COMMUNITIES BETWEEN PRESERVATION AND DISAPPEARANCE: THE DEMOGRAPHIC HAZARD IN BEIUŞ LAND

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Abstract: The demographic hazard issue has been more and more approached in the geograhpic literature of the last decades, being relevant for a community viability and vulnerabilty. The present study is proposing an analysis of the demographic hazard of Beiuş area which should mainly highlight those vulnerable areas that have a problematic demographic status. In order to achieve the proposed goal, we have methodologically used the already known indicators: the demographic dimension of the settlements, the feminization coefficient, the demographic ageing coefficient, the economic dependency coefficient etc. As a result of this study, there has been highlighted the existence, as regards the intensity of the demographic hazard, of several types of settlements: settlements in a critical situation, on the verge of extinction, settlements of moderate demographic hazard and of discreet, sequential demographic hazard. The question that arises is: the critical demographic status of some settlements in Beiuş area is suggesting the necessity to intervene in their support (having in mind the „*authenticity*" derived from the preservation of the archaic lifestyle as opposed to globalization) or needs to be regarded as a normal evolution of a system with limited development potential.

Key words: demographic hazard, viability, vulnerability, Beiuş land

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INTRODUCTION

A settlement's viability, or, on the contrary, vulnerability is best rendered by the human component. Within any territorial system, its adaptation to the complex development potential of a territory is represented by the migration of young population and labour force from the problematic areas towards the more attractive ones. The direct consequences of such a phenomenon are clearly rendered by the demographic hazard, one of the specific markers of a settlement's viability.

The specialized literature in Romania has pretty recently and consecutively approached the more complex issue of human hazards, either in papers approaching the hazards of the geographic systems (Ianoş, 1994), or in specific papers, mostly approaching the social hazard field: Surd et Ardelean (1993), Guran et Turnok (2001). An integrated approach of the human hazard belongs to

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Benedek (2002). In 2002, Ramona Raţiu dealt with the natural and social-economic potential in order to assess the vulnerability of the rural settlements in the Someş river field. More recently (in 2010), Sorochovschi analyzed the vulnerability of the rural settlements through its defining indicators (spatial, physical, social-economic and environmental), the demographic vulnerability being one of those. An overall view of the demographic hazards is given by Rotariu's paper (2004). Surd and al. (2007) worked out a complex paper approaching the demographic hazard in the Apuseni Mountains.

The demographic hazard issue in Beiuş land is one of the many aspects regarding the viability or, on the contrary, vulnerability of some settlements in this specific area. One of the „land-type" regions specific to Romania, Beiuş land, functionally overlaps the area polarized by its traditional center, Beiuş, being administratively composed of four towns (Beiuş, Ştei, Vaşcău, Nucet) and 21 communes. Geographically, Beiuş land coincides with Pocola Depression (the internal compartment of Beiuş Depression) separated by Holod Depression (the external compartement of Beiuş Depression) through the Crişul Negru Gorge (Filimon, 2007).

The natural status of semi-closed depression has triggered, over the centuries, its preservation in a relative isolation which allowed the fractionation between the human component and its living territory and the individualization of this area with relation to the neighbouring ones. As a result, it triggered the emergence of the „land" status under various aspects which can be capitalized in the territorial planning through a territorial development strategy focused on its establishment as project territory (Filimon et al., 2010).

The demographic components of Beiuş land are as follows: the total amount of population (2002): 83921 inhabitants; the general population density (2002): 42.34 inhab / sqkm; negative *natural increase* -7.2‰; negative *migratory increase* -1.8‰. The settlements in Beiuş area are 129, of which 4 towns and 125 villages grouped in 21 communes.

The most important aspect of originality of these settlements is *the high degree of disintegration into small and very small villages, at a short distance range,* morphology being the one that imposed the structure and texture type of the villages of Beiuş.

The conventional village in Beiuş land has 485 inhabitants, thus being in the category of small villages. In these relatively small communities appeared the social space of Beiuş land, that certain „genre de vie" in the French literature, as an element of regional individuality. Due to this dimensional aspect and the social-economic context of the last decades, some of these settlements are on the verge of extinction, the main goal of the present study being their identification.

OBJECTIVES AND METODOLOGY

The present study has as its objective the highlighting of the degree of vulnerability of Beiuş communities with relation to the demographic hazard. The outline of some possible ways of settlement recovery where the demographic hazard is high is also another objective of this particular study.

