, and also by deploying questionnaires. This approach insured that input from each field was received early during preparation.

In addition, for the purpose of better understanding consumers, and taking into account one of the strategy objectives, 'to improve the competitiveness of local agricultural products in the local market,' a survey on consumer behavior was carried out to assess the key elements regarding the decision to buy certain products, as well as consumers' attitudes concerning high quality and/or organic products.

- **Consultative phase:** The final versions of the sectorial studies were presented at workshops to agricultural representatives. The meetings were used to facilitate consultation regarding important topics for the preparation of the strategy.

The first draft was presented to representatives from the European Commission in April 2014; the suggestions made at the time helped to further guide the process.

Following Montenegrin law, a **public hearing process** was launched on October 20<sup>th</sup>; this lasted for a month and gave both professionals and the general public time to give comments/suggestions regarding the draft of the strategy. During this phase, four public meetings were organized in different areas of Montenegro (in all three regions) to present the strategy and to stimulate discussion on the content of the strategy.

During this period, the draft of the strategy was also presented to the working group for Chapter 11, whose members provided valuable comments for the improvement of the document.

All of this will be useful in reaching a consensus about priorities regarding the development of agriculture in Montenegro, as well as the best way of achieving it.

## **1.4. Legal and institutional framework for strategy development**

### **1.4.1. Legal framework for strategic development and links to other strategic documents**

The experience of other countries confirms that agriculture is one of the most demanding sectors in that it has to comply with the greatest number of requirements during the accession process.

The Ministry of Agriculture and Rural Development (MARD) has, most recently, worked intensively on adopting key systemic documents, of which the most important were the Law on Agriculture and Rural Development (2009 and amended in 2014), and the National Rural Development Program of November 2008.

*The Law on Agriculture and Rural Development* is the basic legal document for agrarian policy. Among other issues, this law regulates the following: the development of agriculture and rural areas, support measures in agriculture and eligibility criteria for measures, usage, the organization of producers, the quality and labelling of agricultural products and food, for agricultural products and food, complementary agricultural activities, the organization of agriculture, for public services in agriculture, the establishment of a Paying Agency, for registration and record keeping, as well as many other issues in the field of Agriculture and Rural Development. The importance of agrarian policy is elaborated upon in detail in the Chapter on Policy Measures, while the entire agrarian policy is presented in four main categories: Market-Price Policy, Rural Development Policy, and Support for General Services in Agriculture and Social Assistance for the Rural Population.

*The Law on Amendments to the Law on Agriculture and Rural Development* (2014) states that the Strategy for Agriculture and Rural Development lays down a long-term view of the development of agricultural policy. The Government of Montenegro adopted the Strategy for Agriculture and Rural Development for a period of seven years. Bearing in mind the changes that have occurred, the new strategy is being prepared before the expiry of the existing one; it will be in alignment with CAP 2014-2020.

The Strategy for Agriculture and Rural Development is based on a premise established by the National Agriculture and Rural Development Strategy (Montenegro's Agriculture and European Union – Food Production and Rural Development Strategy) and aims to align agricultural policy, legislation and institutional support in the Agriculture Sector to the principles of and requirements for EU accession.

Within the framework of the previous strategy, the National Food Production and Rural Areas Development Program 2009-2013 was adopted in November 2008. The National Program was an operative document for the implementation of the strategy and provided a framework for the alignment of Montenegro's Agricultural Policy to the Common Agricultural Policy (CAP) of the EU. The National Program sets out objectives, along with strategic and legal frameworks and conceptual keystones for agricultural policy, as well providing guidelines for its alignment with the EU agriculture support model.

The next important document regarding the harmonisation of Montenegro's Rural Development Policy with the EU model is the IPARD Program for 2014-2020; it is expected that this will be adopted during 2015. This program will define support measures in the area of Rural Development. Amongst the most important components of the program are the provision of

investment support in the areas of primary agriculture and the processing industry and the provision of support for the expansion of economic activities in rural areas (diversification).

The Strategy for the Development of Agriculture and Rural Areas is aligned with other sectorial and national strategic documents; i.e. those related to regional development and sustainable development. As highlighted in the *Montenegro Regional Development Strategy 2014-2020*, the major part of Montenegro's development potential is located in its least developed, and mainly rural, areas. In order to achieve balanced regional development, the following action needs to be implemented:

- Infrastructure development (local and regional roads, hospitals, schools, kindergartens, sports facilities, the construction of residential buildings, etc.);
- Increase in economic activity and further impetus regarding the development of entrepreneurship in small and medium size businesses;
- Attraction of foreign investors and the identification of areas for investment;
- Incentive measures for populating underdeveloped municipalities in order to reduce emigration, return of emigrants and attracting new inhabitants;
- An improvement in the standard and quality of education, particularly in the area of higher education, in accordance with the needs and requirements of the market, and with a special focus on developing and strengthening entrepreneurial skills in young people<sup>6</sup>.

The Strategy for Sustainable Development 2015-2020<sup>7</sup> recognizes the introduction of a green economy as one of the interdisciplinary priority themes that requires a multi-sectorial approach, agriculture and rural development as important segments of a green economy in Montenegro, and focuses on the production of integrated agricultural and tourist products that will eventually help to reduce the level of dependency on imported products.

In April 2012, Montenegro became a full member of the World Trade Organization (WTO), which represents the broadest forum for negotiation in the area of liberalization of international trade in all product categories, as well as providing a unique legal and institutional framework for all of the basic international trade principles and rules. As a WTO member Montenegro is committed to fully aligning its national legislation with WTO rules (rules prescribed by WTO agreements and other documents), and to adhering to the commitments of its membership (commitments contained in the so called Schedules of Concessions).

By right of succession, Montenegro took over the Framework UN Convention on Climate Change in January 2007, ratified the Kyoto Protocol in March 2007, and became a member as a non-Annex B country in September 2007. According to its status within the Convention and Kyoto Protocol, Montenegro had no obligations to reduce greenhouse gases during the period 2008-2012; i.e. during its first period of commitment. However, in line with international efforts to agree on global commitments for the period post-2020, Montenegro is preparing to define its national contribution within the scope of the development of a National Strategy for Climate Change. Montenegro belongs to one of the world's regions where climate change is expected to have a tremendously negative impact on the health of the population, on economic development and on the availability of natural resources and food production. However, as a transition country it does not represent a significant share of the global pollution of the atmosphere through the emission of greenhouse gases; on the other hand, it does, however contribute positively to the stabilization of

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<sup>6</sup>Source: Montenegro Regional Development Strategy 2014-2020, Ministry of Economy, June 2014

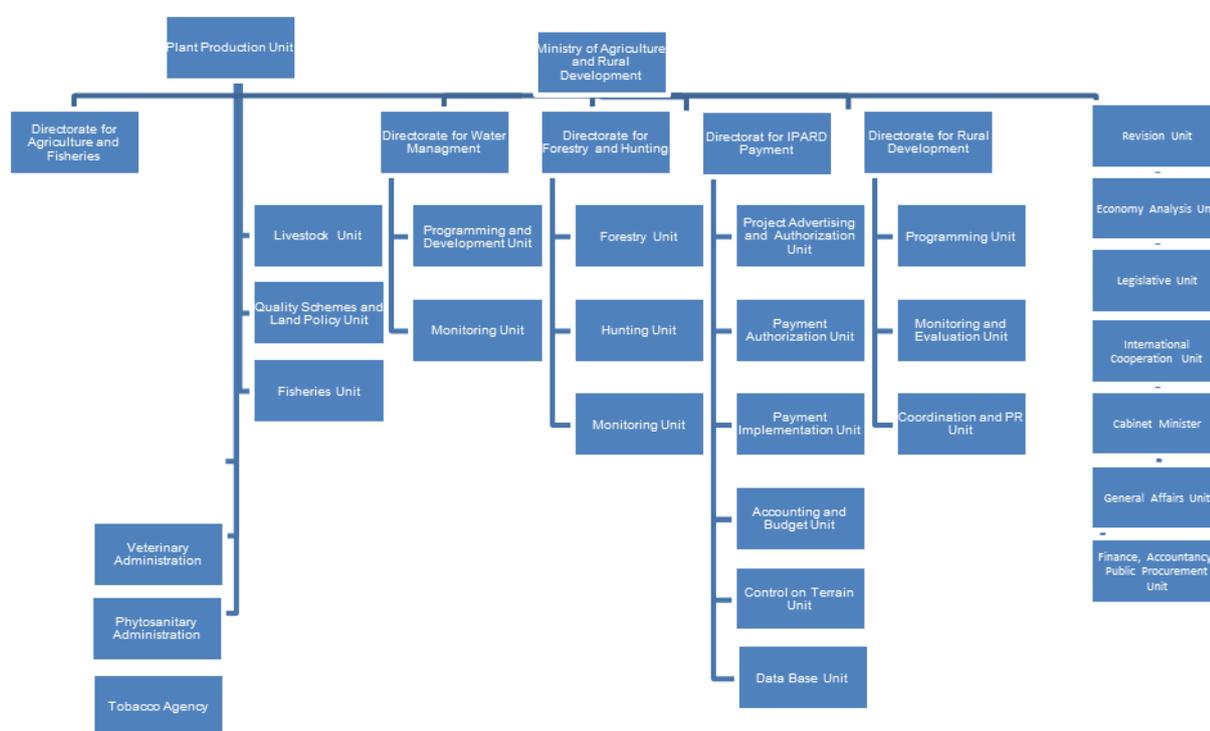
<sup>7</sup>Source: Draft Strategy for Sustainable Development 2014-2020 from July 2014; adoption of the strategy expected during the first quarter of 2015

carbon dioxide levels in the atmosphere due to its relatively high coverage of afforestation and vegetation.

### 1.4.2. Institutional framework

*The Ministry of Agriculture and Rural Development*, as an umbrella institution, proposes laws and other pieces of legislation, proposes system solutions in agriculture, defines agrarian policy and undertakes measures for its implementation. MARD proposes, to the Government, the scope of incentive measures and schemes for agriculture and rural development (Agro-Budget) along with a number of other documents, regulations and enactments that are necessary for the harmonious operation of the Agricultural Sector.

After achieving candidate status, Montenegro had to extend its range of activities related to the EU integration process, particularly in the field of programming individual policies and in their implementation and control. Thus, Montenegro established a detailed internal structure and set specific tasks for organizational units, as described at the diagram below.



Within MARD, five directorates are responsible for the area of Agriculture and Rural Development, as well as the Department of Economic Analysis.

*The Directorate for Agriculture and Fisheries* consists of: the Department for Plant Production, the Department for Livestock Production, the Policy Quality and Land Administration Department and the Fisheries Department. In addition, the Directorate supervises the work of the Veterinary Administration, Phytosanitary Administration and the Tobacco Agency.

The Directorate is responsible for creating agricultural policy, the preparation of the Agro-Budget, and for drafting laws and other regulations in the area of agriculture. During the accession process, this Directorate plays a leading role in the process of harmonisation of national legislation

with CAP. The Department for Plant Production is responsible for proposing secondary legislation that regulates market standards for wine, olive oil, fruits and vegetables, cereals and tobacco and defines the criteria for direct payment measures in plant production. The Head of the Directorate coordinates the work of the Extension Service in Plant Production, which is in charge of on-site control for direct payment measures. The Department for Livestock Production is in charge of proposing secondary legislation, for regulating market standards for milk, meat, eggs and honey and for drafting direct support measures for livestock production, milk and beekeeping. The Livestock Selection Service performs on-site controls of direct payment measures and reports to MARD. The Quality Policy and Land Administration Department adopts regulations regarding quality policy, organic production and agricultural land. All three departments participate in drafting rural development measures in cooperation with the Rural Development Directorate. The Rulebook on Internal Organization and Systematization anticipates 13 job positions in the Department for Agriculture and Fisheries (excluding the Fisheries Department).

*The Rural Development Directorate* consists of: the Department for Programming, the Department for the Monitoring and Evaluation of Rural Development and the Department for Coordination and Public Relations (PR) in Rural Development.

The Directorate for Rural Development prepares strategies, programs and projects in the area of rural development with the view of increasing competitiveness, and for improving living standards and environmental protection in rural areas. It also implements programs and projects concerning rural development funded through national and international funds, and performed in cooperation with international institutions and donors.

The Directorate for Rural Development, in cooperation with other departments within the Ministry of Agriculture and Rural Development, and also with the assistance of other ministries and institutions, develops and prepares IPARD-like, and the IPARD Program for Montenegro. It also makes the necessary preparations for the implementation of national legislation in cooperation with the Legal Affairs Department and proposes amendments as required. It also monitors the progress and impact of all rural development programs, including IPARD, and drafts monitoring and evaluation reports, it coordinates and helps the work of the IPARD Monitoring Committee and helps to coordinate work with the IPA Monitoring Committee, it coordinates public activities within the IPARD Program and develops action plans for activities within Technical Assistance measures, and also coordinates international cooperation in the area of Rural Development. The Rulebook on Internal Organization and Systematization anticipates eleven new job positions in the Directorate for Rural Development.

*The Directorate for IPARD Payments* consists of six departments: the Department for the Announcement and Authorization of Projects, the Department for the Authorization of Payments, the Department for the Completion of Payments, the Department for On-Site Control, the Department for Accounting and Budgeting and the Database Department. The Directorate for IPARD Payments is responsible for payments made by the Ministry through the IPARD Program and also for other support programmes. Within its scope of activities, the Directorate evaluates applications for project approval, prepares and signs grant agreements, assesses requests for the payment of support, makes and monitors payments. The Directorate also prepares and implements control plans, prepares and updates procedures required for accreditation with the aim of implementing the IPARD Program, and monitors payments made against budget expenditure.

Within its daily activities, the Directorate cooperates with the Internal Audit Department, the Legal Affairs Department, the General Affairs Service and other external audit bodies. It communicates, for verification, with external bodies involved in the allocation and control of financial support, including: the European Commission, the National Fund (Ministry of Finance of Montenegro), the Directorate for Rural Development, the Management Authority, and the National Coordinator. The Rulebook on Internal Organization and Systematization anticipates 36 new job positions in the Directorate for IPARD Payments.

*The Department for Economic Analysis* is responsible for: developing economic analysis and the regular monitoring of trends in agriculture, fisheries and forestry, cooperation and coordination with MONSTAT, monitoring trends in trade with third countries and for reporting on foreign trade regarding the exchange of agricultural products. It is also responsible for preparing negotiations regarding foreign trade agreements, for monitoring the implementation of free trade agreements and for reporting to competent bodies in the country and abroad regarding trends in trade and the implementation of agreements, as well as reporting to the WTO Secretariat. It also monitors regulations relating to internal trade and market and coordinates harmonization with EU policy related to CMO. The Rulebook on Internal Organization and Systematization anticipates 4 new job positions in this department.

*The Veterinary Administration* is in charge of: monitoring and preventing the occurrence of diseases in animals as well as detecting, suppressing, and eradicating certain communicable diseases in animals. It is also in charge of implementing veterinary prevention measures regarding animals, food of animal origin, animal feed, semen for artificial insemination, oocytes, and inseminated oocytes, and waste of animal origin- by-products in both internal and foreign trade. A Specialized Veterinary Laboratory has been established within Veterinary Administration. The laboratory performs specialized diagnostic and research activities in the area of veterinary science and aims to: protect and improve animal health, detect and diagnose animal diseases, control the health and safety of raw materials, food items, and products of animal origin, feed, and drinking water for animals, to implement research work and provide training in different veterinary areas. Authorized veterinary ambulances have already implemented activities concerning public interest in accordance with the Program of Mandatory Measures of Health and the Protection of Animals.

*The Phytosanitary Authority*, within MARD, is in charge of administrative and other related professional activities referring to: the protection of the plants health, seeds and seedlings, the protection of plant varieties, genetically modified organisms (GMO) and genetic resources, the safety and quality of food of plant origin at a primary production level, plant protection and plant nutrition.

*The Tobacco Agency*, within MARD, performs affairs related to issuing approval for the production of and for the placement of tobacco and tobacco products on the market, for maintaining a register of traders along with relevant records, for monitoring performance, for analyzing situations and for preparing reports, information and other documents related to the implementation of regulations regarding the production and trading of tobacco and tobacco products. The agency also prepares programs, work plans and performance reports, participates in the development of a legal framework for tobacco production and trading, provides advice on the pricing of tobacco, is responsible for aligning regulations with the EU *aquis*, and performs other matters in accordance with the afore-mentioned regulations. The total number of employees in the agency at present is five.

Two extension services, organized and financed by MARD, operate within the Faculty of Biotechnology.

*The Livestock Selection Service* functions as a unique service for the whole of Montenegro. It comprises six regional centres and 23 employees that cover all municipalities. There are three groups of activities that are carried out by this service: the selection and improvement of farm animals, the provision of expert advice and instructions to farmers, and the on-site control of direct payment to beneficiaries in compliance with the requirements prescribed by the Agro-Budget regarding livestock production. It also reports directly to MARD.

*The Extension Service in Plant Production* covers the entire territory of Montenegro and is divided into 7 regional centres and employs 18 plant production engineers. The main goals of the service are to improve plant production through increasing yields and to improve the quality of products. This is achieved through the provision of expert advice, recommendation and instruction to farmers, as well as through education, seminars and round table events. The service also performs on-site controls regarding the compliance of direct payments and rural development measures. It reports its findings to MARD.

With the aim of strengthening the Extension services, their reorganization is planned, which will unify these two services into single Extension Service and their connection with advise providers working in local self-governments on agriculture affairs and this will result in strengthening capacities as well as better informing of. During the forthcoming period, the training of Extension Service staff will be a priority in order to prepare effectively for the implementation of the Common Agricultural Policy and to provide support to farmers for preparing projects connected to the IPARD Programme. One of the main tasks of the Extension Service during the forthcoming period is to train farmers to meet food safety requirements, animal welfare standards, to protect the environment and to keep accounting records at individual holdings.

#### *Directorate for Inspection Affairs*

The Directorate for Inspection Affairs is a unified inspection body which conducts all inspections. Its scope of work includes, amongst other things, the supervision of any laws relating to agriculture which fall within the competences of the following inspections:

- Agricultural inspection (6 inspectors + chief agricultural inspector);
- Sanitary inspection (32 inspectors+ chief sanitary inspector);
- Phytosanitary inspection (15 inspectors+ chief phytosanitary inspector);
- Veterinary inspection (18 inspectors+ chief veterinary inspector);
- Inspection for environment protection (6 inspectors + chief inspector).

#### *Monteorganica*

Monteorganica is a company that performs controls and issues certificates on organic production. Monteorganica is accredited and certified to perform controls and to certify organic products according to the requirements of standard MEST EN 45011.2004. The Accreditation Body of Montenegro has issued a Certificate of Accreditation ATCG – 0021 to Monteorganica. The Ministry of Agriculture and Rural Development authorize this body.

#### *Laboratories*

The assessment, quality control and safety testing of agricultural and food products is performed by laboratories specializing in such work: the Specialized Veterinary Laboratory, the Public Health

Institute, the Centre for Eco-Toxicological Research of Montenegro, the Phytosanitary Laboratory, the Dairy Laboratory, and the Laboratory for Soil Testing and Melioration.

### **Research, educational institutions and expert services**

*The Faculty of Biotechnology* at the University of Montenegro plays an educational, research and advisory role in the field of agriculture and forestry. It has been performing its educational (teaching) role since 2005-2006 when Plant Production and Cattle Breeding courses were organized. The Plant Production course, which is a specialist postgraduate, masters program and comprises three areas of study: fruit growing and viticulture; crop growing and vegetable growing and plant protection. Cattle husbandry as a specialist postgraduate masters program covers all aspects of cattle breeding. The Faculty of Biotechnology has an experimental farm in Lješkopolje with 25 hectares of vineyards, orchards, and greenhouses. It also has a wine cellar with a capacity of 300 hl. Since its inception, the Biotechnical Faculty has contributed to solving many of the problems faced by farmers through the application of modern research, education and other support services. The faculty has established a good relationship with industry through a significant number of agreements and implemented activities.

