

BUILDING MARKET RECOGNITION OF THE DANUBE REGION IN SERBIA THROUGH AGRO CLUSTER DEVELOPMENT

Vesna Paraušić¹, Branko Mihailović²

Abstract

This paper deals with resource and operational capacities of the existing agro clusters in the Danube region in Serbia and the potentials for their development. The objective of this paper is to understand the level of development of agro clusters in the Danube region and to propose actions and measures to strengthen their capacities, so they could contribute to the competitiveness and recognition of farmers and the region analyzed on the international agricultural market. In paper the method of desk research has been used along with a survey in the form of interview with representatives of registered agricultural clusters. The results show that agricultural clusters in the analyzed region are still in the initial stage of development, their operational capacities are underdeveloped and they are unrecognized on the market. In the future, along with transnational approach, support to cluster development should receive already existing clusters, as well as clusters that will develop in the geographical areas that already have market recognition in some agricultural production, where producers are concentrated and associated, and where there is uniqueness and tradition in the production, as well as high production and export performance.

Keywords: *agro clusters, competition, recognition, Danube region in Serbia, the EU Strategy for the Danube Region.*

Introduction

One of the important factors in creating the competitiveness of companies, regions and national economies in modern theories of competitiveness and trade, are clusters. Professor Porter was responsible for popularization and implementation of the cluster concept and in

¹Vesna Paraušić, Ph.D., Research Associate, Institute of Agricultural Economics, Belgrade, St. Volgina 1, +381(63)214231, vesna_pa@iep.bg.ac.rs.

²Branko Mihailović, Ph.D., Research Associate, Institute of Agricultural Economics, Belgrade, St. Volgina 15, +381(11) 6972858, branko_m@iep.bg.ac.rs.

numerous studies and scientific works which have clusters as topic, researchers start from Porter's definition of *clusters*. According to professor Porter "clusters are geographic concentrations of interconnected companies and institutions in a particular field" (Porter, 1998, page 78) or "geographic concentration of interconnected companies, specialized suppliers, service providers, companies in related industries and associated institutions (universities, agencies, chambers of commerce) in a particular field of activity that compete but also cooperate" (Porter, 2008, pages 213-214).

Clusters affect competition in three broad ways (Porter, 1998, page 80): (1) by increasing the productivity of companies based in the area; (2) by driving the direction and pace of innovation, which underpins future productivity growth; (3) by stimulating the formation of new businesses, which expands and strengthens the cluster itself. Recently, many other authors (Sölvell, Lindqvist, Ketels, 2003; Enright 2003) and institutions (EC, 2006a; EC, 2006b; EC, 2008; OECD, 2007; The World Bank, 2009; Europa InterCluster, 2010) have identified innovative clusters as the factor that contributes to the creation of a sustainable competitive advantage of companies, regions and national economies, as well as the factor that drives economic growth, employment, entrepreneurship and investments.

Clusters can achieve this "role" in all sectors of the economy (including primary sector, i.e. agriculture), in all countries (regardless of socio-economic context) or geographic regions. Numerous studies and examples show the positive relationship between the degree of clustering of companies in rural areas and income growth in rural areas. Group of authors (Porter, Ketels, Miller, Bryden, 2004, page 47) point out that earnings are higher in rural clusters, compared to earnings of workers outside the clusters, as a result of higher productivity and strong cluster effects on the rapid flow of information, high knowledge accumulation, skills and the like. Some of many examples of successful clusters in the field of agriculture in emerging market and developing economies, which show how the development of a cluster can spur innovation and economic growth in an industry, are the following: (a) Wine industry in South Africa, oft unrecognized, but important world-class low-tech rural cluster (Toerien, 2010); (b) Chilean salmon cluster, Colombian and Ecuadorian flower clusters, Coffee cluster in Nicaragua etc. (Gálvez-Nogales, 2010); (c) the Lake Naivasha cluster as a hub of the Kenya's cut flower industry (Bolo, 2008, pages 37-51); (d) the Lake Victoria Fishing Cluster in Uganda (Kiggundu, 2008, page 87-96).

All emerging market, developing and transition economies (which Serbia belongs to) have great chances to develop agricultural clusters and clusters in rural areas. Cluster development in these countries is a method or way to replace comparative or factor advantages (based on the exploitation of high-value natural resources, cheap labour, cheap products) with competitive advantages that "rely" on: specialized knowledge, innovation, high productivity, networking in the value chain of products, developed business environment.

