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THE EARTH ECOSYSTEM IN THE REGION OF GJIROKASTRA

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ABSTRACT

The earth ecosystem in the region of Gjirokastra is the greatest earthbound potential because it protects the ground, the microclimate, the agricultural crops, favors tourism and re-creation. The ecosystem of Gjirokastra region has been changing after 1990 as a result of wide historical, socio-economical, political and demographical factors. The multifunctional, sustainable and integrated use of ecosystem is very necessary; able to realize the dynamic development, which actually is exposed to danger. The existence of original and intrude forests is of a great importance.

JEL CLASSIFICATION & KEYWORDS

■Q23 ■Q56 ■Q57 ■Ecosystem ■Microclimate ■Development.

INTRODUCTION

The region of Gjirokastra lies on the inner part of the southern mountainous region, bordered with Greece at “Kakavia” and “Tre Urat”. Gjirokastra region makes up 10 % of the surface and 3.7 % of the Albanian population with a border line length of 297 km, where 11 km out of it are river borders. The Greek border line about 72 km, counts at the very lower reach of Sarandaporos river, the right strech of the upper Vjosa reach, which snakes through the territory of the Republic of Albania. The Vjosa valley has been the cradle of ancient civilisation. The oldest route, being frequently used by Illyrians and Romans on the bank of the Vjosa, too.

Figure 1: The geographic position of the region of Gjirokastra

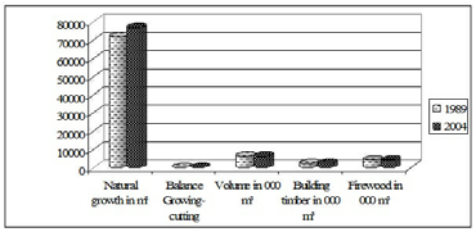


Source: Author

The situation of the area after 1990

Tepelena area counts more than 60 medical herbs, like the sage, the linden leaves, the juniper berries, the wormwood, the laurel, the white thorn, the mountain tea plant which are all picked illegally at a great amount. A selecting, processing and packing center of sage and origano plant is set up at the Commune of Qendër Tepelena. In Gjirokastra, the sage, the origano plant, the white thorn, the linden leaves, the savory and the hoodbine are collected, as well. The Directories of the forest protection have made contracts with the legal firms respecting the legal framework to collect the plants according to technical conditions. It is important to follow a wide market based on its demand.On the other hand, the collectors are not organized, so they do themselves the rest of the work. If we had a better organization of cooperatives, than we would have high effects and incomes.

Figure 2: Balance of timber in the region of Gjirokastra



Source: Author

The biodiversity in Gjirokastra region means two aspects: the genetic (the species variety) and the ecologic (the variety of ecosystems). The diversity of climatic and land conditions has made it possible to have a variety of choices: 179 types of woods and bushes out of 208 found in Albania. 71% of all types are found in Gjirokastra and Përmeti, while 52% are found in Tepelena (Mullaj, A, 20-31).

The rare plants of Albania threatened to extinction 1995). The caduceus bushes, which are mostly found along the valleys of Vjosa and Drino, consist mainly of hornbeams and willows, but also of Mediterranean forests of pines, oaks etc. The forests with clutter and black pine, with cluster pine and no endemic kinds are located in the hills of Libohova, Dropolis, tepelena, hills of Memaliaj, Buz, Krahes and in the valley of Vjosa. The forests of Mediterranean oaks are found in the Upper Dropolis, Krahes and Luftinje. The plant associations of this level have a vast economic use as fire-wood, pasturage and as medicinal plants. Before the 90-s, gorse was used for making baskets, and heather was used for making pipes, children’s toys and also for carving.

Strawberry-tree was used for making raki (Albanian alcoholic drink), whereas laurel, widely spread in the region of Benca, is used as sweet herb and medicinal plant, in the food industry.

Many kinds of flowers help the development of beekeeping. Cutting, burning and over-pasturing in process, have caused damage in almost 20% of the surface of plant coverage,

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especially the forests with cluter pines in the massive of Mali i Gjere (Broad Mountain), hills of Libohova, Valare and Tepelena.