*The Faculty for Food Technology, Food Safety and Ecology (FFTFSE)* has been in operation since 2012 and is a department at the University of Donja Gorica. The main activities of FFTFSE are education and scientific research. FFTFSE offers four courses (technological engineering, sanitary engineering, environmental engineering and HoReCa system engineering) at an undergraduate level. As a scientific research institution, FFTFSE covers the following areas: basic research, applied research, the provision of various services, promotion, networking and collaboration. FFTFSE has also established good links with industry by organizing professional practice sessions and exercises for students in the field and in private laboratories and through work on joint projects. FFTFSE has formed partnerships with various companies in the Agriculture and Food-Processing Sector as well as with national and international universities, faculties and research institutions.

There are *five secondary vocational schools* in Montenegro. Their curricula cover all aspects of agriculture, the processing of agricultural products and veterinary science. These schools provide an education for agricultural technicians of various orientations (agriculturists, fruit growing technicians, viticulture technicians, vegetable technicians, livestock technicians, veterinarians, milk producers, tobacco producers, butchers, bakers etc.).

### **Other institutions and organizations**

Institutions that work on the development of agriculture (though to a limited extent) include the following: the Centre for Vocational Education, the Employment Agency of Montenegro, the Directorate for Small and Medium-Sized Enterprise Development, the Investment-Development Fund, etc. These institutions, in accordance with their competences, perform activities that support the development of agriculture by approving credit to support farmers, unemployed persons and/or small and medium-sized enterprises in the area of agriculture and the agro-industry, and by organising training sessions, etc. They provide a significant level of support through their activities, along with their branch associations such as Chamber of Commerce, Union of Employers and Montenegro Business Alliance.

In the majority of municipalities in Montenegro, particularly those in the north and central regions, agriculture is defined as an area for strategic development. Therefore, local self-

governments, within their competences, all have agriculture units. Municipal budgets for agricultural development are mainly intended for infrastructure development, and to a lesser extent for other support measures. Bearing in mind that the majority of municipalities do not have their own funds for agriculture, people employed in the Agriculture Sector mostly perform their own administrative affairs<sup>8</sup>

### 1.4.3. Current budgetary support for agriculture and the development of rural areas

State support for the development and implementation of agricultural policy is executed through the annual Agro-Budget. The Agro-Budget includes a set of measures and support schemes aligned to agricultural policy priorities framed in the national strategy and working programme of MARD. For the easier monitoring of indicators for the analysis of the agrarian policy, the budget is observed by policy types and groups of measures as follows:

- Market price policy measures<sup>8</sup>;
- Rural development measures;
- Support to general services in agriculture and social transfers;
- Measures for the development of fisheries.

The Agro-Budget for 2015 earmarked 26.7% of available funds for **market-price policy measures**. Direct payment measures are implemented through market-price policy measures that are planned on an annual basis. Direct payments play a leading role in the creation of market price policy as 91.8% (for 2015) of funds are spent in this area. Support is allocated for livestock production, crop production, and dairy production and tobacco production.

*Direct support for crop production* – support is given per ha of cultivated land for grains (cereals), potatoes, forage crops, buckwheat and other crops (other than tobacco), seed production and for elite categories of cereals and potatoes. The minimum area required to become eligible for support is 0.5 ha, except for cereals where the minimum requirement is 1 ha. However, different types of crops cannot be added together in order to fulfil the minimum requirement.

*Support for tobacco production* – eligible producers are those that have sown and/or planted areas of tobacco during the current year, provided that they regularly applied agro-technical measures and that they concluded contracts with registered tobacco processors. Support is calculated per ha of planted/sown tobacco with a minimum plant density of 17,000 plants per ha.

*Direct support for livestock production* – direct support in this sector is applied per livestock unit – provided that the animals are registered with the Veterinary Administration and are marked with ear tags – as follows:

- a. Premiums for cows and breeding heifers – all holdings rearing more than four heads are eligible for this support; premiums apply only to heads above the minimum number;
- b. Premiums for breeding sheep and goats – holdings with more than 40 sheep and/or more than 30 goats in a herd are eligible for this support; premiums apply only to heads above the minimum number;

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<sup>8</sup>These are current definitions in the Montenegrin Agro-Budget and will be adjusted with the new annual budget spending planning for the Agricultural Sector (2015) as 'market price policy measures' which focus mainly on direct payments might appear misleading. During the last three years, on average, 87.4 % of funds relating to Market-Price Policy measures were paid through direct payments. The remaining funds related to the implementation of the Program to Support Apiculture (2.9 % on average), and measures for market stabilization (9.7 % on average, for limited market interventions and risk management in agriculture).

- c. Premium per head for the organized fattening of young bulls, bulls and oxen –the right to support holdings that sell this category of livestock to slaughter-houses that are registered in the register of approved establishments. The minimum number of heads is five heads of own production or 10 for bought heads, regardless of their origin.

*Support for the development of dairy production for the market* – premiums in the dairy sector are given for primary production and also to the processing sector.

Primary producers that supply registered dairy or cheese factories with a minimum of 400 litres of milk, monthly, are eligible to claim premiums; the amount for which they are eligible depends on the quantity and quality of milk delivered. The Dairy Laboratory carries quality controls out twice a month; it informs the dairy or cheese factory that delivered the samples of the results. This premium is disbursed on a monthly basis. Processors who collect milk in the territory of Montenegro have a right to claim support based on the quantity of collected milk (for quantities below 400 litres) and on the number of milk suppliers used.

Market Price Policy measures includes a Beekeeping Improvement Program; 2.4% of total funds have been allocated for this. This program has been implemented in cooperation with the Union of Beekeepers' Association of Montenegro, which is responsible for its implementation; MARD is responsible for supervision and control. The allocated funds are aimed at the breeding of selected types of queen bees, the improvement of the quality of honey products and the healthy condition of bee communities, the professional training of beekeepers and also the provision of support for young beekeepers. In 2014 support for the apiculture sector was also provided by the capital budget for the construction of the 'House of Honey.'

Market stabilization measures account for 6.4% of total funds allocated to market-price policy measures. These measures consist of a market intervention programme which regulates the market due to the extremely sensitive seasonal character of their production (the purchase of lamb surplus) and risk management measures, through which farmers can receive support worth up to 50 % of the total insured value of their insurance policy if they insure their production levels against damage.

**Rural development measures** aim to improving living conditions in rural areas as well as the living standards of farmers, they provide necessary investment in the infrastructure and improve production processes, they increase the competitiveness of domestic producers and improve their processing capacity whilst also providing support for the preservation of traditional products etc. In order to increase transparency, the majority of funds connected to Rural Development measures are awarded through public tender procedures. This has resulted in an increase in institutional capacity, which will be beneficial when implementing upcoming processes relating to IPARD; it will also help to prepare farmers to implement new procedures and requirements.

The first group contains the largest number of measures (12 out of 17) and represents the major part of the budget associated with the Rural Development Policy. The measures are aimed at strengthening the competitiveness of food producers and achieve this by supporting investment in primary production and in the processing industry, by supporting the introduction of international standards and by establishing producers' associations. Farmers have the opportunity to obtain support through the following measures:

- Support for investment in agricultural holdings (EU/IPA project);

- Support for investment in agricultural holdings (MIDAS grants);
- Support for viticulture and wine growing;
- Support for the establishment and modernization of fruit farms;
- Support for the development of olive growing;
- Support for vegetable production;
- Support for the establishment of perennial medicinal and aromatic plants;
- Support for investment in processing on family holdings;
- Support for the improvement of quality standards;
- Support for the promotion of agriculture and agricultural products;
- Support for the improvement of quality of raw milk;
- Support for the activities of cooperatives and national associations.

The second group refers to sustainable resource management where three different types of measures are implemented: the sustainable use of mountain pastures, the preservation of genetic resources in agriculture and the development of organic agriculture. This group of measures represents a small part of the Rural Development Policy, but is of particular importance, as these measures will, in the future, form the basis for the introduction of 'green' payments.

The third group consists of two measures: the diversification of economic activities in rural areas and the renewal and development of rural infrastructure.

The second measure refers to the co-financing of projects in rural areas: the provision of local roads, the management of water facilities and other common facilities. This measure has already been applied over a long period of time and represents a significant part of the total Agro-Budget.

**Support for general services in agriculture** belongs to the third group of agricultural policies, and refers to financial support given to general services in agriculture, which are of public interest. These measures support educational programs, research and development, analyses, advisory services, veterinary and phytosanitary measures and actions, programs referring to product quality control, and the possibility of social transfers to agricultural holdings (for one spouse) for families who live in a village, are engaged in agriculture, but have no other income.

These programs and activities contribute to: the production of safe food, an increase in the level of education and the qualifications of producers, the introduction of new technology, an increase in living standards in rural areas and the creation of better living conditions etc. The aforementioned measures refer to programs and activities, which, due to public interest in such matters, cannot only depend on private initiatives.

**Fisheries development measures** refer to support for development in the area of maritime fisheries and mariculture as well as support for the development of freshwater fisheries and aquaculture.

The Agro-Budget is defined on an annual basis and reflects the level of implementation of agrarian policy in the country. Most recently, attention has been paid to improving the quality of such products (especially milk), but there has also been further investment in the milk production sector, in olive growing and in the growing of vegetables, and in supporting producers' associations. More funds have also been allocated for the introduction of necessary standards (i.e. HACCP) and quality schemes, as well as for the development of organic production.

The Table 1 contains the amount and structure of the Agro-Budget for the period 2010-2015.

Table 1: Structure and amount of the Agro-Budget for the period 2010-2015

Type of measures	Budget allocations (national budget; 000 EUR)					
	2010	2011	2012	2013	2014	2015
Market-Price Policy Measures	5,082	5,710	6,520	6,183	5,448	6,130
Rural Development Measures	4,743	6,615	5,838	5,615	6,581	8,013
Support for general services and social transfers in agriculture and institutional development	7,722	6,951	6,708	6,760	6,728	7,143
Fisheries	1,124	171	171	214	250	300
Animal health protection measures and phyto-sanitary measures	1,720	1,670	1,337	1,540	1,422	1,390
<b>TOTAL AGRO BUDGET</b>	<b>20,391</b>	<b>21,117</b>	<b>20,574</b>	<b>20,312</b>	<b>20,429</b>	<b>22,976</b>
Percentage share of the national budget%	<b>85.1</b>	<b>73.5</b>	<b>75.5</b>	<b>69.6</b>	<b>69.6</b>	<b>65.2</b>
Percentage share of donations %	<b>6.0</b>	<b>5.2</b>	<b>4.1</b>	<b>6.8</b>	<b>6.9</b>	<b>19.2</b>
Percentage share of loans %	<b>8.9</b>	<b>21.3</b>	<b>20.4</b>	<b>23.6</b>	<b>23.5</b>	<b>15.6</b>

## 2. ANALYSIS OF THE CURRENT SITUATION IN AGRICULTURE AND RURAL AREAS

### 2.1. Macroeconomic framework and relevance to the agricultural sector

#### 2.1.1. Macroeconomic framework

After several years that were characterized by high GDP growth (driven by the Real Estate, Construction and Tourism Sectors), budget surpluses, record levels of direct foreign investments, increases in employment and the very dynamic development of the banking system, Montenegro experienced a period of crisis and recession in 2009. After its economic recovery in 2010 and a real GDP growth of 2.5% in 2011, in 2012 a 2.5% decrease in GDP was recorded. Negative economic trends were characteristic for the majority of countries of the region, and internal structural weaknesses resulted in a significant slowing down of the Montenegrin economy, which since experienced a slow but stable recovery.

According to data from MONSTAT, which is presented in Table 2, real GDP growth in 2013 amounted to 3.3%.

Table 2: Basic Macroeconomic indicators in Montenegro 2007-2013

Macroeconomic indicators	2007	2008	2009	2010	2011	2012	2013
<b>GDP in current prices (€ Millions)</b>	2,680.0	3,085.6	2,981.0	3,104.0	3,234.0	3,148.9	3,327.0
<b>GDP real growth rate (%)</b>	10.7	6.9	-5.7	2.5	3.2	-2.5	3.3
<b>GDP per capita in (€)</b>	4,280	4,908	4,720	5,006	5,211	5,075	5,356
<b>Industrial production - Growth rate (%)</b>	0.1	-2	-32.2	17.5	-10.3	-7.1	10.6
<b>Processing industry- Growth rate (%)</b>	9.3	-11.3	-38.6	-0.3	6.8	-10.1	-5.0
<b>Inflation, consumer price method (%)</b>	4.2	8.5	3.6	0.7	2.8	5.1	0.3
<b>Tourist arrivals</b>	1,150,000	1,188,100	1,207,700	1,263,000	1,373,500	1,439,500	1,492,006
<b>Number of employed</b>	156,408	166,221	174,152	161,742	163,082	166,531	171,474
<b>Unemployment rate (%)</b>	19.4	16.8	19.1	19.7	19.7	19.7	19.5
<b>Exports of goods and services (mil. EUR)</b>	1,156.4	1,226.4	1,027.8	1,157.7	1,382.6	1,389.4	1,390.1
<b>Imports of goods and</b>	2,305.7	2,880.5	1,948.8	1,960.5	2,099.6	2,166.4	2,065.5

services (mil. EUR)							
The balance of exports and imports of goods and services	-1,149.3	-4,9	6,8	6,6	9,3	11,3	n/a
Direct foreign investments –neto (mil. EUR)	524,9	567,6	910,9	552,0	389,1	461,1	323,9
Poverty rate %	8,0	4,9	6,8	6,6	9,3	11,3	n/a

Sources: MONSTAT and CBCG<sup>9</sup>

### 2.1.2. The importance of agriculture to the national economy

As one of the key sectors in the Montenegrin economy, the Agriculture Sector represents a major source of income generation, especially for people in the northern, mountainous region, whose alternative income generation possibilities are limited.

In 2013, according to official data from MONSTAT, Montenegrin GDP was €3,327,077,000. The Agriculture, Forestry and Fisheries Sectors all saw a growth in the total GDP; in 2013 growth was recorded as increasing from 7.4 % to 8 % in comparison to the previous year.

Namely, in 2012, the gross value of production in the Agricultural, Forestry and Fisheries Sectors amounted to €394.4 million, while in 2013 it amounted to €436.8 million, which represents an increase of €42.4 million, or 10.8 %. Gross added value in the Agricultural, Forestry and Fisheries Sectors in 2013 amounted to €266.9 million and increased to €34.9 million or by 15 % (the nominal growth index in 2013 amounted to 115). Table 3 shows the structure of the Montenegrin GDP for 2011, 2012 and 2013.

The processing industry, taking into account the whole of the Processing Sector, including the Food Industry, amounted to €137 million or 4.1% of the total GDP. Of that amount, the Food Industry, Beverage Production and Tobacco Processing represented 1.6%, which is equal to more than 1/3 of the Processing Sector's total share of GDP.

The Agriculture Sector has huge potential in terms of increasing added value in primary production through processing. In addition, the gross value of agricultural production (together with production in the Forestry and Fisheries Sectors), namely the value of turnover achieved by the Agriculture Sector in 2013 amounted to €436 million. The following table contains the structure of GDP in Montenegro in 2011, 2012 and 2013.

Table 3: The Structure of GDP in Montenegro in 2011, 2012 and 2013

NACREV 2	GVA 2011, current prices, in 000 €	GVA 2012, current prices, in 000 €	GVA 2013, current prices, in 000 €	Share of GDP in 2011	Share of GDP in 2012	Share of GDP in 2013
A Agriculture, Forestry and Fisheries	256,726	232,012	266,886	7.94%	7.37%	8.0%
B Mining and Quarrying	35,725	33,591	36,067	1.10%	1.07%	1.1%
C Manufacturing	162,535	135,462	136,986	5.03%	4.30%	4.1%
D Electricity, Gas, Steam and Air Conditioning	65,424	89,708	137,229	2.02%	2.85%	4.1%

<sup>9</sup> Statistical Yearbooks 2008-2013. (for the period 2007-2012); Notice from MONSTAT for 2013: [http://monstat.org/userfiles/file/GDP/2013/godisnji\\_percent20BDP\\_percent202013\\_crnogorska\\_percent20ver.pdf](http://monstat.org/userfiles/file/GDP/2013/godisnji_percent20BDP_percent202013_crnogorska_percent20ver.pdf) and CBCG, Bulletin (January 2014) [http://www.cb-mn.org/index.php?mn1=publikacije&mn2=bilten\\_cbcg](http://www.cb-mn.org/index.php?mn1=publikacije&mn2=bilten_cbcg)

E	Water Supply; Sewage, Waste Management and remediation activities	67,230	68,862	66,669	2.08%	2.19%	2.0%
F	Construction	158,081	145,192	136,280	4.89%	4.61%	4.1%
G	Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	391,686	386,333	388,391	12.11%	12.27%	11.7%
H	Transportation and Storage	150,880	130,287	125,738	4.67%	4.14%	3.8%
I	Accommodation and Food Services	207,176	210,511	217,672	6.41%	6.69%	6.5%
J	Information and Communication	164,957	154,588	148,352	5.10%	4.91%	4.5%
K	Financial and Insurance Activities	131,838	129,081	138,399	4.08%	4.10%	4.2%
L	Real Estate Activities	219,875	226,273	227,155	6.80%	7.19%	6.8%
M	Professional, Scientific and Technical Activities	88,175	89,858	76,990	2.73%	2.85%	2.3%
N	Administrative and Support Service Activities	26,755	29,352	37,363	0.83%	0.93%	1.1%
O	Public Administration and Defence; Compulsory Social Security	256,930	246,306	246,541	7.94%	7.82%	7.4%
P	Education	139,272	142,854	138,824	4.31%	4.54%	4.2%
Q	Human Health and Social Work Activities	121,959	124,377	128,876	3.77%	3.95%	3.9%
R	Arts, Entertainment and Recreation	39,807	38,834	45,222	1.23%	1.23%	1.4%
S+ T	Other service activities; Activities of households as employers; undifferentiated goods-and services-producing activities of households for own use	19,637	22,133	24,156	0.61%	0.70%	0.7%
U	Activities of Extraterritorial Organizations and Bodies	...	...	...	...	...	...
	Total	2,704,668	2,635,614	2,723,796	83.63%	83.70%	81.9%
	Taxes on Products Less Subsidies on Products	529,392	513,243	603,281	16.37%	16.30%	18.1%
	GROSS DOMESTIC PRODUCT (current prices)	3,234,060	3,148,857	3,327,077	100.00%	100.00%	100.0%

Source: MONSTAT<sup>10</sup>

The total number of agricultural holdings in Montenegro is 48,870<sup>11</sup>. Of this number, 48,824 are family agricultural holdings, while only 46 are registered as business entities. According to data on unemployment figures (data obtained from administrative sources), business operators in agriculture employed a total of 2,771<sup>12</sup> persons in 2013. Compared to the total number of employed persons in Montenegro, this represents only 1.6 %. This data does not include individual farmers (agricultural producers). However, according to data from the 2010 Census, there were 48,824 families living at agricultural holdings; of this number, 98,341 persons were working. In those 46 registered as business entities, a total of 608 persons were engaged in agricultural activities. Calculated as annual working units (AWU-equivalent to full-time employed), the number

<sup>10</sup>Statistical Yearbooks 2013 and 2014<sup>11</sup>Source: Census of Agriculture 2010, MONSTAT<sup>12</sup>This number includes only legal entities whose main activity (statistically) is agriculture. The number of employees recorded is based on records kept by the Central Register of Tax Administration. Tax Administration only keeps records of those employed in agriculture registered for VAT. Bearing in mind the tax incentives (as per the Law on VAT) available to individual agricultural producers, according to which they are not obliged to pay VAT if their annual revenue does not exceed €18,000, it is easy to understand why the majority of agricultural producers who work on family holdings are not registered at the Tax Administration Office.

actually engaged in agriculture accounts for almost 30% which proves that agriculture employs a higher ratio than the average (3-4 times) when compared with its contribution to GDP (a pattern that is similar in the majority of all 28 EU countries). Once a Central Registry of Agricultural Holdings has been set up, the Ministry will become one of the main administrative sources for delivering data on numbers employed in this sector; this will provide a much clearer picture on employment in agriculture.

