

# **ENVIRONMENT DEGRADING AGENTS AT THE BRAZILIAN NORTHEAST: A STUDY OF CASE AT THE SERIDÓ POTIGUAR REGION**

Francisco Fransualdo de Azevedo – UERN/UFU  
[fransualdoazevedo@hotmail.com](mailto:fransualdoazevedo@hotmail.com)

## **INTRODUCTION**

The occupation and settlement of the Brazilian geographical space by the European settlers happened in a quite anachronic and heterogeneous way, in the historical and space point of view.

In what it refers to the northeast of the Brazil, two settlement fronts stood out with base mainly on two primary economical activities: at the Atlantic forest zone the sugar-cane planters dropped the forest and there the farmers implanted the sugar plantations, totally linked to the economical market of the European metropolis, all this in the centuries XVI and XVII; in the backland central the cattle creators that ventured to penetrate the interiors expanding your flocks Caatinga biome inside were aiming at gives support to the animal driving force of the mills of sugar-cane at forest zone, as well as to provision with meat the population. Several conflicts were observed between the cane planters and the cattle creators because they disputed for lands for the development of your activities at the forest zone. After years of conflicts the delimitation behind space and territorial was established for the same ones.

Now, Atlantic Forest remainder serve as ecological refuges for the fauna that still resists to the devastation caused by the man. The soil was indeed quite cultivated, in some cases in a disordered way, what provoked a considerable loss of your production potential, it's presented a several focuses erosion and degradation, although the activity of sugar-cane is still strong at that area.

At backlands, the Caatinga has been decimated to give support to economical activities of agents not worry with the environment, what has been provoking expressive lands degradation, because the pedology of that lands is fragile, marked by the strong

presence of shallow and stony soils, except for the humid soils close the rivers or to amount of the dams and barrages and plains mountains.

It is observed that the Brazilian semi-arid northeast present a quite fine area of the social and environment point of view, what can be verified through its natural conditions, as well as social and materials ways of life of the population there allocated.

Therefore, the regional natural conditions (soil, climate, fauna, flora and water), when associated to the action anthropic, evidences a continuous and evolutionary process of environmental degradation, being spoken, besides, in desertification of this lands.

Thus, our objective is to analyze the group of actions and the agents, main responsible for the environmental degradation at Brazilian Northeasterner semi-arid, more specifically, in the Seridó potiguar region, center of devastation of the Brazilian Caatinga, considered one of the desertification core of Brazil, in agreement with the federal government's Ministry of the Environment.

### **Actions and main agents responsible for the environmental degradation at Seridó potiguar region**

In agreement with the Ministry of the Environment, the Seridó region presents as one of the four desertification nucleus of existent lands at the Brazil's northeastl. From municipal districts that compose the region – Caicó, Currais Novos, São José do Seridó, Parelhas, Equador and Carnaúba dos Dantas – are considered the more reached by the environmental degradation process. About this subject, the Government of the State of Rio Grande do Norte through PDSS – Plano de Desenvolvimento Sustentável do Seridó - it affirms that

the nucleus of Seridó desertification embraces an area of 2.341 km<sup>2</sup> (18,06% of the surface of the region), where 244.000 inhabitants live (84,21% of the population seridoense). The area in desertification process have a high demographic density (104,23 hab/km<sup>2</sup>), that is about five times superior to the density observed in the whole Seridó (22,35 hab/km<sup>2</sup>) and in the whole Semi-arid Northeast (about 20,00 hab/km<sup>2</sup>), considered one of the semi-arid areas more densely populated in the world (RIO GRANDE DO NORTE, 2000, p. 86)

Among the principal causes of environmental degradation process in the area, is stand out the actions of this agents: mining companies; producing ceramic units of red ceramics devices (tiles and bricks), bakery, lime explorations, industries of coffee toasting, business of farming and cattle raising unprovided of information techniques about the use and adequate handling of the ground and the water in the farms. All those corroborate, more or less, with the land degradation process in the area, be for the excessive use of the resources natural (soil, water and vegetation), be for the inadequate use of chemical products or wrong handling of those same resources.

It is important to consider that the Seridó Region has a quite complex and tenuous natural condition. For example: about the soils types prevails the alluvial soils (brunos soils non calcic), shallow and easy removal if discovered for the disordered deforestation at the Caatinga and if retired to serve as material in the ceramic, and in this case, the situation still becomes more serious, what is happening.

About the vegetation, it also presents quite fragile due to the own rigidity of the climatic conditions. In that sense, the Caatinga

it is composed by species xenophile and in your majority caduciphole, of small load, with bedding arboreal busher, with thorn and, for occasion of the rains, it presents a herbaceous stratum quite developed [...]. Indeed, it is a resistant vegetable formation to great drought periods, presenting bushes and trees with some thorns, giving him/her an aggressive aspect [...] with relationship to the current situation, this vegetation, that is suffering strong impacts along the time, it is being destroyed in burned to give place to the plantation areas or pasture, as well as in the use of the wood of the trees in the building site, in the production of coal and, still, to feed the ovens of the ceramic, brickworkses, lime-pits or bakeries (IDEMA, 2002, P. 21-22).

