EROSIVE PROCESSES IN THE AREA OF RAPOSA TOWN IN MARANHÃO

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INTRODUTION

The dynamics of the environment always awakened the human curiosity, being the aim of analysis from part of the societies through the history. The interference of human being in the environment results in environmental alterations and natural dynamics of the landscape, provoking modifications in several existent ecosystems.

According to Silva (1999), the problems that result from the irracional use of the soil have awakened more interest from scholars and researchers from around the world. In the last five decades, the population of the Maranhão State grew quickly, provoking the great use of the natural resources. In this context the transformations of landscape of *Maranhão* island stand out, in focus *Raposa* town as the area in studying.

In Raposa town area, the erosive processes are very clear, considering the populational growth and mainly the expantion of the extractive activities, standing out the extraction of raw material for civil construction. The extraction of clay (mud and *silte*) causes serious erosive processes, resulting in damages for the environment and community of the town.

Factors like deforestation, the kind of climate and erosion, worsen the environmental problems in the area. The risk is bigger during the intense rainy period that occurs in March, April and May.

This work has the objective to contribute to the upgrading of the knowledge of the erosive process in the area of Raposa town, dealing with the ambiental problems and, considering the occupation processes and their reflexes over the equilibrium spatial.

METHODOLOGY

For this work, it was used the qualitaty approach, marked by phenomenonlogic method, developing the ambiental perception as intrument for the analysis of the phenomena. In the process of the fulfillment was did the following stages:

Bibliographic and cartographic revision;

Cartographic survey and satellite images, to help in the process of localization and delimitation of the area;

Visiting the area;

Photographic register

RESULTS AND DISCUSSION

The environment is in constant dinamics and its morphology is a result from the action of natural and human processes. The erosive processes come from natural dinamics, but, these modifications have been accelerated, overcoming the results from natural processes.

In area of Raposa town, the inadequate use of the soil, the mining activities associated to human action, provoke the intensification of erosive processes. It was found winning areas in Raposa and Pyramid village, situated in northeast of the *São Luís* city, with an area of 81.3 square kilometers, far approximately 25 kilometers from the capital city. Their territorial boundaries are: to the north, Atlantic Ocean; to the east, west and south, with *Paço do Lumiar* town.

The geographic coordinates are definite to the North by the parallel 2°24'59" south latitude and 44º05'26" west longitude, to South 2º27'57" south latitude and 44º05'14" west longitude, to East, 2º27'03" south latitude and 44º01'35" west longitude and to West, 2º25'41" south latitude and 44º01'35" west longitude.

Geologically, the area in studying involves the northeast of the *Maranhão* island, located in the southeast of sedimentary basin of *São Luís*. This formation is marked for tertiary stones, with Itapecuru formation outcrops and Barrier Series, and from the quaternary (FEITOSA, 1996).

Geomorphologically, the area of Raposa town is in the region of *Golfão Maranhense* coastal plain. This area is characterized for its intense landscape dynamics, caused by

oceanographic, climatic and human agents. The action of morphogenetic agents generally becomes intensified by human action, which accelerate those processes (GONÇALVES, 2004).

Pedologically, in the mentioned area predominates arenaceous and argillaceous soil, which were registered and mapped as *Concretionary Lateritic*, *Latosoils* and Quartz Sands, and in some areas of mangrove swamps indiscriminate soil, along the shore.

The climate predominant in Raposa town is the Humid Tropical *Aw*, characterizing by the presence of seasonal stability that exhibits two definite periods, one is rainy, from January to June, and other is dry, from July to December.

For Guerra (1999) the erosive process caused by the rain, cover almost the whole earthy surface, special in tropical climate areas, where the ombrometric totals are much more elevated than other regions of the planet.

In the area of Raposa town, the activities of extraction of the clay (mud and *silte*), has intensificated the morphologic transformation, exposing the area to potential risks of landslide. The extraction of material for civil construction has intensified in the last five years. With the population growth and the realty speculation in the area, occurred the increase of the raw material exploration for the civil construction industry, occasioning the aggravation of the problem.

This material provides the construction material storehouses in *Raposa*, *São Luís* and *Paço do Lumiar*, being source of income for carters and truckers from the region. In the process of extration of the clay, the vegetation is removed, leaving the soil exposed to the external agents, provoking erosive processes, like ravines and gullies, which evolve gradually.

The biggest area of clay extraction in Raposa town is located in Pyramid village where, daily, it is possible to observe trucks and carts transportating extracted material. During the process of removing clay, landslides occur and cause accidents. According to information of local residents, in the year of 2004, two accidents happened. The first happened in May, and the second in September. Both did not register fatal victims.

In municipal headquarters, an old extraction area was transformed in a gas station (*Brandão* Gas Station). But, it is possible to observe in a small area the barrier where happened the removal of clay.

CONCLUSION

Since the beginning of its population, Raposa town passes by diverse alterations in its natural form, where the study of the erosive processes of the region enables the knowledge about environmental degradation, due to the extraction of material for the civil construction. The population looks for income in the environment, unconsciously degrades extense areas and exposes their own lives to accidents.

The devastation of vegetation provokes erosive process, exposing the soil to the action from external agents, causing many ravines and gullies in spread areas in lots and municipal villages.

The extraction of *silte* and mud in Pyramid village happens irrationally and expose the individuals who work with mineral exploration, to accidents in great proportions.

The use of the soil by human being accentuates the processes of environment degradation. Extraction activities of clay and stones transform the space and cause the appearance of the erosive processes and the damage of the soil. The gradual destruction of the environment causes the damage of the natural resource, which has achieved worrying dimension in the last two decades

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