**Table 4: Relevance of Agriculture to the Montenegrin Economy**

	2007	2008	2009	2010	2011	2012	2013
GVA of Agriculture, Forestry and Fishing in current prices, in thousands of €	194,123	230,499	246,812	237,886	256,726	232,012	266,886
Share of Agriculture, Forestry and Fishing in GDP (%)	7.2	7.5	8.3	7.7	7.9	7.4	8.0
GVA of Agriculture, Forestry and Fishing per capita in € <sup>13</sup>	310.0	366.6	390.8	383.7	413.7	373.0	429.6
Employment in Agriculture, Forestry and Fishing							
Number of employees	2,698	2,780	2,819	2,224	2,292	2,505	2,771
Share of total employment	1.7	1.7	1.6	1.4	1.4	1.5	1.6
Trade with agricultural products <sup>14</sup>							
Export of agricultural products (in thousands of €)	40,750	40,675	41,967	50,841	57,292	63,957	62,619
Share of total export (%)	8.9	9.8	15.1	15.4	12.5	17.4	16.6
Import of agriculture products (in thousands of €)	321,321	417,302	389,523	397,692	429,259	435,437	442,758
Share of total import (%)	15.5	16.5	21.8	23.8	23.5	23.6	24.9
Trade balance of agricultural products (thousand EUR)	-	-	-	-	-	-	-
	280,571	376,627	347,556	346,851	371,967	371,480	380,139
Coverage of import by export (%)	12.7	9.7	10.7	12.8	13.3	14.7	14.1

Sources: MONSTAT and MARD

### 2.1.3. Foreign trade and the exchange of agricultural products

Foreign trade exchange of agricultural products has grown continuously over the years. In 2014, the total exchange value of agricultural products was 567.97 million €, which is 12.4% higher than it was during the same period in 2013.

Montenegro is a net importer of food. The coverage of exports by imports is low, even when taking into account a growth trend that existed between 2007 and 2013. In 2014 the export-import ratio was 20.7 %.

The import value of agricultural products in 2013 was 470.6 million € and represented 26.4% of total imports. Exports amounted to 62.6 million € and represented 29.2% of total exports. The main partners regarding both imports and exports, over recent years, have been CEFTA and EU countries, representing over 90 % of all total trade exchanges in the area of agricultural products. The most important partner in both exports and imports is Serbia.

When analysing the structure of imported and exported products, it is evident that no major changes have occurred over recent years. The most frequently imported products are fresh meat,

<sup>13</sup>Calculations based on official data provided by MONSTAT, Tables 2 and 3.

<sup>14</sup>Agricultural products are classified by WTO classification (not including products from Chapter 3 and headings 1604-1605 (fish, crustaceans, molluscs and other aquatic invertebrates and preparations thereof). Official data from MONSTAT was used in the calculations, and was obtained by MARD through regular channels.

preparations of celers, various food products (including a variety of sauces, spices, ice-cream, etc.), followed by carbonated beverages, milk and dairy products, live animals, etc.

Regarding exports, wine remains one of the country's main export products. Of the total export figures relating to agricultural products for 2014, wine represented over 14% of the total. The total value of wine exported in 2013 amounted to 13.8 million €. The wine sector is recognized as a very important sector for Montenegro. Excluding wine, meat processed products were one of the main exported products. The development of the meat industry in Montenegro has influenced a significant change in trends regarding the exchange of products through trade with other countries in both imports and exports. Examples of such changes in trends include: growth in the import of fresh pork used as a raw material, a decrease in the import of meat processed products due to higher levels of consumption of domestic products and an increase in the export of meat processed products.

Annex I contains a detailed breakdown of imports and exports, by product category.

## 2.2. Available resources and the environment

### 2.2.1. Land

As one of the most important natural resources, the land cover of Montenegro is quite diverse and is characteristic for heterogeneous system units which occur due to a variety of different conditions: the basic substratum of different geological and lithological features, specific land relief forms, changeable climate conditions, and land use. Soil that is of poor fertility, that is too acidic, and that has a light composition is termed as shallow skeletal soil; this type of soil has a low absorption level and in turn a low retention capacity for humidity and nutrients.

The surface area of agricultural land in Montenegro amounts to 309,241 ha, which represents 22.4% of the entire territory.

**Table 5:** Agricultural Land by Category (in ha)

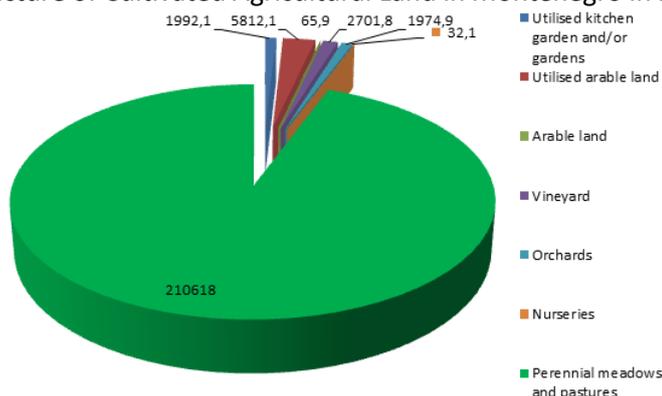
Agricultural Land by Category of Usage	2013
Available Land	309,241
a) Yards and/or gardens	1,992.1
b) Arable fields	5,812.1
c) Orchards (including olive groves)	1,974.9
d) Vineyards	2,701.8
e) Nurseries	32.1
Perennial Meadows and Pastures	210,618.0
Total Usage of Agricultural Land	223,131.0

Source: MONSTAT, Statistical Yearbook 2014

Of this surface area, 95.2% is owned by agricultural holdings, and business operators own the rest, 4.8%. On average agricultural holdings own 4.6 ha of cultivated agricultural land<sup>15</sup>. Large amounts of land remain uncultivated in Montenegro due to the number of pastures.

Bearing in mind the surface area and the structure of the division of agricultural land (0.49 ha of agricultural land per capita), Montenegro is one of just a few European countries that have favourable land resources for the development of agriculture. The following graph shows the structure of cultivated agricultural land in Montenegro in 2013.

<sup>15</sup> Source: MONSTAT-Agricultural Census 2010.

**Graph 1: Structure of Cultivated Agricultural Land in Montenegro in 2013 (ha)**

Source: MONSTAT, Statistical Yearbook 2014

Despite having significant land resources, Montenegro's land is divided up among many family holdings. Thus, 31.6 % of the total amount of cultivated agricultural land comprises small land parcels that have an area of no more than 0.5ha. More than half of the holdings (54.1 %) cultivate just 0.10 to 1.00 ha of agricultural land.

73 % of family holdings have less than 2ha of land. While only 0.9 % of family holdings have land that exceeds 100ha, their land usage represents 38% of the total amount of cultivated agricultural land. In the coastal region, the structure (the size of holdings) is the least favourable, while the northern region has the highest percentage of holdings that use larger areas of agricultural land.

The best quality soil is located in the river valleys, karst fields, and plateaus. The relief of the Montenegrin terrain is characteristic of terrain slopes above 10° (65%), while slopes between 5° and 10° account for 28%. Only 7% of the territory has slopes that are less than 5°, thus enabling the intensive use of land resources in agriculture without any significant consequences regarding erosion. Around 300 torrential basins are seriously affected by erosion; the volume of transported deposits exceeds 2 million m<sup>3</sup> per year.

Soil quality in Montenegro, when monitored in terms of pollution levels, is good. This means that soil is not polluted by metals or by other pollutants. In terms of fertility, however, the situation is different. Most of the land is not very fertile and is shallow skeletal soil with a low humidity retention capacity.

As the territory with the highest level of water sediment in Europe, due to an unfavourable level of water balance, almost 35% of the soil in Montenegro suffers from water shortage. Around 51,000 ha of land are suitable for irrigation, yet only 15-17% of this is actually irrigated.

The main problems in terms of land in Montenegro are as follows:

- Land conversion – primarily refers to urbanization, the construction of industrial and other infrastructure facilities. This problem is especially prominent near settlements, lowlands and around river flows, and in the coastal region; the exact figures regarding land conversion are not available. However, to illustrate the point, the level of development in the coastal area of Montenegro (1 km from the sea) is at present 13.8%; this is line with the average in 38 other European countries. However, when planned construction is taken into consideration (approved spatial plans) this figure changes to almost 46.5%, which is

much higher than in the majority of European countries, with exemption of Belgium that has a very high density rate<sup>16</sup>.

- Degradation through the exploitation of mineral resources (pebble, sand, different ores);
- The increased concentration of toxicants (non-organic and organic) is mainly the result of inadequate utility and industrial waste disposal and due to the emission of exhaust fumes near large roads.
- Erosion is increasingly occurring as a consequence of uncoordinated land management, due to the loss of biodiversity and also because of the absence of services connected to the prevention of erosion;
- Inadequate land registry.

Several trends and processes have been identified as the cause of these problems:

- Demographic trends – abandonment of rural areas and migration to urban areas (the abandonment of traditional methods of land use due to inheritance by younger generations, the result of natural ecological processes taking over and the subsequent loss of agricultural land as it reverts to forest land);
- There are presently no land policies in place– the system for managing land is underdeveloped, and lacks information and statistical data, as well as monitoring systems and adequate human and technical capacity.<sup>17</sup>This becomes a significant limitation when taking in consideration that the relevant share of agricultural land is owned by the state and could be leased to interested investors<sup>18</sup>.

The lease market for agricultural land is still underdeveloped due, in the main, to mentality. Land is usually inherited and a low level of legal knowledge results in landlords being skeptical. Banks accept land as a security when approving loans, although the value of agricultural land has depreciated due to the underdevelopment of the agricultural land market. Exceptions to this rule are the coastal region and any other particularly well-located urban land-parcels that can be utilized for housing construction.

Whilst the adequate usage of available land resources are of great significance for the development of agriculture in Montenegro, the majority of the above listed issues require joint action and coordination with various ministries and institutions at both national and local levels, and also should include input from local-self-governments. Thus, the Strategy for the Development of Agriculture and Rural Areas must be implemented in line with other strategies of the Government of Montenegro such as the Strategy for Sustainable Development and the Strategy for the Regional Development of Montenegro.

One example of such cooperation can be seen in the joint efforts of the Ministry of Sustainable Development and Tourism, the Ministry of Agriculture and Rural Development and the UNEP Office in Vienna. Together, they have started to work on a project entitled 'Support for Montenegro for the Development of a National Action Program'. This was aligned with the UNCCD 10-Year Strategy for Enhanced Implementation and UNCCD (MNAP) carried out the reporting

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<sup>16</sup>Source: Socio-economic analysis of coastal area of Montenegro, CAMP Montenegro, Ministry of Sustainable Development and UNEP/MAP, July 2013

<sup>17</sup>With support from a World Bank loan, the Ministry of Sustainable Development and Tourism has been implementing the Land Administration and Management Project since 2010 ([www.lamp.gov.me](http://www.lamp.gov.me)). As one of the project activities, and as stated in the Annual Working plan of the Government of Montenegro, a Study on Land Policy should be prepared.

<sup>18</sup>The Law on State Property regulates the use, management, and disposal of property and other items belonging to Montenegro and to local self-governments. State property, within the meaning of this law, refers to the state's ownership right regarding movable and immovable things, monetary funds, securities, and other property rights belonging to Montenegro or to a local self-government. The Government prescribes the manner, procedure, contract details, and terms for the sale or lease of state property.

process. The aim of the National Plan is to identify factors that have an impact of desertification and pollution as well as appropriate measures to fight against desertification. The aim is to adopt the National Plan over a period of six years. An action plan, along with a group of measures and activities for the implementation of the National Plan has been defined, as have deadlines for execution and responsible subjects.

### **2.2.2. Natural conditions and the environment**

Montenegro has abundant natural resources. The most important ones are biodiversity, water, the sea and coastal areas, land and mineral resources. The availability of these resources is the product of various geographical factors and their interaction, including position, topography, climate and geological history.

#### **Agro-Biodiversity**

The richness and variety of flora and fauna, i.e. biodiversity, is characteristic of Montenegro, particularly bearing in mind its relatively small surface. Agro-biodiversity and genetic resources for food and agriculture are among the most significant components of biodiversity; this includes all animals, plants and microorganisms that can potentially be used for food and agriculture.

Today, numerous varieties of cultivated plants, along with various breeds of farm animals, are the result of many centuries of natural evolution, together with the planned selection of plants and animal breeds by those cultivating the land. This biodiversity represents a very important resource for Montenegro and is the biological basis for agriculture and food production.

Work on the selection, collection and research of plant genetic resources in Montenegro started in the middle of the last century. The Biotechnical Faculty has a rich collection of domestic, domesticated and induced varieties of grapevine from the Balkans (408 genotypes - varieties). It should be noted that, within their bank of genes, there is a very rare collection of 17 varieties of Kratosija. So far, inventories have been made at several locations and a collection of herbs has been selected. The Centre for Subtropical Fruit in Municipality Bar monitors different varieties of figs and pomegranates.

During a period of over 20 years, the Biotechnical faculty has formed a collection of 200 cultivated and self-grown types of wheat. A significant element of this collection is the utochthonous population that comes from Montenegro (113 samples); 47 samples were collected in other areas of the former Yugoslavia, while 40 samples were obtained from Italy. Unfortunately, due to regeneration problems, 20 accessions were lost and the collection now has just 180 samples. Apart from wheat, 68 varieties of local maize have been collected, 5 of rye, 10 of barley, 5 of oats and 6 of buckwheat. So far, collections were made for 52 genotypes of potato, 2 accessions of tobacco, 11 samples of self-grown warmwood and 13 types, or 45 samples of vegetables. Regarding forage plants, 7 genotypes of *Medicago* sp., 23 indigenous populations of red clover and 11 populations of cocksfoot have been collected and the activities will expand to other forage plant species.

The Montenegrin bank of plant genes includes six very valuable field collections from orchards and vineyards: olives, figs and pomegranate (Centre for Sub-Tropical Crops in Bar), plums and apples (Centre for Continental Fruitgrowing, Medicinal and Aromatic Plants in Bijelo Polje) and vine plants (Experimental/Demo Field at the Biotechnical Faculty in Podgorica).

Through participation in the international SEEDnet project during the period 2004-2011, a gene bank of agricultural plants (MGB – Montenegrin Gene Bank) was set up at the Biotechnical Faculty in Podgorica with all of the necessary equipment for collecting and preserving the seeds of plant species, ex situ conservation seed provided, equipped laboratory for plant tissue culture and national base management system (documentation and information) set up. Data on the Montenegrin genofund is available on the webpage (<http://genebank.btf.ac.me>); since 2009, following the signing of the Memorandum of Understanding with ECPGR, passport data on Montenegrin genotypes (accessions) can also be found on the EURISCO webpage (<http://eurisco.ecpgr.org>).

Montenegro, within its relatively small territory, has a significant number of populations of almost all types of livestock reared in the Balkans. All of these populations are very specific in their genetic and phenotypic features, but are small in number. Some are present in such small numbers that there is a real threat of their extinction. Among them are *busha*, an autochthonous bovine breed that is well adjusted to harsh rearing conditions. Autochthonous sheep are also bred on the Zetsko-Bjelopavlička Plain; they are called *Zetska žuja* or *žuja*.

The highest diversity of autochthonous breeds is present in sheep breeding, which is dominated by breeds that belong to a group known as pramenka: *zetska žuja* are well adapted to arid areas, *bardok* are reared in areas along the border with Kosovo and Albania, *pivska* or *jezero-pivska* sheep are reared in a wide area of Durmitor and Sinjajevina, *ljaba* are generally reared in areas close to Ulcinj, Krajina, Bar and Malesija and *sora* are reared in the north-east of Montenegro.

The domesticated Balkan goat in Montenegro is most predominantly reared in southern and central parts of the country where there are less favourable conditions for rearing other ruminants. The variety with a red coat is considered to authentically represent this breed in Montenegro.

Domestic mountain horses are mostly kept in highland areas of the central and northern regions of Montenegro, while donkeys, though in small number, can be found in the south of Montenegro, although their population is drastically decreasing.

Through the implementation of the National Programme and Action Plan for the Preservation and Sustainable Use of Genetic Resources in Agriculture (2008-2013), in accordance with set priorities, an *in situ* conservation program regarding genetic resources in livestock breeding has been set up, and a national coordinator and competent institution have been nominated by the FAO; a national database of genetic resources in livestock breeding has also been established. The *in situ* conservation programme includes autochthonous breeds of sheep: *žuja*, *sora*, *pivskapramenka* – *pivska* and *jezerska* breeds and *ljaba*, with the tendency of expanding the scope. A National Database for Genetic Resources in Livestock Breeding has been established as an integral part of the European Database EFABIS - (Europe Farm Animal Base Information System) with direct link to the FAO database - DAD-IS. It is updated on a regular basis.

## **Water**

Montenegro is very rich in water resources, which appear in many forms and in abundant quantities. The country has much quality water with which it can supply its population. With an average water flow of 44l/s/km<sup>2</sup>, or measured as volume, around 19.5 km<sup>3</sup>/annually, Montenegro is in the top 4% globally in terms of territories with the highest average water outflow. Bearing in

mind the fact that 95.3% of all water flows in Montenegro have their sources within the country, it can be stated that water is Montenegro's biggest natural resource.

Being a mountainous country with a very pronounced change in relief, 70 percent of the territory of Montenegro is composed of carbonate sedimentary rocks (limestone and dolomite). The average annual precipitation in Montenegro is over 250 litres per m<sup>2</sup>. Karst field terrains provide a large number of sources, all of which have different capacities. The favourable geographical position and hydro ecological conditions, the large number of sources with very good chemical and bacteriological parameters, and environmentally pristine and protected areas; these factors guarantee the quality of water and make it very suitable as drinking water.

However, as these are limited and valuable resources, there are numerous problems related to their use which include the following:

- Discharge of wastewater from different sources, particularly municipal wastewater (especially in urban areas) is one of the major problems that affect this resource in Montenegro. In addition, agricultural activities in river basins, particularly in the central and southern regions, where agricultural production is more intensive, represent a non-point source of pollution with organic substances that enter water flows.
- Excessive and irrational use – general awareness regarding the use of water resources is very low; thus Montenegro faces a situation where its level of consumption exceeds its level of available resources, especially during the summer months or in specific locations. It is also a problem that many consumers do not pay their water bills in households. This problem is aggravated by poor technical conditions in the water supply network and this causes great losses (30-80%) making the entire system unsustainable.
- The degradation of river flows and catchment areas, due to the exploitation of mineral resources in riverbeds, but also in ecosystems in catchment areas, which disturb the national dynamics of hydrological processes. This problem is particularly evident in lower parts of river flows, where these activities have completely changed the hydrological and ecological regimes.

Due to their level of importance and way of use, water resources fall within the remit of several different institutions and purviews. In addition, there is still no integrated water management system, and water issues have not been adequately integrated into the different sectorial policies. Due to a lack of networking and information systems, the exact state of play regarding hydrological and ecological parameters and their interrelation is not known. Moreover, information on the situation concerning water resources is relatively limited, unsystematic, and is has been obtained through the monitoring of standard chemical and physical parameters and data related to water supplies<sup>19</sup>.

Irrigation in Montenegro is a basic requirement and a prerequisite for the achievement of stable agricultural production. The water used for irrigation in Montenegro is of quite good quality.

The Water Administration manages waters and water resources. MARD, together with the Chief Water Inspector is in charge of controlling the enforcement of the Law on Waters.

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<sup>19</sup> Source: Platform for the Development of the National Sustainable Development Strategy 2014-2020, May 2014.

## ***Climate Change and Air Quality***

Climate change represents one of the largest threats to humans in terms of both environmental protection and economic and social planning.

The atmospheric gases that generate the most greenhouse effects are primarily carbon dioxide (CO<sub>2</sub>) and water steam (H<sub>2</sub>O) along with gases such as methane (CH<sub>4</sub>), nitrogen sub-oxide (N<sub>2</sub>O) and tropospheric ozone (O<sub>3</sub>). Agriculture is an important source of methane (CH<sub>4</sub>) and nitrogen sub-oxide (N<sub>2</sub>O).

The main sources of methane (CH<sub>4</sub>) are natural gas fields, livestock breeding (the emission of methane due to the internal fermentation of animals represents 36% of all total methane emissions into the atmosphere) and organic waste (anaerobic decomposition of organic waste with methanogenic bacteria). The main source of nitrogen sub-oxide (N<sub>2</sub>O) is agriculture due to the use of manure and mineral fertilizers, which have high nitrogen content. The agricultural sector is responsible for 97% of all of the total nitrogen sub-oxide emissions.

