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Demographic Changes in the Pădurenilor Region Between 1850 and 2011

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ABSTRACT

The goal of this paper is to identify how Romania's demographic evolution in the last 162 years affected the Pădurenilor Region. The Pădurenilor Region represents one of the richest ethnographic regions of Romania due to its relative isolation which helped maintain traditional speech, clothes, traditions and architecture unchanged for hundreds of years. The demographic evolution of Pădurenilor Region is emphasized by the 10 censuses organized between 1850 and 2011. The 1850, 1880 and 1910 censuses were organized by the Kingdom of Hungary and the ones from 1956, 1966, 1977, 1992, 2002 and 2011 were organized by Romania. The overall result of the study showed a mixed dynamic of the Pădurenilor Region, the growth from 1850 to 1966 followed by a rapid decrease in population from 1966 to 2002.

1. INTRODUCTION

The Pădurenilor Region is located in Hunedoara County along the upper sector of the river Cerna, bounded to the north by the Mureş Valley, to the west by the Poiana Ruscă Mountains, to the south by the Haţeg Depression and to the east by the lower Cerna Valley.

The Pădurenilor Region represents one of the richest ethnographic regions of Romania due to its relative isolation which helped maintain traditional speech, clothes, traditions and architecture unchanged for hundreds of years.

Administratively speaking the Pădurenilor Region covers eight rural areas: Bătrâna, Bunila, Cerbăl, Ghelari, Lelese, Lunca Cernii de Jos and Topliţa (fig. 1). The seven areas unite a total of forty-one villages and hamlets with a total of 6125 inhabitants according to the 2002 Romanian Census [1][2][3][4][5] (partial data

from the 2012 Romanian Census indicate a total of 4807 inhabitants [6]).

In total the seven rural areas of the Pădurenilor Region occupy 564.4 square kilometres, the majority of which is covered by forest. Agricultural land is scarce and is located in the valleys of rivers and streams that cross the region.

The region's landscape is considered mountainous although heights above 1000 meters are located only in the west.

In the east erosion during different geological periods created high plateaus of over 800 meters which still have mountainous features.

The region's hydrographical network is composed of one main river (Cerna) and four smaller streams (Poieniţei, Runcului, Zlaştiiului and Dobra) all of which spring from Poiana Ruscă Mountains and have a general direction west-east carving out deep valleys with numerous gorges.

The biggest and most beautiful of these gorges is located on the river Cerna and it is a natural reserve - "Rezervația Naturală Cheile Cernei".

Forestry and animal breeding is the main source of income for the inhabitants of the Pădurenilor Region. In the past the rich deposits of iron ore and dolomite were extracted from mines and quarries located near Ghelari and Teliuc (gradually closed after 1989).

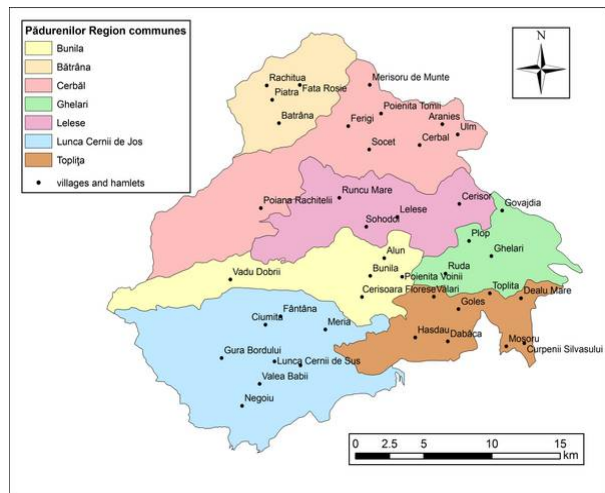


Fig. 1. Pădurenilor Region - administrative map.

Access to the Pădurenilor Region is difficult being made along three secondary county roads from Teliucul Inferior to Lunca Cernii de Jos, Ghelari - Vadu Dobrii and Lelese. Besides these secondary roads the network is largely made up of unmodernised roads, communal and forestry.

