

ABANDONMENT OF ARABLE LAND IN THE MUNICIPALITY OF POGRADEEC

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ABSTRACT

Land abandonment along with land fragmentation are the main problems of agriculture development in the Municipality of Pogradec. This process took start after 1990, because of socio-economic changes that happened in this year. Even after 25 years since that time abandonment of land is very widespread as a result of many factors. Economy of this area is oriented in tertiary sector and little attention is headed toward agriculture. Land fragmentation, lack of mechanized tools to tenure the land and low productivity of arable land in mountainous reliefs, caused a mass abandonment of land and rural settlements. Even today risk of land abandonment is high, because revenues from agriculture are very low and cost of production is high. It's important to study factors and impacts of this phenomenon in order to take proper measures to manage it. Land abandonment causes environmental and economic problems, but sometimes it has positive effects like reforestation. Considering that in Albania unemployment is high, state can promote agriculture sector, in this way a lot of people would raise their revenues and would take better care about land. Purpose of this paper is to define causes, impacts and management of abandoned lands in the Municipality of Pogradec.

Keywords: Land abandonment, Pogradeci's Municipality, land degradation, land fragmentation, reforestation.

INTRODUCTION

Land abandonment is a great problem in all the Europe, but most expressed is in the Eastern European states, as a result of social-economic changes that they experienced after 1990. Estimates have shown that amount of land that might be abandoned until 2030 is about 6.7%,¹ of total arable land in E.U. this percentage might be higher in non E.U counties like Albania, because the lack of state support in Agriculture production, a large number of farms might close in the future. Size of arable land in Albania has declined from 0.26 hectares per person in 1961 to 0.21 hectares per person in 2013.² There are not full data of land abandonment in the Municipality of Pogradec, but I have data about administrative units of Trebinja a mountainous place and Buçimas and Udënisht administrative units that are flat regions. In Trebinja administrative unit amount of abandoned land is 44%. In Buçimas and Udënisht administrative units 30.5% of arable land is abandoned. There is difference between areas within the municipality territory, but in general percentage of abandonment is very high.

¹ EURURALIS Global Cooperation Scenario

² <http://data.worldbank.org/indicator/AG.LND.ARBL.HA.PC?locations=AL>

METHODS

Municipality of Pogradec is located in southeast of Albania in southeastern Europe, between coordinates 40°, 50' North and 20°, 30' East. It has a surface of 548 square kilometers and a population of 71000 inhabitants.³ Relief is mainly mountainous, but some small fields are located around Lake Ohrid and Çërrava administrative unit. Highest mountain is Valamara 2373 meters. Climate is Mediterranean and the average temperature is 11.6°C. In this area are several water streams that flow into the lake Ohrid and River of Shkumbin, which springs at protected area of Nika's Stone. Vegetation is very diverse, because of large differences in relief and it's made of oaks, beech, firs and alpine pastures. Most frequent wild life animals that are found here are bears, wolves, foxes, hares, squirrels and wild goats.

FACTOR OF LAND ABANDONMENT

Land abandonment is related mainly with agriculture problem, but there are other factors like land policy and land inheritance, that have a major impact. In the Municipality of Pogradec the main factors that have determined the large amount of land abandonment are: Socio-economic changes, land fragmentation, ownership of the land and lack of machineries used in agriculture.

Social economic changes after 1990 are the main factors that have created the largest area of abandonment land. Newly opened agricultural land, created in the communism period as a result of self-sustaining economy, were abandoned. People were so angry with that system that they destroy even the plantation of grapes, apples and irrigation system. Old mechanical working tools like tractors were old. Fabrics of fertilizer in western Albania were closed. This situation rise the cost of Agricultural production and people abandoned agriculture and were oriented toward tertiary sector or emigrated in other countries. In this situation high altitude lands were abandoned, and were left in production only the land within the rural settlements.⁴ Another factor was large emigration from rural areas, into urban areas, mainly in Pogradec town and a lot of arable lands in Mokra area were abandoned. Today the agriculture is becoming an important sector of economy, but a lot of land surface is still abandoned. Surface of arable land has risen with only 1000 hectares from 2008 to 2015.⁵

