Annals. Food Science and Technology
2013

SOCIAL DIMENSION OF THE LANDSLIDE RISK IN DÂMBOVIȚA RIVER BASIN, SUB-BASIN VALEA LUNGĂ

Nicolae Petrescu* , Daniela Alexandrescu*, Ofelia Robescu**
* Valahia University of Targoviste, Faculty of Environmental Engineering and Biotechnologies, Unirii Street, no 18-20
** Valahia University of Targoviste, Faculty of Economics Science
Lt. Stancu Ion Street, no. 35
E-mail: n_petrescu06@yahoo.com

Abstract
Complex arrangement of land in hilly areas related Dâmbovița river basin, sub-basin Valea Lungă, on the territory of the Pucheni commune is a complex task to coordinate economic, social, cultural, ecological and environmental protection in general accordance with the needs and values of society. Any complex process as landscaping and associated hill located in the village Pucheni of the Dâmbovița River basin must be based on the modern concept of sustainable rural development by enhancing resource relief, soil, subsoil, surface water and groundwater, flora and fauna, energy, consistent with existing human resources. Sustainable rural development should be based on research results in development projects implemented at national, regional and local. Research studies of landslides that are performed Dâmbovița River Basin, are intended to accurately diagnose the current status of the territory, especially to develop predictions about its dynamics. An important stage of the research in this paper was based on public consultation on the social dimension of natural hazard caused by slope instability phenomena in time, the administrative territory of the commune Pucheni the wide valley basin. This study was carried out taking into account the concept that most people have personal experience in dealing with natural disasters. Such sociological investigation method is used where there is sufficient database Territories analysis of extreme events such as landslides.

Keywords: hydrographic basin, landslide, ecological risk.

Submitted: 14.01.2013 Reviewed: 19.02.2013 Accepted: 18.03.2013

1. INTRODUCTION

Research work started from the premise that the study of territories affected by landslides, are also important sociological investigations on natural risk dimension (WP/WLI, 1994). Landslide affected the right side of Broad river valley, situated on the territory of Malu cu Flori village, especially the county road DJ 724 that connects Pucheni village (2500 inhabitants), the economic center of the Dâmbovița county and part of the network water Malu cu Flori village. Exceptional events such as landslides and are easier to remember the human memory in relation to other events, even if frequent, are much lower in intensity and extent of environmental phenomena (Ianos I, 1994). The human perception of ecological risk in exceptional circumstances, there may be three cases of Understanding: perception on system stability, a perception of instability perception of physical systems and natural disasters (Sandu D, 1992). Such a method of investigating people for situations created by landslides, they are not sufficient for diagnosing basic data and finding phenomena in a very short time solutions to stop the phenomenon and reconstruction of affected investment objectives, appropriate.

There may be situations where ecological reconstruction territory affected by landslide, especially recovery of high value investment objectives or reconstruction of housing, are extremely expensive. Given the historical evidence of settlements Pucheni and Malu cu Flori, especially that extreme natural phenomena are perceived by people according to their civilization and sociological type of organization, it is very difficult or even impossible to believe that people will understand that will have to leave their homes

in case of occurrence of potential hazards such as landslides. The role of such a study is primarily to prevent central government and local authorities should take account of the results of research and development communities must be based on projects that are based on natural risk mitigation. Thus locally should be with spatial and urban plans and maps of the territory vulnerability to natural and anthropogenic factors action necessary natural hazard zonation of landslide (Varnes D.J., 1984).

2. MATERIAL AND METHODS

To achieve a technical project of reclamation of land affected by the landslide, are required in addition to technical implementing measures and public consultation towards cooperation and acceptance of the final decision. Therefore, of great importance in studies of landslide risk in river basin wide valley, must have testing human perception and level of adaptation to local risk (Grecu F, 1996).

In this respect the period 02.07. - 31.08.2011, a study case for Pucheni town, village Meisoare, given its location situated 3 km from the center of the village, land instability in landslides, road access and network water. Pucheni village is located in the internal zone Subcarpathians Ialomița, Leaota foothills, in the north-west of the county, at a distance of 45 km from the Târgoviște city and 39 km from the Câmpulung Muscel city. Commune is crossed by Valea Lungă stream waters. The commune covers an area of 50.59 km ², consisting of villages Pucheni, resident of the village, Brădățel, Meişoare, Valea Lungă, Vârfureni (Neculăești). The population perception study in the village of Meişoare, which may be at risk from landslides, was made by direct quantitative research method each individual based on a structured questionnaire designed for this purpose (Hennessy B., 1985).