The best ways to reduce ammonia emissions from agricultural production include: applying good agricultural practice, the use of modern fertilization methods, modern manure storage, the introduction of special accommodation and types of food for animals, the correct application of organic and mineral fertilizers and pesticides, and the use of organic fertilizers and biological plant protection products<sup>20</sup>.

Agriculture generates a significant quantity of waste of plant and animal origin. The lack of systems for the collection of agricultural waste (with the exception of a small number of individual households) leads to uncontrolled levels of GHG emissions.

### ***The Impact of Climate Change on Agriculture***

Agriculture is one of the most vulnerable sectors in terms of the impact of climate change due to the fact that agricultural products are directly dependent on climatic factors. Adjusting to the anticipated effects of climate change will be challenging.

Montenegro is a region that has been cited as being potentially vulnerable to negative effects from climate change. The main areas of vulnerability are: health, economic development, availability of natural resources, food production, etc. Also, as a developing country, it does not represent a significant share of the global pollution of the atmosphere. On the contrary, thanks to relatively large forest areas and significant vegetation coverage, Montenegro contributes to the stabilization of carbon dioxide in the atmosphere<sup>21</sup>.

Climate change could potentially have a negative effect on the fertility of land through the increased vulnerability of organic substances in the soil, and there could be a higher risk of erosion due to increases in temperatures, droughts and rainfall, all of which are expected to become more frequent.

The majority of the impact resulting from climate change will, in agriculture, be manifested through the usage and availability of water. Climate change is expected to result in a decrease in

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<sup>20</sup> National Strategy on Air Quality Management 2013-2016

<sup>21</sup> Source: Second National Communication on Climate Change to UNFCCC, 2014

annual water quantities available to agriculture in many areas due to a decrease in summer rainfall, particularly in southern parts of Europe.

### **Forestry**

According to the National Forestry Inventory for 2010 (NFI), forests cover 60% of the territory of Montenegro (826,782 ha), while non-forest land covers an additional 9.7% (137,480). The total growing stock in Montenegrin forests is estimated at 133 million m<sup>3</sup>. Of this, 104 million m<sup>3</sup> is forestland that is accessible from outside of the borders of protected areas and other protection regimes. In all forests in Montenegro, the total annual increment amounts to 3.2 million m<sup>3</sup>, while in economic forests it is 2.6 million m<sup>3</sup>.

Despite the favourable structure of forest ecosystems and the importance of the forestry sector in the economy of Montenegro, certain problems that need to be addressed in the future include:

- One of the major problems is illegal activity in the forestry sector, more specifically, the unsustainable cutting of wood, which has consequences both economically (encouraging the grey economy and the exportation of logs) and environmentally (negative influence on forest ecosystems, which further reduces the possibility of improving the quality and productivity of forest habitats).
- In order to achieve sustainable forest management, namely maintaining their economic, social and environmental functions, the following factors are needed: adequate information (on forest habitats, important and endangered species, ecosystem services and their economic importance), competent staff trained for the application of modern forest management methods, and contemporary monitoring and management systems.
- The ownership structure of forest land has a huge impact on its quality; due to incompetent use by owners, the quality of privately-owned<sup>22</sup> forests is not improving,
- Problems with the infrastructure are evident, primarily with forest roads. Roads have not been built in accordance with standards that contribute to the protection of forests. One specific problem in this sector is forest fires; these have become more frequent in recent years, as has the drying out of certain wood species caused by plant pests and diseases.

Forest management in Montenegro needs to be improved to achieve the desired environmental, production and social functions. In order to achieve this goal, it is necessary to create certain preconditions such as the improvement of information bases regarding forest habitats, the integration of EU requests, as set out in Natura 2000, into forest development plans and forest management programs, the introduction of chains of responsibility and controls regarding the trade of wood products, the improvement of fire prevention systems and the strengthening of capacity within the sector.

Forests are of vital economic importance for populations in rural areas as they present a key source of income and also provide energy for heating.

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<sup>22</sup>In total, 32.7% of forests are privately owned, while the remaining 67.3% are owned by the state. However, there are indications that the share of privately owned forests has increased due to cadaster updates and ongoing restitution processes, and that this figure is now almost 49%. Also, the share of privately owned forest has increased due to the reforestation of agricultural land that has not been cultivated for years. Source: National Plan for the Implementation of the Stockholm Convention for the Period 2014-2021, the Ministry of Sustainable Development and Tourism, October 2013. Figures were confirmed by the National Forestry Inventory conducted under the FODEMO project in 2010; it recorded that 49.5% of forest is privately owned, while the remaining 50.5% is owned by the state.

State owned forests are managed by the Forest Administration, which has its headquarters in Pljevlja. Forests in the national parks, however, are managed by a Public company, National Parks of Montenegro.

### 2.2.3. Rural areas

According to OECD methodology, Montenegro's entire territory can be considered as being rural. However, given the significant differences between territorial units on a local level (municipalities) and taking into account other specific characteristics of Montenegro, the following approach has been proposed to define rural areas: if a municipality has a population of more than 10,000 living in urban centres, i.e. in settlements classified by MONSTAT as urban settlements which belong administratively to those urban centres, such settlements are not classified as being rural; remaining territory in the same municipality is, however, classified as rural. On the other hand, the municipalities that had less than 10,000 inhabitants living in urban settlements in the 2011 Census are classified as being entirely rural areas. This proposed division best reflects the current situation in Montenegro.

**Table 6:** The Number of Urban and Rural Populations, by Region

Region	No of Inhabitants	Urban Population		Rural Population	
		No	%	No	%
Coastal	148,683	86,707	58.3	61,976	41.7
Central	293,509	233,640	79.6	59,869	20.4
Northern	177,837	71,673	40.3	106,164	59.7
Montenegro Total	620,029	392,020	63.2	228,009	36.8

Source: MONSTAT, Census 2011

### Demographic trends in Montenegro

The 2011 Census showed an ageing population and a slower growth in population. In combination with internal and external migrations, it has significantly influenced a change in the demographic image of Montenegro. The population growth trends for the period 1981-2011 are presented in the table below.

**Table 7:** Population Trends in Montenegro 1981-2011

Year of Census	Population	Period	Increase/Decrease (period)	Average Annual Growth Rate
1981	584,310	1971-1981	54,706	9.9
1991	615,035	1981-1991	30,725	5.1
2003	620,145	1991-2003	26,641	
2011	625,266	2003-2011	-116 <sup>23</sup>	

Source: MONSTAT, Statistical Yearbook 2013

According to MONSTAT data, the Montenegrin population, during the period from 1981 until the present day, has increased, but growth has been very uneven in certain specific regions. Increases in population in the Central and Coastal Regions have been evident in every census; the Northern Region, however, experienced a decrease in its number of inhabitants.

<sup>23</sup>The negative population trend for the period 2003-2011 is due to different methodology applied during the 2011 Census

Two trends are visible in the migration of the population between the two censuses (2003 and 2011): the first is a significant migration from the northern region and the second is a migration from rural to urban areas.

Montenegro has a significant population of elderly people. Since 1981, when the population growth rate was 11.8%, it experienced a constant fall in population numbers; in 2012 it was 2.5%. According to the 2011 Census, the average age at that time in Montenegro was 34. Rural settlements in all municipalities have a far less favourable age structure than urban areas, i.e. in certain rural areas; the average age is above 50.

The afore-mentioned facts have all contributed to the unequal development of the Central, Northern and Southern Regions. The Northern Region (mostly rural) covers more than 50% of the state's territory, but is populated by less than a third of the total population. On the other hand, almost a quarter of the population in Montenegro lives in slightly more than 10% of the territory in the Coastal Region.

**Table 8: Regions of Montenegro, Basic Indicators**

Region	Population	Surface (km <sup>2</sup> )	Population Density	Population Percentage	Territory Percentage
Northern	177,837	7,304	24.35	28.7	52.9
Central	293,509	4,917	59.69	47.3	35.6
Coastal	148,683	1,591	93.45	24.0	11.5

Source: MONSTAT, 2011 Census

Table 9 shows the gender and age structure of the workforce on family agricultural holdings. According to these figures, about 38% of heads of families on agricultural holdings are over 55. Women are only the heads of holdings in 13% of cases.

**Table 9: Gender and Age Structure of the Workforce on Family Agricultural Holdings**

Category	Workforce Total	Head of the Holding		
		Total	Male	Female
Up to 24	6,717	344	307	37
Between 24 and 34	11,340	2,387	2,228	159
Between 35 and 44	15,675	5,993	5,540	453
Between 45 and 54	21,562	11,675	10,769	906
Between 55 and 64	19,849	12,197	10,657	1,540
65 and above	23,198	16,228	13,037	3,191
<b>Montenegro total</b>	<b>98,341</b>	<b>48,824</b>	<b>42,538</b>	<b>6,286</b>

Source: MONSTAT, Agriculture Census, 2010

Therefore, one of the key objectives for the development of rural areas is the increase and diversification of income and the decrease of nominal and hidden employment of household members. Action to be taken in order to achieve these goals includes: building local institutions, the development of the Rural Financial Sector, the development of a non-agricultural economy, the development of agriculture, the revitalization of the rural infrastructure, etc. The development and diversification of the rural economy can be achieved through investing in the opening of small enterprises, in craft shops and in improving accommodation facilities for the development of rural tourism and the development of entrepreneurship. The improvement of the rural infrastructure would ensure the reduction of regional disparities and would also increase the attractiveness of rural areas whilst also improving the standard of living.

## ***Infrastructure***

A well-established infrastructure contributes to a better quality of life, and reduces migration and depopulation. For example, a good road infrastructure is a key prerequisite for the development of rural areas. It enables better communication with markets and enables product placement, it increases competition and provides opportunities for additional income. There are many rural areas with poorly developed transport, and with little or no social or economic infrastructure. For example, the distance to food shops and elementary schools is, on average, 3 to 4 km, and to high schools and the bank it is 10 km. The average distance to a bus stop is 2.5 km, and to a post office about 7.5 km. In addition, the physical condition of the water supply network is poor; not all villages have an electricity supply and the telecommunication network is undeveloped and more often than not does not offer the possibility of the Internet.

The length of the Montenegrin road network totals 6,352.8 km, of which 931.9 km are main roads, 850.9 km are regional roads, and local roads total around 4,570 km. Within the overall state road network there are 312 bridges and 136 tunnels that have been constructed due to the difficult relief of the terrain.

The poorly developed road network in Montenegro is the result of various limiting factors which together aggravate or restrict operational connections within Montenegro as well as creating problems regarding connections with its immediately neighboring countries.

It is possible that there will be further economic decline and depopulation in remote rural areas if national policies do not provide a favourable living conditions and a better economic environment.

## ***Tourism in rural areas***

Within the Tourism Sector, rural tourism proffers the valorization of agricultural areas, natural resources, cultural heritage, religious monuments, and local traditional rituals that are laid on particularly for tourists; all together these project the identity of each individual area and meet the needs of guests in terms of accommodation, food and beverages, recreation, sports activities and events.

Since Montenegro gained its independence, the Tourism Sector has recorded increases in both revenue and in overnight stays. In 2014, tourism generated, both directly and indirectly, 728.8 million €, which was 1.8% more than in 2013. According to forecasts, revenue from tourism will grow by 8.6% annually (in real terms), while the employment, directly and indirectly generated from tourism, will grow at an average real rate of 5.8%. According to the structure of total overnight stays recorded in 2012, coastal towns account for 96.8%, followed by mountain areas which recorded 1.2% and Podgorica which recorded 1.1%. Other tourist resorts recorded a total of 0.9%.

In 2014, 1,517,376 tourists visited Montenegro, 1.7% more than in 2013. The increase in the number of tourists also influenced the increase of overnight stays and in 2014 a total of 9,553,783 overnight stays were recorded which was 1.51% more than in 2013.

Tourism revenue in northern Montenegro represents a very low share of the Tourist Sector's total turnover. Tourist packages in the central region and in the mountains are still incomplete and are

insufficient to attract large numbers of tourists. Hotels rarely offer anything other than basic accommodation and food services, although there are some exceptions. Some significant positive changes include: the preparation of urban planning and policy documents, a few hotels with a high level of service have been opened, new pistes have been opened at Bjelasica etc. Nevertheless, these improvements in tourism and in infrastructure are not even close to what is needed in Northern Montenegro.

The importance of rural tourism should, however, be taken into account as it provides a valuable link between agricultural production, cultural traditions, traditional gastronomy and tourist services. It maximises the use of existing resources. Therefore, the development of rural tourism is based on sustainable development, through the revitalization of existing, traditional construction and heritage, which is given new purpose, tourism. Planning of more complete renewal, valorisation and protection of tourist potentials creates integral tourist product associated with the implementation of rural area revitalization programme. Rural tourism, particularly tourism on agricultural holding is, therefore, an important part of overall sustainable development.

**Table 10:** Share of Overnight Stays, by Location<sup>24</sup>

Type of Tourist Location	Overnight Stays (in 000)	Location Shares within the total number (in %)	Change Rate 14/13 (in %)
Coastal Locations*	9,258	96.9	1.4
Mountain Locations**	90	1.0	-16
Other Tourist Locations***	75	0.8	33.9
The Capital City	128	1.3	9.9
Other Miscellaneous Locations****	2	0.0	-26.1
<b>Total</b>	<b>9,453</b>	<b>100.0</b>	<b>1.5</b>

\*Ulcinj, Bar, Budva, Tivat, Kotor and Herceg Novi

\*\* Žabljak, Kolašin, Plav, Plužine, Rožaje and Andrijevica

\*\*\* Bijelo Polje, Berane, Mojkovac, Nikšić, Šavnik, Pljevlja and Cetinje

\*\*\*\* Danilovgrad

Source: MONSTAT, 2015

### 2.3. Structure and trends in agricultural production

Agricultural holdings in Montenegro are not specialized. Almost 80% of all total agricultural holdings are mixed type holdings, and only 8.04% are so called specialized holdings for pig and poultry breeding, followed by 4.5% of holdings that are registered for mixed livestock breeding and mixed plant farming. Only 2.9% are non-classified holdings (family holdings with small gardens)<sup>25</sup>.

#### 2.3.1. Primary production

##### 2.3.1.1. Plant production

Plant Production is characterized by a large number of small agricultural holdings, all of which grow different crops. Favourable natural conditions enable the growing of citrus and continental fruits, as well as almost all types of vegetables.

<sup>24</sup>MONSTAT, Notice no. 27 of 20<sup>th</sup> February 2015

<http://www.monstat.org/userfiles/file/turizam/dolasci%20i%20nocenja%202014/godisnja/Turizam%20u%20Crnoj%20Gori%20-%202014.pdf>

<sup>25</sup>MONSTAT, Agriculture Census 2010

According to the Agriculture Census, 2010, about 14,000 holdings are involved in fruit and vegetable production, which represents 32.7% of the total number of agricultural holdings. According to official statistics for 2013, plant production covers 12.513 ha.

Primary plant production is characterized by specific common weaknesses: fragmented holdings, poor vertical integration, small scale of production, low technical levels, uneven quality/price ratio, high production price per unit and lack of storage capacity.

### **Fruit growing**

Orchards covered an area of 1.856,1 ha in 2013, which is 27.7% more than was recorded in the 2010 Census.

According to the Sectoral Study for Fruits and Vegetables (2014), citrus production represented the largest amount (24.4%) closely followed by plums (24.2%). Citrus fruits are the most predominantly grown fruits in the southern region; of this figure, the most predominantly grown fruits are tangerines, which are mainly cultivated on plantations and are sent to foreign markets. In the Northern Region, plums are the most dominant fruit type and are mostly used for making brandy, while a small percentage is processed into jams and preserves, dried or consumed fresh. The production of apples represents 15.8% and figs 11.1%; both of these are also significant.

In addition to peaches, raspberries, strawberries and citrus fruits, many other types of fruits are also being farmed extensively in gardens without the application of agro-technical measures (hilling, fertilization, pruning, and pest and frost protection, and irrigation). Areas producing important fruit types are statistically monitored; statistics for 2013 are shown in Table 11.

**Table 11: Fruit Production in 2013**

Fruit	Production Area (ha)
Plums	205.4
Apples	178.8
Tangerines	128.0
Pears	30.7
Peaches	95.0

Source: MONSTAT, Statistical Yearbook 2014

Organic fruit production in Montenegro has not been sufficiently developed according to its potential. There are currently 123 registered organic fruit producers in the country. There is interest in this type of agriculture but production is mainly concentrated in the North of Montenegro.

### **Viticulture**

According to the Statistical Yearbook 2014, vineyards cover an area of 2.702 ha. Its products dominate the wine market, primarily with its red wine varieties Vranac and Kratošija, but also with its white wine varieties Krstač and Chardonnay. In comparison with the 2010 Census, there has been a significant growth in the development of foreign varieties such as Cabernet Sauvignon and Merlot (red wines), and Chardonnay (white wine).

There are 505 grapes and wine producers that are registered in the Central Register of Grape and Wine Producers.

Small-scale producers mainly grow varieties of grapes used for wine production (94.1%), while table varieties account for only 5.9%. The most common table varieties are: Cardinal, Victoria, Ribijer, Afuz Ali and a few others.<sup>26</sup>

Regarding the structure of plantations in the company '13 jul - Plantaže', varieties of wine grapes dominate (92%), while the remaining amount are table varieties (8%). Grape varieties used for the production of red wine represent 67% of the total vineyard area, while white grape varieties represent 25%.<sup>27</sup>

According to the Agriculture Census, the total vineyard land area that is irrigated amounts to 2,440 ha or 92.2%. Vineyards belonging to business entities are almost entirely watered by irrigation systems (99.7%), while in family farms, areas that are irrigated are significantly less (250.6 ha or 73.6%).

Organic grape production in Montenegro has not yet been developed although there is a chance for its development in certain isolated locations. According to Monteorganica<sup>28</sup>, there are two producers that are currently registered as organic grape producers with total vineyard land area of 1 ha.

### ***Olive growing***

Olive trees are the oldest subtropical crop on the Montenegrin coast and have a cultivation tradition of over 2,000 years. The majority of olive groves comprises old trees (about 70% with an average age of 200-300 years) and are located in places that are hard to access; in recent years less present plantation production has been established (118,8 ha MONSTAT, 2014). The number of olive trees in Montenegro amounts to 489,520, which represents a constant growth in numbers over the last ten years (due mostly to the implementation of rural development measures aimed at setting up new, reconstructed and revitalization of existing plantations). The most predominant domestic varieties are Žutica (65%), Crnica, Sitnica, Lumbardeška and Drobnica. Over recent years there has been an increase in the introduction of foreign varieties such as Picholine, Arbequina, Leccino, and Coratina. These varieties should help to compensate for the lack of choice in table and domestic varieties as well as enabling olive growing in zones that suffer from winter frosts.

In Montenegro, there are no large areas under olives that are privately owned in Montenegro (12 family holdings own 6 ha), but only small estates. Larger complexes exist in Luštica with 20.000 and Ulcinj-Valdanos with 80.000 trees.

Olive growing in Montenegro is characterised by prominent variations in annual yield (from 300 tons of olives per year in a poor harvest year, to 2,600 tons in rare record years, MARD). Some of the reasons for this situation are the inadequate, irregular and incomplete application of agro-technical measures. The average height of trees in Montenegro is 7-10 m, in some cases even 15 meters, which prohibits the application of agro-technical measures and makes harvesting difficult.

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<sup>26</sup>Source: Central Register of Grape and Wine Producers and MARD

<sup>27</sup>Source: MONSTAT 2011.

<sup>28</sup>Monteorganika is accredited and certified control body of producers and certified organic production according to the standard MEST EN 45011:2004.

Organic olive production in Montenegro has not yet been developed, although there is potential for its development in certain isolated locations (e.g. Lustica, Valdanos). There is only one registered producer of organic olive oil and olives, and one applicant-potential producer is in transition period.

### **Crop production**

The most dominant crops in Montenegro are: maize, wheat, barley, alfalfa and clover.

In comparison to the Agriculture Census, 2010, a growth trend in areas growing cereals was noted in 2013. Areas growing wheat, barley and rye tripled in comparison with the 2010 Census. According to statistical data, Table 12 shows total yields of main crops.