However, as the nature and depth of clusters varies with the state of development of the economy, in developing/transition or emerging economies clusters are undeveloped and they are impeded by low local education and skill levels, weaknesses in technology, lack of access to capital, poorly developed institutions, and government policy may also work against cluster formation (Porter, 2008, page 250). For example, in Poland efforts and initiatives to establish new connections between farmers, communities and other stakeholders in the agricultural sector are still very inefficient (Bronisz, Heijman, 2008, page 39). In Serbia (Mijačić, 2011, page 32) clusters are also of underdeveloped capacities, low intensity of activities, and the vast majority of clusters failed to build trust and close relationship with their members.

Given the non-competitive agricultural production in Serbia, the cluster approach to networking of all actors in the repro chain, with the support of government bodies and scientific research institutions, could provide the conditions for productivity growth in the agricultural sector and strengthening the competitiveness and recognition of farmers and regions. Exploring the contribution of agro clusters to competitiveness and recognition of the Danube region in Serbia and farmers in this region, is based on significant natural and market potentials existing in the Danube region in the field of sustainable agriculture and rural development. According to research of domestic authors (Popović, Sarić, Jovanović, 2012, page 76), a variety of natural and socio-economic resources and conditions allow the use of various agricultural production systems in the Danube region – from the intensive crop production on the Upper Danube and Ključ-Negotin plain, and intense conventional and organic fresh food production in Belgrade-Novı Sad metropolitan, to extensive livestock grazing and traditional, integrated and organic production of local meat and dairy products, fruit and grapes in the high nature value farmland areas along the Danube river.

In this paper the authors will research the presence and development of agro clusters in the Danube region in Serbia. They will also indicate the necessary assumptions and requirements for their development, as well as market trends of their development in the future. Development activities and strengthening agro clusters in the Danube region, along with encouraging transnational and cross-border cooperation with other clusters in the Danube region in Europe, would contribute to improving the competitiveness and recognition of farmers in the Danube region, creating agricultural identity of the Danube region, as well as active participation of Serbia in the implementation of macro-regional EU Strategy for the Danube Region (EUSDR).

Methodology and research limitations

In this paper agro clusters are defined as clusters registered in crop and livestock production, i.e. in the production of agricultural products (primary products and products of the first stage of their processing occurred in agricultural production).

Through secondary (desk research) and primary research, agro clusters in the Danube region in Serbia are identified in a qualitative and quantitative way (their number, capacities, area of activity, level of development, problems in functioning), and ways and market trends for their future development are proposed.

Secondary research included the analysis of spatial planning documents, development strategy papers of cities/municipalities of the studied area, scientific works of local and foreign authors in the field of clusters and sustainable agriculture, communications and policy documents of the European Commission (EC) and the Government of the Republic of Serbia.

Primary research was carried out through a survey of registered agro clusters in the Danube region in Serbia, i.e. through direct interviews with managers of agro clusters or employees in the organizations, mostly in Regional Development Agencies (RDAs), which lead or implement cluster initiatives. The base for a survey was prepared questionnaire, which contained all the issues relevant to the assessment of cluster capacities, identification of their problems in functioning, proposing directions for cluster development and the like. The market research was carried out from June 15 to July 15, 2013 and the interview was

conducted by telephone interview lasting approximately 30 minutes. To get data on the number of agro clusters, the authors used the database of registered legal entities and entrepreneurs, provided by Serbian Business Registers Agency (SBRA)³. Multiple step sample was formed in three stages:

- In the first stage, searching for legal entities and entrepreneurs using the keyword "cluster", it has been found that 10 companies, 2 entrepreneurs, 101 associations and 4 foundations have the word cluster in their name.
- In the second stage, in the analysis have been included only clusters which in their name have some of the terms related to agriculture and/or rural development ("agriculture", "agro", "agroindustry", "rural", "food", and other terms related to agriculture). In this way a list of 39 clusters operating in Serbian agribusiness has been obtained.
- In the third stage, according to cluster location, agro clusters registered in the Danube region in Serbia have been separated. In this region 19 agro clusters have been registered: 10 clusters in the Belgrade region and 9 clusters in the Vojvodina region (City of Novi Sad and the municipalities: Sremski Karlovci, Sombor, Bač, Ruma and Apatin).