The metodology used in the working out of this study is the one already established for this kind of analyses. We started from the definition of the demographic hazard suggested by Surd and al. (2007), according to which: „....the demographic hazard resides in the incapacity of some *human collectivities, varying in number, to sufficiently exploit (self-sufficiency) their control and affiliation area, thus turning into backed and/or dependent collectivities"* (Surd et al., 2007, p. 75).

In order to achieve the first objective we analyzed the demographic hazard at locality level. The used indicators to highlight this phenomenon have been: the demographic dimension of the settlements, the feminization coefficients, the amount of the elderly of the total population, the amount of the young population, the demographic ageing parameter (old / young ratio), the economic dependency parameter (inactive/active ratio), each and every one of them highlighting the favourable and critical situations.

In the case of village geo-demographic dimension we used the already established figures: under 500 inhabitants - small villages, 501 - 1500 inhabitants - medium villages and over 1500 inhabitants - large villages. The data source was the population and habitation census (2002), at locality level.

THE ANALYSIS OF THE DEMOGRAPHIC HAZARD MARKERS IN BEIUŞ LAND
THE DEMOGRAPHIC DIMENSION OF THE SETTLEMENTS

Within an area of 195,3 sqkm and a population of 83,921 inhabitants, Beiuş land comprises 129 localities. The 125 rural localities cumulate 60,712 inhabitants, while the 4 towns have a total of 23,209 inhabitants, representing 27.6% of the total population in Beiuş area. The demographic dimension of the settlements in Beiuş land, due to the numerical evolution of the population and the social-political factors, represent a geographical feature of this area. The importance of this marker in any analysis of the human component is significant, the settlement dimension highlighting, even though indirectly, both the habitat potential of the area and the quality features of the population. The particularity of Beiuş land, from this perspective, is the high weight factor of small localities (80), which is 62% of the total amount of settlements (figure 1). These settlements are mainly subject to the demographic hazard by the small number of inhabitants which leads to depopulation.
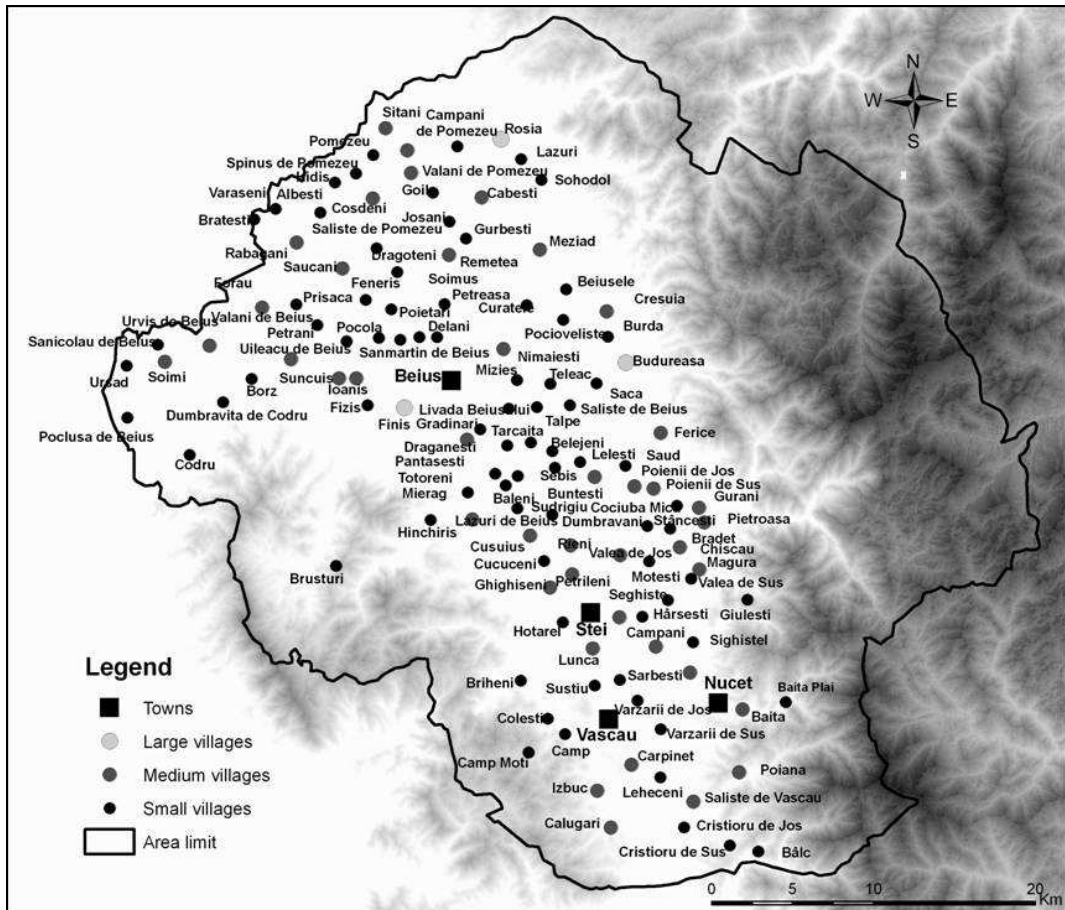