**Table 12:** Total Cereal Production in 2013 (t)

Crop	2013
Wheat	2,300.9
Corn	2,945.9
Barley	1,182.3
Oats	585.0
Rye	573.6

Source: MONSTAT, Statistical Yearbook 2014

Buckwheat was grown as a trial crop on a land area of 102.67 ha in 2013.

In 2010, Montenegro started to produce cereal seed and an area of 31.3 ha was recorded for this use.

Montenegro presents favourable conditions for tobacco growing, particularly in the Coastal and Zeta-Bjelopavlići areas (the area around Skadar Lake). According to MARD, 35.69 ha were used for the production of tobacco in 2013. The amount of tobacco purchased in 2013 amounted to 78 tons (MONSTAT, 2014).

The production of aromatic and medicinal herbs has become increasingly more importance over recent years and increases land areas used for producing these have been recorded. According to data from the Ministry, there are 25 registered holdings with a total surface of 40 ha. 47 organic producers are registered in Montenegro. Particular potential has been seen in the production of aromatic and medicinal herbs and also in grain crops.

### **Vegetable growing**

Regarding vegetable production, 9,605 agricultural holdings are involved in vegetable growing, which represents 19.6% of the total number of registered holdings according to the Agriculture Census (2010).

Within the scope of vegetable production, potatoes represent half of the produce; this crop is mostly grown in the Northern Region. According to MONSTAT data, the production of potato crops increased steadily from 2010 (890 ha), and reached total land area coverage of 1,345.4 ha, with a total yield of 8,825.5 tons in 2013.

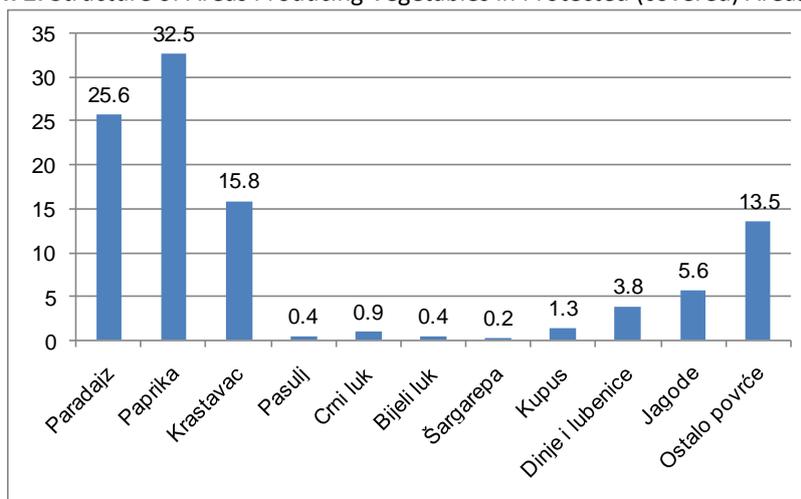
The next most significant crops are cabbage and kale, melons and watermelons and tomatoes; all of these are grown mainly in the Zetsko-Bjelopavlići Region.

**Table 13:** Total vegetable production in 2013

Vegetables	Total yields(t)
White cabbage	12,436.5
Watermelons	12,368.8
Beans	1,314.5
Peppers	4,169.4
Onions	1,938.7
Tomatoes	3,862.7
Green Beans	1,303.5
Cucumbers	1,441.3
Melons	1,380.8

Source: MONSTAT, Statistical Yearbook 2014

Production in protected areas, according to the Agriculture Census (2010), only represented 47.5ha. The largest percentages of greenhouse area are used for the production of peppers (32.5%), tomatoes (25.6%) and cucumbers (15.8%). On the other hand, MARD records show that production in protected areas represents 60 ha; this is probably more accurate data as it takes into account investment projects that have been implemented recently. Insufficient production levels are currently achieved in protected areas due to the high financial investment required for the construction of such establishments, the installation of heating systems, etc.

**Graph 2:** Structure of Areas Producing Vegetables in Protected (covered) Areas (in %)

Source: MONSTAT, Agriculture Census 2010

Insufficient yields are the consequence of numerous factors including the inadequate selection of varieties and hybrids, the inappropriate application of agro-technical measures, climate disasters, the unfavourable distribution of precipitation and limited irrigational infrastructures.

Organic vegetable production in Montenegro is not sufficiently developed considering its potential. There are currently 9 registered organic vegetable producers in Montenegro.

It is evident that interest in the production of fungi and mushrooms is growing. However, there are still no statistical records on this type of production.

### ***Meadows and pastures***

In 2013, meadows covered 60,306.5 ha, and grass-legume mixtures covered 1,380.5 ha.

Uncultivated, natural meadows make up the majority of the total meadow area in the country. They have relatively low yields (1.5-18 tons of hay/ha), because no agro-technical measures of any kind are applied to large parts of this land. Natural meadows and pastures, which have the greatest potential for the production of forage plants, are increasingly exposed to degradation; this is reflected in unfavourable changes to the botanic composition, in increased levels of worthless and harmful plant varieties etc.

### 2.3.1.2. Livestock production

As agriculture is the most important sector for rural areas of Montenegro, livestock breeding, taking into account the terrain is the most important branch of agriculture. However, this sector has not been sufficiently developed. Fragmented holdings and traditional, extensive methods of production, inefficient operations and the inadequate utilization of available natural resources are the main causes of the underdevelopment of livestock breeding. The same applies to the dairy sector.

Livestock breeding allows Montenegro to exploit less productive areas (pastures and meadows), which are predominant within total agricultural structure of land in Montenegro (roughly 88%). If the total area covered with pastures and meadows is divided by the total number of cattle and sheep/goats Montenegro has only 0.23 head of cattle and 0.46 head of sheep/goats per hectare. Taking into account the figures for all types of ruminants in animal units (1 animal unit equals 1 adult bovine or 10 sheep or 10 goats), also including horses, Montenegro still has less than 0.53 animal units per ha; this is clearly not an efficient use of land.

**Table 14:** Number of Cattle and Production, 2013

	No of Cattle (000)
Cattle (total)	89
Cows and Heifers	65.6
Pigs	20.5
Sheep	190.8
Goats <sup>29</sup>	29
Poultry	620
Horses	4.8

Source: MONSTAT, Statistical Yearbook 2014

Ruminant breeding (bovine, ovine and caprine animals) is dominant in Montenegro; pig and poultry breeding is less developed. The dominant breeds are those that are favourable for milk and meat production, with a greater tendency towards dairy breeds. During recent years, positive changes have been recorded in the consolidation of holdings and in an increase in the number of heads.

#### ***Cattle breeding***

Cattle breeding is the most important sector of livestock production; there are approximately 89,058 heads, of which 65,691 are breeding heads (cows and breeding heifers). The total milk production was 168,540 tons in 2013.<sup>30</sup>

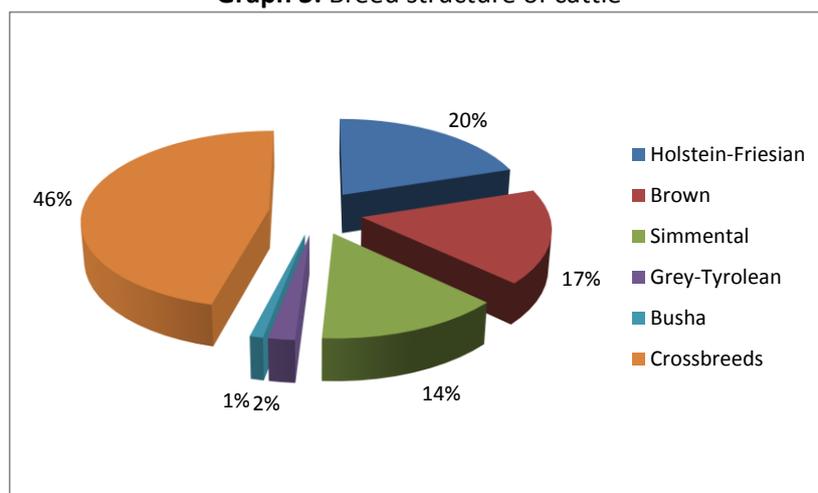
<sup>29</sup>Statistics have not been kept for goats before 2011

<sup>30</sup>Statistical Yearbook 2014

In the cattle-breeding sub-sector, dual-purpose production prevails (milk and meat); the major importance of this is reflected in milk production. Bovine animals are reared on more than 50% of holdings, and on 75% of holdings involved in livestock production. In the overall structure of households engaged in cattle breeding, only 2% are commercial entities, while the rest are family households. The average number of heads per household is low (3.3), and only about 40% of households have more than three cows or heifers.

Cattle breeding is present throughout Montenegro, but 66% of the total bovine population is reared in northern Montenegro.

**Graph 3: Breed structure of cattle**



Source: Biotechnical Faculty, Livestock Selection Service

The breed structure of cattle is unfavourable as different crossbreeds (noble breeds crossed with local ones) account for up to 50% of the total population. Highly productive breeds (Holstein, Brown, Simmental and Grey-Tyrolean) together account for about 53%. Busha, as an autochthonous breed is only present in 1%, but is significant as a genetic resource. The changes in breed composition have contributed to the development of more productive breeds and the reduction of crossbreeds.

Regarding production methods, extensive, semi-intensive and intensive methods are used, depending on agro-technological conditions and specific conditions relevant to each holding. Semi-intensive methods of production predominate.

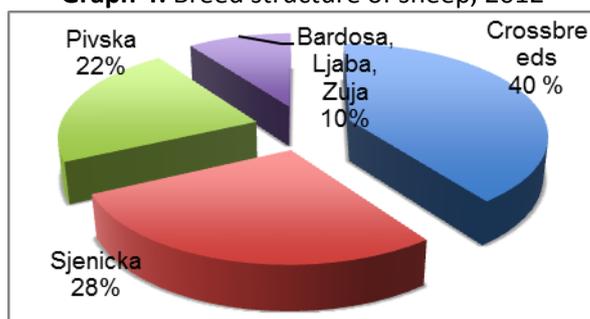
### ***Sheep breeding***

Sheep breeding represents an important branch of livestock breeding. This is mainly due to its use of low-productive areas (pastures and meadows) that dominate within the total area of agricultural land. According to the Agricultural Census, 2010, there are 6,088 holdings that rear sheep (18.6% of households involved in livestock breeding).

The total sheep population in 2013 was 190,843 heads, of which 153,450 sheep are reared for breeding and milking. The average herd size is 37.3 heads<sup>31</sup>

Lamb meat is the main product of this sub-sector (60-65%). Other products include milk and wool, although wool is of very small value.

<sup>31</sup>MONSTAT, Agriculture Census 2010

**Graph 4: Breed structure of sheep, 2012**

Source: Biotechnical Faculty, Livestock Selection Service

Within the breed structure, the Pramenka breed prevails and has several strains. Two breeds are dominant: Pivska and Sjenička. Other breeds such as Bardoka, Ljaba and Zetskažuja, have smaller economic significance due to their small numbers, but are very important in terms of preserving the genes of autochthonous breeds. Montenegro has a high number of crossbreeds (40%) within its total population. According to MONSTAT, almost 70% of sheep are bred in northern Montenegro, 25% in the central part of country, and just 5% in the coastal region.

Extensive breeding is dominant; the local tussock sheep are most commonly bred for three main reasons; the production of milk, meat, and wool. There are some farms where the intensive breeding of highly productive breeds takes place, such as Vittemberg and a few others.

### ***Goat breeding***

Goat breeding is very important in the karst areas of Montenegro (Nikšić, Cetinje, Danilovgrad, Podgorica and the coastal municipalities), because natural conditions are considerably less favourable for rearing other types of ruminants (bovine or ovine). According to the Agricultural Census, 2010, of 32,675 agricultural holdings rearing livestock, 3,583 of them (almost 11%) rear goats.

The total number of goats reared on agricultural holdings in Montenegro amounted to 29,657 heads in 2013, of which 26,414 were older than one year. The average size of a herd is 9.8 heads.<sup>32</sup>

Goat's milk is the main product of this sub-sector. Goat meat, though significant, has a lower value.

Regarding the breed structure, the local Balkan goat dominates and is present with several varieties. During recent times, interest has grown in opening new farms, orientated towards the intensive breeding of mostly Alpine breeds, with a focus on milk production. The Sanska goat is sporadically present in Montenegro.

### ***Pig breeding***

Pig breeding is one branch of livestock breeding which is still under-developed in Montenegro. Compared with the breeding of ruminants, which use available natural meadows and pastures, pig breeding is of less importance. This is primarily because of low production levels of concentrated feed in Montenegro.

<sup>32</sup> MONSTAT, Agriculture Census 2010

During 2013, there were 20,572 pigs registered in Montenegro, of which 1,456 were sows and pregnant gilts, 146 breeding boars, piglets up to 19kg 4,598, 9,355 pigs between 20 and 49kg, and 4,872 pigs for fattening.<sup>33</sup> During the last two years, the number of pigs has significantly decreased because one of the largest pig farms in Montenegro has gone bankrupt.

In addition, every year, about 20,000 pigs intended for fattening are imported from Serbia. Pig breeding usually takes place on private, family holdings that keep from just a few to 300 fattening pigs. Expensive production costs, and a supply of cheap pork imported from other countries, do not provide an incentive for rearing pigs in Montenegro.

Most of the pork produced on family holdings is obtained through fattening and is used for own consumption. Some 10-20% of pigs raised from local production are slaughtered when they reach approximately 20-25 kg of live weight; the rest are fattened until they reach 100–110 kg of live weight.

The breed structure of pigs in Montenegro consists mainly of crossbreeds between Landras and Large Yorkshire and less present are Duroc and Pietren. Crossbreeding, which is common for obtaining better results in pig breeding, is not carried out in a planned manner. The results, therefore, are quite modest in terms of the number of piglets raised per sow and the weight the piglets gain.

### ***Poultry breeding***

Montenegro has recorded positive trends in the poultry sector over the last few years. The number of family agricultural holdings dealing with egg production has increased, and there has been an increase in broiler production. Slaughter and processing facilities have also been developed in this sector.

The total poultry population in 2013 amounted to 620,354<sup>34</sup>. Of this number, 180,735 units were reared by legal entities, while 439,619 were reared on family agricultural holdings. Besides egg-laying hens and broilers, family holdings rear other poultry (geese, turkeys, ducks, etc.) but in smaller numbers.

Over recent years Montenegro has witnessed an increase in poultry production, primarily through the annual fattening of more than 1.5 million broilers and the production of more than 2,000 tonnes of meat (MARD data) on organized holdings. The remainder of chicken meat is produced on rural holdings.

At commercial holdings, egg production takes place in battery cages, with an annual production level of 75 million eggs.

Breeding broilers is much more significant than is the breeding of other types of poultry (breeding of turkeys, geese, and ducks is quite small). The expansion of broiler production has occurred as a result of companies investing in new and more modern technology.

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<sup>33</sup> Statistical Yearbook 2014

<sup>34</sup> MONSTAT, Statistical Yearbook 2014

There is no breeding of parent flocks (parent or grandparent) in Montenegro, nor are there any registered incubator stations. Thus it is impossible to produce either light or heavy hybrids; for this reason they are imported, usually from other countries in the region.

### ***Horse breeding***

Horse breeding still has a place in Montenegrin agriculture due to the specific nature of the geography of the country and because of the level of agricultural development in rural areas. Horses are still irreplaceable in many mountainous areas, not so much in terms of their use for land cultivation but for the transport of goods. Due to the continuous depopulation of rural areas and due to the increasing use of technology and machinery, the number of horses is continuing to decline. Consequently, official statistics have registered fewer than 4,858 heads<sup>35</sup> in Montenegro.

The local mountain horse is the dominant breed due to its characteristics (resilience and strength to carry heavy loads across extremely uneven and rocky terrains). Recently, the number of horses used for sporting purposes has increased. In extremely rocky areas of Montenegro (south and southwest), mules and donkeys are also bred, and are used for carrying heavy loads.

### ***Apiculture***

Apiculture has a long and rich tradition in Montenegro. Different climate zones in the country, large areas covered with natural meadows and pastures, and vast karst regions with rich flora and plenty of honey plants provide excellent natural conditions for apiculture. Honey is the main product, but the economic value of apiculture products could be higher if beekeepers were to expand their assortment of products to include beebread, propolis, pollen, selected bee queens, etc. Moreover, the importance of apiculture is especially high given the role bees play in the pollination of plants. This, in turn, directly influences increases in the yields from different fruits, cereals.

The total number of hives in 2013 was 42,458, of which 2,276 hives were owned by family agricultural holdings, and 182 were owned by business entities.<sup>36</sup> The average number of hives per farm is 20, which is almost equal with the European Union average that ranges from 17 to 20 hives per households. The average number of beehives per household, on a regional level, is as follows: Northern Region 15, Central Region 22, and Coastal Region 37.

Total honey production in 2013 amounted to an average of 510 tons or 12kg per hive. Stationary beekeeping accounts for 60% of the total beekeeping and yield per beehive ranges from 10 to 15 kg, while in the case of mobile beekeeping the yield ranges from 15 to 25kg<sup>37</sup> per beehive. Almost 95% of the total honey produced is sold as 'doorstep sale' and the rest is sold through retail stores and in green markets.

Average annual consumption levels of honey are, on average, 1.2 kg of honey per capita. The average price for honey is 9 € per kg. Beekeeper organizations in the country have formed a Federation of Beekeeper Organizations; this comprises 29 member organizations, most of which are at a municipal level. The Federation comprises about 1,600 members, which represents almost the entire apiculture sector in Montenegro.<sup>38</sup>

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<sup>35</sup>MONSTAT, Statistical Yearbook 2014

<sup>36</sup>MONSTAT, Statistical Yearbook 2014

<sup>37</sup>Sectorial Analysis of Apiculture production in Montenegro (2014), Federation of Beekeeper Organizations of Montenegro

<sup>38</sup> Ibid.

Bearing in mind the increasing interest of Montenegrin farmers in bee-keeping (since 2005, the number of federation members has more than tripled) as well as the high quality of honey produced, measures to further stimulate honey production, to start exporting and to strengthen links between agriculture and tourism through apiculture, are all necessary. MARD supports the apiculture sector through a variety of measures ranging from Agro-Budget funds to improve equipment and production processes and the education of honey producers regarding new trends in honey production. Investment in a project entitled 'House of Honey' is underway. This 'house' is expected to be a unique centre for the purchase, processing, and packaging of honey and also for the education of beekeepers.

### 2.3.2. Processing

#### ***Fruit and vegetable processing***

According to the data from the Sectoral Study in Fruits and Vegetables (2014), the processing sector is under-developed. Other than at a few processing plants, fruit and vegetable processing is only carried out on agricultural holdings. On the Montenegrin market, products such as jam, dried fruit, olive oil, brandy and wine are statistically monitored annually.

**Table 15: Industrial Production in 2013**

Product	Quantity
Unconcentrated juice of individual types of fruits and vegetables, unfermented and with no alcohol added (excluding oranges, grapefruits, grapes and apples)	338 hl
Mixed fruit and vegetable juice, unfermented, with no alcohol added	116 hl
Vegetables (excluding potato), fruits, nuts and other edible plant parts, prepared or conserved in vinegar or vinegar acid	223 t
Jams, marmelades, jellies, puree and/or other fruit pastes (including citrus fruits and homogenized preparations)	94 t

Source: MONSTAT, Statistical Yearbook 2014

Raw materials for processing are obtained from local products. Thus some companies purchase up to 500 tons of berry fruits, 200 tons of medicinal herbs, 120 tons of fresh mushrooms and 40 tons of forest fruits. All of these are frozen in special tunnels and cooling facilities and are packed in prime condition; later they are sold to consumers. Only the first degree of processing is performed; the final product is frozen, dried or boiled (penny bun, cantharellales, etc.).

According to companies directly involved in processing, the supply of raw materials (local fruits and vegetables) is a problem due to high prices, insufficient quantities and continuity in primary production. A significant part of the produce from local companies is exported, and thus their merchandise is not always present in local stores.

Among those who process their own products, brandy producers are the most predominant (pear, apple, and plum).

#### ***Grape processing***

The production of wine in Montenegro has been registered in 44 vine making companies. In accordance with EU regulations regarding the size of companies, there is one medium enterprise in Montenegro, which has a capacity of 17 million litres, as well as two small enterprises, which have capacities ranging from 0.3 to 1 million litres.

