

# Roma seminomadic tradition between social inclusion and the protection of natural resources a Case study of the Toplica District (Serbia)

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## Abstract

In this research, we try to connect sociology with GIS (Geographical Information Science). The main problem in the South-East Serbia present low integration of Roma minority group into society. In that case, better collective ecology conscience may give better inclusion results.

**Roma seminomadic tradition between social inclusion and the protection of natural resources: a Case study of the Toplica District (Serbia)**

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**Abstract**

Using the existing knowledge about the social and cultural characteristics of the Roma in Serbia, acquired in a number of social and other related studies, as well as the data obtained through the GIS methodology for determining the spatial distribution of Roma settlements and activities of the Roma community within the Toplica District (one of the districts in Serbia with a high percentage of Roma population) and their daily migrations which are realized within a geographical space, the paper investigates the possibility to raise the level of their economic activity and social integration, while simultaneously preserving natural resources and improving environmental safety. This issue takes on additional meaning in a situation where Serbia is simultaneously faced with the problem of raising standards in the areas of environmental protection and social inclusion of the Roma ethnic community that survives on the margins of society with all the characteristics of socially deprived groups.

**Keywords:** Roma, Toplica District, social inclusion, protection of natural resources

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## Introduction

Although the Republic of Serbia covers a relatively small area of 88804 km<sup>2</sup>, it has a large number of Roma settlements. A field study<sup>2</sup> conducted in the first decade of the current century "recorded that in Serbia there are 593 Roma settlements with more than 15 families, with more than 100 Roma people" (Bašić, Jakšić, 2006: 37). The presence of the Roma population is also significant in the territory of the Toplica District that has an area of 2231 km<sup>2</sup>. The Toplica District is located in the south-eastern part of Serbia, bordering with the Raška, Nišava and Rasina Districts, and partly with Kosovo. The total population according to the census of 2011 (Republic Statistical Office; X volume) amounted to 91,754 with an average density of 41.1 per km<sup>2</sup>. The depression of Toplica is located between mountains Jastrebac, on the north, and Pasjača, Vidojevica, Sokolovica and partly Radan on the south, with an average height of 400 to 500 m (Mačejka & Tanasković, 2008: 23-9). The river after which the district was named flows through the central part of the depression dividing it into two parts (the Upper and Lower Toplica). The Toplica river, 130 km long, flows into the

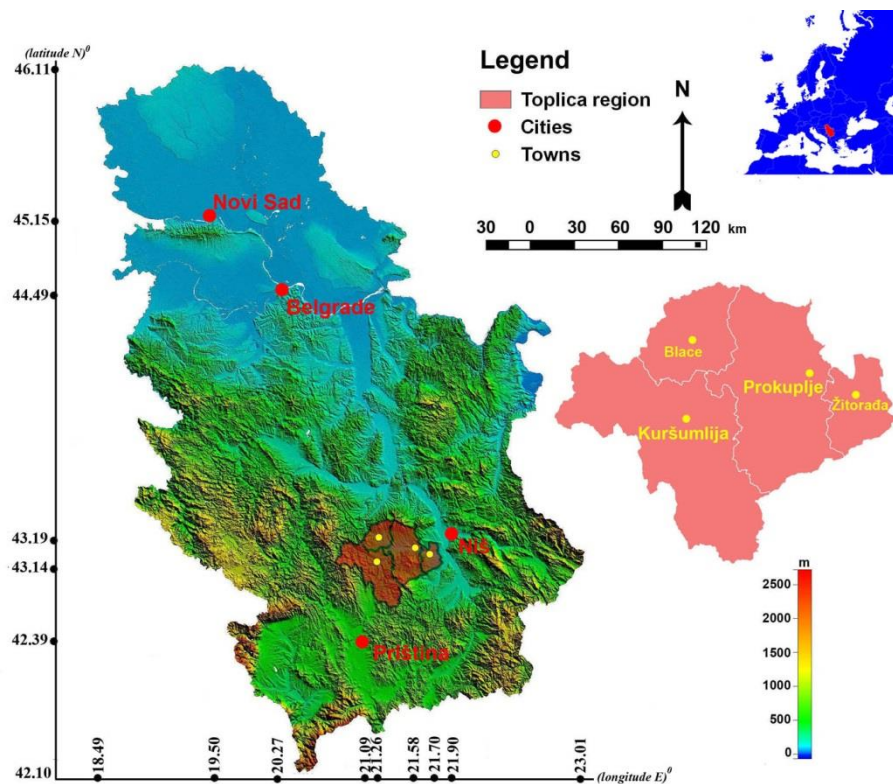
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<sup>2</sup> Conducted within the project *Roma settlements, living conditions and possibilities of integration of the Roma in Serbia: with the aim of taking effective measures to improve living conditions and investigate the possibility of integration*, with the financial support of Oxfam, GB, Belgrade office.

