

# THE ISLAND RURALITY AS LOCAL DEVELOPMENT POTENTIAL OF THE LAG “ŠKOJI” AREA

## RURALNOST OTOKA KAO RAZVOJNI POTENCIJAL PODRUČJA LAG “ŠKOJI”

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The paper presents results of the research of the selected elements of rurality on the example of the Croatian islands of Vis and Hvar, gathered in the Local action group (LAG) “Škoji” and possibilities of their (re)evaluation. The revitalization of rural areas is the fundamental task of local action groups, the associations which bring together representatives of public, private and civil sector of a specific area. Their main objective is to jointly design and implement a local development strategy, based on the specific developmental opportunities of the area which they live in. Rurality of the islands is analyzed through main demographic structures and trends, agricultural resources, land use and fisheries. The selected elements are analyzed as an incentives or limited developmental factors.

**Keywords:** LAG “Škoji”; LEADER; local development; island rurality

### Introduction

Croatian rural areas are characterized by their heterogeneity which is a result of numerous and complex historical and contemporary factors in a specific area (LUKIĆ, 2012). Considering the basic socio-economic features, the Croatian islands are predominantly rural (FARIČIĆ, 2012). Spatial-economic and socio-cultural characteristics, caused by multiple and complex natural, economic, political, social, transport, communicational and other factors, define islands as a special type of rural areas. Their elements and characteristics of rurality differ significantly in comparison to those on the mainland. Thereby, the most important factors of differentiation are size of an island, distance from the mainland and the level of interaction with land and other islands, determining the degree of each island's insularity (ROYLE, 2001; CLARK, 2009). It represents the island's detachment and isolation which caused the unique characteristics of rurality. In addition, for more than half a century, economic and demographic structures

and trends of the Croatian islands have confirmed their status of a peripheral area, further intensified by a physical remoteness and a communicational as well as a transportation difficulties, leading to a pronounced marginalization and underdevelopment in comparison to mainland areas (STARČ, 1992; 2001; ŠIMUNOVIĆ, 1994). The applied models of organization, planning and management of development had not resulted in significant developmental shift so far. In order to stop the current unfavorable developmental trends it is necessary to change the development concept. The European model of rural, as well as the local development under the LEADER approach, stand out as the possibilities. The question was whether the elements of the insular rurality could represent a potential for development through the eight basic characteristics of the LEADER methodology. The primary purpose and the objective of this paper are to analyse islands rural characteristics and to consider if they are stimulating or limiting factors in local development. The basic hypotheses which will be considered through the paper are:

1. When applying the LEADER methodology, or European model of rural development, the local particularities are identified as a development potential of each island.
2. The islands' demographic dynamics and structures are the most important limiting factors of local development.
3. The islands' agriculture is characterized by unfavorable development trends and deagrarianization which represent a significant unused developmental potential.

### Methodological annotations

The specific features of the elements of the islands' rurality have been considered as a possible local development potential in the case of two central Dalmatian islands, Hvar and Vis, gathered in the local action group (LAG) "Škoji" in 2011.

Administratively the LAG consists of 6 local government units<sup>1</sup>, 4 towns (Stari Grad, Hvar, Vis and Komiža) and 2 municipalities (Jelsa and Sućuraj) or 47 settlements in total (Fig. 1). Basic analytical units are administrative towns and municipalities within a LAG, but in some analyses the data are summarized for the entire island or the LAG as a whole, in order to highlight the diversity of structures and development trends within the LAG. The elements of rurality which were analyzed are:

1. Size, spatial distribution and interdependence of size and position of settlements of the islands as a fundamental morphological and spatial characteristics of rural areas.
2. The characteristics of the relevant population dynamics and structure (since population is the most important factor of regional development planning) - through the analysis of population trend from the first official census in 1857 to

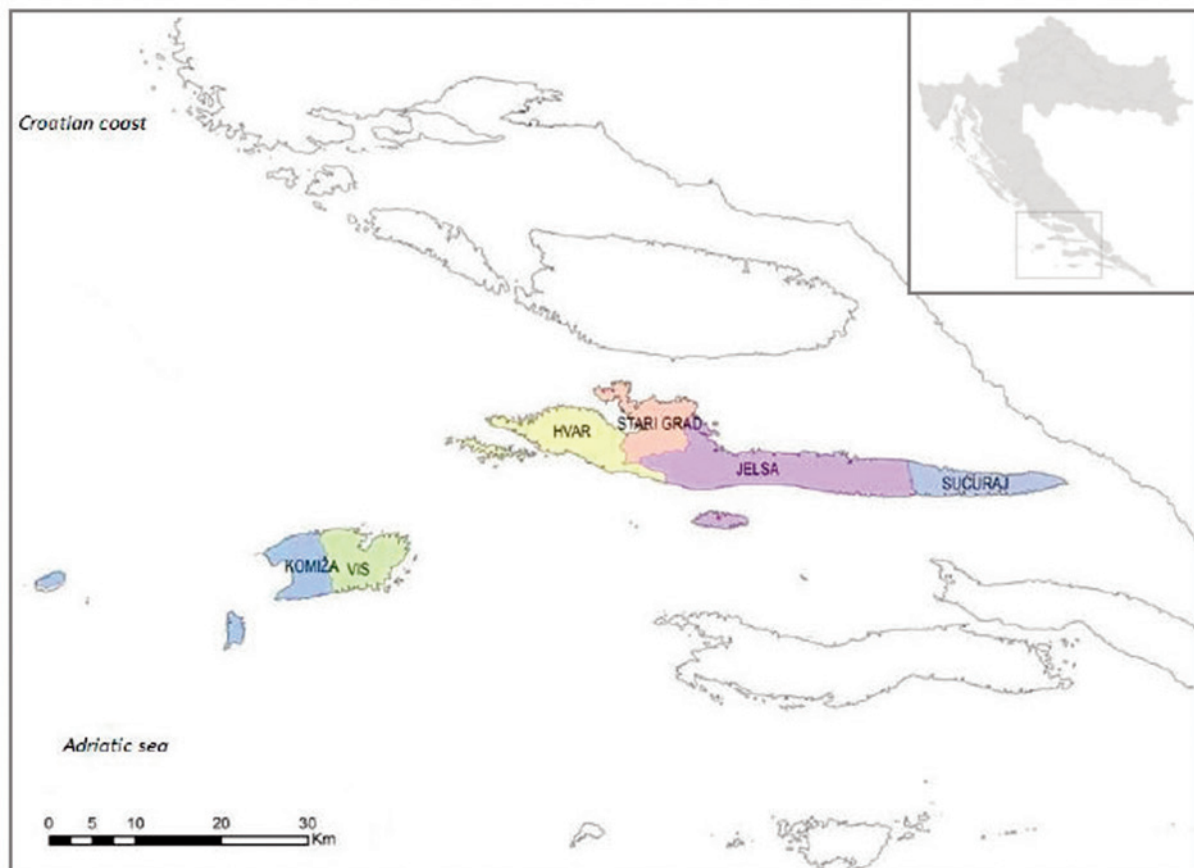


Figure 1 Administrative area of LAG "Škoji"

<sup>1</sup> In the end of 2014, the municipality of Šolta accessed in the LAG "Škoji".

the census of 2011, the natural population changes in the last intercensal period of 2001-2011, type of general population change in the last intercensal period of 2001-2011 and the population structures relevant for planning the revitalization and the development of an area, the age-sex structure.