3. RESULTS AND DISCUSSION

100 interviews were evaluated (Table1), and almost all the subjects interviewed owners, established in the area especially during the 1950s (ROBESCU OFELIA VALENTINA, 2009). In the village of Meişoare, interviewed consider their income as average (over 24%), predominantly low income (40.7%).

Table 1. Sample structure of village Meişoare

Gender(%)	
Male	57
Female	43
Age (%)	
18-29 years	6,6
30-44 years	10,1
45-60 years	30,7
Over 60 years	52,6

Ocupation (%)	
Worker	9,8
Foreman / servant / Technician	2
Educated staff	1
Pensioner	56,7
Own account worker	4,5
Patron employer	1
Student	3,5
Unemployed	11,5
Other	10,0
Education (%)	
Primary school	40,2
Professional	38,5
High school	20,1
Post High school	-
Higher education	1,1
Income (%)	
Small	40,7
High	24,4
Average	-

Table 2. Time since living in village

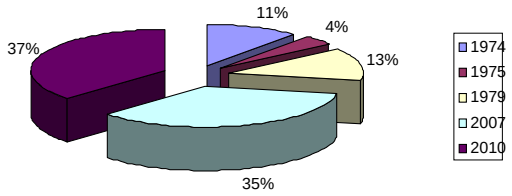
Period of time	%
15 years	6,6
30	
31	10,1
40	
45	30,7
50	
60	
> 60	52,6

Both urban and rural areas, after statistical processing of survey results, we can say high slip risk awareness among the population potentially affected.

Table 3. Estimation of the year production landslides

Year of production slips	Estimation
1974	11%
1975	4%
1979	13%
2007	35%
2010	37%

Estimation of the year production landslides

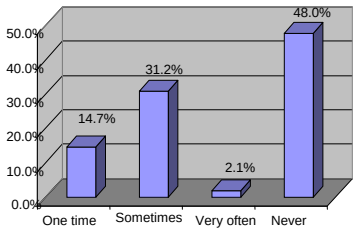


Of those who had problems moving land, 13% indicated 1979. The entire sample, 37% of respondents reported in 2010, then in 2007 (35%). In the village of Meişoare, over 31% of respondents said they sometimes slips have occurred, given that nearly 14% had problems once from these events, and in 2% very often.

Table 3. Frequency damage caused by landslides

Damage frequency	%
One Time	14,7
Sometimes	31,2
Very often	2,1
Never	48,0

Frequency damage caused by landslides

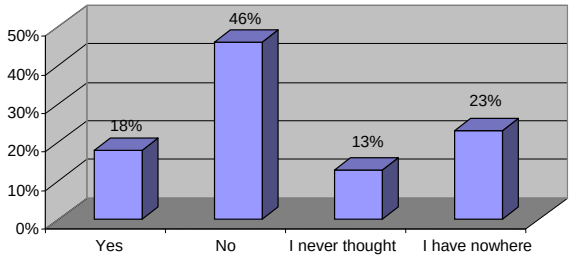


In the village of Meişoare is estimated that the risk of slip is not a reason to leave the area (46%). 18% of respondents answered that they would move from this and over 23% believe that they would move but not where.

Table 4. Landslides can be a reason to leave town?

Landslides can be a reason to leave town?	%
Yes	18
No	46
I never thought	13
I have nowhere	23

Landslides can be a reason to leave town?



In the village of Meişoare, the situation in recent years is appreciated by most subjects (43%) that movements continued or were reactivated (12%). Another 35% of respondents believe that they have stalled.