Figure 1. Beiuş Land. Demographic dimension of settlements
(Source: Data from DJS Bihor)

In the second category, the medium settlements, there are 42 (32.5%), mainly located at the limit between the depression hearth and the mountain frame. The large settlements are 2.3% of the total, respectively 3: Budureasa, Finiş şi Roşia. In conclusion, although there is a pretty large number of settlements, depending on the dominant geo-demographic size, their geo-demographic potential is reduced. The human hazard is triggered by the demographic dimension of the locality itself.

THE FEMINIZATION COEFFICIENT

The feminization coefficient of the population in Beiuş land is part of the recorded general trend at national level and clearly indicates situations derived from the local area features.

This coefficient has an average rate of 104.2 women / 100 men, close to the one recorded at national level (105 women / 100 men). The minimum and maximum rate ranges from 79.5 women / 100 men in Lacu Sărat and 150 women / 100 men in Cucuceni.

Depending on this average rate there were established 4 distinctive classes (figure 2) which divide the localities into favourable or disadvantageous situations.
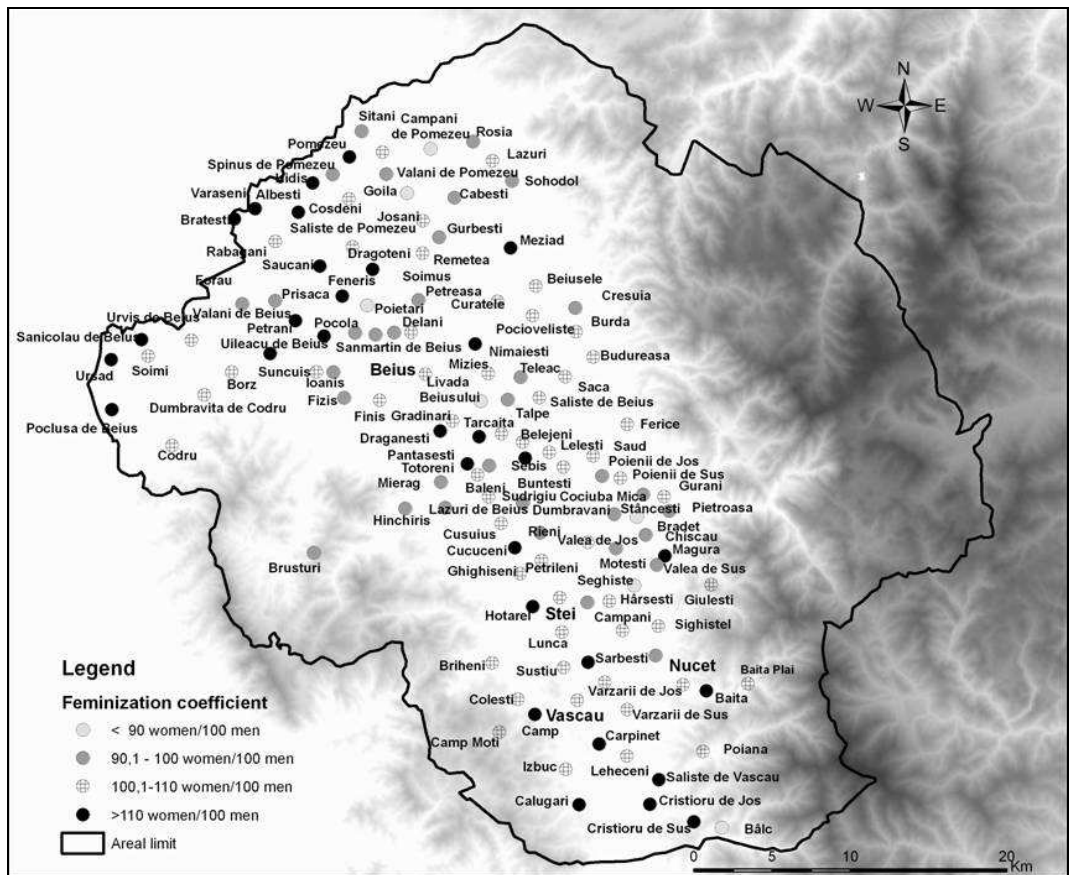

Figure 2. Beiuş Land. Feminization coefficient
(Source: Data from DJS Bihor)

Most of the localities belong to the class of 100.1 - 110 women / 100 men (44.1% of the total number of localities) and over 110 women / 100 men (24%) (figure 2). By these rates and the rural particularity of the area, one can assess that the largest part of the settlements are in a disadvantageous situation.