South Morava and connects to the South Morava river basin. The Toplica District was settled in antiquity. Some ethnic groups that inhabited this area were: the Avars, the Celts, the Dardanelles, the Turks, the Slavs, while the Roma as a community are mentioned in Turkish records from the fifteenth century. After the Battle of Kosovo in 1389, the Turks conquered Toplica, so the ethnic structure was changed. The first written accounts of Roma settlements were given by a Turkish travel chronicler (Evliya Çelebi) in the seventeenth century, although it cannot be determined with certainty whether he separated the Roma population from the Serbs. An Austro-Hungarian researcher, historian and a travel chronicler (Kanitz, 1868: 356-61) described the Roma population in the Toplica District living on the outskirts of towns of Kuršumlja and Prokuplje, where it is mainly located today (Kanitz, 1868). According to the last census from 2011, the number of Roma people has increased, both in Serbia as a whole, and in the district.

Socio-demographic analyses suggest that this increase cannot be attributed solely to the processes related to natural and mechanical demographic factors, such as, for example, an increase in the birth rate, the reduction of mortality or the migrations (Raduški, 2014:206-7). In the first census after the Second World War in 1948, 0.8% of the total population of Serbia declared themselves as members of the Roma ethnic group, and that level was maintained up to the census in 1961, when it declined to only 0.1%. A decade later, during a wave of ethnic emancipation which affected Serbia, the Roma declared ethnicity more freely (0.7%), and this practice has been particularly intense since the nineties of XX century. Thus, the proportion of the Roma in the population of Serbia in 1991 was 1.4%, reaching 2.1% in 2011, so the Roma became the third largest ethnic group in Serbia (after the Serbs and the Hungarians). A series of political, legal and socio-cultural factors contributed to a freer expression of ethnicity and the repression of expressed ethnic mimicry. They need to be identified not only in the fact that, with the disintegration of Yugoslavia, a supranational framework for identification

82 disappeared but also in factors such as intense efforts of Roma activists to preserve the ethnic  
83 identity of the Roma in Serbia and, in the wider international level, to raise awareness about  
84 the importance of accepting their own national identity, together with a number of social  
85 policy measures that promote the full social inclusion of the Roma population in Serbia.  
86 However, ever present explicit and latent discriminatory practices, although formally and  
87 legally impermissible, contribute that a part of the Roma population in Serbia conceal their  
88 ethnic identity. This applies in particular to the population that does not live in spatially  
89 segregated settlements and that has achieved a certain degree of social integration. According  
90 to scientific estimates, there were at least twice as many Roma in Serbia at the beginning of  
91 XXI century than the census results showed (Bašić and Jakšić, 2006:43). The Toplica District,  
92 particularly the municipality of Kuršumljia, has very large afforested areas, except Žitoradja  
93 (Kuršumljia 63%, Prokuplje 39%, Žitoradja 12%, Blace 37%). Due to a negative birth rate, in  
94 the municipality of Prokuplje forests have been returning to their former habitats (Valjarević  
95 *et al.*, 2014; Valjarević *et al.*, 2018). At first glance, this scenario has positive effects on the  
96 environment and natural capacity of the District. However, the biggest problem faced by  
97 Serbia in joining the European Union is precisely the deficiency in the area of environmental  
98 protection. The Roma settlements are largely situated on the fringes of forests, or even inside  
99 the forest belts, so with the rise of environmental awareness, the Roma population could  
100 become an active factor in the preservation of the forest belts. This is especially true if one  
101 takes into account that, when it comes to joining the EU, Serbia is particularly lagging behind  
102 in opening the chapters dealing with ecology and environmental protection (Stopić *et al.*,  
103 2009), (See also, Figure 1.).



**Fig. 1.** The position of Serbia and the Toplica District

### *Cultural and social practices of the Roma community in Serbia*

As part of the cultural tradition of the largest Pan-European minority, Roma cultures in Serbia have some universal elements resulting from the intermingling of a series of broader historical, economic and political factors including the influence that originated from the intercultural exchange. The attitude that the Roma outlook on the world is "based on archaic images that they brought from their homeland" is not without foundation (Djurović, 1996: 89). However, cultural identity and cultural practices of the Roma in Serbia cannot be understood apart from the micro and macro socio-cultural milieu in which the Roma communities survive. The Roma, as a social group, are characterized by the cultural, social, religious and residential diversity (Djordjević, Todorović, Djordjević, 2000; Sokolovska, 2014; Škorić, Kišjuhas, 2014), as well as social mimicry and a relative group closure that is not only reactive in type – a response to social isolation, but also a form of "protection of

group identification and a way of preserving the group order and structure" (Sokolovska, 2014: 8).