3. The primary sector activities – agriculture and fishery, as the most important traditional activities in this area, through the analysis of the features of the contemporary islands' agricultural structure and land use, and finally.
4. social economic restructuring of the area – by analyzing changes in number of agricultural population in the period of 1961-2001 and socio-economic structure in order to define the contemporary meaning of these activities.

### Past researches review

The Croatian islands and the modeling of their development have been dealt by experts from different scientific fields. However, the application of local development within the LEADER approach has so far been viewed by using tools and measures of contemporary rural development (LUKIĆ, 2012), that are associated with the institutional<sup>2</sup> provisions (Law on agriculture and Rural Development, NN 80/13 and Regulation on State aid for agriculture and rural development, NN 80/13) and the documents *Rural development strategy of Republic of Croatia 2008-2012* and *Rural development Program of Republic of Croatia 2014-2020*.

In general, the islands have been identified as a unique problem entity in the period of Croatian independence (since the 1990s). The attempt to intensify the islands' development was made by the adoption of planning and legislative documents and laws such as: National Island Development Program (1997), Law on Islands (NN 34/99) and Laws on Amendments to the Law on Islands (NN 32/02 and NN 33/06). However, the implementation and effect of these documents have not yet resulted in significant developmental shift. The special group consists of papers that recognize and deal with issues of the islands' demographic development.

<sup>2</sup> The most important institutions related to rural development in Croatia are Ministry of Agriculture and Rural Development, Agency for payments in Agriculture, Fisheries and Rural Development and Rural Development Network.

Thus, the authors Nejašmić (1991), Lajić (1992; 1997), Lajić and Mišetić (2006) and Smoljanović et al. (1996) had analyzed the components of total population trends and the most important problems including a low birth rate, natural decline and total depopulation. The special socio-economic aspects of transformation and contemporary significance are considered by Faričić et al. (2010), discussing the current processes on the islands and factors of depopulation and deagrarianization. The second group consists of works on the specifics of the economic base and structure of the islands, as well as the factors and models of the certain economic development, with special emphasis on the islands' agriculture. The author Defilippis (1997; 2001) examines development, structure and uniqueness of the islands agriculture, highlighting its importance in the traditional economic structure, as well as the setbacks in the modern economy.

Rural development and the LEADER approach are relatively newer concepts in Croatia, dating back to the early implementation of the European model of rural development and pre-accession IPARD<sup>3</sup> program as its key instrument. In accordance to that program, the *Strategy of Rural Development 2008-2012* has been adopted in 2008, with the main objectives and measures towards the development of agriculture in rural areas. One of its most important planning instruments is the measure 202 "Preparation and implementation of local development strategies", which enables work of the local action groups, including the LAG "Škoji" and the preparation and implementation of *Local development strategy 2012-2014 of the LAG "Škoji"* (URL 1). By accessing EU, the possibility of using the European Agricultural Fund for Rural Development (EAFRD<sup>4</sup>), financed by the Common Agricultural Policy (CAP), has opened up for Croatia. It contributes to the achieving the objectives of the *Europe 2020* strategy, promoting sustainable rural development throughout the European Union. Nowadays, Croatia has an obligation to adopt the *Rural Development*

<sup>3</sup> IPARD is a pre-accession EU program for the period 2007-2013 in the field of agriculture and rural development. It is an integral part of the IPA (Instrument for Pre-Accession Assistance for), whose main goal is to help candidate countries and potential candidate countries in their harmonization and implementation of the *acquis* and to prepare for the future use of EU funds.

<sup>4</sup> EAFRD is a structural EU fund for agriculture and rural development, whose main objective is the strengthening of the rural development policy. Specifically, it improves the management and control of the rural development in the period 2007-2013.

*Program 2014-2020*, with defined measures to effectively use the resources from the Fund, and with special Measure 19 LEADER intended for implementation of LAG's local development strategies and projects.

#### LAG "Škoji" within the LEADER approach

Contemporary understanding of the local approach to rural development involves a comprehensive development with participation of local community, or rather processes which mobilize institutions and people from the community in order to create, strengthen and stabilize activities, using resources of the area in the best possible way to achieve stable economic and social development (GREFFE, 2005). Unlike the contemporary approach, until the 1970s of the last century, in the most European countries local development was implemented through government policy (the access *up-bottom*), by acting directly on local economy through subsidies, tax exemptions and subsidy loans. The modern local development policy is based on OECD approach and principles: qualitative development, differentiated and unique approach to each of the local areas and involvement of local stakeholders in creation and implementation of their own development. The main characteristic of the recent rural development policy is an effort to stop the developmental setback of rural areas by an efficient use of their own resources. Directing the rural development strives to increase the competitiveness of agriculture and forestry, improving the environment and landscape, quality of life in rural areas and diversification of the rural economy. The contemporary rural development policy is based on the LEADER approach, a European model of rural development. The LEADER is an acronym that stands for "Links between the actions on development of rural areas". It is the method of mobilizing the potential of rural communities and it implies (Manual for the implementation of the LEADER approach in Croatia, 2010):

1. sustainable rural development based on conservation and balancing of environmental, social and economic capital,
2. approach based on the specificities of an area through taking into account local characteristics, potentials, uniqueness and distinctiveness,

3. *bottom-up* approach, which means that local stakeholders are involved in making decisions related to strategy and selection of priorities which should be implemented in their local area,
4. establishing of local partnerships (LAGs) composed of public, civil and economic sectors that seek to identify and implement local development strategy,
5. innovation to represent traditional values in new and competitive manner,
6. integrated and multisectoral approach that involves a horizontal, cross-sectoral connectivity, as well as the vertical course - linking local, regional and national institutions in order to achieve sustainable rural development,
7. networking and connectivity, learning from the best practices, transfer and exchange of knowledge and experience are of particular importance in the implementation of LEADER and
8. cooperation, representing a further step of networking towards developing and implementing individual projects of two or more LAGs within a country or region.

Establishing local partnerships or local action groups (LAGs) is an original and the most important feature of the LEADER program. Areas of LAGs include geographically continuous rural areas, with more than 5,000 and less than 150,000 inhabitants, including towns with less than 25,000 inhabitants. The main tasks of LAGs are to identify and implement local development strategy, making decisions regarding the allocation of its financial resources and their management. LAGs are often more effective in stimulating sustainable development because they:

1. aggregate and combine human and financial resources from public, private and civil sectors,
2. join local actors in joint projects and multi-sectoral activities in order to achieve synergies and critical mass necessary to improve the economic competitiveness of the region,
3. strengthen dialogue and cooperation between different rural actors, who often have little experience in working together and
4. facilitate the process of adaptation and change in the agricultural sector through interaction of different partners.

