



Artisanal fishery versus port activity in southern Brazil



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ABSTRACT

The objective of this study is to describe the artisanal fishery practices in the community of Farol de São Tomé in Campos dos Goytacazes city, north of the state of Rio de Janeiro. We aim to analyze the perception of artisanal fishermen and their families in relation to activities of Logistic Industrial Complex of Farol-Barra do Furado (CLIFABA) and to evaluate the conditions of fishery maintenance together with the port activities. Between 2014 and 2015, we conducted 90 ethnographic interviews with fishermen (30), spouses of fishermen (30) and children of fishermen (30). The fishermen are mostly male, all the spouses are female, here denominated as 'wives', and the children are male and female. In this region, the artisanal fishery is practiced in the marine environment with trawler boats and involves the use of nets, mainly bottom trawl, fishing lines and traps. Due to the absence of a mooring, tractors are used to launch and remove boats from the sea. Regarding the future of the artisanal fishery together with CLIFABA activities, the fishermen affirm that the fishery will ultimately end (37%; $n = 11$). The wives (40%; $n = 12$) and children of fishermen (43%; $n = 13$) believe that with the movement of ships during the activities of CLIFABA, the coastal marine fauna can disappear, ultimately changing the dynamics of fisheries in the region. As a solution to the interference of CLIFABA in the artisanal fishery, the interviewees suggest the repeal of restrictions related to fishery activities, as well as the ability of fishermen to work along any area of the coastline.

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1. Introduction

Artisanal fishery practice is a traditional activity that involves local actors of the fishery community and their knowledge of techniques and strategies related to fishing operations (Diegues, 2000; MPA, 2011). In these practices, the fishermen typically work alone, utilize the familiar labor or are self-employed; they typically explore the environment along the coastline because the boat and the equipment that they use have little autonomy (Clauzet et al., 2005). In some areas along of coast of Rio de Janeiro State in southeastern Brazil, the artisanal fishery on sea presents

characteristics of greater autonomy. Generally, the fishery starts at dawn until late afternoon, but in some communities the artisanal fishermen can board until 15 days (Di Benedetto et al., 1998; Di Benedetto, 2001; Silva et al., 2014; Zappes et al., 2014, 2016b).

The state of Rio de Janeiro is considered the third largest national producer of fish (Vianna, 2009). According Prozee (2005) there are 20,000 fishermen in the state with an average annual of extractive production of fishing on sea was 62 thousand tons with annual revenue of approximately R\$ 180 million (approximately US\$ 52,252,670.69; R\$ 1,00 ≈ US\$ 3.44). In 2012 the annual of extractive production of fishing on sea was 90,689 thousand tons (Fiperj, 2013). The principal resources captured involves pelagic species as corvina (*Micropogonias furnieri*), sardinha (*Cetengraulis edentulus*), bonito-listrado (*Katswonus pelamis*), peroá (*Balistes* spp.), cavalinha (*Scomber japonicus*), xerelete (*Caranx latus*), dourado (*Coryphaena hippurus*) and albacora-de-laje (*Thunnus albacares*). The principal shrimps species captured are Atlantic seabob shrimp

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(*Xiphopenaeus kroyeri*), Argentine stiletto shrimp (*Artemesia longinaris*), white shrimp (*Litopenaeus schimitti*) and pink shrimp (*Farfantepenaeus paulensis F. brasiliensis*) (Vianna, 2009; Fernandes et al., 2011).

Along the north coast of the state (~22°S–42°O), the operations of artisanal fisheries are conducted mainly by the communities of Barra de Itabapoana, Guaxindiba, Gargaú, Atafona, Farol de São Tomé and Macaé, with the use of various types of nets, fishing lines and traps (Di Benedetto, 2001; Vianna, 2009). The community of Farol de São Tomé (22°02'S–41°02'O), in the municipality of Campos dos Goytacazes, has the largest fishery production of marine shrimp in coastal waters (Semensato and Di Benedetto, 2008; Costa and Di Benedetto, 2009). The headquarters of two shipyards that construct fishing vessels are located in this community, indicating their regional importance for artisanal fisheries (Vianna, 2009).

This community is located next to the enterprise of port Logistic Industrial Complex of Farol-Barra do Furado (CLIFABA) (22°07'S–41°10'O) (Fig. 1). CLIFABA is currently under construction along the margin of Bar of Canal das Flechas, occupies an area of approximately 170 km² in the borderline of the municipalities of Campos dos Goytacazes and Quissamã. This enterprise will allow the construction of ships and will serve as a base of logistic support to the port and to the activities *off-shore* in Basin of Campos, working to support the extraction and production of oil and gas in the region (UFF/FEC, 2010). According to the government of the state of Rio de Janeiro and the prefectures of the municipalities of Quissamã and Campos dos Goytacazes, the activities of CLIFABA, functioning as a port logistic industrial complex, were set to begin in the first half of

2011, but the deadline was not met. In this period, the construction was started.