All identified clusters are involved in market analysis and a survey, through interview method, expect 5 clusters in the Vojvodina region, with which the authors were unable to make contact. The geographic area being analysed is the Danube region or the Danube belt in Serbia, which for the purpose of this paper includes the following areas: (a) the Upper Danube region (the municipalities Sombor, Apatin, Bač and Bačka Palanka); (b) metropolitan area of Belgrade – Novi Sad (City of Belgrade, Novi Sad, Pančevo and Smederevo and the municipalities Beočin, Irig, Sremski Karlovci, Inđija, Ruma, Pećinci, Stara Pazova); (c) the Carpathian region in Serbia (the municipalities Golubac, Kučevo, Majdanpek, Kladovo and Negotin). The Law on Spatial Plan of the Republic of Serbia (Official Gazette of the Republic of Serbia no. 88/2010, page 46) points out this region as one of the three dominant development zones ("the Danube belt") and defines this area as wider area or regional entity functionally directed to, or linked with Danube River, which also includes zone along the Sava River.

³ Search for clusters was made on June 10, 2013 using SBRA website, <http://www.apr.gov.rs>.

Results of market analysis of agro clusters in the Danube region in Serbia

Market analysis of agro clusters in the Danube region in Serbia (Paraušić, Mihailović, 2013), indicates that in this development area up to June 10, 2013, 19 clusters have been registered at SBRA: 10 clusters in the Belgrade region and 9 clusters in the Vojvodina region (Table 1, Figure1). Basic characteristics and resource potentials of the surveyed clusters are given below (Paraušić, Mihailović, 2013):

- **Many clusters are registered in the legal form of an association.** Only 4 clusters are registered as a nonprofit joint-stock company.
- **Clusters are new.** Most of the clusters are registered after the Law on Association was adopted, or after 2009.
- **In most cases clusters were established or initiated by RDAs,** which secured funds for cluster development through the EU projects or by applying for the funds from the republic/province, city/municipality budget. In the area of Belgrade region (in the city municipalities Obrenovac and Lazarevac) the Regional Centre for Development of SMEs and Entrepreneurship "Belgrade" initiated the establishment of 7 clusters (the first seven clusters in Table 1). RDAs have initiated the establishment of "Fruška Gora Cluster of winemakers and winegrowers Alma Mons", in Sremski Karlovci, and "Cluster of agriculture Prigrevica", in Apatin. Only two clusters were formed as a result of bottom-up initiatives: "Cluster Baby beef", Belgrade (initiative of companies engaged in the beef fattening and export) and "Cluster Farms Sombor", Sombor (individual initiative).
- In most cases **clusters members** are: registered family agricultural holdings, SMEs and entrepreneurs in the field of agricultural and food production, agricultural cooperatives, farmers' associations, and supporting institutions such as schools and universities, scientific research institutes, certification companies, agricultural professional services, RDAs, experts of various profiles and the like.

- **According to their organizational structure and established network, clusters are similar to associations, cooperatives or NGOs.** Underdeveloped are networks of cluster participants with suppliers, companies in related industries, with supporting institutions, especially with scientific research institutes in the field of R&D. Practically there is no cooperation and coordination among the cluster members: small number of meetings, there is no exchange of knowledge, ideas and information nor joint activities (solving common problems, joint placement of products and purchase on the market, etc.).
- **Clusters do not have critical mass of participants and resources.** Lack of critical mass of clusters is the result of the following factors: (1) membership of big and market strong companies/producers is lacking; (2) membership of some companies and institutions is often formal; (3) narrow geographic area of clusters (for example "Cluster of agriculture Prigrevica"); (4) many clusters are unnecessarily formed or initiated in a narrow geographic area (for example, 4 agro clusters are formed in the city municipality Obrenovac, two agro clusters in Lazarevac and three agro clusters in Sombor).
- All surveyed clusters are characterized by **lack of sustainable and reliable sources of funding** for professional management and cluster activities (joint activities), as well as great reliance on project-based funding (through budget or donor support).
- **Production, export and innovative capacities of clusters are low** (low level of production, small market share, focus on local market and products of lower levels of processing).
- **Local character of clusters and unrecognizable on the market.**
- **Achievement of goals.** Although the goals of almost all clusters aim to increase competitiveness, production, export and innovation in agricultural production, in practice, cluster activities are mainly carried out in the areas of: (a) promotion and internationalization (participation in fairs, study tours, creation of the cluster visual identity/cluster logo and website); (b) education (organization of seminars, trainings, conferences); (c) establishing formal cooperation/network between cluster members (usually only through forming a database on cluster members and their products).