A specific feature is the dominance of the male population in the case of the towns of Ştei, Nucet şi Vaşcău and of most of the settlements in their vicinity, as a result of the industrial activity.

In the class of under 90 women / 100 men and 90.1-100 / 100 men there are 41 settlements. They are mainly located in the depression hearth and less in the vicinity of some industrialized areas.

THE WEIGHT FACTOR OF THE ELDERLY POPULATION OF THE TOTAL AMOUNT

Given by the average rate of this coefficient, 27.3%, Beiuş land is much higher than the national rate (19.4%), the threshold of demographic ageing (12 - 14%) being exceeded by almost all localities, except for Băiţa-Plai and Şoimi (6%, respectively 10%). Although both Băiţa-Plai and Brusturi are part of the very small localities class, they hold the extreme rates of the depression when it comes to this coefficient. The former has the lowest number of old persons (6%) while the latter is entirely populated (100%).
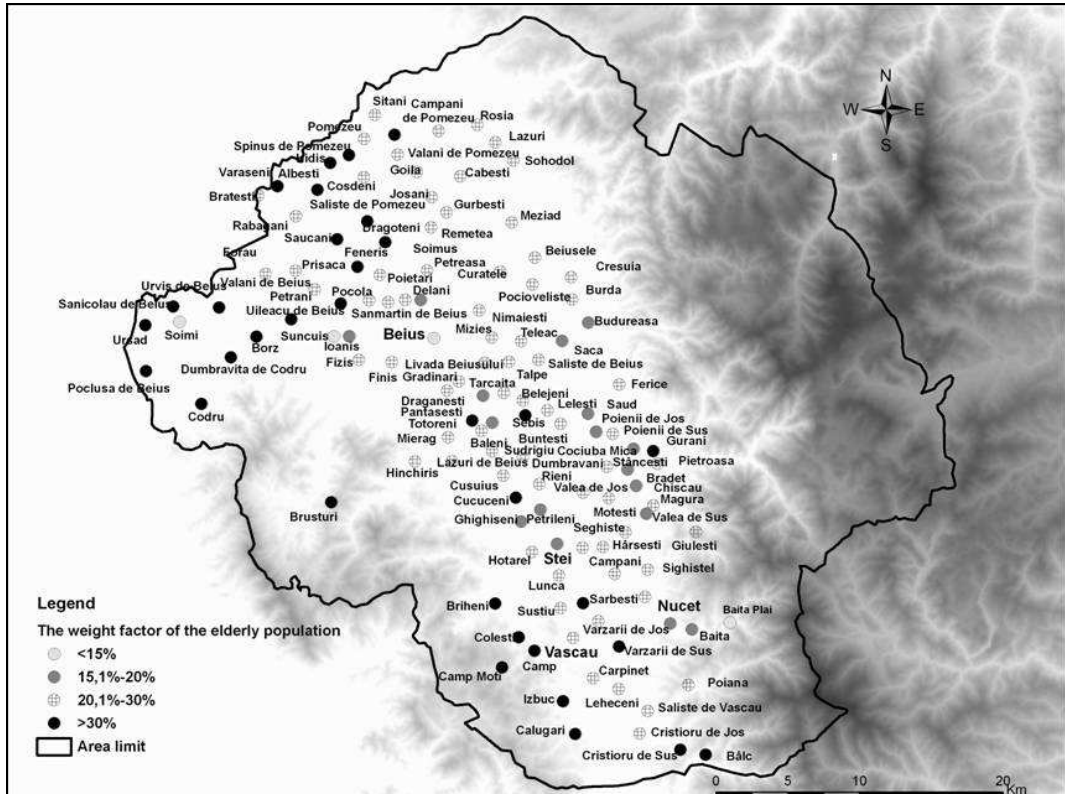

Figure 3. Beiuş Land. The weight factor of the elderly population of the total amount
(Source: DJS Bihor)

The fall of the localities into one of the four established classes has been done according to the weight factor of the elderly population of the total amount of population. A large number of localities belongs to the third class, 20.1% - 30% old population, respectively 75 settlements. To this, there comes yet another large number of settlements (33, including the town of Vaşcău) where the elderly are 30% (figure 3). Together, the two classes hold over 83% of the total number of settlements in the depression and certify the high degree of demographic ageing process. In the other two classes there are 21 settlements, of which only Băiţa-Plai, Şoimi, Şuncuiuş and the town of Beiuş are in the first class. The high weight factor of the elderly population is the result of the development in time of these small rural localities with reduced economical potential which did not allow the preservation or the drawing in of the young population.