In the Pădurenilor Region a railroad service functioned between 1900 and 1997 on the route Hunedoara - Govăjdia - Ghelari and ensured the transport of iron ore from Ghelari mine to U.F. Hunedoara and a passenger service from Hunedoara to Govăjdia and Ghelari [7].

2. THEORY AND METHODOLOGY

Demographic dynamic represents one of the most meaningful ways to characterize and understand a territory and identify potential problems in further socio-economic development. The goal of this paper is to identify how Romania's demographic evolution in the last 162 years affected the Pădurenilor Region.

In Transylvania and in Hunedoara County in particular demographic evolution over the last 162 years was influenced by seven events that determined the evolution of settlements and the dynamic of the population.

Chronologically the seven events are: the strengthening of Hapsburg Empire's power, the exploitation of iron resources from Poiana Ruscă Mountains on an industrial scale, construction of Arad - Alba Iulia railway, the colonization of Hungarian and

German people in Transylvania, the union of Transylvania with Romania, the communist regime and the political regime change in 1989.

The demographic influence of the seven events is emphasized by 10 censuses organized between 1850 and 2011.

The 1850, 1880 and 1910 censuses were organized by the Kingdom of Hungary and the population had a general rising trend do to the first three events mentioned above.

After the union of 1918 Romania organized seven more important censuses, the first in 1956 showed a decrease in population due to the war period, the censuses of 1966, 1977 and 1992 showed a general increase in population but a decrease in rural areas and finally the censuses of 2002 and 2011 are characterized by an overall decrease in population.

Currently it is obvious that we are in a period marked by a dramatic reduction in the population with multiple causes: aging, low birth rate, rural - urban and external migration and low standards of living in rural areas.

All these causes are amplified in relatively isolated areas as the Pădurenilor Region due to low socio - economic potential and the lack of alternatives to traditional way of living.

So that the Pădurenilor Region and its ethnographic potential will not disappear we must design programs specific to mountain rural areas that encourage traditional lifestyle but also create conditions for a sustainable development.

In order to identify priority areas were to implement projects it is necessary to have knowledge of demographic change at all levels, thus the results will present the general situation of Pădurenilor Region, the situation of each rural area of the region and were needed situations of individual villages or hamlets.

3. GENERAL RESULTS

The numerical evolution of the population in the Pădurenilor Region was determined by the action of the seven events listed before.

In 1850 the number of inhabitants in the Pădurenilor Region was 9502, with increased natural growth and migration towards the developing industrial centres Ghelari, Govăjdia and Toplița, the population reached 12936 inhabitants in 1880.

Between 1880 and 1910 the industrial development of "Uzinele de Fier Hunedoara" and the colonization of Hungarian people in Ghelari led to another increase in population to 15,392 inhabitants.

The First World War took its toll so between 1910 and 1930 the population dropped to 14,430 inhabitants.

Between 1930 and 1956 the population grew only slightly to 14,870 inhabitants given the hard living conditions after the Second World War.

The population continued to grow due to the increased natural growth until 1966 when it reached its highest point, 15400 inhabitants.

After 1966 the industrial development of the cities in the Mureş, Cerna and Strei areas led to a migratory trend to these urban centres, the aging

process accentuated the population decrease in the Pădurenilor Region so that in 1977 the population was 12611 inhabitants, in 1992 it fell to 8208 inhabitants, in 2002 it was 6125 inhabitants and finally in 2011 it reached an all time low of just 4807 inhabitants, which is half than what it was back in 1850 (table 1).

Table 1. Pădurenilor Region - population between 1850 and 2012.