Such situation worries the population and the government, but no much measured they are taken with the intention of moderating such devastating actions. The own government recognizes the gravity and the complexity of the subject, to the point of to notice:

along the time, this important biome, that has been providing great part of the necessary energy to the productive activities of the State

and to subsistence of the local populations, is suffering serious environmental impacts, resulting in significant reduction of forest resource, with reflexes at socio-economic level. Those impacts are associated, mainly, to the burned ones, deforestations to the cattle raising and the agriculture in lands no capable, that can lead to the desertification (IDEMA, 2002, p. 22).

Regarding the environmental impacts caused by the companies mining of medium and of great load, the Government of the State of Rio Grande do Norte through PDSS (2000, p. 83) it marks that

the mining economy of Seridó is ruled by extraction processes and improvement that date of more than half century. It has been led like this without the cares demanded by the environmental legislation, that is much more recent [...]. As much some as another they have been constituting if in sources of environmental degradation, in several areas of Seridó.

About the impacts caused by the mining activity in Seridó they stand out the following ones:

construction of roads, bites, highways and opening of glades, for access to the mining areas; excavation of tunnels and of holes of varied dimensions, exposing people and you encourage to several risks; generation of noises and degradation of the soil, due to explosions and leaks of fuels, verified during the mining activities and of geophysical risings; interference possibilities in the resources underground hydrics, as a result of the accomplishment of hydrogeology studies; and damage possibilities to the flora, to the underground waters, to the soil and the communities' safety, due to the perforation of wells and of galleries for research and preparation of the plowings. There are still other important environmental impacts of the mining in Seridó, as referred them to the rejects of the mines and the use of the alluvial soils (RIO GRANDE DO NORTE, 2000, p. 84).

In what it concerns to the activity ceramist's action in Seridó, the same stands out as the most irresponsible and inconsequent among the others analyzed.

Regarding the agents' actions for now analyzed, standing out the action of the ceramic section, the Government of the State of Rio Grande do Norte through PDSS (2000, p. 88) it countersigns:

the human activities that grow and they continue until today in the Area of Seridó, they are linked to the extensive livestock, to the *sequeiro* agriculture, with cultures and inadequate techniques, to the exploration industry of the ceramic and the mining, among the most significant. The industry of the ceramic has outstanding paper, being sustained in two vectors with cashes and potentials powers of degradation of the environment: the retreat of the clay of you are worth and the use of the native forest for the firewood production, consumed in the ovens of it burns of the ceramic.

In Seridó Potiguar, the Government of the State of Rio Grande do Norte through PDSS recognizes the existence of approximately 150 units producing of red ceramic, including the brickworkses and the most automated industries. Then it is possible to deduce the size environmental damage that the activity is causing, have seen that your principal raw material corresponds to the soil (clay) or better, mud how it is called in the area and, the vegetation (firewood), used as fuel in the ovens of the productive units.

Concerning the bakeries, lime explorations and industries of coffee toasting, the consumption is made inferior to the ceramic, especially because the number of productive units in those different vectors is smaller and those agents' daily consumption is also inferior.

With relationship to the family units and cattle creators, they also come as responsible agents for the environmental degradation in the area, due to the consumption of the firewood, garbage production that not always it receives the due treatment and inadequate practices of exploration and use of the resources natural (soil, vegetation and water, mainly).

All those actions, added associated and/or they have been provoking serious alterations in the local climate, for instance, temperature elevation every year.

## CONCLUSION

We verified that the public section has science of the advanced apprenticeship of degradation of the nature in the area of Seridó, however, its acts with shyness in the sense of inspect, to control and/or to punish the responsible agents for such actions.

The principal agents that deplete and explore the resources natural soil, water and vegetation inordinately in the area as the units ceramists producing of workmanships of red ceramic (tiles and bricks), miners, bakeries, lime-pits, industries of coffee toasting, cattle creators without technical information on the use and appropriate handling of the soil and of the water in the properties, besides the family units in general, together with the government, they didn't still arrive the a consent with relationship to the precautions and peculiar responsibilities, what has been postponing the electric outlet of decisions aiming at changes in that process.

The educational base still exercises little influence in the society in the sense of providing changes behaviorists that come to reduce the impacts on the environment.

It is necessary to modify the arrangements economical, political, cultural and social, so that to preserve the nature it is a priority in the society as a whole, with views to the valorization and preservation of the life in worthy conditions and you greeted

## REFERENCES

ANDRADE, Manuel Correia de. **Geografia econômica do Nordeste: O espaço e a economia nordestina**. São Paulo, Atlas, 1981.

\_\_\_\_\_. **A produção do espaço norte-rio-grandense**. Natal: UFRN/CCHLA, 1995.

\_\_\_\_\_. **A terra e o homem no Nordeste**. São Paulo: Livraria Editora Ciências Humanas, 1980.

RIO GRANDE DO NORTE. **PDSS - Plano de Desenvolvimento Sustentável do Seridó**. Natal: IICA, 2000 (2 volumes)

INSTITUTO DE DESENVOLVIMENTO ECONÔMICO E MEIO AMBIENTE DO RIO GRANDE DO NORTE (IDEMA). **Perfil do Estado do Rio Grande do Norte**. Natal: 2002.

\_\_\_\_\_. **Região do Seridó.** Natal: 1998.

VARELA-FREIRE, Adalberto Antônio. **A caatinga hiperxerófila Seridó, a sua caracterização e estratégias para a sua conservação.** São Paulo: Academia de Ciências do Estado de São Paulo/U.S. Fish & Wildlife Service, 2001.