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COMPARATIVE ANALYSIS OF THE SOCIAL AND ENVIRONMENTAL IMPACTS OF MIDAS-TYPE PORTS: A CASE STUDY OF THE PORT OF SUAPE (STATE OF PERNAMBUCO) AND THE PORT OF AÇU (STATE OF RIO)

Mirian Celeste Salih Teixeira[1]

Luiz de Pinedo Quinto Junior[2]

Abstract:

This research aims to perform a comparative analysis of the potential and the existing special social, environmental impacts caused by the building of the Port of Açu (Clipa), located in Southern São João da Barra town (RJ), Brazil. It also analyzes the changes occurring in the area under the influence of the Port of Suape, in Metropolitan Recife, in between the towns of Ipujuca and Cabo de Santo Agostinho. These ports are called MIDAS (Maritime Industrial Development Areas). They are designed for industrial use, a.k.a. IPZ (Industrial Port Zone) to meet the demands of globalization, linking markets and shedding borders. By requiring efficiency and speed in the shipping of goods, they demand a large area for the expansion of their cargo storage areas, because space impacts the members of traditional communities, changing their trading focus on fishing activities, agriculture and livestock.

Keywords: Midas; environmental growth; economic impact; social exclusion

1 INTRODUCTION

Ports are part of the land as spatial infrastructures, historically linked to a city. It is in this local scale that they gain significance, combining productive and managerial power, adding value to an increasingly competitive process which creates the image of the area as an attractor of investments and the bearer of a comparative edge.

Globalization has set new demands for ports, which resulted in changes in the world's port system and port-bearing cities, provided that productive sectors increasingly

[1]Environmental Engineering Master Degree Student with IFFluminense. E-mail: miriansaltex@gmail.com
[2]Ph.D. in Architecture and City Planning, Professor of the Master Degree Program in Environmental Engineering at IFFluminense. E-mail: luizpinedo@uol.com.br

depend on sea transportation. According to Monie (2006), today one cannot think of ports only from a technical, operating perspective, but as a tool servicing a development project.

In the current stage of the Brazilian economy, ports have soared in importance and are part of major productive and trading networks. They balance the domestic trade balance and drive local and regional development by raising the income and job opportunities. These facts have turned ports into strategic tools for the Brazilian economic development policies in the two stages of the Brazilian Accelerated Growth Program known as PAC 1 and PAC 2, with investments in maintenance, revamping and enlargement of the port infrastructure, and the increase of the logistics efficiency of ports. This strategy has been devised to provide the port industry with higher competitiveness and dynamism, while reducing waterway transportation costs, thus contributing to the development of Brazil. In the PAC 2, for example, the expected investments for the period of 2011 through 2014 have amounted to R$ 160 million for the Brazilian Dredging Program, R$ 1.5 billion for the port infrastructure itself and R$ 350 million for logistics intelligence (SEP/PR, 2014).

In Metropolitan Recife, 60 km from the city, they put up the Logistics and Industrial Port Complex of Suape (CLIP). In upstate Rio de Janeiro, the building of the Logistics and Industrial Port Complex of Açu (CLIPA) is under way. These two port complexes are of major importance for the 2nd edition of the Brazilian Accelerated Growth Program (PAC), because of their proximity to the oil basins, oil production sites and oil byproducts.

Both ports fit into a new typology of ports called MIDAs or Maritime Industrial Development Areas, a.k.a. ZIP (Industrial Port Zone). The MIDAs-type ports fulfill the demands of a globalized world, bring markets together and bridge borders. They also call for efficiency and swiftness in the trading of goods. The sites where both the SUAPE and the AÇÚ ports were built meet the demands for industrial activities and an easy logistics to ship inputs and products. Because these ports require large areas for the expansion of the cargo storage area, they had to be set up far from major urban centers (QUINTO JR, 2011; et al).