Year	Pădurenilor Region	Bătrâna	Bunila	Cerbăl	Ghelari	Lelese	Lunca Cernii de Jos	Toplița
1850	9502	640	1106	1602	1673	1485	1620	1376
1880	12396	717	1407	2104	2002	1832	2511	1823
1910	15392	653	1678	2031	2976	1803	4058	2202
1930	14430	587	1692	1756	2719	1532	4096	2048
1956	14870	539	1499	1436	3871	1162	4334	2029
1966	15400	709	1420	1383	5190	1158	3612	1928
1977	12611	315	1102	1297	4639	975	2661	1552
1992	8208	278	664	918	3156	635	1501	1056
2002	6125	175	462	665	2314	511	1116	882
2011	4807	124	292	470	1927	395	894	705

Since the Pădurenilor Region is made up of seven communes it is important to analyze the evolution of each community to show its strengths and weaknesses in organization and functioning. Not only the population has changed between 1850 and 2012 but also the structure of communes in the Pădurenilor Region.

Changes took place in consequence of the founding or merging of some villages and hamlets, which indirectly affected population dynamics by creating socio-economic imbalances at the level of the commune (table 2).

Table 2. Pădurenilor Region - number of villages between 1850 and 2012.

Year	Pădurenilor Region	Bătrâna	Bunila	Cerbăl	Ghelari	Lelese	Lunca Cernii de Jos	Toplița
1850	34	1	7	8	4	4	3	7
1880	34	1	7	8	4	4	3	7
1910	33	1	5	8	4	4	4	7
1930	33	1	5	8	4	4	4	7
1956	41	4	5	8	4	4	8	8
1966	41	4	5	8	4	4	8	8
1977	41	4	5	8	4	4	8	8
1992	41	4	5	8	4	4	8	8
2002	41	4	5	8	4	4	8	8
2011	41	4	5	8	4	4	8	8

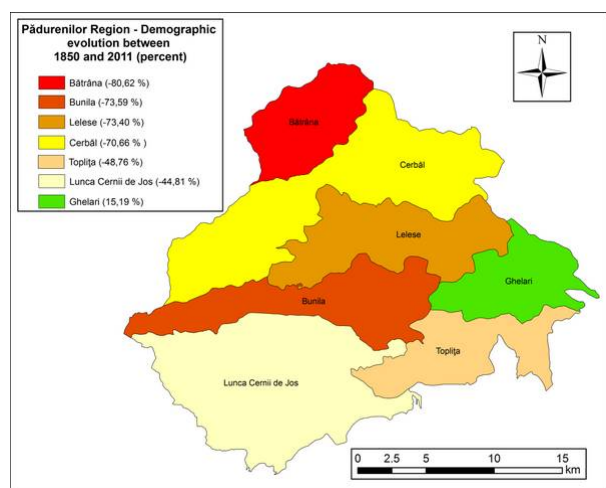


Fig. 2. Pădurenilor Region - demographic evolution between 1850 and 2011.

Bătrâna commune is located in north-western part of Pădurenilor Region and until 1956 it was made up of a single village (Bătrâna). After 1956 three new villages (hamlets) were founded: Fața Roșie, Piatra and Răchițaua. These three hamlets had a low population from the beginning; the highest number of population of 69 inhabitants was recorded in Piatra in 1966. The overall population of Bătrâna commune registered two demographic peaks, the first in 1880 with 717 inhabitants and the second one in 1966 with 709 inhabitants. After 1966 the population decreased steadily to just 124 inhabitants in 2011.

Bunila commune, situated in the centre of Pădurenilor Region, west of Ghelari is an example of a commune which undergone an administrative collapse. In 1850 it consisted of seven villages and hamlets (Bunila, Alun, Cerișoara, Florese, Poienița Voinii,

Buzdular and Vadu Dobrii) around 1900 the villages Cerișoara and Florese were merged to form Cerișoara Florese and the hamlet Buzdular was incorporated to Poienița Voinii. Demographically Bunila was one of the largest communes in the area; it had 1106 inhabitants in 1850 and had a steady increase until 1930 when it reached 1690 inhabitants. Between 1930 and 1966 it had a moderate drop to 1420 inhabitants, after this relative calm period the population dropped abruptly to 664 inhabitants in 1992 and then to just 292 in 2011.