The technological conditions of all three aforementioned companies meet all internationally adopted standards. Production technology standards vary, however, at the remaining vineyards and range from the use of modern technology to traditional production methods. Both methods of production can meet hygienic standards. However, all producers who meet the hygiene requirements and whose wine is of an appropriate quality have received permission to release their wine on the market.

Local wine is mainly produced from grapes produced in Montenegro. However, as the grape market is limited, some wineries make their wine from grapes purchased from producers outside Montenegro, mainly from Macedonia.

Wine export is three times greater than the import of wine. Red wine is the most exported of all Montenegrin products. According to data from the Sectoral Study for Fruits and Vegetables, the annual consumption of wine was 8.2 million litres or 14 litres per capita.

Wineries usually sell their products directly to consumers (sales at the holding); some of them also sell to restaurants and in some exceptional cases they also sell to hotels and supermarkets. In order to be present in supermarkets, small wineries must secure larger quantities of their product, which they are not usually capable of doing. This is why the distribution of their products is usually limited to a couple of restaurants and some hotels. The development of wine routes has contributed to an increased number of visits to wine cellars and to better connections between small-scale wine producers and consumers. Wine routes have now been recognised as a tourist attraction due to their impact on the economic evaluation of products; this trend has also been reflected in producers taking a greater interest - at first there were only 16 cellars on the wine route and now there are 33.

Through WIPO (The International Bureau of the World Intellectual Property Organization), Montenegro has protected two types of wine with designations of origin dating from 2003: 'Montenegrin Krstač' and 'Montenegrin Vranac.' This is in line with the Lisbon Agreement for Protecting the Appellations of Origin and their International Registration.

Montenegro has been a member of OIV – International Organization of Vine and Wine since 2007. There is a National Vine Growers Association, which protects the interests of vine growers and wine producers. This national association joined the European Confederation of Independent Winegrowers (CEVI) in 2013.

In addition to wine production, the production of brandy from grapes is predominant in Montenegro. Grape brandy is most commonly produced in comparison with the production of brandy from other fruits.

### ***Olive processing***

The processing industry in Montenegro has not modernized sufficiently to remain in line with international standards of production of olives and olive oil, and this affects the quality of the final product. Significant improvements have, however, been noted over the last few years in terms of both agrotechnical measures and processing technology.

Olives are mostly processed into oil (90%), while a small percentage is kept back for household use. There are currently 15 registered mills in Montenegro, 8 of which have a continuous line for

the cold squeezing of oil (capacity 250-500 kg of fruit per hour); the rest are traditional mills with stone presses.

Yields range between 300 tons of olives per year in poor harvest years to 2,600 tons of olives in record years.

There are no millers' associations and the majority of mills do not meet strict HACCP standards due to discontinuity in investment. There are 6 olive associations in total (with the potential for the establishment of a national association).

The consumption of olive oil in Montenegro is relatively low - 0.5 litres per capita, which is way below average consumption in the EU (which ranges from 4-6 litres per capita).

As stated in the IOC study, extra-virgin olive oil only represents 11.1% of the total production in Montenegro. The main reasons for this are untimely harvesting and the fact that olives are still mostly collected from the ground instead of being picked from the tree, which leads to an increase in the content of free fatty acids in the oil produced.

Quantities of other olive preparations are negligible and are manufactured mainly for personal consumption and are produced using traditional methods. There are two small plants that produce soap from olive oil and one producer makes a type of liquor from olive extracts. Olives have multiple uses as they can be used to make cosmetic products (oil of pomace), souvenirs, olive wood products including small pieces of furniture, tea from olive leaves, etc. In order to valorise this potential, it is necessary to promote various forms of associations (clusters, cooperatives) that can adequately place their final products on the market.

### ***Milk processing***

Average annual milk production has averaged 170 million litres per annum over the last ten years, 95% of which is cow's milk. Of the total quantity of milk produced, 13%, on average, was collected and processed in registered processing establishments, and the remaining quantities were processed at family holdings before being put on the market, consumed in households or used for feeding calves. The percentages of milk collected during the specified period varied from 11% to 16%.

In 2013, milk collection figures reached a record high during the last 10 year period. In comparison with 2012 there was an increase of 8.6%.

Currently, there are 25 dairy and cheese facilities that operate in Montenegro. Around 63% of collected milk is processed by four plants; they, in turn, cooperate with 66% of the total number of milk suppliers.

When analysing collections made by the largest milk processors, it is evident that out of the total quantity of collected milk, the highest shares are produced (59%) and processed (75%) in the Central Region of Montenegro. 32% is produced and 22% is processed in the Northern Region, and in the Coastal Region 9% is produced and only 3% is processed.

The chemical quality of collected milk in Montenegro is very good and complies with EU criteria. However, the quality of raw milk must be significantly improved, particularly when it comes to

plate count numbers. In 2013, only 25.98% of collected milk was of extra class when measured according to its plate count. It should be noted that according to the valid classification methods, extra class implies plate count figures of up to 200,000; the limit for EU aligned milk, however, is a plate count of 100,000. Regarding the number of somatic cells, the situation is slightly better, since about 50% of collected milk in 2013 had up to 400,000 somatic cells, which is, indeed, the limit for EU aligned milk.

Bigger dairies implement HACCP and other relevant standards. The number of dairy plants with HACCP certificates has increased, so now there are 13 establishments that operate in accordance with HACCP. However, four dairies are in the implementation phase of HACCP standards and seven more are planning to introduce it during 2014; this is most encouraging.

The milk industry in Montenegro is characterized by a narrow range of products (mainly yogurt, sour cream and different types of soft and hard cheeses and sweet (limited shelf life) milk and whey). Of 25 dairies, five produce sweet milk (limited shelf life), five produce whey, 12 produce different types of cheese and five produce yogurt. However, of the five dairies whose main product is yogurt are four are also the largest processors and jointly process 63% of the total; this leads to the conclusion that yogurt is the most dominant of all dairy products in Montenegro. Montenegro traditionally produces several types of cheese with specific local characteristics ('njeguški,' 'pljevaljski,' 'polimsko-vasojevički,' 'kučki,' 'lisnati,' 'crmnički,' 'sozinski,' etc.). The poor hygiene of milk, the small quantities collected and the continuity of collection levels followed by expensive equipment are all limitations that prevent milk processors from expanding their product lines. These limitations refer particularly to the production of UHT milk.

Despite the presumption that the estimated quantity of produced milk in Montenegro could meet the needs of the domestic market, large quantities of dairy products are still imported, mainly from neighbouring countries. The value of the foreign trade balance for 2013 was €41.7 million; imports represented 95.6% of that amount. The import structure of milk and dairy products is made up as follows: 60% UHT milk, 20% yogurt and 10% cheeses. Most imports are brought in from neighboring countries, primarily Serbia, Croatia and Slovenia.

Despite the progress that has been achieved in the dairy sector over the last few years, due to the construction of new and improved processing facilities, producers still require a substantial amount of training, particularly in the area of improving raw milk hygiene as this is still at an unsatisfactory level.

### ***Meat production and processing***

A large portion of the overall meat production in Montenegro comes from ruminants: beef (6,343 tons or 37.1%), meat from small ruminants, sheep and goats (3,823 tons or 22.3%). The rest is pork (3,844 tons or 22.5%) and poultry (3,100 tons or 18.1%). Total meat production stands at approximately 17,110 tons per year, thus only meeting 36% of the overall amount consumed in Montenegro<sup>39</sup>.

Regarding **meat production**, cattle breeding are the biggest sub-sector in livestock breeding in Montenegro. Specific natural conditions, such as large areas covered with natural meadows and pastures, are currently used predominantly for the extensive breeding of ruminants in

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<sup>39</sup>Sectoral analysis of the production and processing of meat in 2014

Montenegro. The substantially higher price of veal than beef and a lack of proper domestic production for feed required for the intensive fattening of bullocks are the main reasons that young heads are slaughtered at an earlier stage. Nevertheless, from year to year, the organized fattening of bullocks is increasingly pre-set at commercial establishments and family holdings (included in the support system). The production of beef, in addition to calves and bullocks, includes the slaughter of culled cows, bulls and oxen.

The annual production of sheep and goat meat amounts to 3,823 tons. Montenegro has a surplus of 20,000 lambs every year. As Montenegro still has no possibility to export lamb to the EU, this surplus is purchased in the autumn and sold at a subsidised price to domestic consumers.

The annual production of goat meat (young goats, meat from older animals and animals excluded from their herds) is estimated at 460 tons and the annual milk production is estimated at around 5,000 tons. Kids are usually sold in two categories: as young kids (15-20 kg of live weight), and older kids (20-30 kg of live weight). The rate of self-sufficiency for sheep and goat meat is 94%<sup>40</sup>.

Of the total meat consumption in the country, the largest part is pork. The self-sufficiency rate for this is only 13%. The traditional production of *prosciutto* from predominantly imported pork, which is smoked and dried, is very important part of the Montenegrin meat-processing sector. 'Njeguška' prosciutto is produced at Njeguši in an area of approximately 8 km<sup>2</sup>, between Cetinje and Kotor. The area of Njeguši has a very specific microclimate with Mediterranean winds and this has a very positive impact on the prosciutto production process, its maturity and finally, its taste. The distinctive taste and smell of this prosciutto is due to a combination of mountain and sea air and cold smoke from burnt wood obtained from nearby forests that is used during the drying process. It is estimated that the annual production of prosciutto in 2010 was approximately 5,000 tons<sup>41</sup>. In addition to being sold on the local market, producers are increasingly exporting prosciutto to neighbouring countries.

The local production of fresh meat is way below market demands and the self-sufficiency rate is just 36%<sup>42</sup>.

The production of chicken meat within poultry as a whole is by far the most important element and amounts to around 3,100 tons. Only small quantities of meat are produced from other types of poultry (turkey, geese and ducks). So far, four establishments dealing with the slaughter and butchering of poultry have been registered; one of these has an integrated processing system.

The food industry in the country is extremely diverse for a number of reasons: in terms of type, capacity, technical equipment etc. So far, over 300 agro-industrial companies have been registered in Montenegro, 20% of which deal with the production and processing of meat and meat preparations.

The development of the meat preparation industry has been quite dynamic over the last 10 years, with significant investments in modern equipment for slaughtering and for meat processing. An increase of 3.5% in the production of meat and meat preparations was recorded in Montenegro during 2013 in comparison with the previous year.<sup>43</sup>

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<sup>40</sup>Calculated on the basis of per capita consumption and data on import/export for 2012.

<sup>41</sup>Sectorial analysis of meat production and processing 2014

<sup>42</sup>Sectorial analysis of meat production and processing 2014.

<sup>43</sup>Sectorial analysis of meat production and processing 2014.

There are a few vital entities that have made significant investments in their businesses and have thus expanded their product ranges. Sanitary and ecological conditions in these plants are admirable meet local market needs. The procurement of raw materials regarding pork and poultry is mainly based on imports, while beef and lamb can, to a significant extent, be provided locally.

There are four major companies that have processing capacities over 5,000 tons of meat per annum; these companies export processed meat products to Serbia, Bosnia and Herzegovina, and also to Macedonia and Kosovo. Two other companies have capacity levels between 500 and 1 000 tons and there are around 30 smaller companies that are engaged in slaughtering, in the production of fresh meat and that proffer a limited level of processing. So far, the EU has not approved any meat production facilities in Montenegro.

### **2.3.3. Quality policy and organic production**

The protection of agricultural products with designation of origin, geographical indications and traditional specialties and mountain product guarantees all contribute to the formation of recognisability, product identity, identification of region or country of origin, and the preservation of tradition and national identity. Introduction of the Quality Policy represents a positive step forward for sustaining and developing rural areas and provides effective protection from misuse, imitation and deceit. The promotion of products contributes to the recognition of the regions from which they come, makes a positive impact on the income of agricultural holdings and encourages farmers to form associations and more organized presentations at the market. In addition, the registration procedure for brands facilitates the permanent quality recognition of such products.

This area is of strategic importance for future development. Therefore, steps have been taken to protect products that will become well known outside of Montenegro once this policy has been applied; such products may include certain types of cheese, prosciutto, olive oil and wine. As yet, no Montenegrin products have been protected in accordance with the aforementioned designations. However, activities have been intensified with certain groups of producers to initiate these processes.

Organic production is a key development opportunity for Montenegrin agriculture, especially taking into account the availability of very favourable natural conditions that are reflected in the country's uncontaminated soil, water and air. Besides, the fragmented estates and the fact that it is difficult to be competitive in terms of quantity and price of conventional products, producers are slowly direct conventional type of production into organic farming.

Although organic producers are still not in the habit of registering their activities, they are slowly improving. Compared with 2013, the number of registered producers has increased by 4.38%, the number of certified producers has increased by 28.57%, and the number of issued certificates for organic production has increased by 10%. All of this implies that there are 167 producers in Montenegro, of which 27 have certified products.

The total area of arable land currently being registered is 420.80 ha, of which 48.33 ha is being registered for organic production. The remaining 372.47 ha is in conversion period at present. Crop and fruit production are represented almost equally (49.44% crop production, 49.41% fruit growing) compared to the total arable land (420.80 ha) which is in the process of being registered; vegetable and viticulture production are represent 0.91% and 0.24% and respectively. Wild plants

and forest fruits have been collected from an area of 143.400 ha, whilst a very large meadow and pasture area of 2,627.43 ha has been used for hay and cattle feed.

Organic crop production is mostly represented in the northern part of Montenegro. The crops that are mostly grown are the following: oats, barley, wheat, rye and buckwheat. Regarding fruit, the most dominant are the following: apples, plums, pears and raspberries. Organic livestock production has not been developed much as yet. Bee keeping, however, predominates (there are 1057 hives that are active in the system of organic production). In other areas, there is much less activity; for example, organic products have only been developed to a small extent to date in areas relating to goats, sheep and poultry.

The range of organic products on offer is limited, both in terms of available quantities and also in terms of the variety of products. The reason for this is the seasonal character of production.

In order to promote organic production, MARD, in cooperation with local self-governments has opened a bazaar of organic products where organic producers sell their products once a week. In addition, this also raises awareness regarding the importance of organic products among producers and consumers.

#### **2.3.4. Consumer perceptions**

The survey on consumer behavior<sup>44</sup> in Montenegro showed that the things that people most appreciated when purchasing agricultural products were: quality (45%), affordability (21%) and country of origin (17%). People's first associations with the term 'local products' were cheese (25.4%), 'njeguška pršuta' (traditionally smoked ham, 10.5%) and kaymak (9.7%). Local cheese, fruits and vegetables are mostly purchased at local markets (34.6% and 35% respectively); fresh meat, processed meat products and drinks are generally purchased in supermarkets and stores, while honey, olive oil and cheeses are purchased 'on the doorstep' (57.4%, 25.7% and 25.1% respectively).

When consumers purchase local products, quality is the most decisive factor. The key advantages of local products are: better quality (64.7%), origin (10.5%) and habit (7.5%). On the other hand, 42% of those who do not purchase local products stated that products are not always available, 20% believed that imported products were cheaper, 18% considered imported products to be of better quality, while 11.3% were in the habit of purchasing imported products.

Finally, Montenegrin consumers would prefer local products to have proven quality certification (26%), to be cheaper (25.5%) and to be more readily available (21.4%). In addition, 35% of surveyed consumers confirmed that they purchase organic products and would do so more regularly for health reasons.

Based on the survey results, it is clear that quality is of key importance to consumers. It is for this reason that the strategy has focused on quality assurance and on the availability of products on the market.

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<sup>44</sup>Conducted in May-June 2014, as a way of supporting the for development of sectorial studies under the MIDAS programme

### 2.3.5 Possibilities for obtaining credit

The financing of projects for agricultural producers has been made possible through the Investment Development Fund (hereinafter referred to as: IDF), commercial banks and microfinance institutions.

IDF was established with the adoption of the Law on Investment-Development Fund of Montenegro ('Official Gazette of Montenegro', No.88/09). Broadly defined activities end goals of the IDF are enabling their realization in a number of areas, and some to be stressed are: support to small and medium-sized enterprises (credit and guarantee support); support for resolving infrastructure and environmental projects; stimulation of exports and employment.

IDF provides support through direct credit lines and by providing credits to final recipients of the loans through the commercial banks, with which IDF established cooperation.

The credit beneficiaries are micro, small and medium-sized enterprises and entrepreneurs, all of which comply with the Law on Companies, 'Official Gazette of the Republic of Montenegro', No. 06/02, 17/07, 80/08, 40/10, 73/10, 36/11 and 40/11), and individual entities who perform activities as defined by the Rules of the Activities in which they are engaged (craftsmen, farmers, etc.)

**Table 16: Direct Credit**

Activity	Amount of credit at IDF, €	Grace Period	Repayment Period (not including grace period)	Interest Rate
Support programme for agriculture and food production	10,000 -1,000,000 (Entrepreneurs and agricultural producers up to 50,000)	Up to 4 years	Up to 8 years	5 % annually

Source: IDF, Financial Support for 2015.

Credit through banks will be implemented in line with agreements made with commercial banks and in accordance with the rules of the IDF.

**Table 17: IPARD-like Credit Line**

Activity	Amount of credit at IDF, €	Grace Period	Repayment Period (not including grace period)	Interest Rate
Support programme for the development of agriculture –IPARD-like 2015	Up to 100,000 (micro, small and medium-sized enterprises that perform some type of agricultural activity among others)	up to 4 years	up to 8 years	3.5 % annually
	Up to 80,000 Registered agricultural producers– in line with the definitions of registered agricultural producers from the Operational Manual of the IPARD-like Project	up to 4 years	up to 8 years	3.5 % annually

Source: IDF, Financial Support for 2015.

IDF can directly finance up to 50% of any total investment. The amount of the loan, intended for investment in current assets, can be worth up to 20% of the total amount loaned. As collateral for loans, IDF will accept bills of exchange, mortgages on real estates, bank guarantees, guarantees from local self-governments, Government guarantees and other collateral in the banking business in accordance with the Policy on Collateral and depending on decisions made by the authorities of the IDF.

Financing through commercial banks is characterized by high interest rates and unfavorable conditions for farmers. The level of collateral depends on the type of investment: mortgage without charges and restrictions under the terms of the bank (mortgage value must be at least 1.5 times greater than the loan amount). Additional collateral is possible (guarantee of other legal entities and natural persons, pledges etc.) depending on the amount requested.

### 3. SWOT ANALYSIS

An analysis of the current situation in the Agricultural and Rural Sector in Montenegro is summarized in this section; the generic (horizontal) internal strengths and weaknesses of the sector are applied to a variety of external opportunities and threats.