Table 1. Agro clusters registered in the Danube region in Serbia, 2013

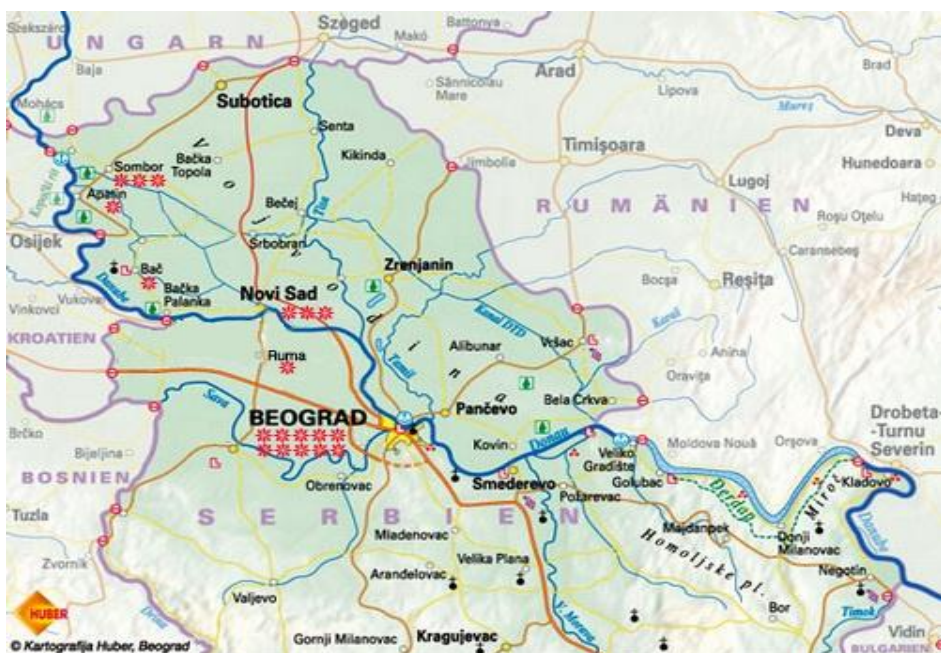
Name of cluster and year of establishing	Operational/Results
Region of Belgrade	
1. "Rakovica agro cluster", 2007.	Not operational (without results).
2. "Agrocluster Obrenovac", 2009.	Insufficiently operational.
3. "Cluster of flowers Obrenovac", 2011.	Partially operational.
4. "Cluster of fruit Obrenovac", 2012.	Initial operating period.
5. "Cluster of vegetables Obrenovac", 2012.	Initial operating period.
6. "Cluster Beo food 5", Beograd, 2010.	Not operational (without results).
7. "Agrocluster", Lazarevac, 2011.	Not operational (without results).
8. "Plodovi Kolubare Lazarevac", 2012.	Results in the field of promotion and education. Cluster is the result of the EU Exchange 3 Programme.
9. "Plants United", Beograd, 2008.	Initiative of Belgrade Chamber of Commerce/ Insufficiently operational.
10. "Cluster Baby Beef", 2009.	Not operational (without results).
Region of Vojvodina	
1. "Cluster Farms Sombor", Sombor, 2008.	Insufficiently operational, without visible results.
2. "Vegetable Sector Cluster", Sombor, 2010.	-
3. "Cluster Milk", Sombor, 2012.	-
4. "Fruška Gora Cluster of winemakers and winegrowers Alma Mons", Sremski Karlovci, 2010.	Partially operational, with results in the field of promotion and education.
5. "Cluster Fruškogorska jabuka", Novi Sad, 2012.	Initial period. Cluster is the result of cross-border cooperation within IPA project.
6. "Cluster Green table", Novi Sad, 2011.	-
7. "Cluster of agriculture Prigrevica", Apatin, 2011.	Small operation (only in the field of education). Without visible results.
8. Cluster "Voganj 2011", Ruma, 2011.	-
9. "Cluster Bač Agrar", Bač, 2013.	-

Source: *Paraušić, V., Mihailović, B. (2013): Research of agro clusters in the Danube region in Serbia registered at the Serbian Business Registers Agency.*

In terms of sectors, one cluster was registered in the field of crop production ("Cluster Bač Agrar"), trade in agricultural products ("Cluster Beo food 5") and rural development and rural tourism ("Cluster Farms Sombor"). Two clusters were registered in vegetable production ("Cluster of vegetables Obrenovac" and "Vegetable Sector Cluster" in Sombor) and in flower production ("Plants United" and "Cluster of flowers Obrenovac"). Three clusters were registered in the field of livestock production ("Cluster Baby Beef", "Voganj 2011" and "Cluster Milk"), and most of them (4 clusters) were registered in the fruit, grape and wine production ("Cluster Green table", engaged in the production and export of plum; "Cluster Fruškogorska jabuka"; "Fruška Gora Cluster of winemakers and winegrowers Alma Mons" and "Cluster of fruit

Obrenovac”). Four clusters include the wider field of agriculture: “Agrocluster Obrenovac”; “Agrocluster”, Lazarevac; “Cluster of agriculture Prigrevica“, Apatin and “Plodovi Kolubare Lazarevac”.