Local action group "Škoji" has been established in 2011 with the aim of preparing local

administrative units of the islands of Hvar and Vis for the implementation of the LEADER approach. It has been founded as a civil society organization, with the participation of stakeholders from three sectors: local government, local public institutions and enterprises, representatives of local business and civic associations. After the founding of the LAG, according to the LEADER procedure, *Local development strategy of the LAG "Škoji" 2012-2014* has been developed and adopted, in accordance with LEADER methodology, or by using a *bottom-up* principle, which implies involvement of stakeholders from all three development sectors. According to data from September 2014, the LAG has 92 members, with the structure of 18% in public, 36% in civil and 46% in economic sector.

#### The characteristics of the islands' settlements size and spatial distribution

Basic morphological characteristics of rural areas is manifested through specific structure of their settlements' size and population density which are determined by smaller, spatially dispersed settlements and significantly lower population density in comparison with urban areas. The type and spatial distribution of the islands' settlements are the results of various

physical and geographical factors, while historical and geographical factors have influenced the dynamics of their development. Geomorphological features have a major role, especially those related to the sea and coast, resulting in location and more dynamic development of coastal villages. Another important feature is the availability of fertile land, which has resulted in a development of small and compact settlements in the interior of the island, located at the edges of a few fertile island areas.

The specifics of the islands' rurality in terms of settlement size are the domination of small villages (up to 500 inhabitants), the occurrence of "extinct settlements" (0 inhabitants), the absence of larger urban agglomerations (over 5,000 inhabitants), and the coastal concentration of population.

In the area of 415.27 km<sup>2</sup> which is the surface of the islands within the LAG (DUPLANČIĆ LEDER ET AL., 2004) a total of 14,537 inhabitants has been recorded in 2011 (Census 2011). It represents an average population density of 35 inhabitants per km<sup>2</sup>, or about a half of the average population density of Croatia (75 people per km<sup>2</sup>). From the total of 47 settlements in the observed island area, 5 settlements have been recorded as "extinct" (Malo Grablje and Humac on the island of Hvar, Oključna on the island of Vis, Sveti Andrija and Palagruža) in the census of 2011. Also, 3 settlements (Palagruža, Humac and Malo Grablje) have not been recorded as having any resident in the previous census in

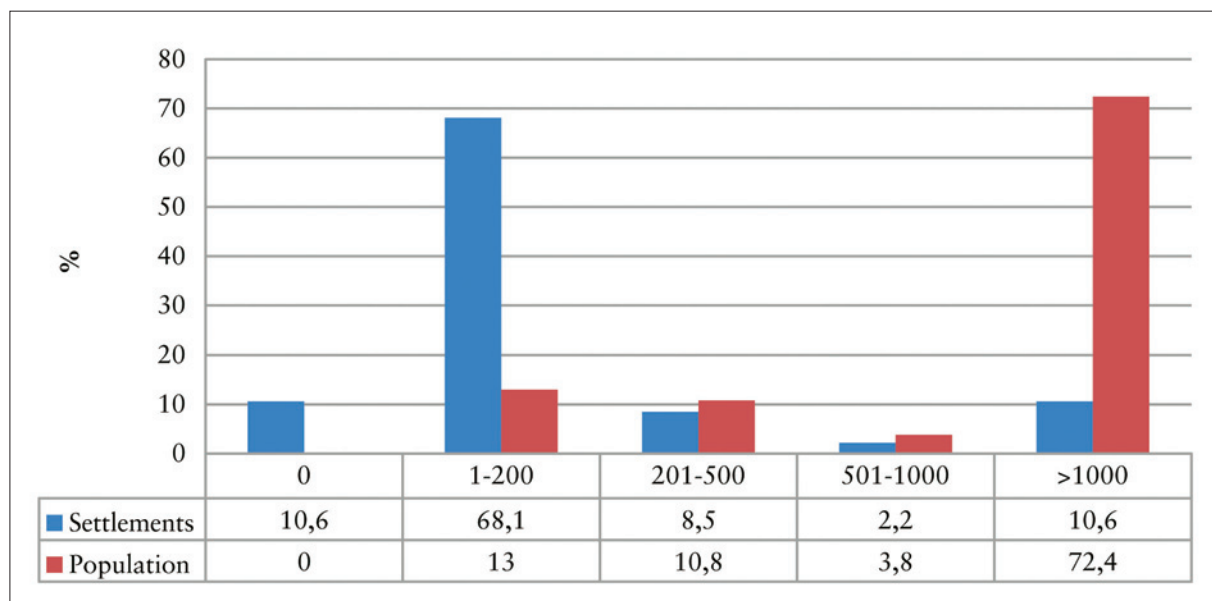


Figure 2 Distribution of population by settlements size

2001. It is reasonable to expect that the next census could record a few more settlements which now count fewer than 10 residents as “extinct”. Most small island settlements belong to the groups of up to 200 inhabitants (32 settlements) or up to 500 inhabitants (4 settlements) (Fig. 2). They count more than three quarters of all of the islands’ settlements while only 3,463 inhabitants or less than one quarter of the total population have been living there. Only one settlement (Vrboska on the island of Hvar with 548 inhabitants) is in the category of medium-sized settlements (501-1,000 inhabitants). In the islands’ framework, large settlements are contemporary demographic, economic and administrative centers of the islands (Hvar, Stari Grad and Jelsa on the island of Hvar and Vis and Komiza on the island of Vis). These five settlements have a total population of 10,526 inhabitants, or slightly less than three quarters of the total population, which indicates that the population is concentrated in just a few centers. The spatial distribution of settlements in terms of

their size is characterized by a concentration of all major settlements on the coast, while dispersion of smaller and “extinct” settlements are commonly in the interior of the islands (Fig. 3).

### The characteristics of population dynamics

Demographic situation in rural areas is characterized by significantly unfavorable trends and structures in relation to the urban, demographic more dynamic areas, which mainly causes depopulation, natural decline, emigration, population aging and decline of the developmental potential (LUKIĆ, 2012). As a part of the Croatian rural periphery, the islands have demographic characteristics that indicate their common problems of low and declining birth rates, negative natural change, population aging, as well as special features in terms of immigration in contemporary period of demographic development.