**Table 18: SWOT Analysis of the Current Situation in the Sector of Agriculture and Rural Areas**

<b>(Strengths)</b>	<b>(Weaknesses)</b>
<ul style="list-style-type: none"> <li>– High quality, preservation and fertility of the soil,</li> <li>– Favourable climate for many types of products,</li> <li>– Tradition in agricultural production practices,</li> <li>– Biodiversity, presence of autohtonous species and varieties in agriculture,</li> <li>– Good conditions for organic production,</li> <li>– Sufficient work force that seeks additional opportunities for employment,</li> <li>– Obvious changes in the institutional framework during the recent period,</li> <li>– Obvious positive changes in production processes (adoption of new technology, introduction of standards etc.)</li> </ul>	<ul style="list-style-type: none"> <li>– Large part of production non-competitive in price</li> <li>– Poor mechanization</li> <li>– Low level of technology and specialization applied in production</li> <li>– Small and fragmented holdings</li> <li>– Low levels of production per household unit</li> <li>– Relatively high input prices that influence the final price of products</li> <li>– Low levels of market sales</li> <li>– Lack of organization and cooperation in the production chain</li> <li>– Insufficient quality assurance standards (hygiene and environmental)</li> <li>– Inefficiency and non-competitiveness of processing industry (low levels of production, obsolete technology, lack of investment, market inefficiency)</li> <li>– Unfavourable age and social structure in rural areas,</li> <li>– Poor infrastructure in major parts of rural areas</li> <li>– Low budget support</li> <li>– Insufficiently developed IT systems, statistics and analyses in agriculture</li> <li>– Weak promotion and marketing</li> <li>– Lack of storage capacity</li> <li>– Poor connections with the Tourism Sector</li> <li>– Low levels of education and lack of knowledge in farmers</li> <li>– Low levels of application of good agricultural and environmental practice</li> <li>– Seasonal production</li> </ul>
<b>(Opportunities)</b>	<b>(Threats)</b>
<ul style="list-style-type: none"> <li>– Strengthening agriculture through tourism, additional food demand</li> <li>– Availability of state and EU support, particularly for rural development</li> <li>– Increasing markets for organic production</li> <li>– Strengthening local production and markets</li> <li>– Increase of exports of competitive products (wine, lamb, vegetables)</li> <li>– Positive international market tendencies, including Middle East market</li> <li>– Efficiency of additional budget support</li> <li>– Faster technological development, strengthening of professional skills and institutions supporting agricultural development</li> <li>– Growing demand for high-quality products</li> <li>– Involving young work force in agricultural activity,</li> <li>– Development of cooperation</li> </ul>	<ul style="list-style-type: none"> <li>– Opening of the market will increase competitiveness which may endanger major parts of commercial production</li> <li>– Due to low levels of production and quality, as well as preferences for foreign goods, the penetration of large trade systems will further endanger the economic position of certain sectors</li> <li>– Concentrated development of other economic branches in certain parts of the country, without agricultural development, may further affect depopulation and the under-utilization of natural resources</li> <li>– Huge dependence on imports,</li> <li>– Lack of public awareness regarding the benefits of local products</li> <li>– Difficulties in accessing finance for farmers (loans)</li> </ul>

In general, agriculture in Montenegro benefits from a favourable climate for the production of many species and varieties of crops. Montenegro has a well-preserved environment, including high quality, well-preserved and fertile soil, and a low level of pollution due to a low use of mineral fertilizers and pesticides. Climate, rich biodiversity, nature and a clear environment are excellent preconditions for the development of organic farming. Also, available land resources are an additional advantage, together with the traditional production of typical products and the preservation of autochthonous species, types and breeds in several sectors. The growing local market, which also is experiencing an increasing demand from the Tourism Sector, provides support for further progress in the sector. Over recent years, processing capacities have been developed in a few sectors, and these have paved the way forward for the introduction of value added products onto the market.

On the other hand, fragmented holdings and small-scale production, a lack of skilled labour, the low educational level of farmers and their unfavourable age structure, and limited mechanization and low levels of implementation regarding modern technology and knowledge, all collectively hold back productivity. Relatively high input costs and expensive hire-purchase systems limit the competitiveness of products. Expensive repurchase systems and lack of storage capacity (for instance for fruits and vegetables) influence production and force it to have a seasonal character, thus limiting the farmers' ability to achieve higher income and continuous market supplies.

This also creates poor connections with the Tourism sector which requires high quality and stable supplies throughout the year. Even the higher quality products are poorly promoted and are not marketed sufficiently because producers are not organized into groups or into professional associations, and thus do not maximize their potential collectively. These identified shortcomings all require additional investment for which credit support is difficult to obtain for agricultural producers due to expensive credit terms and the fact that they are unable to provide collateral. Insufficient implementation of scientific research activity limits the application of innovative production technology and this, in turn, results in a low percentage of new products reaching the market. It does, however, result in the maintaining of traditional products and production methods.

Through a combination of strengths and weaknesses, Montenegrin Agriculture has many opportunities to develop further. The main opportunities include: high demands due to economic growth and increases in income, potential sales opportunities in cooperation with the Tourism Sector, and increasing interest from Middle-East countries. The local population prefers local products but as living standards increase, the demand for branded goods, high quality produce and organic produce will increase. The unification of Montenegrin traditions also offers a small number of opportunities for the marketing of products with their designation of origin (for instance lamb, 'Njeguši prosciutto,' 'Pljevaljski cheese,' 'Kolašinski cheese' etc).

Challenges that need to be overcome include:

- Unfavourable structure of agriculture and lack of economy of scale;
- Natural constraints for agricultural production;
- Standards of food safety have not been fully implemented in production;
- Vulnerability of the environment and eco-systems;
- High quality products (organic, PDO / PGI) have not yet been sufficiently recognized and standardized;

- Underdeveloped physical and social rural infrastructures;
- Present depopulation in rural areas;
- Rural population is very dependent on agricultural income;
- Difficult approach regarding loans for investment in agriculture;
- Insufficient awareness of producers regarding the importance of associations

#### **4. Vision for the development of agriculture and rural development sector**

Based on an analysis of structure and trends in the Agricultural Sector, and taking into account the available natural resources and political framework (analysed in the aforementioned SWOT analysis), the main challenges for the further development of this sector have been identified. Montenegro will work on the harmonization of National Policy with the Common Agricultural Policy over the forthcoming period in order to improve the multifunctional roles of agriculture, to increase its competitiveness and sustainable use of resources, and to improve the quality of life in rural areas,

Some of the long-term goals for Montenegrin agriculture are to increase productivity, to increase the amount of cultivated land and to EU standards for food safety in both the relevant primary and processing sectors.

Investments are needed in the primary crop production sector in order to establish new perennial plants (orchards, vineyards, olive trees) by planting seedlings, to rehabilitate existing machinery and equipment and to buy new machinery and equipment. Such investment would contribute to increasing yields of quality fruit, grapes and olives.

Competitiveness in the sector of vegetables could be strengthened by extending the length of the supply season through more production in protected areas and through the improvement of market infrastructure to enable the storage and preservation of fresh products for sale on the market; such measures would improve the quality of products and would reduce their seasonal character.

In order to improve the general situation in the livestock sector, support should be concentrated on: increases in market-oriented production, increases in productivity, the improvement of the racial composition of the population, the improvement of the capacity of accommodation for animals, the development of technology for the production of animal feed, the improvement of standards in the processes of milking and milk processing, maximizing the use of resources and improving measures for the disposal of manure.

Investments in the milk and meat processing sectors should be focused on the acquisition of modern equipment and the improvement of production technology to reach national and EU standards, the introduction of quality management systems, the purchase of equipment to reduce harmful impact on the environment, and the advancement of both knowledge and skills.

Two of the main priorities for Montenegrin agriculture are to produce high quality food and to increase the number of producers who operate in accordance with the rules of organic production. Montenegro has committed to such improvements primarily because of its natural characteristics that do not allow for mass production. Results can only be achieved by integrating the various quality assurance standards regarding food safety, quality schemes (designations of origin, geographical indications and designations of guaranteed traditional specialty) and organic

production, into agricultural production. The allocation of support for the introduction of quality standards, education and the promotion of products will continue.

In the long-term, Montenegro aims to increase its number of producers involved in quality schemes and in organic production as well as increasing the scope of production in all areas of agriculture in Montenegro. Recognizable brands will be created and will hopefully find a niche on the demanding EU market.

Tourism, as a driver of the Montenegrin economy, presents a significant market for local products. Traditional products of high quality will be attractive to tourists while also linking agriculture and tourism in terms of developing rural tourism. Rural tourism has significant potential in the Northern Region of Montenegro and represents an extra income for agricultural holdings. The Ministry of Agriculture and Rural Development, together with the Ministry of Sustainable Development and Tourism, the National Tourism Organization and local community will all continue to finance projects aimed at expanding economic activities in rural areas.

Montenegro will continue to finance measures aimed at ensuring the income of agricultural producers through direct support measures. The main support, however, will be directed at investment which will improve the quality of products, increase productivity, create better living conditions in rural areas, and create new jobs.

Montenegro's priority in the short term, in order to achieve the aforementioned goals, is to meet the requirements for obtaining full accreditation from the European Commission for its use of IPARD funds. The IPARD program will finance investments regarding the modernization of agricultural holdings, the improvement of existing processing facilities and the construction of new ones, and the improvement of rural infrastructure and rural tourism.

The level of competitiveness of agricultural producers, both in primary production and in processing will be increased through the implementation of IPARD measures by 2020. An increase in the level of competitiveness is essential to achieve a better level of performance on the EU single market. Measures will be implemented through the IPARD Program and will improve the state of infrastructure and facilitate the circulation of goods; it will also aim to improve connections between rural areas and the market and to improve the standard of living in such areas.

During the first phase of IPARD programme implementation, the focus will be on increasing the level of competitiveness of agricultural producers. This will be achieved through the support for investments in primary production, but also through the support to investments in food processing. The increase of the competitiveness in the processing sector will be achieved through the ability to invest in order to meet the standards and through investments in the expansion of product assortment. IPARD support measures will be targeted at all sectors of agriculture in order to increase production and productivity and to create new jobs. Later, in addition to the aforementioned measures, the IPARD Program will focus on the diversification of economic activity in rural areas and on providing support for activities relating to organic agriculture, and maximizing the exploitation of pastures through agro-environmental measures.

For IPARD accreditation purposes, Montenegro will work on strengthening its administrative capacity, both in Ministry and in advisory services, with the aim of fully implementing IPARD measures and also maximizing the use of funds by producers. Montenegro had a positive

experience when implementing the World Bank project, MIDAS, which was aimed at the preparation of agricultural producers and their administration for IPARD. As with IPARD, MIDAS also found that the number of claims was higher than expected. However, there is still there is a problem in terms of securing funds for pre-financing as the banking sector considers agriculture to be a very risky industry and thus interest rates are high. Montenegro will continue to try to provide favorable conditions for financing projects in agriculture; negotiations with financial institutions are ongoing.

Montenegro will as a result of financing of rural development measures through IPARD, significant amount of money from the national budget, that were used so far for financing, gradually divert to direct payments. In the short-term, support will be given to the production of perennial plants and vegetables, while the support to the meadows and pastures will be upon the establishment of a LPIS system. All payments will be made in accordance with the CAP. Funds will be allocated depending on amount of available funds. Within the area of agro-environmental measures, support for organic production and the sustainable management of pastures will be continued. The full functionality of the Register of Agricultural Holdings will allow for better control of payments from the national budget, and will also provide preconditions for the establishment of IACS. In order to enable opportunities for additional payments, Montenegro will prepare a model for the implementation of payment, in accordance with the EU *acquis*, regarding areas with natural constraints.

In the long-term, the main objective regarding administrative capacity is the accreditation of a Paying Agency for the implementation of CAP; this implies the establishment and full operational capacity of IASC. In order to fulfill these requirements, additional employment has been planned as well as regular training for employees with the support of the EC.

One of the biggest problems faced by Montenegrin agriculture is the fragmentation of property and its dispersion; this could, in many ways be overcome by the establishment of producers associations and agricultural cooperatives. However, a legal basis has to be prepared for the implementation of such organizations to strengthen advisory services, to support local governments and to raise producers's awareness about the importance of establishing such an association.

In order to harmonise the legislation framework with the EU *acquis*, priority must be given to the adoption of secondary legislation and its implementation. There will be intensive activities for training of employees at the Ministry, at Extension Services and at the Administration Office for Inspection Affairs, in order to ensure the implementation and control for the application of standards. One both short-term and long-term priority is to strengthen the capacity of laboratories in terms of equipment and professional staff.

In order to enable agricultural producers to apply standards, innovative technologies, educational workshops and info campaigns will all be continued with the support of the EU, the FAO and with the bilateral assistance of other EU countries. For the purposes of full harmonisation with the EU *acquis*, activities related to the market organisation of agricultural products will be implemented on a gradual basis in line with EU policy. The main priority is compliance with production standards and establishing Montenegrin products on the market. During the time leading up to accession, compliance, along with the full application of mechanisms concerning the implementation of this policy, will be achieved; this will be achieved both in terms of the organisation and the

implementation of measures relating to the operation of the internal market, and also in terms of full implementation regarding EU mechanisms for trade with non-EU countries (third countries).

## **5. MEASURES FOR HARMONIZATION WITH EU POLICY**

### **5.1. Direct payments**

#### **EU situation**

Pillar I of the Common Agricultural Policy – Direct Payments, or Income Support, are annual current transfers (subsidies) made from the EU budget (European Agricultural Guarantee Fund – EAGF), to ensure a safety net for EU farmers and to stabilize their income. Although they cover a wide range of schemes, their implementation has a slightly negative influence on the operation of the common European market as the majority of direct payments are decoupled from production. Direct payments also contribute, in combination with cross-compliance standards and the greening component, to providing basic public goods delivered through sustainable farming.

The CAP Reform (2013) significantly reshaped the existing direct payment policy and introduced the following new schemes:

- Compulsory Basic Payment Scheme, in the form of decoupled payments (payment entitlements)
- Compulsory Green Payment, in the form of decoupled payments, with 30% of available funds
- Compulsory Young Farmers' Payment, in the form of decoupled payments, with 2% of available funds
- Voluntary Coupled Payments, coupled to certain eligible sectors of agricultural production, with up to 13% (plus 2% for protein crops) of available funds
- Voluntary Small Farmers' scheme, in the form of decoupled payments, with up to 10% of available funds
- Voluntary Payments for Areas with Natural Constraints, in the form of decoupled payments, with up to 5% of available funds.

Besides the new types of eligible schemes, there are some old/new horizontal mechanisms that will be implemented in each Member State from 2015 onwards. These relate to external and internal convergence, redistribution, cross-compliance standards (Statutory Management Requirements and Good Agricultural and Environmental Conditions), the Farm Advisory Service and management and control tools – Integrated Administration and Control System – IACS and Land Parcel and Identification System – LPIS.

#### **Montenegro's situation and the steps to be taken**

National Direct Payments are currently defined by the Act on Agriculture and Rural Development, the Act on the Budget for 2014 and the Decision on the Implementation of Measures on the Agricultural Policy for 2014 - Agro-Budget 2014.

All National direct payments are coupled to production and comprise of the following schemes:

- in the beef sector – payment per cow/heifer, payment for fattening per head,
- in the sheep and goat sector – payment per ewe and she-goat,

- in the milk sector – payment per liter of delivered milk,
- in the arable sector – payment per ha of different crops (arable, fodder, seeds),
- in the tobacco sector – payment per ha.

National direct payments are not in line with those that have been implemented in the EU. Major disparities can be summarized as follows:

- 100% of all payments are coupled to production, and the Beef and Milk Sectors are the main beneficiaries (68% of all total Direct Payments);
- Cross-compliance is not compulsory for beneficiaries;
- IACS/LPIS systems have not been implemented in the management and control of Direct Payments.

Regarding the eligibility of coupled sectors, all sectors, except for tobacco, are currently eligible for coupling in the EU.

Policy alignment in direct payments will be achieved gradually during the period 2014 - 2020, in line with available funds in the national budget, and taking into consideration the strategic objectives of the Montenegrin Agricultural Policy – the protection of farm income and rural communities. Time is needed for the establishment of missing tools, such as LPIS and various registers required by IACS; such matters could also influence the speed of policy alignment.

The establishment of these systems has already begun and the Register of Agricultural Households and Operators has started to collect data and to form a central database. It is expected that the LPIS system will be operational in late 2017, since the financial assets have already been agreed through IPA 2013.

Data on land-parcels will be provided on the basis of statements provided by the owners of agricultural holdings using the following: digital cadastral plans, and topographical maps. A digital elevation model will enable the visualization of agricultural land through ortho-photo maps will also help to define the borders of LPIS parcels.

The process of policy alignment in direct payments will be based on the following:

- A gradual increase in the budget and extending the coverage of beneficiaries as well as agricultural land in the system of Direct payments
- A gradual decoupling from production (arable crops coupled payments) and the introduction of a simple SAPS-like scheme for arable crops, permanent crops and grassland
- The restructuring of support in terms of increasing expenditure for decoupled payments and consequently decreasing, in relative terms, expenditure available for coupled payments in beef, sheep and goat milk, and tobacco
- Current measures, similar to EU 'green' payments in concept but not related to surface area, will gradually be harmonized to be in line with the European model;
- The introductions of cross-compliance-like standards for farmers who receive direct payments (except for small farms).

## **5.2. Common market organisation (CMO)**

### **EU situation**

The European Union has created common rules for the functioning of market in agricultural products. These rules establish a unified legal framework for the implementation of measures referring to: the production of agricultural product and placing them on the market, creating and implementing mechanisms for regulation and stabilisation of the common market (particularly in the case of major disorders) and meeting requirements for trade with third countries.

The EU Regulation No. 1308/2013 lays down marketing years, public interventions, private storage, reference thresholds prices, intervention prices and emergency measures; it also set out specific rules relating to specific sectors referring to production, establishment on the market, aid programs, imports and exports. In addition, this regulation aims to facilitate cooperation among producers by defining a framework for setting up producers' organisations.

### **Montenegro's situation and the steps to be taken**

The way that the marketing and sale of agricultural products is managed and regulated in Montenegro is not the same as it is in the European Union. There is no single legal act that regulates the market for agricultural products.

The Law on Agriculture and Rural Development represents a legal basis for the adoption of secondary legislation which should: stipulate the minimum quality for agricultural products, enable the establishment of producers' organisations, anticipate the possibility of market interventions in the case of major disorders, etc. However, unlike the EU *acquis*, this law would not present a single legal framework on which the entire market for agricultural products could be regulated. Provisions referring to wine and olive oil in Montenegro are already stipulated in the Law on Wine and in the Law on Olive Growing and Olive Oil; these laws are partly harmonised with the EU *acquis*.

On addition to the aforementioned laws, Montenegro applies various rulebooks that regulate specific production standards and conditions for placing products on the market. These rulebooks cover the following agricultural products: fruits and vegetables, eggs, milk, etc. The majority of these provisions are not, however, in compliance with the EU *acquis*.

In order to comply with EU Common Market Policy, the adoption of the Law on Common Market Organisation has been planned for 2016.

This law will stipulate horizontal measures such as: market interventions, aid schemes, producers' organizations, export and import license systems, etc. It is anticipated that the majority of provisions will be in compliance with the definitions stated in Regulation 1308/2013, with the clause on delayed enforcement for these provisions which will not, be applicable till the day of accession.

Primarily, this refers to provisions of trade with third countries that Montenegro cannot apply for until its acceptance for EU membership due to obligations assumed through membership of the WTO (such as export refunds, specific calculations of custom duties for processed agricultural

products, so called enter-price systems for the calculation of customs duties on fruit and vegetables, etc.).

This regulation will also introduce specific measures relating to production and to placing of agricultural products on the market. Taking into account that Montenegro either does not produce the majority of products covered by marketing standards or does not produce them in sufficient quantities, during the pre-accession period, the policy concentrate on compliance with marketing standards for wine, apiculture products, olive oil and table olives, fruits, vegetables, milk and dairy products, beef, sheep and goat meat.

The Ministry of Agriculture and Rural Development, i.e. the Directorate for Agriculture and Fisheries will create the legal framework. For the full implementation of this policy, it will be necessary to strengthen the administrative and institutional capacity of the Paying Agency (Directorate for IPARD Payments) and of Inspectoral Services. It will also be necessary to equip laboratories and to train professional staff in order to accredit the quality analysis process.

Apart from creating legal and institutional frameworks, all other activities will be directed towards preparing producers to apply standards in such a way that support measures are directed to increasing the quality to educating producers. MARD, in cooperation with extension services, will work on raising producers' awareness regarding the necessity of producers' associations and organizations.

*Note: A detailed description of the existing situation and a plan for harmonisation with the EU acquis are outlined in the Action Plan for Alignment with the EU Acquis in Agriculture and Rural Development Chapter IV.*

### **5.3. Rural development measures**

#### **EU situation**

The European Agricultural Fund finances pillar II of the Common Agricultural Policy – Rural development measures for Rural Development – EAFRD. With the reform of EU common policies for the period 2014 – 2020, the EAFRD has become a part of the ESI funds (European Structural and Investment Funds), and one of five instruments, along with the Cohesion Fund - CF, the European Regional Development Fund - ERDF, the European Social Fund – ESF, and the European Maritime and Fisheries Fund – EMFF; their joint goal is to accomplish the objectives of the comprehensive Europe 2020 Strategy. The precondition for use of EAFRD funds in any Member State is the adoption of strategic documents – the Partnership Agreement and the Rural Development Programme, as well as having in place bodies for the management and implementation of the Rural Development Programme, namely a Paying Agency and a Managing Authority.

The goal of the EU Rural Development Policy is to support the development of rural areas including the Agriculture, Food Production and Forestry sectors, in order to achieve the following objectives:

- Improving the competitiveness of agriculture
- Ensuring the sustainable management of natural resources and climate
- Achieving the balanced territorial development of rural economies and communities, including the creation of new jobs and the preservation of existing ones.