Picture 1. *Agro clusters registered in the Danube region in Serbia, 2013*



Source: *Serbian Business Registers Agency and survey of agro clusters in the Danube region in Serbia, 2013.*

Market analysis of clusters (Paraušić, Mihailović, 2013), indicates that cluster functioning and development are restricted by numerous internal and external limitations. Some of the most important **internal limitations** are: (a) lack of mutual trust and conflicts expressed by different groups (this problem is particularly present in the "Cluster of flowers Obrenovac", which reduces the membership, and the cluster does not include the leading and large flower producers in this city municipality); (b) inactive members, underdeveloped internal communication and cooperation; (c) lack of entrepreneurial initiative and capital. In terms of **external factors**, the biggest limitations come from: (a) destimulative measures of agricultural policy (this problem is particularly expressed in „Cluster Baby Beef“, Belgrade); (b) underdeveloped business environment for companies and family agricultural holdings; as well as (c) failed privatization of companies in the agribusiness sector.

From the presented characteristics of agricultural clusters it can be concluded that they are still in the initial stage of functioning, they are insufficiently operative and without sustainable sources of funding. They do not have critical mass of participants, nor economic and market strength and they possess very low production, export and innovation capacities. Due to these characteristics, agro clusters do not show their positive effects on productivity growth, innovation and competitiveness of the participating cluster members and the region in which they operate. Moreover, there is a lack of their positive influence on the entrepreneurship development, employment and the creation of new SMEs within cluster activities.

Although it is still too early to assess possible market sustainability of registered clusters in the future, especially having in mind the fact that clusters need a decade or more to develop depth and show their positive effects, it can be noted that the clusters will not develop in a successful way if recorded problems in functioning (especially in the field of external limitations) are not eliminated or at least reduced. The following are assumptions for further development and improvement of capacities of agro clusters in the Danube region.

Assumptions for development of agro clusters in the Danube region in Serbia

Based on a research of attitudes of employers on the business environment in Serbia (Union of Employers of Serbia, 2013, page 11-13), research of cluster development in Serbia (Paraušić, 2012), survey research of agro clusters in the Danube region (Paraušić, Mihailović, 2013), and the analysis of the world literature on the factors that contribute to the success of clusters (Rosenfeld, 2002; Englands Regional Development Agencies, 2003), it can be concluded that the successful development of agro clusters in Serbia will be first of all determined by fulfilling: (a) the "**external**" and (b) "**internal**" assumptions.

External assumptions for cluster development include stimulative and predictable macroeconomic policy, and especially creating stimulative business environment for business and investments of SMEs, cooperatives and family agricultural holdings in sector of agriculture and rural development. The most important external assumptions are: (a) predictable and stimulative agricultural policy; (b) reform of labour laws and trade regulations; (c) reduction of the tax burdens (especially in terms

of wages) and other expenses of business entities (hidden costs of business); (d) development of financial market; (e) effective policy to protect and strengthen competition on the market; (f) depolitization of public institutions and effective coordination of government bodies at all levels; (g) support clusters and SMEs sector by business support organizations or regional development agencies.

Internal assumptions for cluster development include: (a) increasing the critical mass of clusters (participation of major and recognized producers on the market); (b) active cooperation of the cluster members based on trust and long-term relationship; (c) providing stable sources for funding the cluster activities; (d) the entrepreneurial spirit and initiatives; (e) increasing the production, export and innovation capacities of clusters. The most important internal assumption will be providing stable sources for funding the cluster activities by: project funding, i.e. applying for budget and donor funds, as well as the EU funds; membership fees and commercialization of cluster services. Strengthening the internal capacities of clusters is an important assumption, given that the success of clusters in project funding depends on the existence of high production, export and innovation capacities of clusters. Furthermore, strengthening the internal capacities of clusters is also the assumption for greater engagement of consultants by the member companies, who provide expert assistance and necessary knowledge transfer (Mihailović, 2011, page 26). It is important to note that none of these assumptions alone can influence the development and sustainability of clusters, but together, creating synergy, they make a favourable and stimulative environment for the overall development of clusters.

