

INTRODUCTION

The fishing activity is not prioritized by the federal public sector, leaving it in the margin in the process in coastal management. The Productive Fishery System (ABDALLAH and SUMAILA, 2007) include and inter-relates the whole fishing activity, with provision of necessary equipment to the activity, the industry of fish processing and derived products, covering the entire production chain of the activity. The extractive fisheries has an important role, from the social point of view, in Paraná, feeding that with workers in different production systems (ANDRIGUETTO FILHO *et. al.*, 2006).

Most of the workers in the fisheries sector in Paraná are located in coastal regions. Identifying these workers and understanding their real socioeconomic conditions, besides analyzing their conditions of food security, is an essential subsidy in the process of

public management to society, integrating it with the sustainable management of use of the environments and resources along the coastal region of Paraná.

Also, the emphasis on the state of "food security" adds to the socioeconomic character of the workers in the fisheries sector of Paraná its content of a population that aren't starving in the country. This basic indicator is relevant information to the formulation of public policy with social nutritional dimension, a parameter required by the United Nations international agreements, as well as an ethical, moral and citizen condition of the Nation.



STUDY AREA

- The coast of Paraná is situated on the Brazilian southeast coast, and has a total surface area of approximately 6000 km (BIGARELLA, 1978);
- Heterogeneous socioeconomic indicators, especially due to the development of distinct economic activities, such as agriculture, tourist-resorts and port system;
- Artisanal fisheries have great importance in the coast of Paraná, nevertheless, there are absence of reliable statistics and the fishing monitoring in this region (BORGES *et al.*, 2004).