Table 5. Assessing the dynamics of slope the last three years

Assessing the dynamics of slope the last three years	%
Continued	43
Stalled	35
Relapsed	12
Do not know/not respond	10

Assessing the dynamics of slope the last three years

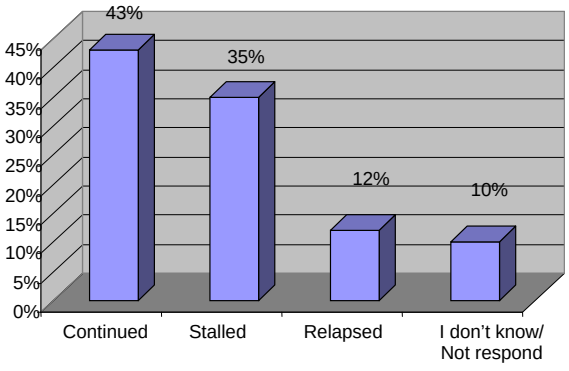
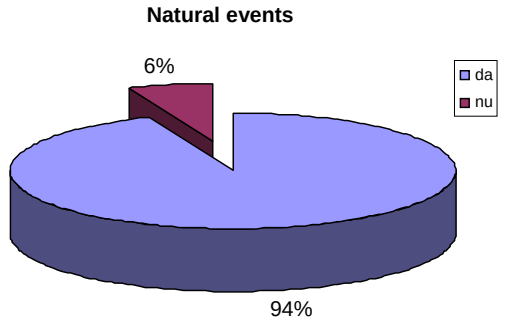
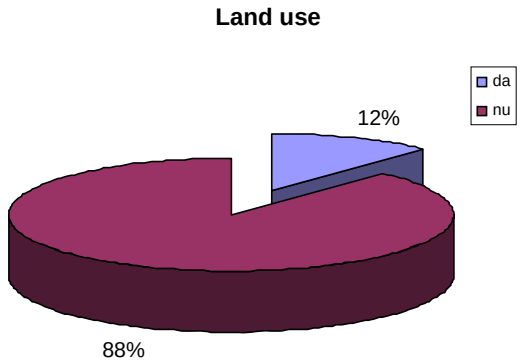


Table 6. Landslides may be linked to other events?

Landslides may be linked to other events		%
Natural eventes	yes	94
	no	6
Land use	yes	12
	no	88





At a rate of 94%, interviewed in the village of Meişoare said that starting may be related landslides and other events, especially natural ones. In the village of Meişoare, 12% reported and influence on mass movements on slopes by anthropogenic land use, especially deforestation. Grazing and wagon roads but not perceived as destabilizing factors in the dynamics of slope.

The high level of awareness of the danger is reflected in a general desire to engage in prevention and control of instability phenomena, at least in words. For example, in the village of Meişoare, 67% of respondents would participate in voluntary work programs initiated by the municipality against landslides. There is however a rate of 8% of those who said they were not involved.

Table 7. Measures against landslides

Measures against landslides		%
Measures taken by the city hall	Yes	78 (before 1989)
	No	22
Measures taken by individuals	Yes	11
	No	89

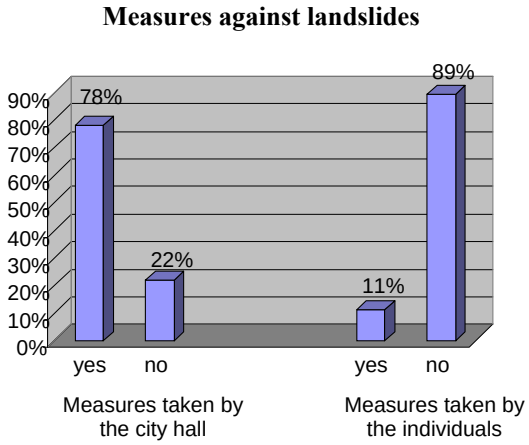
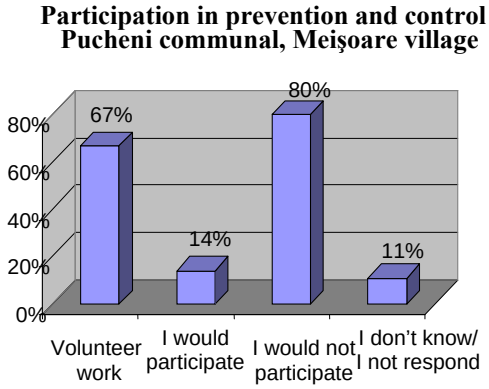


Table 8. Participation in prevention and control

Participation in prevention and control	%
Volunteer work	67
I would participate	14
I would not participate	8
Do not know/not respond	11