Directions of development of agro clusters in the Danube region in Serbia

In the future support to cluster development in the Danube region should receive already existing clusters, as well as clusters which will develop in the geographical areas that already have market recognition in some agricultural production, where producers of certain products are concentrated and already united in successful cooperatives or associations, where there is uniqueness and tradition in the production, as well as high production and export performance of producers. In accordance with the above mentioned, clusters that would respond to the model of sustainable agriculture and rural development, could be developed in the following productions:

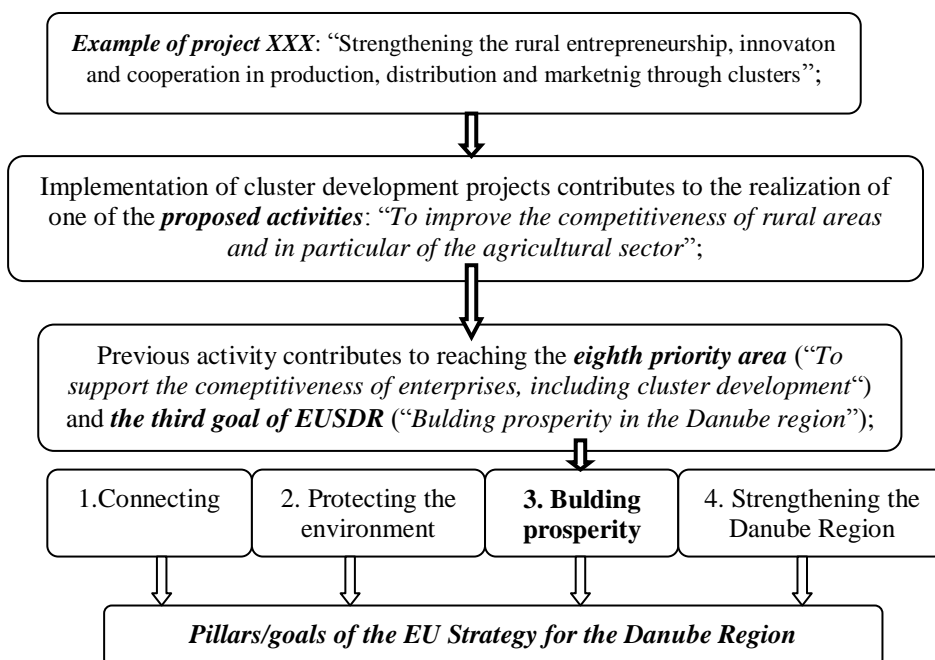
- Organic production in the municipality Bač and other municipalities that belong to Upper Danube region. In the municipality Bač the example of successful business is the company "Zdravo organic", Ltd. This company makes organic products (fruit and vegetable processing), it possesses large and modern facilities, implemented standards and is export oriented.
- Clusters in the field of fruit and grape production in the metropolitan area of Belgrade-Novı Sad, especially in the Belgrade municipality Grocka (Boleč, Ritopek, Begaljica), Novi Sad, Smederevo, Beočin and Sremski Karlovci and in the municipalities Negotin and Kladovo. For example, in the municipality Sremski Karlovci very successful is winemaking cooperative "Bermet", which protected designation of origin for bermet wine in 2007, and in this municipality "Fruška Gora Cluster of winemakers and winegrowers Alma Mons" is also registered.
- Clusters in the field of vegetable production in the metropolitan area of Belgrade-Novı Sad, especially in the Belgrade municipality Palilula (places such as Veliko selo and Slanci), Novi Sad and Pančevo.

In addition, certain areas in the Danube region have high natural resources, and thus provide opportunities for cluster development in the following kinds of production:

- Organic production of cereals, industrial crops, vegetables and herbs in the metropolitan area of Belgrade - Novi Sad, where there are the highest opportunities for placement of products, with the biggest concentration of population of greater purchasing power. Organic production in particular can be developed in the Belgrade municipalities Sopot and Barajevo, which can be roughly defined as "ecological municipalities" (The strategy of agriculture development of the city of Belgrade until 2015, page 377, 383).
- Handicraft production of agricultural products at higher levels of processing according to traditional recipes (meat products, dairy products, especially from goat's milk), integrated production and processing of medicinal herbs, wild and cultivated fruits and grapes, honey. Clusters of agricultural production with high added value in the concept of „High Nature Value farming“, can be developed especially in the Carpathian region in Serbia, which is characterized by high value ecological resources for the development of traditional mountain agriculture.