Table 1: The main vegetation habitats at Gjirokastra region in percentage

Denomination	The region of Gjirokastra	The district of Gjirokastra
Inhabited surfaces, arable land, water and unproductive terrains	2	0.5
Alpine pasture with herbage predomination	4.3	4.3
Wood formations with plane trees predomination	0.8	0.5
Wood formations with hornbeam and low oak predomination-associated habitats	49.2	15.3
Wood formations with Italian oak and holly bush predomination	38.4	16.8
Wood formation with The Macedonian fir tree predomination	2.5	0.4
Wood formation with the black pine and the Macedonian fir tree predomination	1.4	0.8
Wood formation with the Mediterranean oak predomination	0.9	–
Wood formation with the beech and the Macedonian fir tree predomination	0.3	–
Bush formations at pasture land	0.2	–

Source: Author (2004)

About 49.2% surface of the main vegetation habitats of the region is occupied by the wood formations with hornbeam and low oak predomination, 38.4% with the Italian oak and holly bush predomination and only 12.4% with the others. 38.6% of the vegetation habitats are common at Gjirokastra area, 32.4% at Përmeti and 29% at Tepelena (The annual Statistics, 30).

- The levels of ecosystem in the region of Gjirokastra

The level of oaks is the most important, as it covers 42% of the forest surface in the region of Gjirokaster. It lies in the altitude of 600-1000 m, in the belt of brown lands.

The most common are the oaks and ash-trees, which construct important forest massifs in Pogon, Kardhiq, Zagori, and mountain of Nemercka, Dangelli, Carcove, Petran and Piskova; which are now being used legally and illegally. There are even small areas with chestnuts which are used as construction material, etc. Lime trees are widespread in the region of Tepelena; its flowers are collected and exported as medicinal plants. This plant level is considerably damaged by human interference, because it is located very near the inhabited rural areas and is used as fire wood, food for animals during the winter, and also as construction material.

- The level of Mediterranean Fir trees

This level covers 7.3 % of the forest surface of the region and is located in the altitudes of 1000-1500 m above sea level, in the belt of the mountainous brown and gray lands.

The fir-tree of Macedonia and Greece has high biological values and constitutes forests in Upper-Dropolis (fir-tree of Sotira), Kardhiq, Fushebardhe, Zhulat, Prongji, Zagori, Hotove, Petran-Carcove, Buza e Bredhit, Luzat-Qender and Kurvelesh. This belt is a little developed in Tepelene, Bence, Nivice, Peshtan, Luzat and Hormove. Fir-tree is used as construction material and also for taking out resin. This level substitutes the level of beech, which constructs a small massif on the northeastern area of the mountain of Nemercka, in the region of Permet. The forest of Grehot (the commune of Carcova) in Nemercka, in the altitude of 1400 m, is located in 45 acres and has biological and environmental values. There could be found 5 kinds of fir-tree, 4 kinds of beech, 1 kind of white hornbeam and other associations.

The National Park Fir-tree of Hotova, which is located in the altitude of 400-1600 m, is remarkable for the bio-diversity which is formed by 20 kinds of forest trees and 25 kinds of bushes. The unique ecological and tourist values make it one of the most special parks in the Balcans.

- The level of Hormoqi

This level is located in the altitudes of 1500-1800 m and covers 0.9 % of the forest surface of the region. The main kinds of the trees are the black pine, mountain maple-tree, a special kind of fir-tree and mountain pine, located in Kardhiq in about 230 acres, and in Kerre (a part which is damaged by fires).

- The level of pasturage and sub-alpine bushes

This level is located in the mountain ranges of Trebeshine-Dhembel-Nemercke, Shendelli-Lunxheri-Bureto and Murgane-Mali i Gjere-Shtugare. It is the highest plant level (1800-2484 m above sea level) and covers 36.4 % of the total surface of the region. It is very rich in herbaceous plants, which form summer natural pasturages of great nutritious values, used by sheep and goats which give quality products (bio-products); these products are much required in the other countries. Besides the herbaceous plants, the bushes like hawthorn and juniper can be found... The valley of Vjose-Carcove has got two characteristics: it is the only region in Albania where the formation with red briar is found (in Permet with a surface of 42 acres) which is endemic bush vegetation, with high biological and scientific values.

- Fauna Habitats of the ecosystem in the region of Gjirokastra

After 1990 hunting has been more and more spontaneous. Today the fauna habitats and rare species are under illegal and uncontrolled hunting, using explosives and pesticides and the worsening of development conditions, because of deforestation, fires or noise. For these and other reasons some rare species like wild goat, roe deer, wild swine's, wild hares, and the mountain grouse are almost under extinction. In the forest of Sotira the number wild goats has reduced considerably. In the valley of Zagoria animals and poultry like wild goat and swine, rabbits, badger, fox and mountain grouse are almost under extinction because of illegal hunting by foreign hunters. Even in the valley of Vjosa river some animals like field and mountain grouse,

