

NATURE PRESERVATION IN THE COMMUNE PÂNGĂRAȚI, NEAMT COUNTY

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Abstract

*Human intervention on the natural environment components generally involves the requirement of protection with concrete actions for the protection of the landscape or protected areas. The structure of the Pângărați commune land, an area that we have studied, is 12,190 ha; of which 25% is occupied by arable surface area. By the intensity and the forms of the human activity, the commune territory, has graduated and territorial differences, as follows: slightly modified landscapes, moderate anthropogenic landscapes, strong anthropogenic landscapes. Eco Moldavia is an association that aims to protect and conserve the environment and to change the behavior in the environment compliance and preservation. Eco Moldavia is custodian of the natural avifaunal areas of the lakes Pângărați and Vaduri, and since 2010, the Association is custodian of the yew reserve (*taxus baccata*), reserve located on the left side of the stream Pângărați.*

Key words: environment, landscape, lake, environment compliance, fish, avifaunal areas, pastures

INTRODUCTION

Human civilization, in its rise, often has unexpected consequences on the natural environment, causing the disappearance of many landscapes, geological evidence, plants and even animals. By the concept of geographical environment, we must understand the entire system based on **abiotic sub-system** (environmental support), the **biotic sub-system** (plant and animal communities) and the **socio-cultural sub-system** (human society and its work). In this view, the current geographical environment is the result of dynamic interaction between the physical and geographical components, closely related to the anthropogenic factor, which, in this land of ancient habitation, has made a deep imprint on the landscape. Increasingly brutal intervention of the anthropic factor on components of the natural environment, in general, but also for the commune Pângărați, involves the requirement of protection with concrete actions for the protection of the landscape or areas of the reserve status.

The action to maintain the existing natural landscape was meant "to measure" the intensity of human action on nature, understanding by "the environment" – "all natural and anthropogenic components outside a living being which influence the human existence" (Environmental Protection Law 137/1995). In this law, the term "protected area" ("protected zone") means a

"well-defined geographical area, with rare natural features or natural elements in high percentages; including parks, nature reserves, natural monuments, but also including lake areas, spas, areas of socio-cultural facilities, where pollutants must be below the action level"

By "natural monument" is meant "species of plants and rare or endangered animals, isolated trees, geological formations and geological structures of scientific interest or landscaping interest"

Understanding by "the environment" – "all natural and anthropogenic components outside a living being which influence the human existence", and by pollutants – "substances (solid, liquid or gas) in air, potentially injurious to health causing discomfort and / or altering the environment"; we can look at pollution as a matter of destroying "ecological balance".

MATERIAL AND METHODS

The Structure of the land fund : known by a variety of landscape elements, Neamt County, offers a harmonious structure of its land fund. The county's agricultural areas have a percentage over 48%, followed by forests, with over 44%. It is apparent, therefore, a proportional distribution between agricultural land and forest land.

Table 1

Neamt County. Farmland (ha) by use in 2005

Total: county/commune	Total area	Of which :							
		Agricultural area	Of the agricultural area :					Forests	Other surfaces
			Arable	Pasture	Meadow	Vineyards	Orchards		
Total: county	589.611	284.033	170.939	69.776	40.107	786	2.425	260.885	44.693
	100%	48,3%	60,0%	24,7	14,1	0,3	0,9	44,2	7,5

Comparatively, in the case of the commune Pângărați, the situation is changing, the forests are holding a percentage of over 70%.

Typically, in the mountain area of Neamt County; the largest extent in reaching a common area is over 10,000 ha, 20,000 ha sometimes, and even exceeding 35,000 ha; but, of that, over 50% and even 89% is forest land(the case of the commune Tarcău). There are exceptions, commune Hangu situation, where forest is below 45%.

According to the table on the structure of the commune Pângărați land, to the agricultural land is assigned 25.4% of the territory; but, of which, 88% are pastures and meadows.

Table 2

Commune Pângărați. Farmland (ha) by use in 2005.
(compared with neighboring communes: Tarcău and Hangu)

Total commune	Total area	Of which :							
		Agricultural area	Of the agricultural area :					Forests	Oter surfaces
			Arable	Pasture	Meadow	Vineyards	Orchardis		
Hangu	12.165	4.703	209	1.854	2.640	0	0	5.512	1.950
Tarcău	39.890	1682	132	968	571	0	11	35.769	2439
	100%	4.2	7.8	57,6	33,9	0	0.7	89,7	6.1
Pângărați	12.190	3.096	330	1.129	1.608	0	29	8.567	527
	100%	25,4	10,6%	37,2	51,9	0	0,1	70,3	4,3

Even if the arable land occupies a small area of the use categories of the commune (**330 ha**, representing about 10% of the agricultural area of the commune), it is still used by people to provide broadly agricultural products, especially the vegetables of the immediate necessity. Areas occupied by orchards are very small (less than 0.1%).