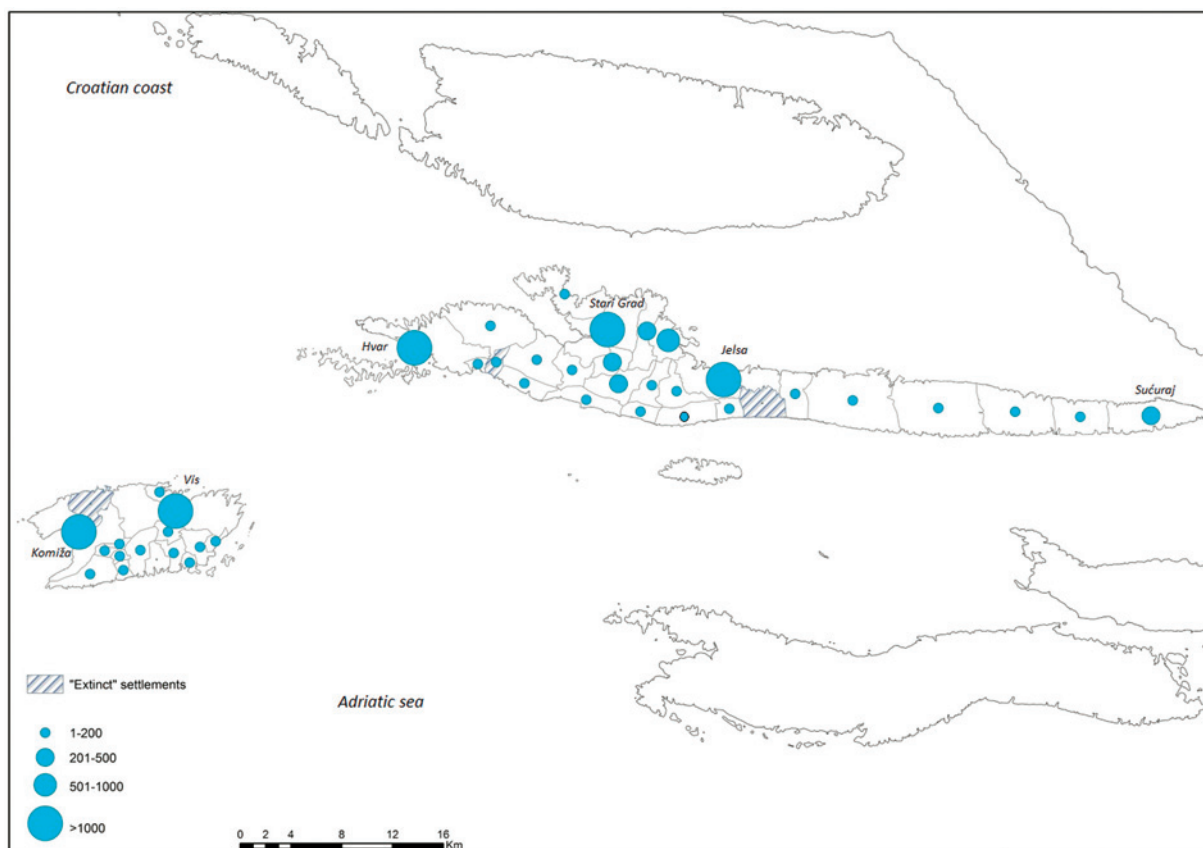


Figure 3 Spatial distribution and size of the settlements within the LAG

Changes in the number of inhabitants within the LAG “Škoji” from the first official census in 1857 indicate three main stages of the population development. A continuous increase in population until the census of 1900 was the result of high birth rates and a need for workforce in agriculture and fisheries which were the dominant economic branches at that time. The population maximum of the LAG “Škoji” was recorded at the turn of the 20<sup>th</sup> century (on the island of Hvar by the Census of 1900 and on the island of Vis 10 years later according to the Census of 1910). Afterwards, a period of depopulation of the islands’ area has started and has continued during the century. It was especially intensified after World War II, and by the 1960s, the process of the islands’ demographic extinction had already been started (LAJIĆ, 1992). The most significant population decrease of the LAG “Škoji” area was recorded in the intercensal periods of 1921-1931 and 1961-1971, primarily as a result of an intensive emigration. The decrease in the islands’ population was influenced by many interrelated factors. The emigration from the islands in general was primarily the result of a socio-economic backwardness, a land overload and an agrarian overpopulation and also the viticulture crisis (related to the occurrence of phylloxera, etc.) in the period of 1921-1931 (LAJIĆ, 1989). Substantial changes in the focus of

socio-economic development in urban-industrial centers had resulted in the decrease of the islands’ population in the period of 1961-1971. These changes led to re-orientation of the agricultural population towards the non-agricultural (industrial and service) activities and an intensive migration from rural to urban and industrial areas. Thus, the most intensive depopulation process was registered during an equally intensive period of industrialization and rural exodus in Croatia (LAJIĆ, 1992). The contemporary demographic development (the intercensal period of 1991-2011) has been marked by stagnation and a slight increase in the number of residents. The increase is not entirely a result of positive demographic trends, but also of the appearance of the so-called “fictive population”. In the mentioned period, the owners of second homes began reporting their residency in the islands, which reflected to a statistical increase in the total islands’ population, while the real demographic situation of island has been far less favorable (LAJIĆ, MIŠEVIĆ, 2013).

The number of the inhabitants of the islands within the LAG had reduced to 4,038 in the period of 1857-2011, and today the islands of Hvar and Vis are a home to 22% less residents than in 1857 (Fig. 4). In the period of the population maximum (Census 1900), 13,468 residents had been living on this two islands, which is 93% more than

