LAND DEGRADATION AND WAYS TO PREVENT AND COMBAT THEM WITH FOREST VEGETATION – FORESTRY MANAGEMENT

DEGRADAREA TERENURILOR ŞI MODALITĂŢI DE COMBATERE CU VEGETAŢIE FORESTIERĂ – MANAGEMENT FORESTIER

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Abstract: *Land degradation and pollution may derive from various industrial activities like mining and oil processing, wood industry, pulp and paper, chemicals, energy, transport, etc. Also, land degradation occurs from natural causes (volcanoes, desertification, and erosion) due to farming (intensive grazing, salted lands due to inadequate irrigation, etc.), due to community or residential construction. Pollution and risk to human communities and natural ecosystems do not disappear but continues on and off after the economic activities that have caused land degradation. These lands remain sources of pollution and risk. Failure to take into account these risks has sometimes led to accidents or disasters registration, either ecologically or directly on human communities.*

Key words: *degradation, management, forestry, salted lands, ecologically*

INTRODUCTION

In the history of mankind can identify three stages or three levels of relationships between humans and the environment. They have had an impact on the natural environment in which man was integrated, creative activity since the beginning of the first human community. Tools for building stone, man made the first „career" or "exploitation of minerals", timber for building the tools used pieces of wood taken from the natural ecosystem in which he himself being, to maintain fire also turned to the same products ecosystem [3]. Of course, all this has affected the natural

ecosystem to a lesser or greater, but generally not exceeding its capacity to remake, the self. Accelerated development of human society in the industrialization phase, the engine-development is a dualism between the increasing exploitation of natural resources (agricultural land, forests, energy resources, mineral resources), which brought an additional amount reinvested in capacity building, creating new more advanced and more powerful machines that were given the opportunity to further enhance the exploitation of natural resources [8].

Based on natural resource exploitation, man has become more independent from nature, he created the ecological systems we human socio-industrial systems, with which man began to dominate nature, resulted in aggression is continuing increasingly natural ecosystems. Many ecosystems have been irreversibly destroyed, converted into artificial systems from this period often remaining areas of degraded land, which then constituted a growing concern more evident and more systematically organized at the legislative, regulatory and policy development in industrialized countries [5].

MATERIAL AND METHOD

Territory (land) is one component of the environment which is often degraded due to human economic activities. The land may be degraded in several ways, but the most obvious and most spectacular land degradation occurs as a result of the exploitation of mineral resources. The operating activities of mineral resources extracted from the soil or subsoil man a large amount of material, in order to obtain useful products [2]. Typically, only a portion of the useful components are extracted, the other part is the rock invalidity (sterile) for its intended purpose. Therefore, the extracted material is subjected to transformation processes, preparation for the separation of useful components. Invalidity is a waste fraction and stored. Often, solid waste, liquid and Fire residues contain gaseous pollutants, which can be spread by water or air at distances greater or smaller land areas causing pollution deposition. All they can become degraded or polluted, or degraded and polluted.

In 1968, at Aberfan in Wales of a dam break occurred at a dump coal mining, the wave of mud slid across a valley to the village, where he surprised the school and killed 116 children, virtually extinguishing an

entire generation in the village. In the late 1980s, the city Ilford, Essex (England) found a higher level than the natural radioactivity in a residential neighborhood. Neighborhood was built on land where there was once a chemical plant. The scandal ended with the demolition of the neighborhood, land remediation and reconstruction of housing in another area, the work costing 10 million pounds. In 1991, there were 120 families moved from their homes on the street Lumdsen Road in Portsmouth, Hampshire (England), because they were built in the years 1950-1960, on a former landfill contaminated with asbestos and heavy metals. The event cost £ 12 million, including demolition, reconstruction of housing, land remediation and medical costs.

Such events were registered in other countries, so the authorities in the fields of environmental planning and organization have developed referral true for investors, so that the implementation of developments to take into account the state of contamination of land [6]. They encouraged local authorities and scientific institutions were funded to conduct studies and prepare such inventories of contaminated land, with proposals for remedial techniques and possible future use.

RESULTS AND DISCUSSIONS

Recovery of degraded complex and multifaceted, in parallel with the prevention and combating soil erosion and regulating hydrological regime is among the major actions taken by our socialist state in economic and technical. The appearance of degraded land and torrential processes are a coquetry the nature of the imbalance created as a result of wasteful use of soil. In this sense, one can cite excessive and indiscriminate clearing of forests practiced until the Second World War. To these were added a agro technical improper application and the complete lack of anti-erosion measures, and as a result of degraded land have been a great extension. After studies of the Ministry of Agriculture and Forestry in 1953 revealed that, at that time, about 4 million hectares have been affected by strong erosion up to excessive erosion of surface and depth.