This research aims to establish a comparative analysis of the possible and existing effects of the social and spatial changes that came about in the area impacted by the Suape Port and the building of the Açu Port, with the launch of major logistics projects such as the port infrastructure of the MIDAs type. This hypothesis is grounded on the expected impacts caused by the need to use and occupy large stretches of land to deploy export corridors and logistics terminals for containers, one of the major characteristics of the MIDAs-type port.

We will also identify the social impacts caused by the pressure on natural resources and land occupation; real-estate exploitation; the rise in the living cost; changes in the traditional commercial focus and social marginalization.

2 METHODOLOGY

Ours will be an exploratory and analytical research. We will use comparative, dialectic and qualitative methodologies, as proposed by Lakatos (1983); Gil (1995). We will hand out questionnaires covering the areas of interest; browse through magazines, websites and blogs after articles; perform a historical and bibliographical survey and a photographic recording. We also intend to perform a conceptual approach to Henri Lefebvre's 'production of space' concept. We will approach it from a critical perspective assuming that space is a social product and, therefore, the venue where capitalist relationships are reproduced and found with all the conflicts and contradictions they bring along.

2.1 Description of the Areas under Study

2.1.1 The CLIP at Suape

The Industrial Port Complex of Suape is located 60 kilometers from Metropolitan Recife (Figure 1), between the towns of Ipojuca and Cabo de Santo Agostinho, in the State of Pernambuco, Northeastern Brazil. It is run by the government of the State of Pernambuco and occupies an area of 13.5 thousand hectares that divides into industrial, administrative and ecological, cultural zones. It was named after the Beach of Suape, the most southern beach in Cabo de Santo Agostinho town, meaning "winding path" in the Tupi language.

Its hinterland connects to 160 ports in all continents and is ready to be the major hub port in the Southern Atlantic, due to its geographic location (SUAPE, 2013).

Figure 01. The area where Suape's CLIP is located.

Figure 01.. Area where the CLIP at Suape is located.

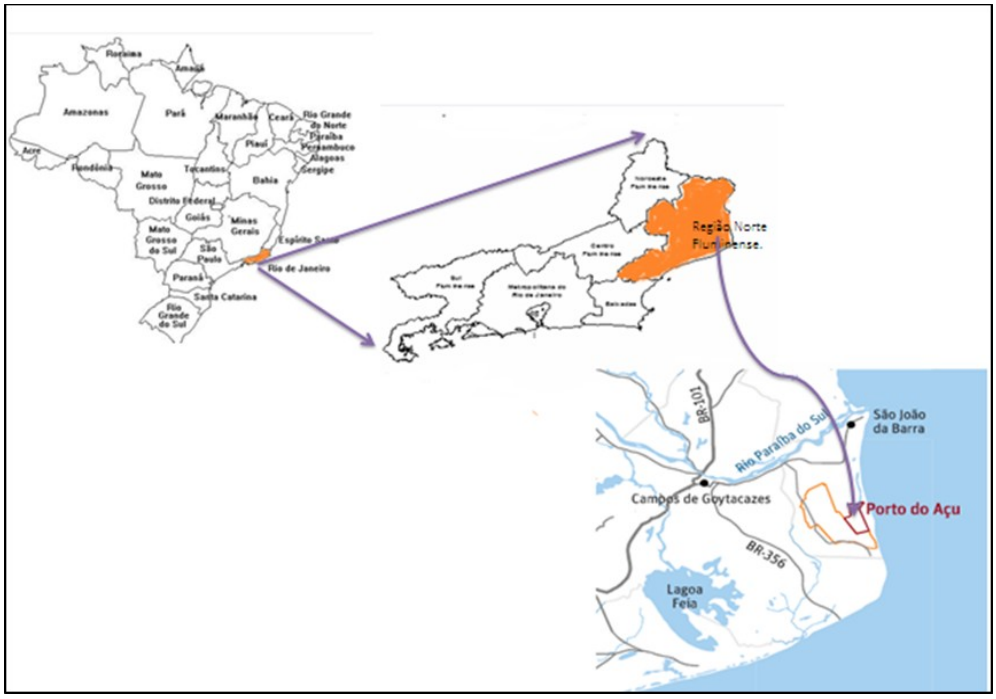
The Port of Suape was thought up in the 40's by economic and social researcher Father Louis Joseph Lebret. In April, 1984, a shipping of alcohol started off operations. According to Alves (2011), Suape has three natural conditions that contribute to its performance:

- Deep waters near the shoreline;
- A natural breakwater created by a strip of reefs;
- A large flat land available to put up facilities.