High fragmentations of land properties. Average size of farms in European Union it is 16.1 hectares.⁶ In the Municipality of Pogradec average farm size is 3.9 hectares.⁷ Land fragmentation is high as a result of traditional way of inheriting land.⁸ So the land has to be divided equally to all sons of a farm family.⁹ Along the generations this way has badly

³ INSTAT. Population census 2011

⁴ Price B., Kienast F., Seidl I., Ginzler Ch., Verburg P. H., Bolliger J. FUTURE LANDSCAPES OF SWITZERLAND: RISK AREAS FOR URBANISATION AND LAND ABANDONMENT. Applied Geography, Volume 57, February 2015, Pages 32–41

⁵ INSTAT. Agriculture Statistical Yearbook 2015

⁶ http://ec.europa.eu/eurostat/statistics-explained/index.php/Farm_structure_statistics

⁷ INSTAT, Agriculture Statistics 2012

⁸ C Bizimana, WL Nieuwoudt & SRD Ferrer. FARM SIZE, LAND FRAGMENTATION AND ECONOMIC EFFICIENCY IN SOUTHERN RWANDA. Agrekon, Vol 43, No 2 (June 2004)

⁹ Gajendra S. Niroula, Gopal B. Thapa. IMPACTS AND CAUSES OF LAND FRAGMENTATION, AND LESSONS LEARNED FROM LAND CONSOLIDATION IN SOUTH ASIA. [Land Use Policy](#), Volume 22, Issue 4, October 2005, Pages 358–372

fragmented land. A way to regulate this problem is to exchange properties that are far with the ones next to owner parcels to rise surface of parcel. Even in flat regions of Buçimas and Çërrava land is fragmented, because of 7501 law that has divided land according to the number of members in a family. As a result land is divided in small parcels about 0.1 ha.

Problems with ownership of the land are a major problem for agriculture development, because some properties are claimed by two different owners. The ones are the owners who legally have the land with certificate from 1944 and the others are the new owners that have claimed the land from 7501 law in 1991.¹⁰ This has created confusion and has halted investments on those lands. In rural area of Mokra the land is divided according to 1944 land certificates, but there are problems of ownership in Buçimas and Çërrava fields. State is trying to compensate the old land owners, but this process is going very slowly.

Lack of necessary mechanical tools in agriculture is another problem that causes low productivity of the land and leads to its abandonment. In mountainous area of Mokra largest parts of lands are worked in the traditional ways without mechanized tools. Even in flat areas as a result of lack of the state subsidizes, the cost of land labor with mechanical tools is high. Number of machineries per 100 square kilometers has risen from 67 in 1961 to 121 in 2008.¹¹

IMPACTS OF LAND ABANDONMENT

Impacts of land abandonment are evident in a great scale in environment issues, but in the future they might impact even society. Impacts are negative like land degradation¹² and positive like reforestation. Some of the major impacts, that are evident in Municipality of Pogradec, are as below.

Loss of cultural landscapes is related with land and rural abandonment. Population of the rural settlements in Mokra region is reduced drastically as result of emigration. Traditional rural landscape with traditional village houses and fertile agriculture lands is changed with pastures and damaged abandoned houses. Low number of inhabitants remained in those villages is low and that has caused a lack in infrastructure investments, forcing even the remained ones to leave.

Environmental problems. Erosion is a very widespread process, because new arable lands were open by deforestation in areas where vegetation recover with difficulties like poor soils or high altitudes. Those lands were left prone to erosion, because they were state properties and no one claimed them. The state didn't intervene to reforest them. Annually 20-30 ton soil in year per hectare is eroded in Albania¹³ and a large amount is generated in abandoned lands. Landslides and desertification are very common on these lands, creating environmental problems and risks humans life.