### *Cultural and social practices of the Roma community in Serbia*

As part of the cultural tradition of the largest Pan-European minority<sup>3</sup>, Roma cultures in Serbia have some universal elements resulting from the intermingling of a series of broader historical, economic and political factors including the influence that originated from the intercultural exchange. The attitude that the Roma outlook on the world is "based on archaic images that they brought from their homeland" is not without foundation (Djurović, 1996: 89). However, cultural identity and cultural practices of the Roma in Serbia cannot be understood apart from the micro and macro socio-cultural milieu in which the Roma communities survive. The Roma, as a social group, are characterized by the cultural, social, religious and residential diversity (Djordjević, Todorović, Djordjević, 2000; Sokolovska, 2014; Škorić, Kišjuhas, 2014), as well as social mimicry and a relative group closure that is not only reactive in type – a response to social isolation, but also a form of "protection of group identification and a way of preserving the group order and structure" (Sokolovska, 2014: 8). For several decades, the key characteristics of their social status have been: a) spatial segregation - a common practice of living in separate (ethnically cleansed) settlements that in appearance reflect the state of permanent misery of the majority of Roma population that is dramatically manifested in the organization and way of life "(Bašić and Jakšić, 2006: 36); b) an extremely unfavorable education structure and a high proportion of illiterate population in comparison to the same parameters of other ethnic groups in Serbia (MHMRSM, 2004); c) frequent unemployment or engagement in least paid and stigmatizing positions; d) a low level of inclusion in health and social care; e) the lack of political participation, public action and international organization (Mitrović, 1996:815; Todorović, 2011: 1139); f) low social capital - social relations of the Roma population in Serbia are

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<sup>3</sup> Some residents of the Toplica District came before Slavs migrations to the Balkan Peninsula.

144 primarily based on contacts, the exchange of information and support within the immediate  
145 and extended kinship community, all of which makes social inclusion difficult (Škorić and  
146 Kišjuhas, 2014). In addition, the population in Serbia, and in the region, displays social  
147 distance and stereotypes towards the Roma, which apparently arise from their unfavorable  
148 "subclass", "subproleterian" position (Mitrović, 1990; Miladinović, 2008; Lazar, 2005;  
149 Petrović, Šuvaković 2016)<sup>4</sup>. The totality of outlined characteristics as well as the existential  
150 and social practices in which the majority of the members of the Roma ethnic group live are  
151 the reasons that the Roma in Serbia lack the resources important for the preservation of ethnic  
152 and cultural identity<sup>5</sup>, as well as the resources for true social integration that does not mean  
153 assimilation and suppression of their cultural and ethnic identity. Observed from the  
154 standpoint of the theme of this paper, the professional practices of the Roma in Serbia are of  
155 great importance, namely the ways in which this ethnic group earns an existence. In this  
156 regard, it is important to present the results of a research carried out in 2014 as part of the  
157 project *Social and cultural potential of the Roma community in Serbia*, implemented with  
158 financial support from the Open Society Foundation Serbia (Belgrade)<sup>6</sup>. It was carried out on  
159 a stratified sample (based on the results of the census conducted in 2011 in the Republic of  
160 Serbia), where the strata formed according to the territorial distribution of the Roma in  
161 Serbia.<sup>7</sup> Based on these data, the distribution of the sample by region and the number of  
162 settlements in which to conduct research were determined. The sample of 1,212 respondents

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<sup>4</sup> At the same time, the stereotypical images are saturated with negative qualities attributed to the Roma as being dirty, lazy, primitive, prone to theft and so on. This stable core of stereotypes is home to several positive ones that occur as a constant in most studies of ethnic stereotypes - for example, happy, musical (Turjačanin, 2004; Petrović, Šuvaković, 2016).

<sup>5</sup> True, it should be said that the social situation of the Roma in most countries of the so-called Western Balkans does not differ greatly from their position in Serbia.

<sup>6</sup> The research was conducted through the cooperation of the Department of Sociology, University of Novi Sad, the Department of Sociology, Faculty of Philosophy in Nis and the Department of Sociology, University of Belgrade. Also, the research was joined by a leading researcher of the Roma population in Serbia prof. Dr Dragoljub Djordjević, and the representatives of the Roma community and great connoisseurs of Roma culture - Osman Balić, Zoran Tairović and others were consulted.