In Bunila commune one can observe a particular situation, the depopulation of Alun village. The village has grown mainly due to the exploitation of marble resources, from 287 inhabitants in 1850 the population peaked to 438 inhabitants in 1930 but then suffered dramatic declines reaching just 14 inhabitants in 2002 (results from 2011 census are not yet available for individual villages). It is worth mentioning that this village like many others in Pădurenilor Region has a great ethnographic heritage, this village also has all the houses and roads built from marble extracted at the local quarry.

Cerbăl commune is located in the northern part of Pădurenilor Region on a high plateau (700-900 m) surrounded by Zlaști and Runcu streams. It is one of the largest communes from Pădurenilor Region with an administrative area of 130.16 square kilometres and a total of eight villages and hamlets. In 1850 it was the third largest commune after Ghelari and Lunca Cernii de Jos with a population of 1602 inhabitants. In 1880 it peaked reaching 2104 inhabitants after which the population suffered a steady decline reaching 1499 inhabitants in 1956, then 1102 inhabitants in 1977 point at which the rural - urban migration really begun to be an important issue. In 1992 after the fall of the communist regime the migration phenomenon increased so that the population dropped to just 664 inhabitants, reaching an all time low in 2011 with just 292 inhabitants. Over time the administrative structure of the commune kept constant being made up of eight villages and hamlets: Cerbăl, Arănieș, Feregi, Merișoru de Munte, Poiana Răchițelii, Poienița Tomii, Socet and Ulm. Out of the eight the most worrisome decline was registered in Merișoru de Munte were in 2002 only 21 people lived, less than half that in 1992. If the half-life rate continues it is very likely that in 10 years the hamlet will be abandoned.

Ghelari commune is situated in the eastern part of Pădurenilor Region and demographically is by far the biggest commune of the area. Its development was influenced by the presence of massive resources of iron ore and dolomite limestone. Extraction and processing of iron ore in the area is attested by numerous historical artefacts and documents which describe in detail the workshops from Govăjdia valley (including the world famous blast furnace from Govăjdia). Due to the economic importance of iron ore

resources the villages and hamlets in the area developed relatively quickly so that in 1850 Ghelari commune had 1673 inhabitants, 939 of which lived in Ghelari. The construction of the modern iron mine, the limestone quarry and the transport system to U.F. Hunedoara were the main factors in Ghelari's intensive demographic development.

The commune reached the height of its development in 1966 when 5190 people lived here. This was a direct consequence of three key factors: positive demographic growth, migration and the colonization of Hungarian and German populations until 1918 (in 1910 at the peak of this process there were 535 Hungarians and 66 Germans living in the area). After 1966 gradual depletion of iron ore resources reversed the migration trend and the population recorded moderate decreases as it reached 4639 inhabitants in 1977 and 3156 inhabitants in 1992. The closing of the furnaces in Hunedoara in 1994 brought with it the closing of the mine in Ghelari and the dramatic decrease in population to 2314 inhabitants in 2002, figures for 2011 showing a further decline to just 1927 inhabitants.

It must be noted that the village of Ghelari represents, due to its central role structures, the area coordinator of the Pădurenilor Region polarizing all other 40 villages. Because of its economic role in Ghelari have been concentrated over time a number of functions usually found in urban areas: a small hospital, a high school, shops and a train station (located 3 kilometres away at Crăciuneasa quarry). All of these have worked together in the development of Ghelari village. The population rose from 939 inhabitants in 1850 reaching a maximum of 4134 inhabitants in 1966 then declined steadily reaching 2675 in 1992 respectively 1919 inhabitants in 2002. Because Ghelari commune is positioned relatively close to the city of Hunedoara there is no immediate risk of depopulation in any of the villages. Alun, the smallest village from the commune had 53 inhabitants in 2002 up from 44 inhabitants in 1992.