Development of agro clusters in the Danube region in Serbia should be considered in the context of participation of Serbia in the process of *implementation the EU Strategy for the Danube Region* (EUSDR). According to statements of the European Commission (EC, 2010, page 6; EC, 2010a, pages 64-68), cluster development projects contribute to implementation of the EUSDR by reaching the goal of the eighth priority area and the third goal of EUSDR, as shown in Scheme 1.

Scheme 1. Link between clusters and EUSDR objectives



Source: The authors according to the statement of the European Commission (EC 2010 and EC 2010a).

Inclusion of Serbia in the implementation of this macro strategy of the EU is recognized as an opportunity for further development of Serbia's cooperation with neighbouring and other countries along the Danube River, as well as assumption for development of potentials of Serbia in the fields of infrastructure, agriculture, environment, tourism, institutional and human capacities. In the Serbian government document from 2010 (The Government of the Republic of Serbia, 2010, page 11-14) it is emphasized that the overall objective of Serbia for participating in a comprehensive EUSDR is: "Using the potential of the Danube as an important resource for the sustainable development of Serbia", and one of the priority areas within

the pillar "Socio-Economic Development", which will be improved along with cluster development is the following: "Economic development and strengthening of regional cooperation and partnership in the Danube region".

The best way to develop agro clusters in the Danube region in Serbia, within implementation of the EUSDR, **is through transnational cooperation, cross-border and cross-sectoral cooperation between the clusters**. The European Commission emphasizes that it is important to strengthen transnational cooperation in the Danube region at political and business level, in order to reduce high socio-economic differences between the countries and achieve greater regional coherence (EC, 2010a, page 64). In addition, the European Commission sees clusters and links between centres of excellence, as factors which will extend the competitiveness of upstream enterprises to the whole region (EC, 2010, page 9-10).

In order to select projects for cluster development in the Danube region in Serbia to be financed from the EU funds, funds of international financial institutions and national funds, and which could be included in the Action Plan EUSDR, it is important to have in mind that potential projects must meet the following criteria (EC, 2010a, page 4-5): (a) They should address identified priorities and be supported by countries, stakeholders or Commission's services; (b) They should have an impact on the macro-region or a significant part of it (thus they should be transnational, i.e. include several countries that want to cooperate); (c) They should be realistic and feasible technically and financially (realistic source of funding should be identified); (d) They should be coherent and mutually supportive.

Conclusion

Primary research of registered agricultural clusters in the Danube region in Serbia indicates that in this region 19 agro clusters have been registered up to June 10, 2013. From the presented characteristics of agricultural clusters it can be concluded that the clusters are still in the initial stage of functioning, they are insufficiently operational and without sustainable sources of funding. Clusters lack critical mass of participants, as well as economic and market strength and they are of poor production, export and innovation capacities. Due to these characteristics clusters do not show their positive effects on productivity growth, innovation and competitiveness of the participating cluster members and the region in which they operate. Furthermore, there is a lack of their positive influence

on the development of entrepreneurship, employment and the creation of new SMES within the cluster activities. Although the clusters need a decade or more to develop depth and show their positive effects on competitiveness of participating cluster members and the region in which they operate, it can be concluded that the clusters will not develop in a successful way if numerous problems recorded in functioning, especially in the field of external limitations of development, are not eliminated or at least reduced.

This paper proposes the necessary assumptions (internal and external) and the survival and further development of clusters will depend on fulfilling these assumptions. Moreover, the authors indicate market trends of agro cluster development in the future, and emphasize the need of transnational approach to their development in the context of Serbia's participation in implementation of the EUSDR. Generally speaking, it can be concluded that in the future support to cluster development should receive already existing clusters, as well as clusters that will develop in the geographical areas that already have market recognition in some agriculture production, where producers of certain products are concentrated and already united in successful cooperatives or associations, where there is uniqueness and tradition in the production, as well as high production and export performance of producers.

Literature

1. Bolo, M. O. (2008): *The Lake Naivasha Cut Flower in Kenya*. In D. Z. Zeng (ed.), *Knowledge, Technology and Cluster-Based Growth in Africa*. The World Bank, Washington, page 37-51.
2. Bronisz, U., Heijman, W. (2008): *Competitiveness of Polish regional Agro-clusters*. Applied Studies in Agribusiness and Commerce. Budapest: Agroiinform Publishing House, 2008, page 35-40.
3. Englands Regional Development Agencies (2003): *Practical Guide to Cluster Development*.
4. Enright, M. (2003): *Regional Clusters: What We Know and What We Should Know*, in "Innovation Clusters and Interregional Competition", editors Johannes Brocker, Dirk Dohse, Rudiger Soltwedel, Springer-Verlag Berlin Heidelberg, page 99-129.