THE DEMOGRAPHIC AGEING COEFFICIENT

By its numerical rates, it confirms the demographic ageing process. The average rate of 2 old / 1 young recorded in the area under analysis exceeds the rate of 0.42 old / 1 young. This rate is

the result of the numerous old population, doubled by very little young population. The towns of Beiuş, Ştei, Nucet and 18 villages have a rate of 0.42 old / 1 young. Most of the localities (figure 4), i.e. 93 belong to the class of 1 - 3 old / 1 young. The localites in which the coefficient rate ranges between 3.1 old / 1 young and 5 old / 1 young arises a serious question regarding their long and short term viability. The most critical situation is recorded in 7 localities (Bâlc, Brusturi, Câmp Moţi, Călugări, Coleşti, Criştioru de Sus and Sânicolau de Beiuş) with 5 old / 1 young. All these are small localities, located in a natural framework with limited habitat potential.
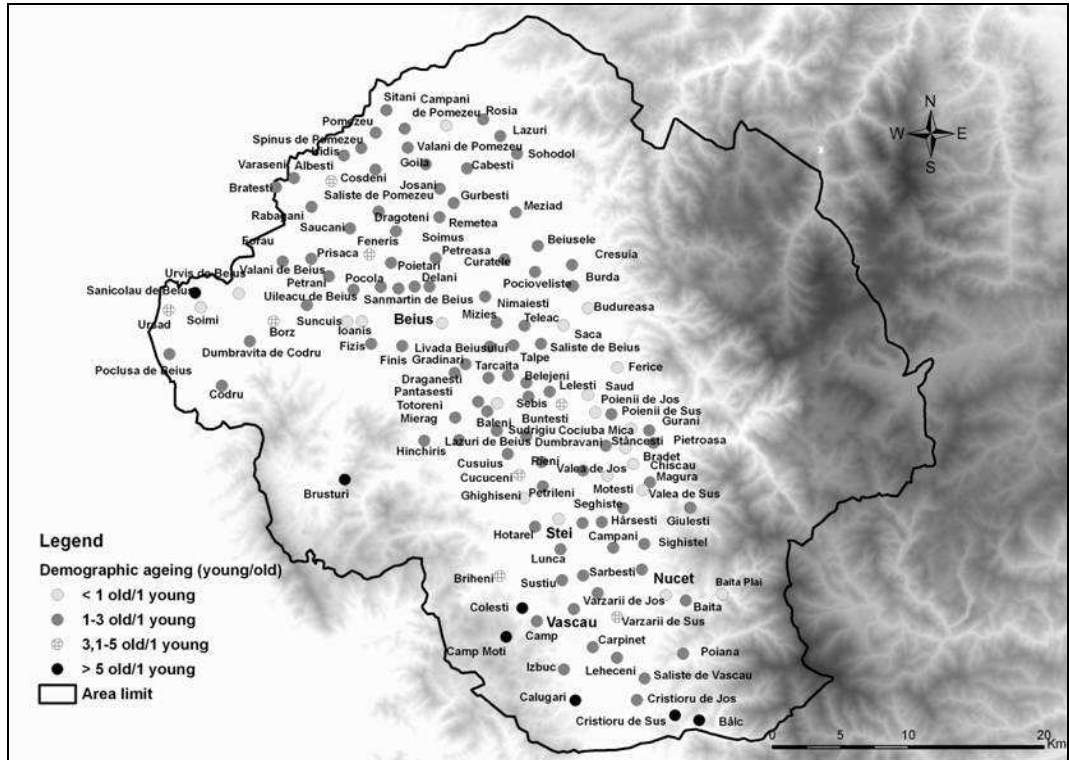

Figure 4. Beiuş Land. Demographic ageing coefficient
(Source: Data from DJS Bihor)

THE WEIGHT FACTOR OF THE YOUNG POPULATION OF THE TOTAL POPULATION

The habitat and human potential of the settlements is better highlighted by this coefficient. The young population of Beiuş land is 15.3% of the total population, a much lower rate, we think, to the habitat potential of this area. This small rate is explained by the reduced birth rate, as a result of a change in the idea of family in the rural area, of the migration of the young population and, consequently, reduced fertility. To these factors, one might add, at least temporarily, the lack of viable economic solutions which should highlight the resources and the existent potential and should attract, or at least maintain the young population with biological potential.