2.1.2 The CLIPA

The Logistic and Industrial Complex of the Port of Açu (fig. 02) is being put up in Açu, the fifth zone in the town of São João da Barra, in upstate Rio de Janeiro. It is strategically located to service the oil industry, because it lies very close to the Campos and the Espírito Santo Basins, also ready to be used to be the basis for the operations of the Santos Basin.

Figure 02. CLIPA's Area



Source. Adapted by Roberto Morias (www.robertomorias.com.br)

The company in charge of building this port project is PRUMO LOGISTICA GLOBAL, a private Brazilian company operating in the infrastructure and logistics industry. This port has one offshore and one onshore terminal and a 17km-long pier ready to berth up to 47 vessels.

Located close to the area where 85% of oil and gas is produced in Brazil, this will be one of the major, groundbreaking project in Brazil, as modern engineering practices are being used in its construction and operation, as said by PRUMO, the current majority stockholder.

Construction works started in October, 2007, in an area of 90 km². The Port of Açu will be 25 meters deep and will be able to berth big-sized vessels like Capesize and Very Large Crude Carriers (VLCCs) which carry up to 320 thousand tons of cargo. Today, only 7% of Brazilian ports can berth Capesize ships (PRUMO, 2014).

The area where the Port Complex of Açu is sited was chosen based on the following criteria:

- A draft capacity of 18 meters;

- The natural conditions of sea currents that facilitate the maintenance services on this draft, shedding the need for dredging services;
- A large available area, scarcely inhabited and with low-cost lands, which reduces the initial investments required to deploy the project;
- Proximity to the oil and gas exploration area in Campos and Espírito Santos Basins;
- Connection to highway BR101, the Centro-Atlântica railway network and the Logistics Corridor.

3 PORTS: SOCIAL AND SPATIAL PRODUCTION AND ENVIRONMENTAL CONFLICTS

The 'production of space' is the phrase issued by French philosopher Henri Lefebvre in the 60's. Since then it has influenced the ideas of geographers worldwide. Lefebvre thinks that the 'production of space' means the very re (production) of life. In other words, when people in society produce and engage in relationships, they also produce space.

Santos (2000) defines the geographic space as a synonym for used territory or "the result of the historical process as for the material and social foundation of the latest human actions", a perspective that "allows a comprehensive consideration of all causes and the effects of the social, spatial process" (Santos et al, 2000:2), without ignoring the need for *periodization*, according to the different uses and historical times.

Lefebvre (1974) says that space is historically produced by humans, as they organize their society politically and economically, thus reflecting on the conflicting relationships between capital and work. From this realization, he defines a threefold division of space:

- The conceived space: the abstract representation of space that translates into capitalism by hierarchy-based, immovable thoughts far from reality.
- The perceived space: is in between the distant order and the proximal order related to the unfolding of spatial practices stemming from actions, values and relationships that are particular to each social background.

- The experienced space: the existence of concrete and abstract elements denotes the differences in terms of the expected lifestyle.

The abstract and concrete elements of the experienced space are tools and a means of production of society, besides a means of control and domination, a means of power embedded with contradictions and conflicts. The conflicts translate into the results between private interests and collective assets that develop in the stress between the several uses of natural resources in a given territory or space (SILVEIRA, 2010). Conflicts related to environmental impacts are linked to the economic model and the political action of States and, therefore, to many problems 'said' to be environmental which are indeed political and economic.