<sup>7</sup> Out of the total population that ethnically identified themselves as members of the Roma ethnic group, 29% live in Vojvodina, 18% in the Belgrade region, 14% in the region of Šumadija and Western Serbia, and 39% in the region of Eastern and Southern Serbia.



accounted for 0.82% of the total Roma population in Serbia. The survey was conducted in 34 municipalities which, according to the results of the 2011 census, recorded a high share of Roma people in the total population. In order to encompass the diversity of the Roma population in the research, in the formation of the sample a special attention was placed on the residential aspect that is directly linked to the degree of integration of the Roma into mainstream society, that is, the autochtony of Roma communities and cultural practices. For these reasons, a more detailed classification of the areas where Roma people live was created. The city and village areas where the research was conducted were divided into urban/rural microregions (where there is no territorial concentration of the Roma, but they are integrated into the rest of the population), Roma settlements (mahalas) in cities/villages, slums in cities/villages, mahalas and slums outside of the cities/villages and the suburban settlements<sup>8</sup>. The gender structure follows the structure of the population recorded in the census. Data from our study largely remain within the estimate presented in the Report on the situation of minorities in Central Serbia, compiled in 2000, according to which in Central Serbia only 5% of the Roma work in publicly owned enterprises, and there are practically no Roma in the executive government (Brza, 2000: 23). Although there is improvement compared to the period of a decade and a half ago, it is not large. Thus, less than a third of respondents in the sample classified themselves into one of the offered activity sectors. Only 5.4% said that by profession they belonged to the sector of economic production, 3.1% to agriculture, 5% to trade, catering and tourism, and the same number to the service sector. The Public Services (administration) employ only 4% of the respondents, healthcare and education 5.4%, and the culture and information sector 1.4%. The results that we got show that the structure of specific occupations among the Roma in Serbia is dominated by the unpaid work of housewives with

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<sup>8</sup> In the city microregion, 11% of respondents were questioned, in a city mahala 38.2%, in a city slum 4.7%, in Roma settlements by the city 8.4%, in a slum by the city 3.3%, in a suburb 6, 8%, in a village 16.9%, in a Roma settlement in a village 9%, in a village slum 0.2%, in a Roma settlement by the village 1.1%, in a slum by the village 0.4%.

29.4%, mainly carried out by women. Then, there is wage labor (mainly doing simple and hard labor without a regulated employment status) with 20%, the collection of recyclable materials 13%, resale of goods, either through legal or illegal forms of trade 10.8%. Only 6.6% of the questioned Roma stated they were employed in an economic unit as a worker. Craft products and services employ 5.1% of the Roma, playing music 3.8%, street cleaning 3.1%, while only 2.4% perform agricultural activities. Among the Roma, there are few who hold jobs for highly-qualified persons: 0.2% are lawyers, 0.9% are pedagogues, 0.3% are teachers, 0.3% are engineers. There are very few among administration officers, 1.2%, and 0.9% among the taxi drivers, or medical and paramedical personnel, 0.9%. Sporadically, they engage in begging, 0.4%, divination and healing, 0.3%. Traditional past occupations of Roma people on the territory of Serbia<sup>9</sup> are present in 63.9% of respondents' families. Playing music is dominant with 24.1%, peonage with 21%, blacksmithing 8.3%, reselling horses and carpentry each with 1.7%. Other traditional jobs (such as goldsmiths, weaving, processing of feathers and the like) are present in the families of respondents with less than 1%. A consideration of the intergenerational transfer of interest provides an interesting picture. When we compare the occupations of the respondents and the occupations of their fathers, it can be seen that the occupations of fathers and offspring do not overlap entirely, because many of the fathers' jobs are not even mentioned as activities that respondents currently perform (seed seller, a rope maker, an umbrella repairman, a blacksmith, a knife sharpener, etc.). However, some occupations appear as traditional family occupations that are performed by fathers and sons/daughters. Thus, 65.9% of those who said they were playing music listed a musician as the father's profession, 42.9% of laborers said that their father had also performed the same job. Slightly more than a quarter of respondents (25.6%) who work in the collection and sale of secondary raw materials stated the identical occupation of their fathers.

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<sup>9</sup> More about this in Djordjević, 1984, Volume III; Todorović, 2000, 313 - 333.