5. Europa InterCluster (2010): *The Emerging of European World Class Clusters*. White Paper, July 2010, Brussels.
6. European Commission (2006a): *Innobarometer on cluster's role in facilitating innovation in Europe*, Analytical Report, July 2006, Flash Eurobarometer No 187, The Gallup Organization.
7. European Commission (2006b): *Putting knowledge into practice: A broad-based innovation strategy for the EU*. Commission of the European Communities, Brussels, 13.9.2006, COM(2006) 502 final.
8. European Commission (2008): *The concept of clusters and cluster policies and their role for competitiveness and innovation: Main statistical results and lessons learned*. Commission Staff Working Document SEC (2008) 2637.
9. European Commission (2010): *European Union Strategy for the Danube Region*. Brussels, COM(2010) 715 final.
10. European Commission (2010a): *European Union Strategy for the Danube Region. Action Plan*. Commission Staff Working Document. SEC (2010) 1489 final.
11. Gálvez-Nogales, E. (2010): *Agro-based clusters in developing countries: staying competitive in a globalized economy*, FAO, 2010.
12. Institute of Agricultural Economics (2009): *The strategy of agriculture development of the city of Belgrade until 2015*.
13. Kiggundu, R. (2008): *The Lake Victoria Fishing Cluster in Uganda*. In D. Z. Zeng (ed.), *Knowledge, Technology and Cluster-Based Growth in Africa*. The World Bank, Washington, page 87-96.
14. Mihailović, B. (2011): *Development of consulting services in Serbia and their impact on the performance of companies in the agricultural complex*. Monograph, Institute of Agricultural Economics, Belgrade.
15. Mijačić, D. (2011): *Analysis of business infrastructure in the Republic of Serbia*. National Agency for Regional Development, Belgrade, 2011.

16. OECD (2007): *Competitive Regional Clusters: National Policy Approaches*. Policy Brief.
17. Official Gazette of the Republic of Serbia no. 88/2010: *Law on Spatial Plan of the Republic of Serbia from 2010 to 2020*.
18. Paraušić, V. (2012): *Clusters in agricultural complex in the Republic of Serbia*, Ph.D. thesis, unpublished material. Faculty of Business Studies, Megatrend University, Belgrade.
19. Paraušić, V., Mihailović, B. (2013): *Research of agro clusters in the Danube Region in Serbia, registered at the Serbian Business Registers Agency, and institutions involved in the cluster implementation*, unpublished material. Institute of Agricultural Economics, Belgrade.
20. Popović, V., Sarić, R., Jovanović, M. (2012): *Sustainability of Agriculture in Danube basin area*. Institute of Agricultural Economics, Belgrade, No 1/2012, page 73-88.
21. Porter, M. E. (1998): *Clusters and the New Economics of Competition*. Harvard Business Review, November-December, Harvard Business School Publishing, page 77-90.
22. Porter, Ketels, Miller, Bryden (2004). *Competitiveness in Rural U.S. Regions: Learning and Research Agenda*. Institute for Strategy and Competitiveness, Harvard Business School.
23. Porter, E. M. (2008): *On competition*, Harvard Business Review Book.
24. Rosenfeld, S.A., (2002): *Creating Smart Systems: A Guide to Cluster Strategies in Less Favoured Regions*, Carrboro, North Carolina, USA.
25. Republic of Serbia Government (2010). *The position of the Republic of Serbia for the participation in the development of a comprehensive EU strategy for the Danube Region*.
26. Serbian Business Registers Agency (2013): *Database of enterprises and entrepreneurs*, <http://www.apr.gov.rs>, accessed on June 10, 2013.
27. Sölvell, Ö., Lindqvist, G., Ketels, C. (2003): *The Cluster Initiative Greenbook*. Ivory Tower AB, Stockholm.

28. The World Bank (2009): *Clusters for Competitiveness: A Practical Guide and Policy Implications for Developing Cluster Initiatives*. International Trade Department.
29. Toerien, D. (2010): *Analysis of the South African Wine industry: Lessons for LED practitioners*. Centre for Development Support, University of the Free State, South Africa.
30. Union of Employers of Serbia (2013): *The views of employers on the business environment*, Belgrade, May 2013.