Depending on the weight factor of the young population, rates over 25% are to be found only in 5 settlements (Băiţa-Plai, Moţeşti, Cociuba Mică, Şoimi and Câmpani de Pomezeu). These rates are explained by the industrial activity or tourism which attracted the young population (Băiţa-Plai, Moţeşti) or by the numerous gypsy population (Cociuba Mică, Şoimi).

The settlements belonging to the last class (under 15% young population) are the most numerous (67) and those which, long and medium term, can raise serious issues in their preservation as administrative entities (figure 5).
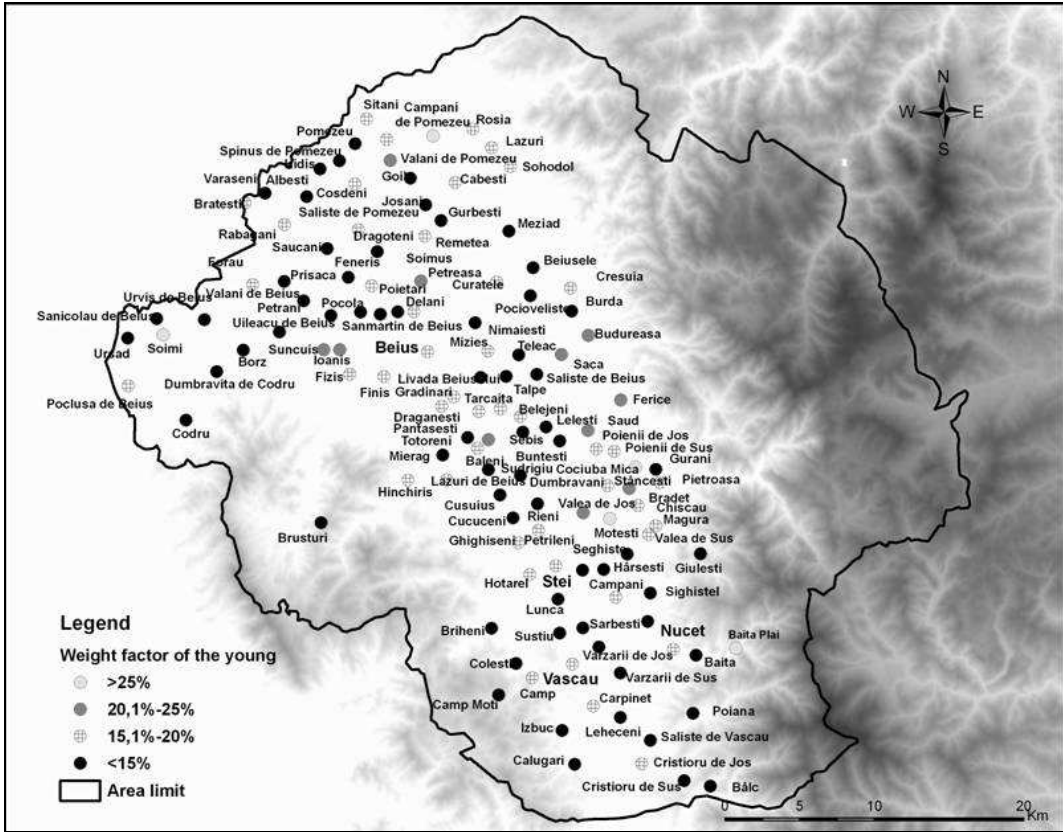
Figure 5. Beiuş Land. Weight factor of the young population of the total amount
(Source: Data from DJS Bihor)

The young population, by its rates, absolute or percentage, raises serious questions as regards the future of this extremely attractive geographic area.

THE ECONOMIC DEPENDENCY COEFFICIENT

This coefficient has been calculated as a ratio between the active and inactive population. As expected, the situation is not a favourable one to Beiuş land when this coefficient has an average rate of 2 inactive persons / 1 active.

In addition, we need to mention that part of the active population is almost at the limit of retiring and there is not much population left to replace it. The most eloquent example is to be found in Bâlc where the coefficient rate is 0.4 active / 1 active, but there is almost no young population in this locality of only 17 inhabitants. The high weight factor of the settlements belonging to the first two classes (figure 6), 80 localities confirms this assertion. These localities are grouped into two areas: the former comprises the settlements located between Beiuş and the northern limit of the depression (towards Oradea) while the latter comprises the settlements located around the industrial units of the European Drinks & Food Group.

The settlements in the last class show the most critical situation, being scattered within the territory. It is the case of small localities and elderly population.