210 So, despite the fact that some jobs disappeared, and that today in Serbia much less Roma are  
211 employed as workers in the economy, there remains a number of occupations that is  
212 transferred through generations among the Roma. Taking into account the low social status of  
213 this minority group (the lack of education, the lack of economic inclusion, consequently, the  
214 lack of material resources, access to the media, bank loans and other social resources), the  
215 question about the possibility of their social integration into mainstream society is being  
216 raised (Postma, 1996). For, the vicious circle of social exclusion is being repeated: the  
217 exclusion from education reduces the chances on the labor market (Sparkes, 1999, Petrović,  
218 2011), and the exclusion from the labor market reduces the availability of social benefits that  
219 act as insurance in case of illness, old age, inability to work, whereby the higher the risk of  
220 long-term exclusion or the exclusion in later years of life (Babović; Cvejić; Pudar, 2010). The  
221 chain continues with the material, cultural and political deprivation, which reduces the  
222 chances for the establishment of social relations outside their deprived groups and produce a  
223 feeling of powerlessness, personal and social incompetence, passiveness (Sen, 2000). In the  
224 case of the Roma in Serbia, the situation is more than clear, particularly when one takes into  
225 account the structure of their economic activity.<sup>10</sup> Equipped with such information on the  
226 Roma population in Serbia as a whole, we asked whether the spatial distribution of the Roma  
227 population in the area tested and their registered daily migrations within the geographical  
228 space with the aforementioned natural characteristics can become a part of the policy of social  
229 inclusion of the Roma population in the wider community. We believe that such potential  
230 exists.

231 *Natural resources of the geographical space in the function of the social inclusion of the*  
232 *Roma community*

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<sup>10</sup> According to the results of the 2011 census, only 11.45% of the Roma population are economically active, 16.50% are unemployed, 4.4% are pensioners, 0.10% have property income, 35.15% are children, pupils and students, 17.28% are housewives, while 15.12% belong to the category of others (persons with other personal income, as well as persons unable to work or other persons who do not belong to the above categories).

233 Ecological geography experiences development by asking the question whether humanity is  
234 viable even when separated from nature. The largest development of ecological geography  
235 happened in the eighties of the last century when the first conference on the effects of global  
236 warming had a panel discussion on how we can save the planet Earth and whether the  
237 development in perpetual motion is sustainable or not. Eurocentric dualism failed to separate  
238 the influence of politics on society, even if the society was far from modern, or not  
239 sufficiently accepted by the major communities (Hobson, 2007). The theory on super-natural  
240 effects in geography failed to absolutely come to life. So, today, there is insufficient evidence  
241 that nature is inherently sustainable. Theoretical ecological geography together with political  
242 geography calls for the possibility of post-humanism as a direction that will, due to the great  
243 development and therefore the technology, be able to solve some of the most pressing  
244 problems of mankind, including certain minority communities in certain territories that have  
245 their own characteristics in the ontological sense (Sundberg, 2014). Ecological Geography is  
246 not only important for the acquisition and protection of certain resources within nature, but  
247 also because the development of environmental awareness can prevent conflicts and  
248 strengthen efforts to protect nature (Berdal and Keen, 1997; Le Billon, 2000; Barnett, 2001).  
249 In other words, it is necessary to ensure environmental security and efforts to preserve local  
250 and planetary biosphere as a fundamental system underpinning all human activities. A  
251 geographical space itself can sometimes present certain communities that are traditionally  
252 close to it. The Roma community is related in part to the semi-nomadic way of life, although  
253 its concept and way of life has changed due to globalization, new technology, and improved  
254 social conditions of existence. To that extent, the nomadic way of life has been increasingly  
255 replaced by a sedentary life, so migration and nomadic life usually occur as a result of  
256 discrimination in different historical periods in different geographic areas (Barany 1994;  
257 Škorić and Kišjuhas, 2014). Anthropological semi-nomads within the Toplica District are

bound to three coordinates within the geographic space (Barlovo-Kuršumlija, a suburb of Prokuplje, Staklara settlement and Kastrat Municipality in Kuršumlija).