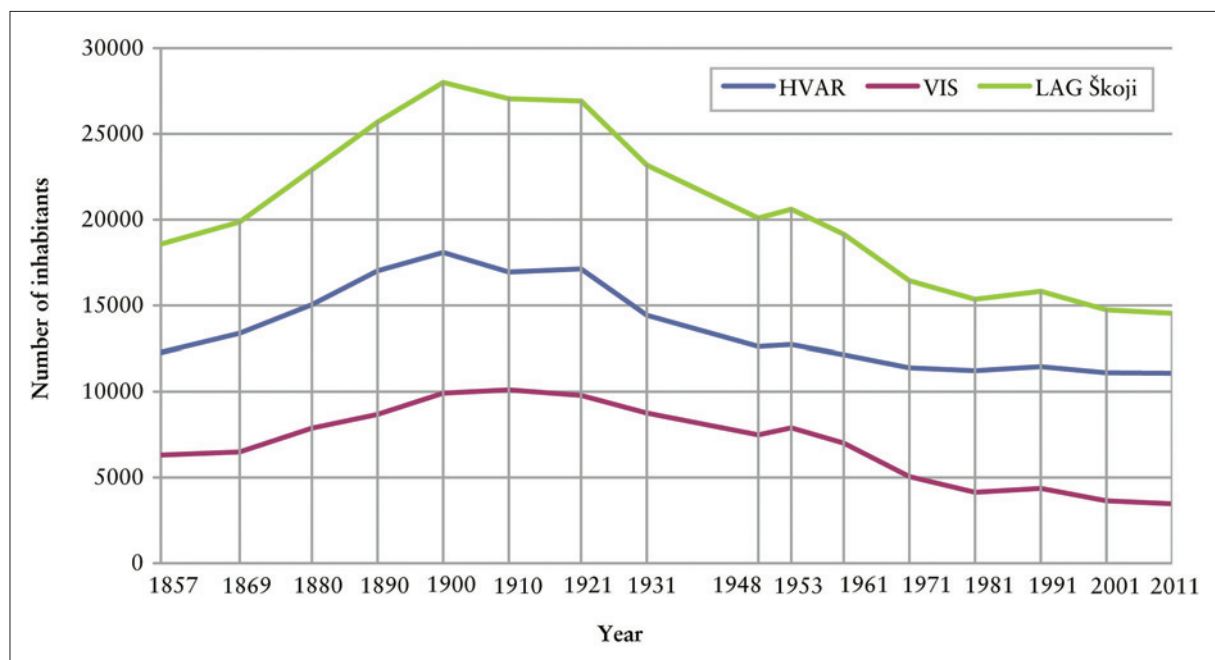


Figure 4 Population trends of the LAG in the period 1857-2011

Source: Population and settlements 1857-2001; Contingents of the population to the cities / municipalities, Census 2011, DZS, Zagreb

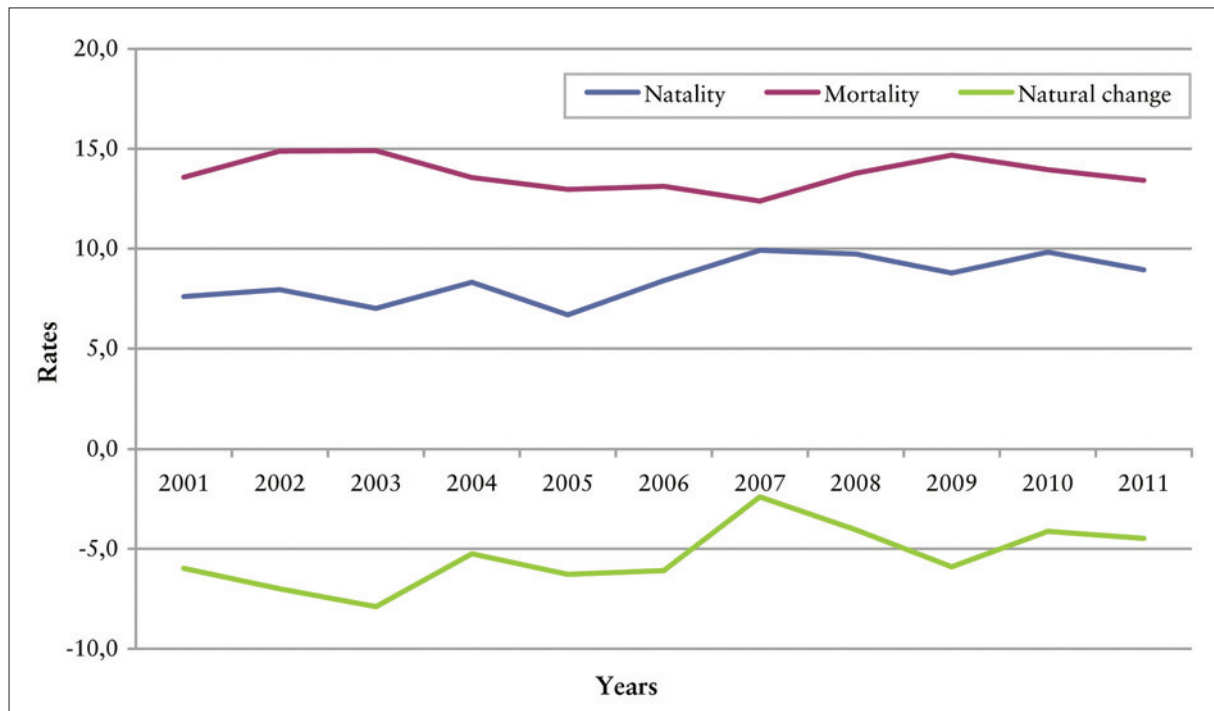


Figure 5 Natural demographic trends 2001-2011 of the LAG

Source: Tables of birth from 2001 to 2011, DZS, Zagreb; Tables of mortality from 2001 to 2011, DZS, Zagreb

today. The most intensive population decrease on the islands of Hvar and Vis was observed in the intercensal period of 1921-1931. The total population loss was 3,734 in only one decade.

The transitional period in the natural movement of the islands' population was in the mid-sixties of the 20<sup>th</sup> century, when the number of deaths exceeded the number of births (Fig. 5). The basic component of the natural decline is a decrease in birth rates with a constant number of deaths (LAJIĆ, 1997). The biodynamics of LAG's population shows a natural population decrease of 930 residents in the past intercensal decade. It is a result of the average birth rate of 9.7‰ for the island of Hvar and 8.2‰ for the island of Vis and the average mortality rate of 13.6 ‰ for the island of Hvar and 20.6‰ for the island of Vis in the intercensal decade of 2001-2011.

The type of general population trend of the observed islands has been determined as the synthesis indicator of dynamic population characteristics, including natural, intercensal

changes and migration balance (NEJAŠMIĆ, 2005). During the period of 2001-2011, as a difference of natural decline (930 persons) and the intercensal decline (200), the net migration was 730 persons. It means that 730 more persons have immigrated the islands within the LAG. Accordingly, the area of the LAG belongs to  $I_4$  type of general population trend (weak regeneration by immigration). Among them, only the city of Hvar had a positive natural and intercensal changes and belongs to  $I_1$  type of the general population trends, while other areas have recorded natural decline and positive net migration (Tab. 1).

These results of the analysis of total, natural and general population trends suggest the following contemporary demographic problems in the islands: a natural decline, low birth rates, dominance of a migration component in the overall population movement and depopulation in the most of the islands' local administrative areas. Also, those demographic characteristics stand out as a significant limiting factor, with a need of modeling serious measures of revitalization of the islands' population.