Social problems resulting from conflicts between fishery communities and port activities have been reported along the coast of Brazil (Lopes, 2013; Castro and Almeida, 2012). Along the north coast of the state of Rio de Janeiro, this reality has already reached the fishery communities in Atafona and Barra do Açu, which have both been affected by the deployment of the Logistic Industrial Complex of Porto do Açu (Souza, 2010). However, there are no studies related to the cultural and social impacts of CLIFABA in the region, but there are indications of possible threats in the economic and territorial context (UFF/FEC, 2010).

The assessment of environmental changes caused by port enterprises can be understood using qualitative data obtained through interviews with stakeholders (Jung et al., 2011). These data present the potential to demonstrate environmental conditions from the past and present, as well as what the environmental future might look like. This demonstrates that interdisciplinary research can help in the management and conservation of the environment and human culture that are involved (Jung et al., 2011). In this sense, it is necessary to understand the intention of the participation of stakeholders in the implementation process and the management of major technological projects to avoid value conflicts that may arise between the local community and entrepreneurs (Ravesteijn et al., 2014). Thus, the objective of the present study is to describe the artisanal fishery practices of the Farol de São Tomé community and to analyze the perception of artisanal fishermen and their families regarding port enterprise by assessing the

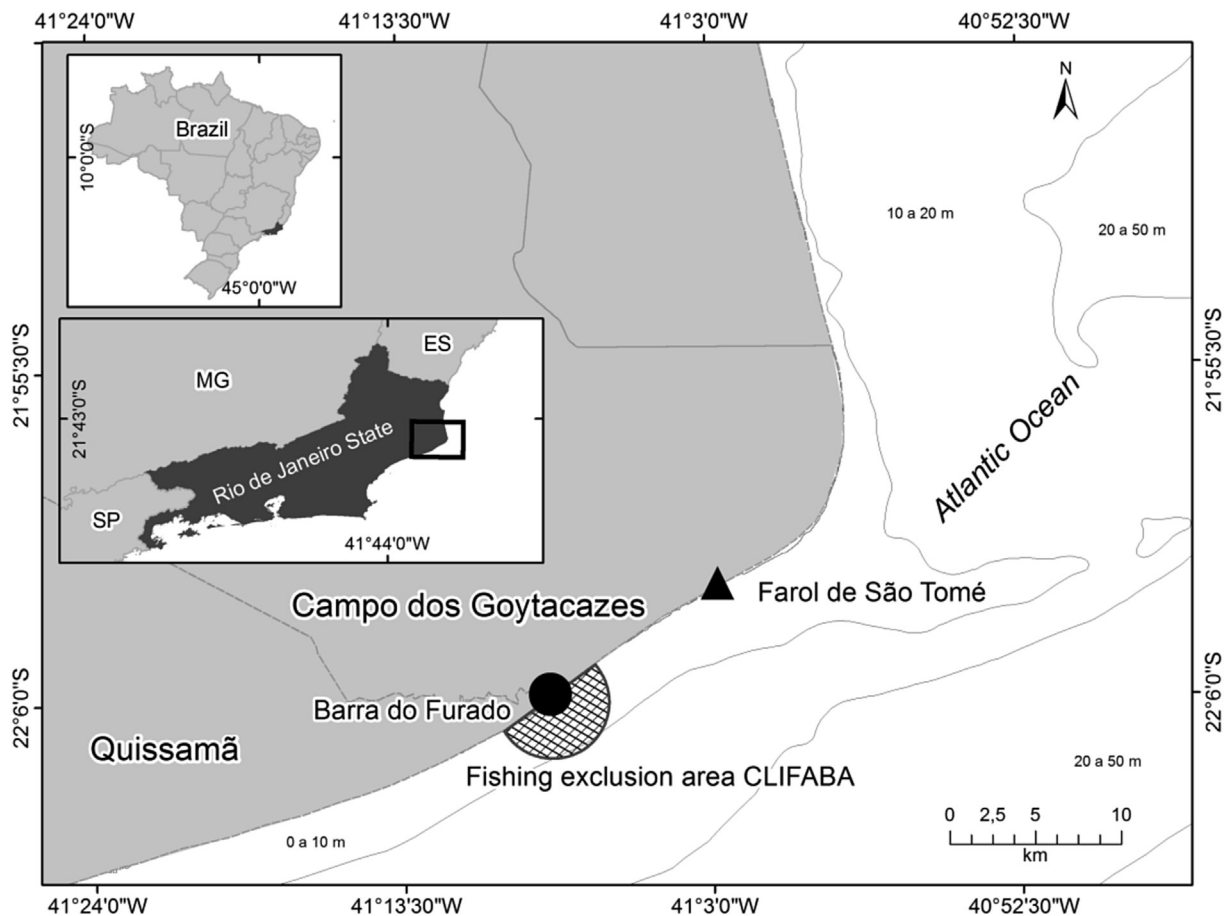


Fig. 1. Locations of the communities of Barra do Furado and Farol de São Tomé, Rio de Janeiro state, southeastern Brazil. Headlines (dotted) indicate the fishing exclusion zone in the coastal marine environment due to CLIFABA activities.

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