## **Materials and Methods**

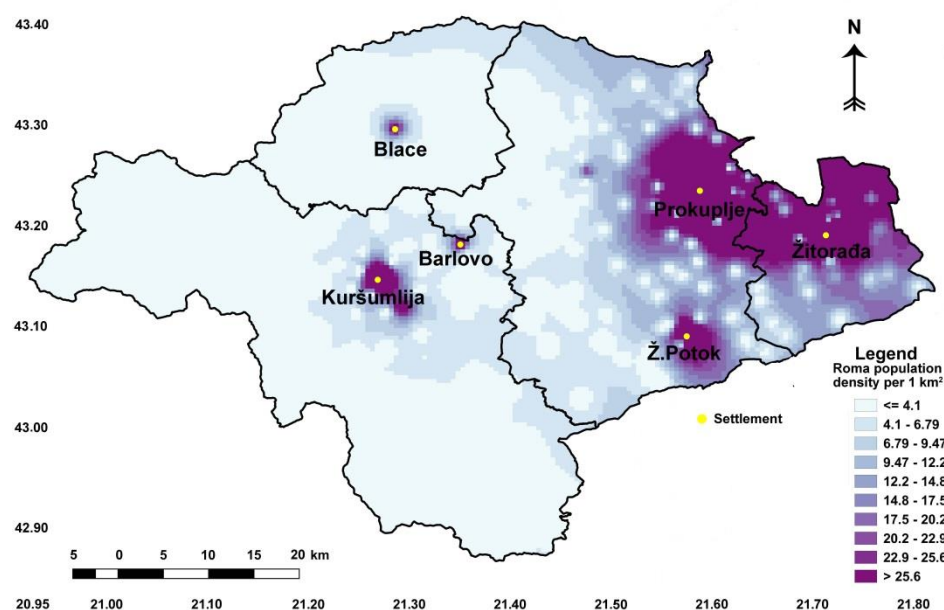
GIS and data modelling is a very powerful tool for calculating and describing certain population properties in a specific area. In this paper, we analyzed demographic characteristics and the changes of Roma population in the Toplica District. For that purpose, we used GIS software QGIS, Grass GIS and SAGA, with tools for geospatial calculations. (Bíl *et al.*, 2012). The satellite recordings of the land and forest areas were downloaded from the official web page of CORINE (Coordination of Information on the Environment), while from the official web page (<http://www.eea.europa.eu/publications/COR0-landcover>) we downloaded vector data with the exceptional view of coniferous, broad leaved and mixed forests, (Wu and Chen, 2016; Frechtling, 1999). After downloading the data, we exported it to the GIS software. In GIS we cropped the territory of the Toplica District for future manipulation of vectorized data. In QGIS, we georeferenced raster data and digitized all positions of Roma settlements. The Ordinary Kriging method is a fundamental part of tools implemented in software Quantum GIS and SAGA (GIS) dealing with spatial analysis. Although there are a few other methods, the priority was given to Ordinary Kriging and the Global Kriging method because of the most realistic autocorrelation and the statistical relationship among the measured points. Thus, with this method, the weights are based not only on the distance between the measured points and the prediction of location, but also on the overall spatial arrangement of the measured points, and it minimizes the variance of the error of estimation. The Ordinary Kriging method was employed through QGIS and SAGA (GIS) extension of Spatial Analyst. The map of the Roma settlements and Roma daily migrations (given in Table 1) in the territory of the Kuršumlija municipality was made using this method (Fig.2,3).

## **Results and Discussion**

284 Empirical research points to the widespread social exclusion of long-established Roma  
285 communities in their home countries, one of which is Serbia (Guy, 2001; Prieto-Flores, 2006;  
286 Sigona, 2005). The results of the census in 2002 show a very small number of Roma people in  
287 the Toplica District. After the war in Yugoslavia (1991-1999), Roma people declared  
288 themselves as being Serbs (Ljujić *et al.*, 2012). The official data of the census in 2002 show  
289 that, in the Republic of Serbia in the entire territory of the Toplica District, the number of  
290 Roma population was 3338 or 3.27 %. Data from the last census in 2011 show that the  
291 number of Roma people significantly increased to 4278 or 4.72%, while the total population  
292 decreased. The data show that the number of Roma people has not increased in demographic  
293 terms, but that the process of segregation has been reduced due to the activities of the  
294 institutions of the European Union. We calculated the migration of the Roma population using  
295 numerical and statistical methods. Also, we used the data from the terrain analyses in Roma  
296 settlements. Other methods we used are: interviews, oral questions, written questions,  
297 statistical books, census materials, etc. With the help of GIS and numerical analysis, we  
298 divided the belts of the Roma population and their gravitational influence in relation to  
299 forests, and the opposite impact of forests to the areas where the Roma live. The strongest  
300 influence of 85-100% around three towns and two villages covers an area of 44 km<sup>2</sup> in  
301 Kuršumlija, 52 km<sup>2</sup> in Ž.Potok, 229 km<sup>2</sup> in Prokuplje, 157 km<sup>2</sup> in Žitoradja. The very strong  
302 influence between 65-85% is in Kuršumlija with a covered area of 14 km<sup>2</sup>, Ž. Potok with 19  
303 km<sup>2</sup>, Prokuplje with 34 km<sup>2</sup> and Žitoradja with 17 km<sup>2</sup>. The medium influence of 45-65%  
304 belongs to the area of 12 km<sup>2</sup> in Kuršumlija, 14 km<sup>2</sup> in Ž.Potok, 19 km<sup>2</sup> in Prokuplje, 18 km<sup>2</sup>  
305 in Žitoradja. The light influence of 25-45% is present in an area of 16 km<sup>2</sup> in Kuršumlija, 18  
306 km<sup>2</sup> in Ž.Potok, 20 km<sup>2</sup> in Prokuplje, 11 km<sup>2</sup> in Žitoradja. The very light influence of 5-25%  
307 covers an area of 20 km<sup>2</sup> in Kuršumlija, 12 km<sup>2</sup> in Ž.Potok, 30 km<sup>2</sup> in Prokuplje, 10 km<sup>2</sup> in  
308 Žitoradja. No influence or a slight influence of 0-5% belongs to the rest of the territory in