Lelese commune is situated in the center of Pădurenilor Region to the northwest of Ghelari commune. Due to its proximity to Ghelari and implicitly Hunedoara it was one of the largest communes in the area. In 1850 a total of 1485 people lived in its four villages (Lelese, Cerișor, Runcu Mare and Sohodol). In 1880 it peaked at 1832 inhabitants and it was followed by a downward trend reaching 1532 inhabitants in 1930 and 975 in 1977. After the fall of the communist regime external migration has increased such that only 635 people lived here in 1992, number that fell to just 395 inhabitants in 2011.

Lunca Cernii de Jos commune is located in the southern part of the Pădurenilor Region in the upper meadow of Cerna. In terms of administrative surface it is the largest commune in Pădurenilor Region occupying a total of 134.64 square kilometres. Also in

terms of number of villages and hamlets it is the largest of the area with eight villages, just like Bunila and Toplița communes. And just like in the case of Bunila one can see an increase in the number of villages over time. If initially there were only three villages (Lunca Cernii de Jos, Lunca Cernii de Sus, and Meria) after 1900 new village cores begin to emerge. The new villages were decreed to compensate for the large area of the commune and the inaccessible terrain. Authorities have decreed new villages in remote areas of the commune where there was a greater concentration of residents.

The first such village core to emerge around the year 1900 is Ciumița which is located to the north of Lunca Cernii de Sus. Due to geographic placement and the specific factors of the area this village has depopulated rapidly so that from 130 inhabitants in 1910 population has decreased to 43 in 1977, 4 inhabitants in 1992 to the point where no one lived here in 2002. In all, before the 1956 census other four villages were decreed: Fântâna, Gura Bordului, Negoiu and Valea Babii. The village of Fântâna is located in the area close to Leontina Peak at an altitude of over 1100 meters. Initial population in 1956 was 184 inhabitants decreasing constantly to just 38 in 2002. The village Gura Bordului is located upstream of Lunca Cernii de Sus at the confluence of Board creek with Cerna. In 1956 it had 525 inhabitants number which decreased dramatically to 139 in 1992 and then to just 81 inhabitants in 2002.

The village of Negoiu is located in the south of the commune in the upper meadow of the homonym stream. In 1956 in the village lived 932 people but the number decreased steadily reaching 581 in 1977, 342 in 1992 and just 241 inhabitants in 2002. The last village formed around 1950 is Valea Babii which is located to the north of Negoiu. In 1956 it had a population of 81 which grew to 109 in 1966 and then fell to just 30 inhabitants in 2002.

In terms of demographic evolution of the commune this was excellent until 1956 so that from 1620 inhabitants in 1850 the population increased constantly reaching 4058 in 1910 to the maximum of 4334 people in 1956. After 1956 there comes a period of drastic decline, the population reaching 1501 inhabitants in 1992 and then dropping to just 894 in 2011. Although the last 50 years have been marked by a negative population dynamic Lunca Cernii de Jos is still the second largest commune of the Pădurenilor Region after Ghelari.

Toplița commune is located in the southeast of Pădurenilor Region along the Cerna valley. We can see a phenomenon similar to Lunca Cernii de Jos only here we have just one new village forming in the early 1950's, the village of Mosoru. This village was formed from a remote core of the village Curpenii Silvașului. In 1956 in Mosoru lived 47 people but their number decreased

constantly to reach 3 inhabitants in 1992 and just one in 2002. The village of Curpenii Silvașului had a similar fate ending up abandoned since 1992 after previously in 1850 it had 120 inhabitants and had peaked to 290 inhabitants in 1910. As for the rest of the six villages of the commune they do not have any problems regarding depopulation. The lowest population reported in 2002 was 20 inhabitants in the village of Goleș. Overall demographically the commune had a good evolution growing from 1376 inhabitants in 1850 to 2202 inhabitants in 1910 followed by a slow decline until 1977 when the population was 1552 inhabitants. After the fall of the communist regime an increase in external migration increased the fall of the population so that in 1992 the population was 1056 inhabitants and in 2002 it was just 705 inhabitants. The decrease in number of inhabitants in Pădurenilor Region also led to an overall human density. If in 1850 this was of 16.85 inhabitants/square kilometre in 2002 it was just 8.51 inhabitants/square kilometre (table 3).