Measures to combat soil erosion in the past were more sporadic and small scale. Currently, this problem is given great importance, being elevated to the rank of a state problem. Indeed, after 1950, began large-scale organized activities in knowledge, improvement and enhancement uses of

these lands by differentiated [1]. These works have participated and all sectors concerned and in particular the agricultural and forestry sectors.

The improvement and enhancement of land erosion advanced mobile sands and land sliding phenomena are given in terms of economic and hydrological ameliorative to make the forest cultures [7]. This is determined largely by the very low fertility of these lands, which can not support another type of service. However, in some pools with strong torrential character, the presence of forest in a certain proportion is claimed and in terms of improving hydrological regime. Since then, the important role of forest vegetation in soil erosion and water courses torrent's forestry sector has developed a broad and multifaceted activities in the production, research, design and teacher [4]. Thus in the years 1950-1965 were over 70 000 hectares of forested degraded land have been built over 650 million m^3 hydro technical papers and over 1547 km stone wood hydraulic works in about 500 perimeters of improvement.

CONCLUSIONS

In parallel with the production and their direct support, there have been numerous scientific researches on ecological knowledge and characterization of degraded lands, identification and classification of these fields and research stations lasting nature forestry, ecological and hydrological taxonomic on forest crops on degraded land.

Research on forest crops on degraded land have been made in hundreds of areas of evidence of work output and 10 perimeters experimental permanent forest research institute created in all regions of the country characteristics, in terms of forms of land degradation. Following this wide activities and experiences of forest specialists in recent years in combating soil erosion by forest, have published numerous works isolated, local character and a research paper summarizing the results of experimental erosion a forestation [9]. During its existence, the surface of the earth has suffered and continues to undergo significant changes due to the action and especially the interaction between endogenous and exogenous factors.

The soil, the properties of plants to supply water and nutrients is able not only to sustain plant life, but also ensure a certain production (crop) of them. Acquisition of soil fertility (tits continuous supply capacity of the plants with water and nutrients) was achieved in a very long time. In such

acts but also factors that lead to the destruction or cancellation of fertility trait's solution, the reduction or cancellation of land productivity traits.

An important element of the resort is the soil [7]. This together with climatic maintain plant life. The soil, the properties of plants to supply water and nutrients is able not only to sustain plant life, but also ensure a certain production, ownership of soil fertility, food supply that capacity of the water plant continues and nutrients, is carried out in a very long time. Their negative action can lead to complete destruction of soil and rock damage even mothers. Phenomena or processes leading to reduction or cancellation of soil fertility, productive capacity of land is called degradation phenomena or processes.

Land resulting from the action or process of degradation phenomena is called degraded land. So, by land degradation means reduction or cancellation of the productive potential of land as a result of the destructive action of natural factors. During its existence, the surface of the earth has suffered and continues to undergo significant changes due to the action and especially the interaction between endogenous factors and exogenous factors. Lifting or diving crust (endogenous factors), leading to activation of exogenous factors such as, for example, and the erosive action of water. Action geographic factors that cause land degradation exceed the destruction of topsoil, it is also on the substrate continued his litho logy, is on the rocks [5]. The complex process of destruction of soil and rock is called a process of denudation.

From studies, it appears that our country is still approximately 900 000 ha of degraded land and the excessive sliding, furrowed by rain formation, at different stages of evolution, which are unfit for agriculture. Concerning the use of these lands, the research undertaken in the country and abroad showed that, of all plant associations, the forest provides the most effective means of improving and protecting it meant the ecological restoration of degraded land areas.

Measures and improvement works are presented by category and a forestation of degraded lands in the territory. For some of these categories of land, as land eroded by water, land sliding and, as a large, river-marine and continental sands, there are numerous research and a wealth of production experience, presentation of technical solutions that allow improved. For other categories of degraded lands, as salted lands, anthropogenic ally degraded land and to a certain extent, areas with excess water, experience in

our country is relatively poor. In addition, experiments installation of forest vegetation on these lands; made in Romania are of recent date, installed forestry crops still young. For these reasons the technical solutions to these plots, both based on foreign literature and local experience, are temporary and will further refine the basis of research.

Thus, for each category of degraded land appear: characterization and classification of land stations degraded technical solutions vegetative improvement works, especially a forestation works, building works, land preparation, specific procedures for a forestation works of fertilization.

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