¹⁰ <http://www.dw.com/sq/problemet-me-ligjin-e-pronave-pengojnë-zhvillimin-në-shqipëri/a-5282814>

¹¹ <http://data.worldbank.org/indicator/AG.LND.TRAC.ZS?locations=AL>

¹² Jose´ M. Rey Benayas, Ana Martins, Jose´ M. Nicolau and Jennifer J. Schulz. ABANDONMENT OF AGRICULTURAL LAND: AN OVERVIEW OF DRIVERS AND CONSEQUENCES. Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources 2007 2, No. 057

¹³ Jorgji F., Zamir G., Grazhdani S. Spatial DISTRIBUTION OF POTENTIAL EROSION RATES AT HILLSLOPE SCALE IN PRESIPA LAKE BASIN (ALBANIA) USING SHUTTLE RADAR TOPOGRAPHY MISSION (SRTM) ELEVATION DATA. EGU General Assembly 2013, held 7-12 April, 2013 in Vienna, Austria, id. EGU2013-6214



Figure 1. Abandoned land Damaged by erosion in Municipality of Pogradec (2016).

Social problems are creating as result of rural abandonment and high unemployment in the Pogradeci town. People living in villages, who have unclaimed their lands, are treated with state assistance and that cost it a lot of money. If state would have subsidized agriculture, people would have worked in their land and unemployment would have been lower.

Wild fires. Abandonment lands are covered full of grass and bushes that can light easily in the dry periods, causing a lot of fires.¹⁴ Largest number of them is registered on Plloça hills and in pastures of Shulleri in Valamara Mountain. In Plloça hills fires are lighted to enlarge urban areas and in Valamara Mountain to enlarge pastures.

MANAGEMENT OF ABANDONED LAND

Best way to manage abandoned land is reforestation. There is passive reforestation, when shrubs or plants are grown naturally or active reforestation when the plants are planted by humans to protect land.¹⁵ Passive reforestation is seen in Plloça hills and in western side of lake Ohrid. Active reforestation is not very widespread, because the state or municipality funds have been very low and only some hectares with pines had been planted on the “Mali i Qytetit” near the border with Macedonia. Half of the territory of the Municipality of Pogradec has been named a “Transboundary Biosphere Reserve” and is now under the UNESCO Protection.¹⁶ This will increase state investments for land and biodiversity protection in this area. Another way is to put a land tax for people who haven’t worked the land for a period longer than ten years.¹⁷ In Albania is a tax for the arable land, but it should be reduced, in contrary Albanian parliament should vote a law to put a tax for long time abandoned land, or people should left their land ownership to the state and don’t pay the tax, with the purposes that land will be taken by other farmer which will use them. It is important to register all the arable lands in this municipality and after this to be determined, which are

¹⁴ Ursino N., Romano N. WILD FOREST FIRE REGIME FOLLOWING LAND ABANDONMENT IN THE MEDITERRANEAN REGION. *Geophysical Research Letters*, Volume 41, Issue 23, 16 December 2014, Pages 8359–8368

¹⁵ José M. Benayas R.(2005) Restoring Forests After Land Abandonment. Springer New York, *Forest Restoration in Landscapes*-356-360

¹⁶<http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/biosphere-reserves/europe-north-america/albania-the-former-yugoslav-republic-of-macedonia/ohrid-prespa/>

¹⁷ *Daiga Paršova*. Land Abandonment and Current Policy Initiatives on Land Mobility. 5th International Workshop on Land Market Development and Land Consolidation. *April 23, 2013 Skopje, Macedonia*

rich and which are poor soils. Lands with high productivity should be used for agriculture production and poor soils to be changed in pastures or to turn into forests.¹⁸ Most of agricultural production is made of cereal and animal foods and in a small area in Çërrava field, agriculture is oriented towards the fruit-growing. According to state agriculture strategy, agriculture should be oriented in fruit-growing, because cereals have lower production and high cost.

CONCLUSIONS

Land abandonment is very widespread and a large amount of arable land has been abandoned after 1990 and in some part of this area 44% of agriculture land has been abandoned. Main factor that have determined this process are; social-economic changes, high fragmentation of land, low number of agriculture machineries and problems with ownership of the land. Larger impacts are noticed in environment issues like; erosion, landslides and land degradation. Reforestation has a positive impact, because it turns abandoned lands into their natural condition and has great impacts in the biodiversity of an area. To manage land abandonment, first we have to solve problems of agriculture. There are several ways to manage abandoned land, but there should be cooperation among; central government, municipality's authorities and farmers, that these measures take effects. Better solutions are that poor lands in mountains area should be reforested or turn into pastures and agriculture should be promoted in rich soils.

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