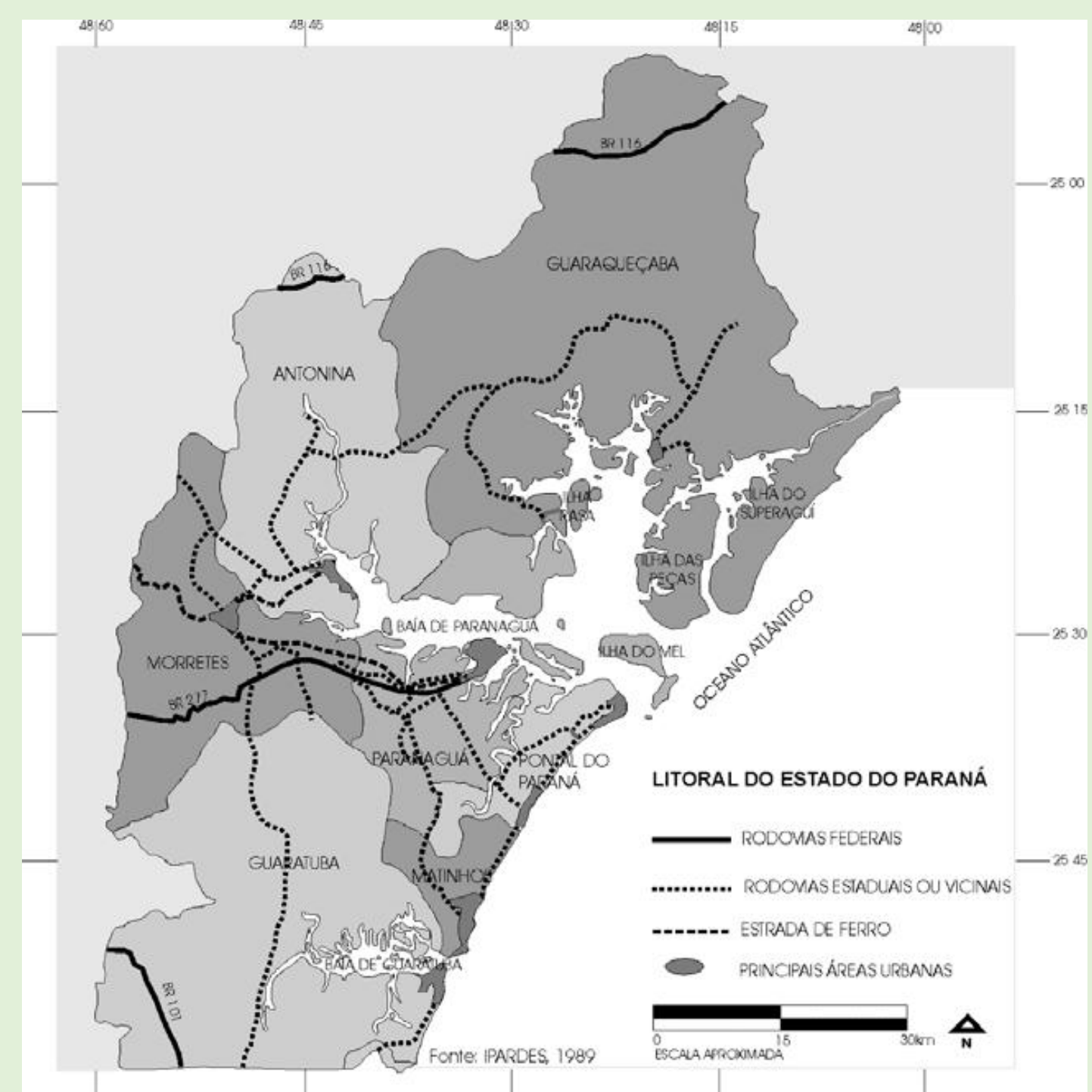


Figure 1. Coastline of Paraná: municipalities, main accesses and geographical features. Source: IPARDES, 1989 in ANDRIGUETTO FILHO *et al.*, 2006.

RESEARCH OBJECTIVES

To identify and characterize the profile of Workers in the Fisheries Sector (TSP) in the state of Paraná, post year 2000. Contributing to an analysis of the socioeconomic and of food security conditions of workers in the fisheries sector, as well as, mapping regionally their occupation.

- a. To characterize the socioeconomic profile of the TSP who act directly and indirectly with extractive fishing activity (artisanal and industrial) in the state of Paraná, analyzing their evolution between 2003 and 2015;
- b. Map the *quantum* of workers in the fisheries sector according to their regionalized occupation;
- c. To identify, according to Brazilian Food Insecurity Scale (EBIA), the Food Safety condition of these workers in the state of Paraná;
- d. To analyze the determinants of "Food Security" of TSP in Brazil through a probabilistic model, identifying the probability of these being in Food Security situation in Brazil and in the state of Paraná.

METHODOLOGY

Statistical
Analysis

Geographic
Information
System

Probabilistic
Modeling

TSP- Industrial: workers involved in industrial activity - aimed at the generation of surplus directed to the market and, consequently, to the accumulation of capital.

TSP-Artisanal: workers who carry out their activities for the subsistence of their families, and manage to generate, or not, surpluses that are marketed in the market.

REFERENCES

- ABDALLAH, P.R.; SUMAILA, U.R. 2007. An historical account of Brazilian public policy on fisheries subsidies. *Marine Policy*, v. 31, p. 444-450.
- ANDRIGUETTO FILHO, J.M.; CHAVES, P.T.; SANTOS, C. & LIBERATI, S.A. 2006. "Diagnóstico da pesca no litoral do estado de Paraná". In: Isaac, V.N.; Haimovici, M.; Martins, S.A. & Andriguetto, J.M. (Org). A pesca marinha e estuarina do Brasil no início do século XXI: recursos, tecnologias, aspectos socioeconômicos e institucionais. pp.117-140; Belém; UFPA.
- BIGARELLA, J. J. 1978. *A Serra do Mar e a porção oriental do Estado do Paraná*. Curitiba: SEPL/ADEA, 249p.
- BORGES, L. M.M.; MAULIN, G.C.; ANDRIGUETTO, J.M. 2004 Analysis of Income Sources of Fishers' Families on the Coast of the State of Paraná, Brazil. *Journal of Coastal Research*, , 39 (Proceedings of the 8th International Coastal Symposium): pp-pp.