## **Montenegro's situation and steps to be taken**

Current national rural development measures are laid down by the Law on Agriculture and Rural Development, Law on Budget of Montenegro for 2014, and Decree on Conditions, Method and Timeline of Implementation of the Agricultural Policy Measures of for 2014 – Agro-budget.

The total planned expenditure in 2014 for rural development amounts to €6,581,000, which equals 55% of all support provided to the Agricultural Sector, or 33% of the total Agro-Budget (agricultural component). The Agro Budget 2014 defines Rural Development Policy measures, as follows:

### **Axis 1. – Measures for improving the competitiveness of agriculture**

- Support for investments in agricultural holdings (MIDAS grants),
- Support for the development of viticulture and winemaking,
- Supporting for setting up and modernising/equipping fruit plantations to increase production,
- Support for primary production in olive growing,
- Support for vegetable production,
- Support for setting up plantations of perennial medicinal and aromatic herbs,
- Support for investment in processing on family holdings,
- Improving the quality of products,
- Promotion of agricultural products and agriculture,
- Support for improving the quality of raw milk,
- Support for activities involving cooperatives and national associations.

### **Axis 2. Measures for sustainable management of natural resources**

- Preservation of autochthonous genetic resources in agriculture,
- Organic production,
- Sustainable use of mountain pastures.

### **Axis 3. Measures for improving the quality of life and diversification of economic activities in rural areas**

- Diversification of economic activities in rural areas,
- Revitalising and development of rural areas and construction of infrastructure.

The overall objectives of the Rural Development Policy of Montenegro during the period 2014 - 2020 are:

- To foster viable, high quality food production by developing a competitive and innovative agro-food sector, able to sustain competitive pressure in both domestic and EU markets and to meet EU standards and market requirements,
- To achieve the sustainable management of natural resources and to mitigate the impact of climate change through the efficient management of forests and water resources, and to introduce agricultural production methods regarding the protection of the environment,

- To achieve the balanced development of rural areas in terms of land useage by fostering the diversification of economic activities, job creation and social inclusion, and by improving living standards in rural areas.

The harmonization of the National Rural Development Policy with the *acquis* will take place gradually during the pre-accession period, in accordance with the financial resources available (national budget funds, IPARD-like funds, IPARD funds – EU and other national components), whilst also taking into account priority action areas for the EU:

- Fostering the transfer of knowledge and innovation regarding agriculture, forestry and rural areas,
- Enhancing the competitiveness of agriculture and sustainable management,
- Promoting the organization of the food chain and risk management,
- Restoring, preserving and enhancing ecosystems relating to agriculture and forestry,
- Promoting resource efficiency and supporting a shift towards a low-carbon and climate-resilient economy in the Agriculture, Forestry and Food Sectors,
- Promoting social inclusion, poverty reduction and economic development in rural areas.

The main aspects of harmonization will be reflected in:

- The implementation of the IPARD II Program, the measures of which have been harmonised in terms of content and implementation, with EU Rural Development Policy Requirements,
- The inclusion of existing national investment measures in the IPARD II Program – rural development measures from Axis 1 of the Agro-Budget (improving the competitiveness of agriculture) and Axis 3 of the Agro-Budget (improving the standard of living and the diversification of economic activities in rural areas), which implies adjusting them to harmonize them with eligibility criteria, eligible costs and intensity/amount of support and increases in the budget,
- The inclusion of existing national agro-environmental measures in the IPARD II Program – rural development measures from Axis 2 (sustainable management of natural resources) which implies adjusting them to harmonise them with eligibility criteria, eligible costs and intensity/amount of support, and increases in the budget,
- The introduction of new rural development measures in the IPARD II Program, which have not been applied so far – LEADER approach,
- The adjustment of existing national measures that will continue to be financed from the national budget (risk management in agriculture, improving product quality), in terms of harmonising them with EU requirements: eligibility criteria, eligible costs and intensity/amount of support.

Rural development measures will contribute to the improvement of the structure and economic situation in the Agricultural Sector through support for the development of economically viable farms.

***Strengthening the competitiveness and sustainability of farms*** will be achieved through the restructuring and improvement of land use and by strengthening market orientation and market share, through the following measures:

- Investment in the physical assets of agricultural holdings
- Support for the setting up of producer groups

- Investment in physical assets concerning the processing and marketing of agricultural and fisheries sectors products

**Promoting of food chain organization and risk management in agriculture** will be realized through the sustainability of the agro-food sector, through measures:

- Support for cooperatives
- Support for Quality schemes support
- Support for risk management in agriculture

**The restoration, preservation and strengthening of ecosystems that depend on agriculture** will be achieved through the conservation and sustainable usage of genetic resources in agriculture, and the conservation of biodiversity, through the following measures:

- Support for conservation and the sustainable use of genetic resources
- Support for the sustainable use of mountain pastures
- Support for the development of organic production

**Fostering the transfer of knowledge and innovation in agriculture** will be achieved by supporting activities aimed at the acquisition of skills, as well as by exchanging experiences and encouraging innovation in the management of farms, through the following measures:

- Support for the transfer of knowledge and activities aimed at providing information
- Support for advisory services

**Promoting the efficient use of resources** will be achieved through activities that encourage an economy with low levels of carbon emissions and that are sensitive to climate change in agriculture, through the following measures:

- Support for renewable energy

**Promoting social inclusion, poverty reduction and economic development in rural areas** will be achieved through the diversification of economic activities, by restoring villages, by improving rural infrastructure and by improving access to modern information and communication systems through the following measures:

- Investment in the development of rural infrastructure
- Diversification of farms and business development
- Support for areas with natural constraints
- LEADER approach

#### **5.4. Quality policy**

##### **EU situation**

The European Union has created common rules for quality schemes including Protected Designations of Origin, Protected Geographical Indications and Traditional Specialties Guaranteed. The quality and diversity of the Union's agricultural and food production is one of its important strengths; this gives the Union's producers a competitive advantage and contributes greatly to its living standards, cultural diversity and gastronomic heritage. This is due to the skills and

determination of Union farmers and producers who have kept traditions alive while taking into account the developments of new production methods and materials.

The main requirements of the *acquis* with respect to Protected Designations (PDO) of Origin, Protected Geographical Indications (PGI) and Traditional Specialities Guaranteed (TGI) are laid out in the following regulations as amended: Regulation (EU) No 1151/2012 of the European parliament and of the council of 21 November 2012 on quality schemes for agricultural products and foodstuffs. Regulation covers PDO, PGI and TSG (PDO/PGI were introduced in 1992 with Regulation (EEC) No 2081/1992 and TSG with Regulation /EEC) No 2082/1992, then replaced by respectively Regulation (EC) No 510/2006 and 509/2006).

### **Montenegro's situation and steps to be taken**

In Montenegro Quality Policy is regulated by the Law on Designations of Origin, Geographical Indications and Designations of Traditional Specialty Agricultural Products and Foodstuffs (Official Gazette of Montenegro 18/11).

In accordance with the aforementioned, in terms of legislation, Quality Policy in Montenegro has been harmonised with EU regulations to a great extent.

However, there are still no protected products with quality indications in Montenegro; therefore, it is necessary to continue training producers.

Montenegro has great potential regarding the production of high-quality products; at present, however, this potential has still not been realized. It is necessary to encourage agricultural producers to improve and standardize the quality of their products and to thus become more competitive in both the domestic and foreign markets. Incentives for improving the quality of products and for the establishment of schemes to achieve higher standards are necessary; initiatives connecting primary production and processing could significantly increase the marketing opportunities for agricultural and food products on the domestic market, especially through tourism. This could be achieved through the introduction of quality assurance and food hygiene schemes and by providing assistance to producers to start such registered quality schemes. This kind of support is necessary both before and after EU accession.

Also, in order to increase the use of existing resources, it is necessary to conduct analyses on and to map products i.e. to identify products that can be protected.

It is necessary to encourage and support producers working in the same field (agriculture or food production) to work together to form associations and to appear together on the market.

When Montenegro achieves the protection of products through ZOP, ZOG, GTS, it will be necessary to provide support to producers for marketing such products (preparatory work, design, laboratory analyses and other key activities during the initial phase).

MARD will support informative and promotional activities regarding the specification of quality in products; such activities will be carried out through Agro-Budget measures. Promotion in such cases should be based on consumer interest in terms of quality, tasty food as well as on the specific and unique nature of traditional and national products from Montenegro. Taking into account the aforementioned facts, the best marketing channel for such products is tourism. The

importance of delivering high-quality products is critical in this sense, because tourists are seeking traditional and authentic products from Montenegro.

Note: Detailed descriptions of the existing situation and of the Plan for Harmonization with the EU *acquis* are outlined in the Action Plan for the Implementation of the Strategy for the Development of Agriculture and Rural Areas 2015 – 2020, Chapter V.

## **5.5. Organic agriculture**

### **EU situation**

The European Union has created common rules for organic production. These rules provide a basis for the sustainable development of organic production while ensuring the effective operation of internal markets, guaranteeing fair competition, ensuring consumer confidence and protecting consumer interests.

The main requirements of the *acquis* regarding organic farming are set out in the following regulations as amended: Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91.

### **Montenegro's situation and steps to be taken**

The horizontal legislation which regulates Organic Agriculture has been, to a great extent, aligned with the EU *acquis*. Commission Regulation (EC) No. 834/2007 has been completely transposed, except for the provisions that refer to importing goods from third countries and the use of the EU logo; these provisions are not applicable at present.

In the future, more effort should be made to intensify activities relating to the development of organic products. Measures taken should be as follows:

- To increase the scope and quality of organic production as well as the processing of organic products;
- To raise consumer awareness regarding the importance of organic products;
- To develop the market for organic products;
- To strengthen institutions and to strengthen support systems for organic production;
- To draft secondary legislation with the aim of achieving full compliance with EU legislation.

In order to achieve the full implementation of this policy and to increase the number of organic producers, the efforts will be made to:

- Support producers in the placement and production of organic products by supporting promotional activities and the improvement of products, and by supporting the final stages of production to establish products successfully on the market (packaging, labelling, etc.);
- Educate farmers on the importance of organic production and on available systems by providing educational workshops and visits to other countries (organic holdings); all of this to be carried out to enable exchanges of experience and knowledge and to achieve higher levels of familiarity with new technology within the production process.
- Develop market organizations and producers' associations that will appear collectively on the market. Support should be given for the establishment and promotion of direct sales channels for organic products (green markets where organic products will be displayed), aimed at the attractive and efficient presentation of goods to consumers and that are in

compliance with regulations in terms of labelling organic products. Networking between producers and hotel owners along with the procurement of products through tourism should also be encouraged.

*Note: Detailed descriptions of the existing situation and of the Plan for Harmonization with the EU acquis are outlined in the Action Plan for the Implementation of the Strategy for Development of Agriculture and Rural Areas 2015 – 2020, Chapter VI.*

## 6. INDICATORS

	SOURCE	2013.	TARGET VALUE in 2020.
Gross value and gross value added for sector of agriculture, forestry and fisheries	MONSTAT	436.828 mil. EUR 266.886 mil. EUR	↑3%
Number of employees in the sector of Agriculture, Forestry and Fisheries (Labor Force Survey)	MONSTAT	12,3 thousands	Growth trend
Foreign trade in agricultural products Foreign trade balance (ratio of exports over imports)	MONSTAT	1:7	1:6
The coverage of imports by exports		13.7%	16%
Exports		62,6 million EUR	↑10%
Surfaces of used agriculture land (ha)	MONSTAT	223.131,0	↑3%
Arable land (ha)	MONSTAT	12.513,0	↑15%
Average house holding size (per ha)	MONSTAT	4.6 ha	5 ha
The number of head of cattle per house holding	MARD (Veterinary Administration)	3.9 heads	5 heads
Number of registered agriculture producers	MARD and other bodies in charge of the monitoring	23.000	30.000
The number of agriculture and food products with protected geographical designations of origin (PDO / PGI)	MARD	0	5
Number of wines with protected geographical origin (PDO / PGI)	MARD	0	5
Land under organic production	MARD/ Monteorganica	420	↑15%
Number of registered organic producers	MARD/ Monteorganica	167	300
Number of registered agriculture cooperatives <sup>45</sup>	Register of MARD	0	20
Number of beneficiaries of support from the rural development measures	MARD	620	1000
Length of constructed rural roads	MARD	n/a	Growth trend
Number of constructed rural water supply systems	MARD	n/a	Growth trend
The level of compliance of national legislation with the EU acquis	Annex on Progress, EC	<u>PARTIALLY</u>	100%
Establishment (system) of instruments for implementation CAP:			
LPIS system	None		Established
FADN	None		Established
IACS	None		Established

<sup>45</sup> In accordance with the Law on cooperatives

## 7. ANNEX I

EXPORTS (WITH NO FISH AND FISH PRODUCTS) in thousands of Euros								
HS tariff code and commodity code (s)		2008	2009	2010	2011	2012	2013	2014
		EUR						
GI 01	Live animals	4	13	9	12	12	17	24
GI 02	Fresh, chilled or frozen meat	2,905	2,945	3,529	3,129	4,355	5,695	41,603
TBr 0401-0405	Milk and dairy products, without cheese	18	0	6	20	88	918	222.5
TBr 0406	Cheese	19	0	-	52	47	95	109.4
TBr 0407-0408	Eggs	10	-	-	14	14	15	18.6
TBr 0409	Honey	6	27	1	14	0	2	2
GI 05	Other products of animal origin	2	2	7	-	-	0	0
GI 06	Live trees and other plants, bulbs, flowers and ornamental plants	-	48	35	89	59	52	68.4
GI 07	Vegetables	3,990	3,706	3,446	4,109	3,294	4,872	4,282
GI 08	Fruits	3,219	2,491	4,733	4,650	4,034	4,136	4,133
TBr 0901	Coffee	55	55	50	460	982	683	516
TBr 0902-0903	Tea	90	42	23	28	47	28	56
TBr 0904	Spices	58	19	60	40	52	20	126
GI 10	Cereals	131	197	20	26	2	22	6
GI 11	Products from the mill industry	420	1,316	604	499	1,771	1,962	2,200
GI 12	Oil and other seeds, medical herbs	138	199	140	155	209	493	348
GI 13	Lacs, gums, resins and other vegetable saps and extracts	-	-	1	-	-	0	2
GI 14	Plant materials for wickerwork	0	-	0	0	-	-	-
GI 15	Fats and oils of vegetable or animal origin	95	229	885	1,510	3,625	2,241	3,053
TBr 1601-1603	Meat processed products	2,203	2,692	2,026	2,519	3,057	3,624	3,150
TBr 1701	Sugar	200	98	138	472	6	9	3
TBr 1702-1704	Products from sugar	73	176	163	29	8	14	20
GI 18	Cocoa and products from cocoa	69	36	2,800	2,164	2,747	3,232	3,737
GI 19	Preparations of cereals, flour, starch or milk; pastry products	1,196	1,004	1,919	3,377	4,083	2,147	1,826
GI 20	Fruit and vegetable products and products from other parts of plants	244	800	1,249	931	160	75	88
GI 21	Various food products (eg. soup, ketchup, coffee and chicory extracts, yeast, fruit syrup, etc.)	974	1,353	2,946	4,687	2,464	1,441	1,009
TBr 2201	Still and sparkling water with no added sugar	320	382	384	270	417	245	336
TBr 2202	Water including mineral and aerated water, containing sugar	60	56	219	260	165	144	102
TBr 2203	Beer	5,204	2,924	2,622	2,720	3,506	3,734	4,001
TBr 2204	Wine	17,308	16,592	16,665	18,410	18,083	13,212	13,752
TBr 2204-2208	Other alcoholic drinks	1,152	1,094	1,085	1,026	1,047	1,338	798
TBr 2209	Vinegar	4	-	20	19	41	5	7
GI 23	Waste and scrap (from food) industry; prepared animal feed	30	431	118	79	53	100	183
GI 24	Tobacco and tobacco products	561	699	134	394	2,251	5,673	5,903
ex GI 29. 33. 35. 38. 41. 51. 52. 53	Other agricultural products	2,918	2,338	4,804	5,142	7,278	6,377	5,736
<b>TOTAL EXPORTS</b>		<b>43,675</b>	<b>41,967</b>	<b>50,841</b>	<b>57,306</b>	<b>63,957</b>	<b>62,620</b>	<b>97,379</b>

HS tariff code and commodity code (s)		2008	2009	2010	2011	2012	2013	2014
		EUR						
GI 01	Live animals	15,965	16,174	21,784	25,509	24,151	22,935	20,127
GI 02	Fresh, chilled or frozen meat	58,862	59,854	60,246	57,061	65,534	71,259	103,438
TBr 0401-0405	Milk and dairy products, without cheese	23,125	22,079	23,162	25,909	26,283	25,287	25,162
TBr 0406	Cheese	14,375	11,405	12,560	14,195	14,548	15,769	14,410
TBr 0407-0408	Eggs	559	626	751	1,384	1,971	2,709	2,756
TBr 0409	Honey	594	657	654	755	746	661	705
GI 05	Other products of animal origin	478	320	311	239	224	319	259
GI 06	Live trees and other plants, bulbs, flowers and ornamental plants	3,649	3,268	3,015	4,029	3,534	3,682	5,077
GI 07	Vegetables	7,282	6,834	6,360	7,987	8,458	11,554	12,895
GI 08	Fruits	11,963	11,699	11,237	13,391	14,759	18,244	20,728
TBr 0901	Coffee	12,349	17,754	25,501	22,390	12,378	9,122	8,058
TBr 0902-0903	Tea	412	210	213	240	264	322	280
TBr 0904	Spices	623	789	802	802	1,002	977	1,030
GI 10	Cereals	9,329	11,530	5,953	11,261	12,079	10,327	11,318
GI 11	Products from the mill industry	23,799	15,815	17,194	22,015	20,428	18,793	17,173
GI 12	Oil and other seeds, medical herbs	1,944	1,696	2,084	1,944	1,834	2,043	2,011
GI 13	Lacs, gums, resins and other vegetable saps and extracts	136	81	44	42	178	110	128
GI 14	Plants materials for wickerwork	70	27	43	60	36	58	48
GI 15	Fats and oils of vegetable or animal origin	16,783	14,201	14,148	16,615	17,894	16,311	14,202
TBr 1601-1603	Meat products	20,781	17,254	16,319	17,598	19,141	20,918	20,601
TBr 1701	Sugar	7,092	6,214	6,508	9,170	8,324	7,329	5,623
TBr 1702-1704	Products from sugar	3,014	2,674	2,588	2,870	2,923	3,264	3,179
GI 18	Cocoa and products from cocoa	18,480	18,640	19,269	19,407	20,628	21,366	21,755
GI 19	Preparations from cereals, flour, starch and milk; pastry products	27,574	26,393	26,432	27,173	28,634	30,649	31,595
GI 20	Fruit and vegetable products and products from other parts of plants, without juices	22,423	19,401	16,624	17,554	14,775	14,858	15,235
GI 21	Various food products (eg. soup, ketchup, coffee and chicory extracts, yeast, fruit syrup, etc.)	23,577	23,890	25,102	26,372	27,997	30,028	31,228
TBr 2201	Still and sparkling water with no added sugar	9,486	7,901	7,436	7,536	7,761	7,098	6,987
TBr 2202	Water including mineral or aerated water, containing sugar	29,495	25,124	25,610	29,328	30,227	28,406	26,233
TBr 2203	Beer	7,850	5,462	4,673	4,559	5,023	5,218	6,221
TBr 2204	Wine	3,238	2,653	3,185	3,607	4,044	4,451	4,861
TBr 2204-2208	Other alcoholic drinks	6,275	5,348	5,509	5,981	6,428	6,980	7,153
TBr 2209	Vinegar	164	167	139	151	165	133	215
GI 23	Waste and scrap (from food) industry; prepared animal feed	13,606	11,936	13,669	16,337	18,389	16,839	16,441
GI 24	Tobacco and tobacco products	21,105	20,467	17,578	14,910	11,678	12,724	11,930
ex GI 29. 33. 35. 38. 41. 51. 52. 53	Other agricultural products	844	981	959	881	3,106	2,014	1,511