Table 3. Pădurenilor Region - population density between 1850 and 2012.

Year	Density (people/square kilometre)
1850	16.85
1880	21.96
1910	27.27
1930	25.56
1956	26.34
1966	27.28
1977	22.34
1992	14.54
2002	10.85
2011	8.51

4. MAIN CONCERNS ON AREA DEMOGRAPHICAL CHANGES

From this analysis I believe that the main problem, in terms of population, that the Pădurenilor Region has is depopulation and abandonment of villages and hamlets. Thus after the 2002 situation we see that from the 41 villages in Pădurenilor Region 23(56%) had fewer than 100 inhabitants, number that can increase when the final results from the 2011 census are made public. Also in Pădurenilor Region 17 villages (41,4%) had less than 50 inhabitants in 2002, 6 villages (14,6%) had less than 20 inhabitants and 2 villages (5%) were abandoned (table 4).

It is possible that following a negative demographic evolution over the next 10-20 years that the villages with less than 50 inhabitants will suffer a great fall in population or even be abandoned. In addition to the loss of ethnographic heritage of these villages the depopulation process has another more serious effect on the environment: land use change and landslides.

Table 4. Pădurenilor Region - population in 2012 in individual villages.

Village	Population	Village	Population
BĂTRÂNA	117	LELESE	194
Fața Roșie	33	Cerișor	123
Piatra	10	Runcu Mare	159
Răchițaua	15	Sohodol	35
BUNILA	97	LUNCA	
Alun	14	CERNII DE	205
Cerișoara	172	JOS	
Florese	140	Ciumița	-
Poienița	39	Fântâna	38
Voinii	140	Gura	81
Vadu	39	Bordului	251
Dobrii	122	Lunca Cernii	270
CERBĂL	122	de Sus	241
Arănieș	42	Meria	30
Ferigi	90	Negoiu	183
Merișoru	21	Valea Babii	
de Munte	165	TOPLIȚA	
Poiana	99	Curpenii	-
Răchițelii	112	Silvașului	188
Poienița	44	Dăbâca	50
Tomii	44	Dealul Mic	21
Socet	112	Goleș	395
Ulm	44	Hășdău	1
GHELARI	1919	Mosoru	44
Govăjdia	134	Văleri	
Plop	53		
Ruda	208		

Currently one of the specific features of the Pădurenilor Region is that land is worked in terraces that require constant care. Abandonment of villages and farmland can lead to phenomenon which favours the formation of ravines and landslides.

4. CONCLUSIONS AND MEASURES TO REVIVE THE PĂDURENILOR REGION

The Pădurenilor Region is a disadvantaged mountainous area subject to an intense process of depopulation for the last 50 years. After a positive demographic trend of over 100 years (1850 - 1966) the socio-economic changes of the last 50 years along with specific harsh conditions of the mountain areas have determined a process of depopulation difficult to stop, with increased intensity and unpredictable evolution.

There is no doubt that some of the ethnographic heritage of the area was lost but its not late to save the Pădurenilor Region.

Saving measures of the Pădurenilor Region should be integrated in national, county and local development plans.

Since the Pădurenilor Region with its iron ore and wood resources was the engine behind the development of Hunedoara city and of the entire central area of Hunedoara County I believe that the revitalization of the area must start from them.

To revive the area I suggest five simple interconnected steps: Hunedoara - Ghelari railway reconstruction and tourism promotion of Pădurenilor Region, exploration and exploitation of new iron ore resources in the area with advanced technologies, revitalization of villages by encouraging young people to move in the area, promoting the timber industry and promoting sustainable farming areas.

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