Table 1 Components of the type of general population trends of LAG 2001-2011

<i>Spatial units</i>	<i>Natural change 2001-2011</i>	<i>Migration balance 2001-2011</i>	<i>Intercensal change 2001-2011</i>	<i>Type of general population trend</i>
HVAR	3	110	113	I <sub>1</sub>
JELSA	-265	191	-74	I <sub>4</sub>
STARI GRAD	-144	108	-36	I <sub>4</sub>
SUĆURAJ	-63	34	-29	I <sub>4</sub>
THE ISLAND OF HVAR	-469	443	-26	I <sub>4</sub>
KOMIŽA	-237	86	-151	I <sub>4</sub>
VIS	-225	199	-26	I <sub>4</sub>
THE ISLAND OF VIS	-462	285	-177	I <sub>4</sub>
LAG "Škoji"	-931	728	-203	I <sub>4</sub>

Source: Population and settlements 1857-2001; Contingents of the population to the cities / municipalities, Census 2011, DZS, Zagreb; Tables of birth from 2001 to 2011, DZS, Zagreb; Tables of mortality from 2001 to 2011, DZS, Zagreb

### Age-sex population structure

The biological structure, or the composition of population by sex and age, is directly influenced by natural movements, resulting from contingents essential for reproduction and formation of workforce. The composition according to age and sex is one of the most important indicators of potential vitality and biodynamic of population in a certain area, especially because of its social and economic implications (NEJAŠMIĆ, MIŠETIĆ, 2006). As a result of unfavorable natural and overall population trends and age selectivity of migrants, the age-sex composition of population in rural areas is much less favorable than in urban areas. It is characterized by old population and the process of feminization. The basic characteristic of population by age in the Croatian islands is a generally high degree of aging which results from a long-term emigration of younger aged population and an extremely low fertility rates (LAJIĆ, 1992). Smaller and more remote islands (Zadar, Šibenik and Trogir's islands) are characterized by a higher degree of aging in which the age index (the proportion of the population group 65+ and the group of 0-14) is unfavorable - more than 700 old at 100 young people. The age index of the island of Hvar is 165, and the island of Vis is 196 old in comparison to 100 young residents. At the same time, the population of the islands within the LAG belongs to the type of very old population because the share of the people older than 65 exceeds 12%

(23.1% on the island of Vis and 21.5% on the island of Hvar). Showing the age-sex composition by five-year age groups indicates a regressive (contractile) type of demographic age, in which proportion of children ("base" of the chart) is lower than in the central part, indicating very low birth rates (Fig. 6).

Another important characteristic of population structures by sex in rural areas is the process of feminization or the increase in the proportion of women in older age groups. As a consequence of specific mortality rates by sex, which are larger in male than in female population, the proportion of women increases in older age groups, as well as in general population.

The consequence of the age composition and the aging process indicates further unfavorable processes influencing total population number, general social conditions and economic development. The slowing down of the population growth rate (or in this particular case the increasing of the rate of decrease of total population), reduction of the fertility rates, further deterioration of age-sex composition, the aging of working contingent and reduction of fertility contingent, all decrease the opportunities for biological revitalization. Also, the social implications of the demographic aging are evident in the need to ensure necessary quality of life for a growing number of aged population and increasing pressure on the social security system.

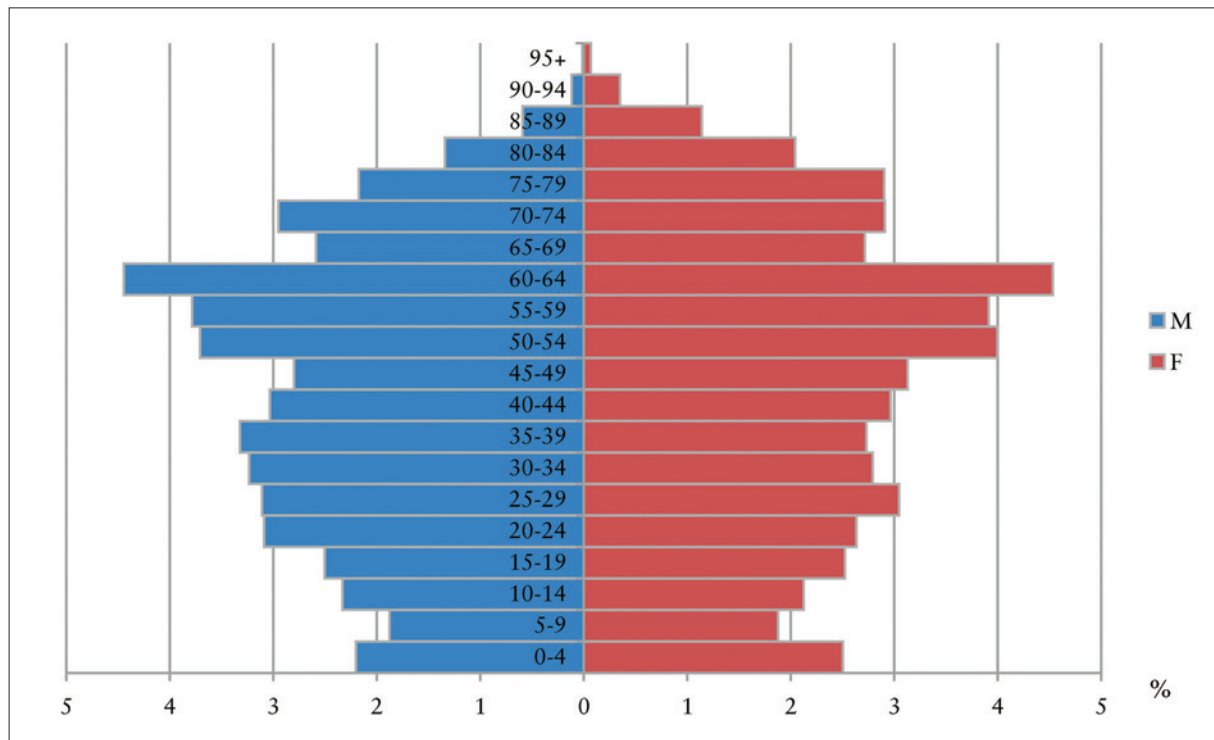


Figure 6 Age-sex structure of population of LAG, 2011  
Source: Population by age and sex by settlements, Census 2011, DZS, Zagreb

### The characteristics of the islands' agriculture

The activities of primary sector, including agriculture and fisheries, have traditionally been the most important economic activities in rural areas, whose features and development are primarily influenced by the natural geographical features of the area. Karst terrain, lack of arable and fertile land, abundance of sunlight and summer droughts marked the development and structure of the islands' agriculture. From the very beginning of settling the islands until the half of the 20th century, agriculture had formed the core of the islands' economic development. Due to the process of deagrarianization, the importance of agriculture in modern economic structure had decreased significantly occupying an insignificant share today. The largest part of arable land is located on terraced anthropogenic soils, which emerged in the era of winemaking upswings in the second half of the 19<sup>th</sup> century (DEFILIPPIS 2001; RADINOVIĆ, 2001).

Special features of the contemporary islands' agriculture are reflected in its structural production, mainly subsistence purpose, fragmented properties,

specifics of processing and land use, as well as the continuous process of deagrarianization, which further reduces its significance. Specific climatic and ecological conditions have influenced the domination of vineyards, olive and citrus growing, as well as sheep-breeding on karst pastures in the agriculture of the islands (DEFILIPPIS, 2001). The process of deagrarianization is reflected in the reduction of arable land and the land's production, as well as the reduction of agricultural population, family farms and the number of their members ever since the late 19th century and the period of viticulture crisis caused by phylloxera and the so called Wine clause in Austro-Hungarian and Italian trade agreement. Cultivated area on the Croatian islands had decreased by about 5,000 acres in the period of only twenty years (1970-1990), and in 1991 it encompassed only 16% of the overall agricultural area (DEFILIPPIS, 2001). Land fragmentation shows the distribution of farms in relation to the size of arable land - 50% of family farms have less than 1 hectares (ha) of cultivated land, 85% less than 3 ha, while there is only 3% family farms with more than 5 ha (RADINOVIĆ, 2001).