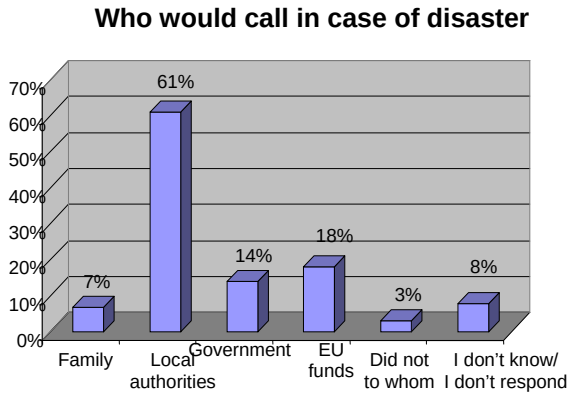


Overall, however, there is a distrust of local authorities and the measures taken so far by the municipalities, something that emerges from the inconsistency of responses on population expectancy on obtaining concrete support in case of disaster. When the production of a catastrophic event due to field trips, most of those surveyed said they would

address or central county officials for help (61%). Almost 3% of the subjects interviewed consider that not whom to ask for help.

Table 9. Who would call in case of disaster

Who would call in case of disaster	%
Family	7
Local authorities	61
Government	14
EU Funds	18
Did not to whom	3
Do not know/not respond	8



4. CONCLUSIONS

Efficiency of damage prevention measures taken by the respondents is significantly influenced by the frequency of the problems they had with landslides. The study shows that the population of the village Pucheni, Meişoare village, there is a denial of the warnings on the occurrence of disasters caused by landslides and resistance to the abandonment or eviction housing. A direct correlation is found stronger in case of questions with strict reference to the observation villagers if any influence of wagon roads and grazing on maintaining and potentiation sliding process. Those who claim harm existing wagon roads versions are usually aware of the aggressive grazing on the substrate.

Field observation correlated with the results of surveys and dialogue with local authorities highlights but in most cases, the attitude of sufficiency and lack of accountability to local people, which can be expressed in rational exploitation of private property or public land, most of landslides are initiated by anthropogenic disruption. In this context, priority is public awareness of fair perception of the phenomenon, responsibilities of individual, family and to the local administration. An important role for environmental education, that should be attention relevant factors. At local level stakeholders: parents, educators of the school, church, organization systems in local government - inspectors, agents, staff of City Hall, police - should conduct joint efforts to integrate environmental harmonious community.

5. REFERENCES

[1] GRECU F. - Expunerea la risc a terenurilor deluroase / Cercetari geografice in spatiul carpato-danubiano, a II-a Conferinta regionala de Geografie, Timisoara, 1996;
[2] HENNESSY B. – Public Opinion, Brooks Coole Publishing Company, 1985, Monterey;
[3] IANOS I. – Riscul in sistemele geografice, SCGGG/ Geogr. XLI, 1994, Bucuresti;
[4] PETRESCU NICOLAE, MAGDALINA ION – Amenajarea, organizarea si sistematizarea teritoriului, Editura Bibliotheca Targoviste, 2009;
[5] PETRESCU NICOLAE, ISTRATE ALEXANDRU, STAICU DORIN, ALEXANDRESCU DANIELA, ROBESCU OFELIA – Amenajarea durabilă a bazinelor hidrografice aferente râurilor Dâmbovița şi Ialomița în zona subcarpatică a județului Dâmbovița - Contract de cercetare nr. 289/06.06. 2011, beneficiar CJ Dâmbovița.
[6] ROBESCU OFELIA VALENTINA – Modele privind managementul reconstructiei de mediu in bazinul superior al raului Dambovita, Editura CERES Bucuresti,2009;
[7] ROTARU T., ILIUT P. – Ancheta sociologica si sondajul de opinie. Teorie si practica, Editura Polirom, 1997, Iasi;
[8] SANDU D. - Statistica in stiintele sociale, TUB, 1992, Bucuresti
[9] VARNES D.J. - Landslide hazard zonation: a review of principles and practice UNESCO Press, 1984 Paris;
[10] WP/WLI : International Geotechnical Societes UNESCO Working Party on World Landslide Inventory. A suggested method for reporting landslide causes, Bulletin IAEG, 1994.