Table 3

Commune Pângărați. Unproductive land (non-agricultural area) (ha), (2005)

Total commune	Total area	Agricultural area	non-agricultural area					Total: another non-agricultural areas	forests forests	Total: non-agricultural areas
			of which, another areas :				unproductive			
			waters, reed	roads	constructions					
Pângărați	12.190	3.096	202	101	152	72	527	8.567	9.094	
	100%	25,4%	38%	19%	29%	14%	4,3	70,3	74,6 %	

4,3 value relative to the total area of the village

38% - value reported to the non-agricultural areas

74.6 % - relative value of non-agricultural areas, including forests

In the above tabel, delivers clear enough the non-agricultural areas, which are holding 4, 3% of the commune Pângărați area. Within these areas are

highlighted: lake areas (202 ha), constructions within the built-up areas (152 ha), communications channels (101 ha), unproductive land(72 ha).

It should be appreciated, also, the land reclamation work done on the Pângărați valley (torrent regularization works), on the streams and Pângărăcior and Stejaru.

Annually, there have been clogging of minor river beds, and regular dredging. After strong floods, in the river mouths area of the rivulets Oanțu and Pângărăcior, dams were built, were made soil erosion control works and also lake clogging works.

By the intensity and the forms of the human activity, the commune Pângărați, has graduated and territorial differences, as follows:

Slightly modified landscapes from human intervention, which integrates mountains with unspoiled biocoenosis(or slightly disturbed); mixed forests, alternating with natural grassland used for hay or pasture. It's about the areas over 750 m altitude of the main massifs (southern sector of the Stânișoara Mountains and the northern end of the Tarcău Mountains).

Moderate anthropogenic landscapes characterized by strong fragmentation of the forest ecosystems in the area; fragmentation accompanied by changes in the structure and even changes in the composition of the flora. Here, at altitudes below 750 m, clumps of forest alternates with grasslands used as hayfields and pastures, interspersed with orchards and even crops. On land with low stability, with strong erosion and reactivation of landslides, floral landscape has been modified by humans in the terrain.

Strong anthropogenic landscape occurred by the total landscape change and by the total river system change. (by dams, drainage and river bed adjustments). They include the low relief under 600m above sea level and are still controlled by humans. As of early phenomena of imbalance, it is noted air, water and soil pollution, due to intensive forestry and primary processing of wood.

Flora and forest reserves. Natural monuments Through these categories, are meant rare species of plants and animals, or endangered species, isolated trees, forest formations of scientific interest or landscaping interest. They are rare and endangered and are protected by law. Of the endemites, found on the territory of the commune Pângărați, must be noted, first, the yew tree (*Taxus baccata*), which formed here, a real unique reserve



Lake Pângărați, right bank. Massive invasion of lacustrine vegetation (thicket, reeds, sedge

CONCLUSION

Association of nature protection and nature conservation

Within the commune Pângărați, actually within the Oanțu village, operates the non-profit and non-governmental association ECO MOLDAVIA.

ECO MOLDAVIA is an association that aims to protect and preserve the environment. The Association's purpose, too, is changing people's behaviour on environmental compliance and environmental preservation. The Association is custodian of the natural avifaunal areas of the lakes Pângărați and Vaduri. Since 2010, the Association is custodian of the yew reserve (*taxus baccata*), reserve located on the left side of the stream Pângărați. The Association is a founding member of the Coalition of the Protected Areas.

Among the objectives of the Association we mention:

- the initiation and the development of actions aimed at environmental protection
- the promotion of the sustainable development concept
- the environmental education
- the organization and the carrying out of cleaning activities
- the editing of informative materials on environmental education
- organizing meetings, conferences, symposia and lectures on topics of environmental legislation and environmental education to create a responsible attitude to civil society (natives and tourists) towards the environment.

The Association operates in the north-west of Moldova, on Bistrița Valley; starting from the waterhead of the Bistrița River to the Bistrița river

mouth to river Siret; the Association operates, also, on the Siret Valley from Bacău to Focșani.

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