The ageing process of the active population and the lack of a representative young population to take charge of the process of manufacturing goods and thus providing income, raise several questions regarding the economic future of the settlements in Beiuş, especially those in the last class.
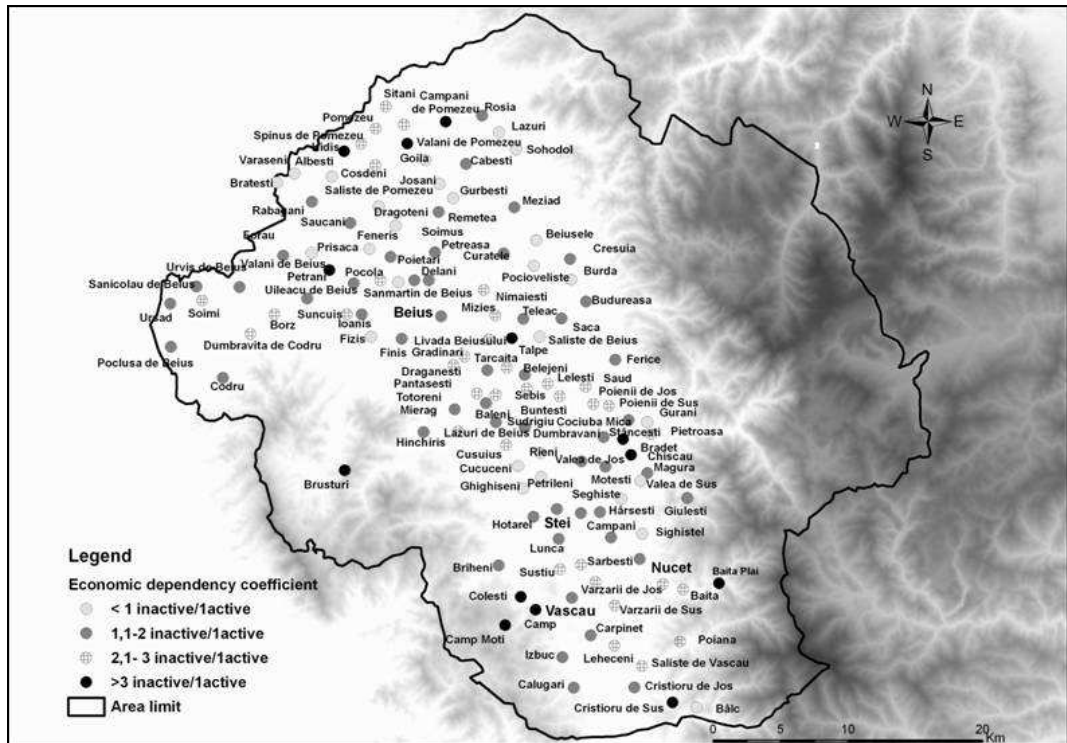
Figure 6. Beiuş Land. The economic dependency coefficient
(Source: Data from DJS Bihor)

THE DEMOGRAPHIC HAZARD

Following the analysis carried out through the afore-mentioned coefficients, we have worked out a map of the demographic hazard in Beiuş land.

The main demographic hazard is given by the generalization and accentuation of the demographic ageing process, doubled by feminization. Considering the rates recorded individually for the afore-mentioned coefficients, the settlements of Beiuş land fall into three categories of demographic hazard: high, medium and small hazard (figure 7).

The most critical situation, on the verge of extinction due to very small demographic potential, doubled by an increased degree of ageing population, is to be found in 7 localities: Bâlc, Brusturi, Câmp Moţi, Criştioru de Sus, Hidiş and Sânicolau de Beiuş. They all have gloomy insecure future due to the low habitat potential and depopulation.

In the high hazard category we have 87 settlements, representing 67.4% of the total. In their case the demographic hazard manifests itself through the demographic ageing phenomenon and the intensification of the feminization process, but, at least on short term, there is no risk of depopulation.

The low demographic hazard, manifested discreetly, sequentially, through one of the used demographic coefficients, is present in 35 settlements, respectively 27.1% of the total. The demographic ageing is mainly found in Ferice, Căbeşti, Goila, Sohodol, the other coefficients showing rates that do not raise a problem, on long term.

The increased feminization of the population is present in the towns of Nucet, Ştei, Vaşcău and villages Budureasa, Săud, due to more intense industrial activity.