The States of Pernambuco and Rio de Janeiro, where the Industrial Logistics Complex of Suape and AÇU are located, have always been subordinate to the economic development process. They share some similarities in their economic cycle, as follows:

- The sugar cane cycle
- Port focuses
- Cattle raising
- The oil industry
- The Industrial Port Complex

The development strategies in these areas rely on different rationales of interest which shape these sites, shifting land use and occupation.

Based on the concept of the complex land use value (LOJKINE, 1981), the ports of Suape and Açu are situated in areas that have seen three changes and times. They are: the natural land use value, the rural use value and the complex use value. The first changed into the rural use value on account of the major and minor farmers, in this case the land is the support of agricultural activities. And lastly, the change into complex use value, since there is a change in the rural land use to support the urban industrial and logistic activities under way.

In São João da Barra, as per Quinto Jr (2010, et al), the major changes with the deployment of the CLIP at the Port of Açu will change the current geographical, urban and hydrological

dynamics of the area, since it will no longer support the farm and cattle raising activities and will become a fully urbanized area. The author stresses that such fact requires that public authorities rethink the existing infrastructures, aiming at a new planning that can enhance the way the microdraining system works, thus avoiding future environmental and urban problems.

The Brazilian Agency for Waterway Transportation or ANTAQ in Portuguese (2012) states that ports generate social, environmental impacts, since the environmental impact is any change in the physical, chemical and biological properties of the environment, as a result of any form of matter or energy, resulting from human activities directly or indirectly affecting the health, safety or the well-being of the community, social and economic activities, the biota, the aesthetic and sanitary conditions of the environment and the quality of environmental resources.

At the construction stage of Port of Açu's MIDA, environmental damages impacting natural ecosystems have occurred. The engineering failures in the hydraulic landfills at the start of the dredging works have caused the salinization of the soil, the subsoil and the waterways. The draining canals near the projects have been affected and the minor farmers have lost their crops and experienced financial losses. This dredging also scared away local sea species, impacted fishing activities and caused financial losses to the small-scale fishermen relying on fishing for long to earn a living (SOUZA e OLIVEIRA, 2010).

The environmental conflicts related to the MIDA at the Port of Suape, considered to be a modern port, have been debated since 1975. The site chosen for the project was organized in spatial terms by communities into twenty seven sugar cane mills. There were rivers, beaches, mangrove swamps, woods and fruit gardens there. The good depth and the availability of the cargo-storage area to set up a port and handle port activities have justified the landscape irreversibility (CAVALCANTI, 2008).

Considering these facts, we notice that the shift in the use and value of the land of the MIDAs-type ports is tangible, as they are projects taking up great extensions of urban land, causing a number of social and environmental impacts. In these lands of “logistic” use,

local dwellers are evicted from their land or shifted away, local commercial focuses change and the urban centrality is remodeled by the port activities.

4 FINAL REMARKS

Ports are extremely complex clusters involving environmental, social and economic systems. Today port areas are faced with the challenge to accommodate the demands of globalization and, therefore, require a higher efficiency, since most of the world riches pass through them.

Port reproduction in the MIDAs-type ports evidences the relationship of the shifting in land use and value, since they take up large urban areas and cause a variety of social, environmental impacts. In these lands of “logistic” value, local dwellers are either evicted or shifted away, local trade focuses change and the urban centrality is redesigned by the port activities.

The bibliographic survey has revealed that the Industrial and Logistic Port Complex of Suape is a consolidated port. Its history has followed up the development of port activities in Brazil, and seen social, environmental conflicts that may significantly contribute to local growth, since the CLIP at Açu is still at the deployment stage.

This comparison becomes evident as a significant contribution to those willing to understand the different relations, in the different spaces reached by the economic development, of the economy's hegemonic players and, on the other hand, of the answers they get at the place valued by corporations.

Finally, we agree with Lefebvre's (1974) observations when he says that space is historically produced by humans, as they organize their society politically and economically, thus mirroring the conflicting relationships between capital and work. Society, therefore, is supposed to be in charge of the participatory management of its inhabited spaces.

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