rook, magpie, blackbird, jay etc are in great danger. The legal hunting according to all regulations would be very profitable to the local communities. A special interest can be found in the Reservation of Hunting Carcove, part of forest property Petran-Carcove, which is located in the region of Seran–Perat–Carcove (The Encyclopedia of Tepelena, 184) up to Saranpador and covers a surface about of 1000 acres. Its flora is composed of Mediterranean bushes, which before 1945 formed natural forest massifs almost virgin and there was also a rich fauna. During 1968-1980 when a vast area of land was plowed because of the great importance of agriculture laid by the government of the time, therefore the habitats of most species were destroyed. The fauna of the region is becoming poorer because the species cannot find the suitable conditions and the number of hunters has increased. The fines towards the hunters are insufficient for the constant preservation and development of this natural richness, which has economic, ecological, scientific, cultural and esthetic values.

A special care is shown for the valleys of Vjosa and Drino, which are regions of migration zone for some rare species like the red sparrow.

The wild fauna in the calendar of hunting is divided into three groups:

Useful animals and poultry, whose hunting is forbidden strictly, are: grey bear, roe deer, wild goat, field grouse, wild cock, eagle, woodpecker, otter, beaver, weasel and wild cat. Their hunting is allowed only for scientific purposes, with the authorization of the Ministry of Agriculture, Food and the Protection of the Consummators. Animals and poultry like swine's, hares, mountain grouse, snipes, and wild pigeon are allowed to be hunted according to the regulations in different periods of the year. Harmful animals and poultry are allowed to be hunted in the whole year. The main reasons of fauna damage at Gjirokastra region are the vulnerability to hunting abuse; the damage of habitats from the deforestation, forest and pasture fires, illegal woodcutting especially oak trees; the main shelter to the wild fauna; the use of pesticides, the pollution of water, air and soil; the pollution of river banks from different things; the human brutal attack; the full exploitation of rivers materials; the continuous noise; the insufficient work of forest department for protecting the wild fauna; the illegal use of shotguns as a result of not being registered (2200 hunting shotguns are in use, out of which only 500 belong to the members of the hunting organization); the illegal hunting of foreign citizens. An increase in number of the fox, the marten and the beaver,which harm the wild fauna by eating eggs, birds,the animal youngs, especially those of the grouse and the wild rabbit. A lack of investment on fauna and hunting. On such conditions, it is necessary to provide the hunters with record books, recording the number and the type of killed animals. It is also necessary to declare other nature reserves in order to revive fauna and giving way to tempting the tourists. People who belonged to the Hunters State Association were permitted to keep guns (Regulations of the Ministry of Agriculture Nr.4 data 30-05-1969: "On hunting" and the list of animals and wild poultry, killing or capture of which in any ways was forbidden, like wild goat, roe deer, bear, lynx, or wild cats, weasels, wild cock and hen , field grouse, snipes, griffons, eagles, sparrow hawks, cuckoos, woodpeckers of all kinds, storks, rig-doves, bee eaters, owls, pelicans, long eared owls, except he little owls). After 1990 hunting has been more and more spontaneous. Today the fauna habitats and rare species are under illegal and uncontrolled hunting, using explosives and pesticides and the worsening of development conditions, because of deforestation, fires or noise. For these and other reasons some rare species like wild goat, roe deer, wild swine's, wild hares, and the mountain grouse are almost under extinction.

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Figure 3: The villages Leskaj, Draçovë and Kanikol, district of Permet



Source: Author

Figure 4: The valley of Zagoria in the district of Gjirokastra



Source: Author

The human mind pressure on the environment brought forward harm and damage to the forest and pasture ecosystem. The brutal human factor threatened the habitats to distinction and already brought an end to vegetation. A large number of plants are exposed to danger, as a result of a biological balance loss from grazing and illegal picking of medical plants. Opening new lands on steep terrains and frequently having conifer fires means the same, too. The ecotourism of Gjirokastra region is unique for the natural and original values it bears.

Conclusion

After 1990 (especially after 1997), the crisis reflected negative consequences on the regional biodiversity. The territory originality is displayed on the high historical values, on the archological, structural, ethnographical, cultural and landscape resources, as well. Each vegetation belt is typed to its soil, its number of woods, bushes and plants. The nature ecosystem is the ecological balance and the lung of the foundation stone. The vegetation is spread into belts which form diminishing circles as the area gets higher in altitude. The favourable geographical position of Gjirokastra region determines Mediterranean features of the landscape which are written on the rocks variety, on the climatic and hidrologic respect, on the land features and last on flora and fauna.

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