Land use is considered to be one of the key indicators of intensity and market orientation of agriculture, but also an indicator of the variety of social processes associated with deagrarianism. This especially applies to the share of used and uncultivated land in total available land.

In 2003, approximately 74% of total available land in Croatia was utilised agricultural land, while 8.3% was uncultivated agricultural, with large differences across macro-regions (LUKIĆ, 2012). According to the agricultural census data (2003), the share of the utilized agricultural land was 32.2%. At the same time, there was 11.9% of uncultivated agricultural land in total available land of the islands within the LAG. Compared to the other rural areas, the proportion of utilized agricultural land in the LAG is significantly lower (for example, for the region of Eastern Croatia it is 90.2%), while the share of uncultivated agricultural land on the islands is higher. Precisely these areas, the former farmland and agricultural zones, bordered by stone walls and located on terraced sites, represent the “frozen” agricultural capital of the islands and could be reactivated in a relatively short period (MORIĆ ŠPANIĆ, 2014). This situation is primarily a result of natural geographical characteristics of the islands area (Mediterranean climate, karst relief and lack of arable land), but large areas of fallow land are also the result of orientation on tourism and the fact that tourism development contributed to its abandonment (LUKIĆ, 2012).

The structure of utilized agricultural land by categories on the islands of Hvar and Vis indicates traditionally dominant cultures of vineyards and orchards which are mainly represented by olives and citrus fruits. Given the geographical location and climatic conditions, the islands of Hvar and Vis have excellent prerequisites for production of grapes and wine. Therefore, viticulture had represented the most important economic sector since the founding of the Greek colonies until the end of the 19<sup>th</sup> century and the collapse of islands viticulture due to the appearance of phylloxera. Also, the importance and the development trend of viticulture can be compared with the trend of the islands' population. The population maximum on the islands of Hvar and Vis was reached during the wine-growing upswings. After the occurrence of phylloxera and the collapse of viticulture in the early 20<sup>th</sup> century, the population has constantly been decreasing. Olive growing had always thrived in the shadow of viticulture on the islands, due to larger profitability of vines cultivation. Despite the favorable ecological and climatic conditions, olive growing is nowadays an insufficiently used potential of the island's agriculture, especially considering that only a small proportion of olive trees are cultivated, while the rest is rusty. By inventorying agricultural areas, the lavender plantations are included in the category of fields, which makes land use structure of the island of Hvar occupied by approximately 12% (Tab. 2, Tab. 3).

Table 2 Available, used and uncultivated land of the LAG

<i>Spatial units</i>	<i>Total utilized agricultural land</i>		<i>Uncultivated agricultural land</i>		<i>Other (hectars)</i>
	<i>Hectars</i>	<i>Share in total available land (%)</i>	<i>hectars</i>	<i>Share in total available land (%)</i>	
Hvar	337.48	28.4	197.67	16.6	851.62
Stari Grad	447.59	24.9	151.70	8.4	1,350.58
Jelsa	627.59	24.2	303.30	11.7	1,964.64
Sučuraj	129.39	56.6	41.79	18.3	99.10
Island of HVAR	1,542.05	26.6	694.46	12.0	4,265.94
Vis	581.21	66.3	67.94	7.7	295.52
Komiža	112.98	42.4	66.00	24.7	153.79
Island of VIS	694.19	60.7	133.94	11.7	449.31
LAG “Škoji”	2,236.24	32.2	828.40	11.9	4,715.25

Source: Agricultural households by total available land, the total area of available land, utilized agricultural land, other land and number of parcels of utilized agricultural land, Agricultural census 2003, DZS, Zagreb

Table 3 Total utilised agricultural land of the LAG by categories (in hectares)

<i>Spatial units</i>	<i>Arable land and gardens</i>	<i>Vegetable gardens</i>	<i>Meadowes</i>	<i>Graslands</i>	<i>Orchards</i>	<i>Vineyards</i>	<i>Seedbeds</i>
HVAR	74.55	2.47	0.55	2.00	156.35	101.26	0.30
JELSA	125.63	5.33	0.00	0.00	249.08	247.43	0.12
SUĆURAJ	17.76	1.68	3.90	8.22	87.93	9.90	0.01
STARI GRAD	38.81	10.53	0.52	4.43	234.75	158.50	0,01
The island of HVAR	256.75	201.01	4.97	14.65	728.11	517.09	0.43
KOMIŽA	3.70	1.30	0.00	16.19	37.86	53.93	0.00
VIS	5.01	1.14	10.00	400.24	42.49	122.23	0.10
The island of VIS	8.71	2.44	10.00	416.43	80.35	176.16	0.10
LAG "Škoji"	265.46	22.45	14.97	431.08	808.46	693.25	0,53

Source: Surface area of utilized agricultural and other land by categories, Agricultural census 2003, DZS, Zagreb