The economic dependency is higher in Brădet, Lacu Sărat, Şoimi, Stînceşti. Here the acts of the main actors should focus on solving these vulnerable situations that might trigger long-term issues.
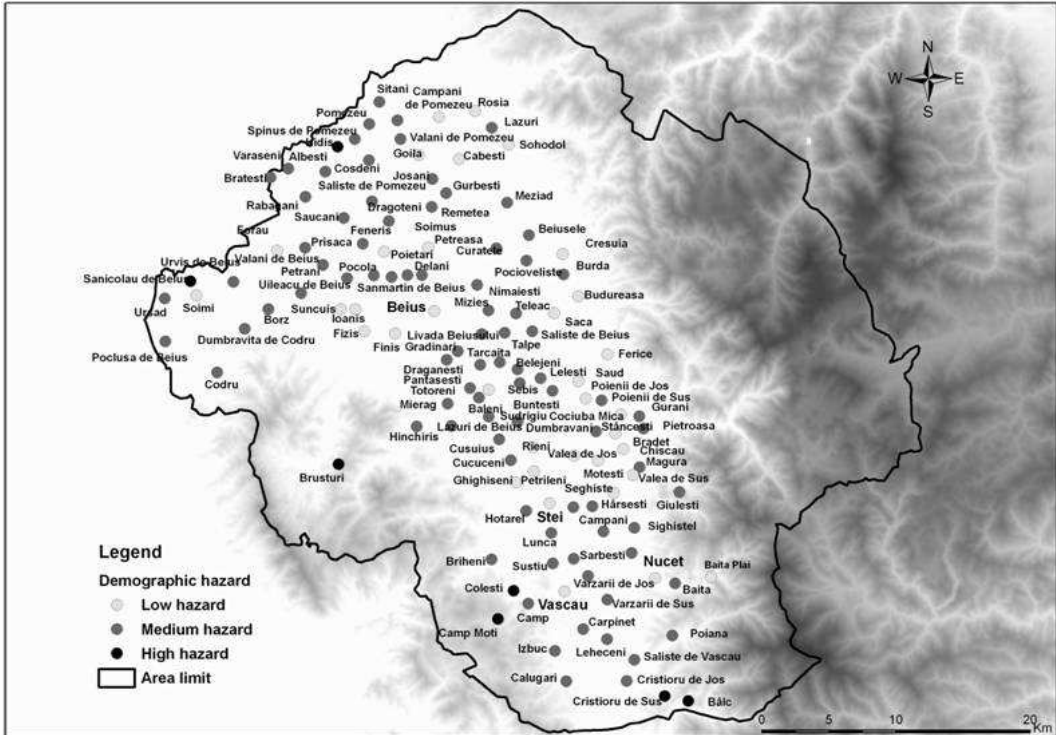
Figure 7. Beiuş Land. Demographic hazard

DEBATES AND CONCLUSIONS

Beiuş land, an old area of living and human continuity, center of concentrated natural and human energies on the upper stream of Crişul Negru, is presently facing the generalization of the demographic ageing process. The demographic ageing and the feminization process of the population area real issues for the settlements in the depression, especially for the small and very small localities. The disappearance of some settlements is a real threat for 7 localities. The question that arises is what are the chances to stop this phenomenon, respectively the means to diminish the demographic hazard, under the actual social-economic circumstances.

In the case of the almost extinct localities, the population and habitat census, in progress at the moment of this paper's editing process, could confirm their disappearance. We consider that any action taken to rejuvenate these localities is tardy, the chances to succeed are slim considering the old population and the lack of viable economic programs.

In the case of other localities, considering the local particularity, the existing tradition, the presence of already established economical activities, we consider that a human and economic policy oriented towards the preservation of the local distinctiveness and its capitalization could solve the present issues. On medium and long term, considering a sustainable development, it is important to work out an integrated local development strategy to capitalize the „*land type*" areas and the identity marks of Beiuş land, up to its establishment as a project territory (Filimon, 2007) and the setup of the brand of Beiuş land. On short term, the main actions should be oriented towards the support of the young population, to ensure an accurate social-economic framework, to encourage the development of long term viable economic activities and to capitalize the existing local resources not only the human ones. The presence of lohn type units (Beiuş and Ştei) is only a short term solution. A field which has generous resources is the tourism, providing that real, not speculating investors are drawn up, as well as the encouragement of free initiative of the locals.

The rejuvenation of some traditional economic activities and even traditional crafts could contribute to the preservation of the young population.

Nevertheless, the demographic ageing remains an unsolved issue for all the authorized institutions and a challenge for the future generations of Beiuş land. The local young population has a fundamental part in solving this issue, a flux of young allochthonous population being able to dillute or even lose the authenticity of Beiuş land.

ACKNOWLEDGEMENTS

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