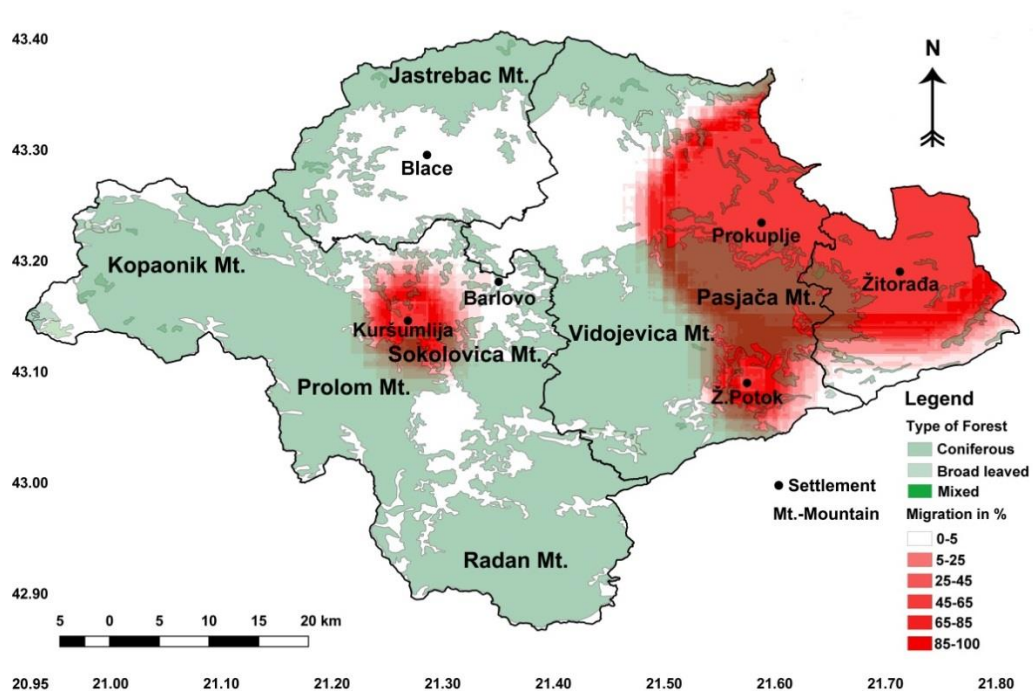
309 Kuršumljija of 846 km<sup>2</sup>, Ž.Potok doesn't have the influence area of 0-5% because Ž. Potok  
310 covers an area of 13.4 km<sup>2</sup> and the influence is higher than the whole territory. Prokuplje  
311 covers area of 0-5% influence with 427 km<sup>2</sup> and Žitoradja does not have the influence area of  
312 0-5% (see Figure 2). Therefore, the area covered in forest is not the same because forests  
313 don't cover a similar area, for example, in municipalities of Prokuplje and Žitoradja, there is a  
314 different dispersion of forest. According to satellite recordings, we measured the forest areas  
315 in the municipalities. In 2015 in the municipality of Prokuplje, forests cover the total area of  
316 40.5%, in Žitoradja 12.8%, in Blace 38.2% and in Kuršumljija 64.5%. In comparison to the  
317 last census data from 2011, the municipality of Prokuplje has an increment of 1.5%, Žitoradja  
318 of 0.8%, Blace of 1.2% and Kuršumljija of 1.5%. Since we divided forests into three  
319 categories (broad-leaved, coniferous and mixed), the coniferous forests are especially  
320 threatened since their territory has been decreasing for many years. Conifers that are strongly  
321 influenced by potential cuts spread over an area of 0.32 km<sup>2</sup>. In the municipality of Prokuplje,  
322 this area is 1.9 km<sup>2</sup>, on the territory of the Municipality of Žitorađa it is 0.4 km<sup>2</sup>, in the  
323 municipality of Blace there are no coniferous forests and a consequent influence. The pressure  
324 on mixed forests would cover the following surfaces; 0.8 km<sup>2</sup> in the municipality of Žitorađa,  
325 0.4 km<sup>2</sup> in the municipality of Kuršumljija. Other municipalities do not have a potential  
326 pressure on mixed forests. The pressure on broad-leaved forests which are most frequent in  
327 the territory of the Toplica District has the following values: in the municipality of Kuršumljija  
328 this area is 30.2 km<sup>2</sup>, in the municipality of Prokuplje the area is 183.5 km<sup>2</sup>, while in the  
329 municipality Žitorađa it is 36.3 km<sup>2</sup>. The increase in the total amount of forestation can  
330 clearly be explained by the fact that forests have been returning to their initial habitats  
331 (Valjarević et al., 2014). Based on the obtained results covering a long period, it can be  
332 concluded that the forestation increased greatly, which indicates a decreased number of  
333 settlements (according to the Census of the Republic of Serbia from 2011, numerous villages