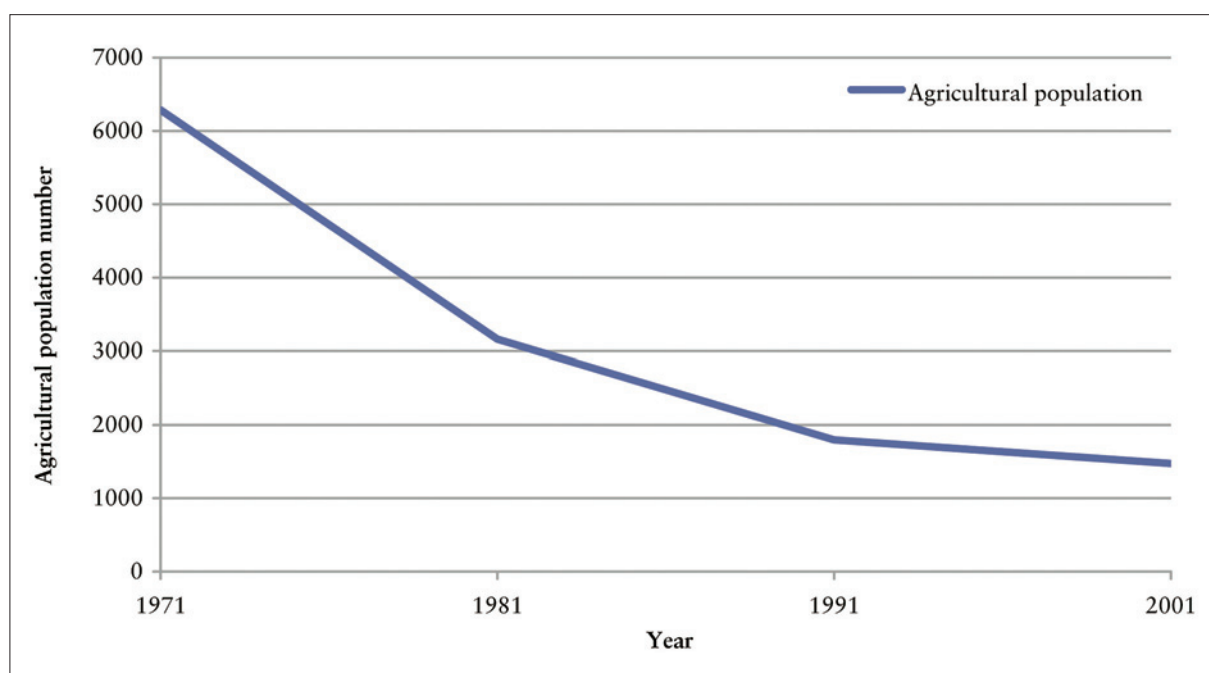


Figure 8 Trends in the number of agricultural population of the LAG, 1961-2001

Source: Agricultural population by activities and sex, by the city / municipality, Census 2001, 1991, 1981, 1971 and 1961

The characteristic of contemporary agriculture on the islands can also be considered through socio-economic restructuring of the LAG area showing two major processes: deagrarianization and tertiarization. The process of deagrarianization or decrease in total number and share of agricultural population indicates multiple reductions in the period of 1961-2001 (Fig. 8). The intercensal period of 1961-1971 was the most intensive period

of deagrarianization, related to the socio-economic changes and the process of urbanization, which caused abandonment of agricultural activities in rural areas. The process of tertiarization or increasing the proportion and general importance of tertiary sector and services, is associated primarily with the development of tourism and catering industry.

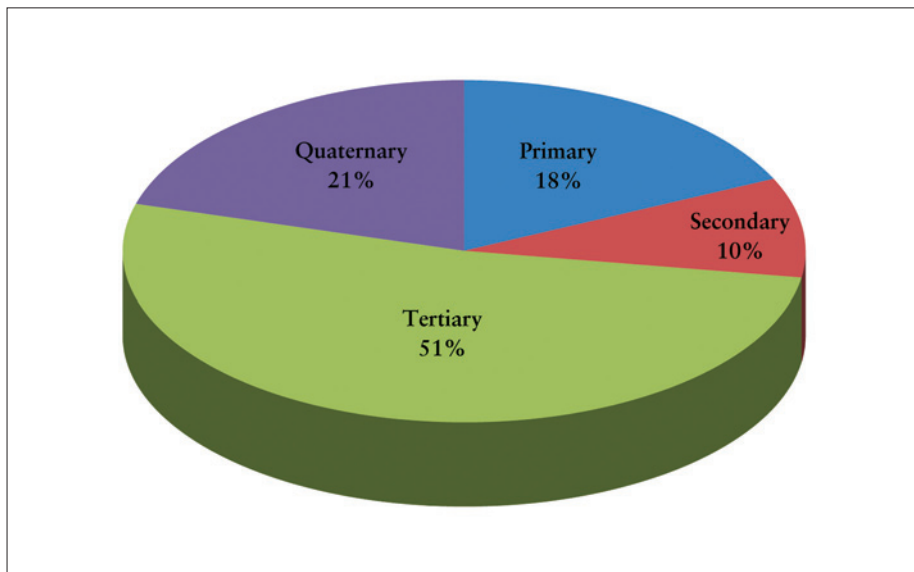


Figure 9 Share of employment by economic sectors in 2001

Source: Population by economic activity and gender, by city / municipality and settlements, Census 2001, DZS, Zagreb

## Fisheries

In addition to agriculture, fishing is traditionally the most important activity on the islands. Today it is characterized by decline in fishing, fish processing and the number of professional fishermen. Main contemporary problems of the islands and, in addition, of the Croatian fisheries are: overfishing, impossibility of fish stocks recovery, decrease in the annual amount of catch, technically and technologically obsolete fishing boats and tools, and constant increase of total costs while the sales price are reducing.

In the period from the late 19<sup>th</sup> to the half of the 20<sup>th</sup> century the invention of canned fish has led to progress of fish industry, and the opening of factories in the Adriatic area. In that breaking economic time they played a key role in the acceptance of surplus agricultural population and directly encouraged fishing. During the World War II, general social and economic conditions in almost all fish processing factories caused stagnation and decline in production. There had been significant changes in organization of labor and ownership relations in the post war period, which is why fish factories were restructured, closed or merged. The production was based solely on the catches of their own outdated fishing fleets, insufficient for existing factory capacities, with additional problem of decreased market. For factories which were

located on the islands, among all these problems, the biggest and the most frequent one was the lack of skilled labor force (JOVANOVIĆ ET AL., 2010). Causal relationship of demographic trends and the islands' economy could also be observed in the case of fish processing factories. Population maximum on the island of Vis was recorded in 1910, about 10 years after it was reached on the island of Hvar. This was primarily the case due to the existence of 9 fish processing factories which managed to accept surplus agricultural population and postpone their ongoing emigration. Although fishing today does not have an important role in the economic structure of the islands, it is a part of their local identities and an important resource for integrated tourism development.

## Discussion and conclusions

According to the analysis of the selected elements of rurality in cases of the islands of Hvar and Vis, the particularities of their characteristics have been observed in relation to the other heterogeneous rural areas in Croatia. At the same time, specificities of certain elements have been identified as the elements of the area's identity and thus the potential of the local development, while certain characteristics are recognized as limiting factors.

The characteristics of the islands' population density and settlements distribution are the limiting factors in terms of 5 extinct settlements and the dominance of small and scattered settlements that have become valuable, but still unused spatial resources. The concentration of population in several coastal settlements and at the same time demographic and economic emptying of the islands interior also present the abandonment of the valuable spatial resources. However, small and scattered settlements in the islands' interior had preserved the traditional island rurality, thus becoming a potential of the future tourism and agricultural development. Through the analysis of the characteristics of demographic dynamics and structure, several important problems have been identified: low birth rates, natural population decline, occurrence of the so-called "fictitious" population and an extreme old age. Demographic problems also represent a major limiting factor

for development, because population is the most important holder of all development processes in a specific area. Mobilizing the local stakeholders and population is the most important feature of the LEADER approach, and it could be considered as a tool of population revitalization. According to the analysis of available, utilized and uncultivated land, through the trend of agricultural population and contemporary composition of employment by sectors of activity, the hypothesis of deagrarianisation and the unfavorable development trends in agriculture have been proven. The revitalization of the island's agriculture can be achieved through orientation on quality and cultivation of indigenous islands sorts, because the agricultural policy of the European Union promotes high quality, geographic authenticity and originality on the markets, namely the use of the specific characteristics of an area as a feature of the LEADER approach.

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