were abandoned) due to social changes in the Toplica District during the period from 1984 to 2012. Monitoring the Toplica District has shown the tendency of increased urbanization related solely to the central parts of the towns, which indicates the constant rural to urban migrations. Namely, due to social changes in the Toplica District during the period from 1984 to 2012, the level of industrialization considerably decreased. Therefore, a constant migration of the population from this area is noticed, especially to Belgrade, the capital of Serbia (according to the Census of the Republic of Serbia from 2011, the depopulation of this territory amounted to 8.1%). The Roma population moved to the central part of the region especially to the city of Prokuplje, because many of them were not included in the reform process and resocialization (Rudić, 1978; Janević *et al.*, 2010). Many of them live in inhumane conditions on the suburb zones of the towns of Prokuplje and Kuršumlija (see Figure 4).



**Fig. 2.** The map of Roma population density in the Toplica District according to the data from the census of 2011





**Fig. 3.** Migration of Roma population to forest areas per one year in %, data from the terrain analysis and from the local books of the municipality of Prokuplje



**Fig. 4.** Roma community in the flow in the edge of the subway of the city of Prokuplje

## Conclusion

Identified determinants of the studied geographical territory (primarily pronounced forestation and the return of forest resources to previous habitats) and the potential impact of population

357 on forest resources that was found require the consideration of measures to preserve and  
358 protect these natural resources, particularly given the weaknesses of the system of ecological  
359 safety in Serbia. On the other hand, a significant concentration of the Roma population in the  
360 study area that is recorded, and the characteristics of their social status, including spatial and  
361 overall social segregation, offer the possibility to include this population in the protection of  
362 ecosystems through certain systematic measures. By initiating a wide range of activities to  
363 preserve local ecosystems, especially forest resources, the Roma ethnic community could  
364 become one of the key actors. As a population with a very low rate of economic activity, it  
365 could be trained to recognize the potential for self-employment (in the business of preserving  
366 forest resources, reforestation, forest cleaning and the collection of recyclable materials  
367 improperly deposited on the forest ground, and in many other activities). Resources, as  
368 valuable goods in society (Granovetter, 1973), whose maintenance and improvement Roma  
369 communities may deal with, can become the basis for strengthening their economic and  
370 overall social position, especially if one takes into account the experience of their members in  
371 the area of forestry. At the beginning of the current century, among the economically active  
372 members of the Roma ethnic community, it was found that as many as 23% of them were  
373 engaged in agriculture, hunting and forestry (MHMRSM 2004:445). Researchers do not  
374 perceive such activities as a new form of social exclusion of the Roma, removing them from  
375 the main currents of social life in Serbia. On the contrary, we see their role in connecting  
376 current major environmental issues which Serbia has to address in the future, which means the  
377 standardization of this activity in the process of joining the EU, and the issues of social  
378 integration of the Roma ethnic minority. This issue takes additional significance when we  
379 take into account the low economic potential of the area and the deindustrialization of the  
380 entire region lasting several decades, which substantially reduces the chances of getting a job,  
381 wherein the possibilities of the Roma community are even fewer, in view of its extremely

adverse educational structure.<sup>11</sup> Namely, more than half of the Roma community in Serbia have no education or have incomplete elementary education (53.72%), a third have completed the elementary education (33.3%), 11.54% have completed secondary education, while only 0,65% have university education (Sokolovska, Jarić, 2014, p. 386), wherein this structure is even more unfavorable in underdeveloped areas of Serbia such as the Toplica District. For these reasons, the spatial and social segregation of the Roma in the Toplica District could be turned into its opposite. The knowledge of the terrain, the migratory practices and a spatial proximity to significant natural resources, paired with appropriate education for environmental protection and occupational training to perform certain tasks within the forest areas in the Toplica District could give the Roma a significant opportunity for a way out of the vicious cycle of poverty and social deprivation, not only by providing new sources of existence, but also by strengthening their social ties with the local population. All this together could become an example of good practice in the social integration of the Roma. In doing so, it is of course necessary to further efforts and implement other measures for social inclusion, such as an intensive commitment to include all Roma children of age in all levels of formal education in Serbia, as well as other activities on strengthening their social and cultural potential.

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<sup>11</sup> According to the latest census, in the Republic of Serbia, 13.68% of the population has no formal education, or has only incomplete primary education, where the Roma ethnic community accounts for almost half of the population in this category - 6.38% (SORS, 2014).

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