Chapter 16

Diagnosis of the socio-economic profile fish farmer coastal region of Pará

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ABSTRACT
The state of Pará is presented as the 2nd in the production of fish from fishing, but the production of aquaculture origin lies in 21 th positions in the national ranking, representing only 12.8% of regional production. The decrease in the quantity and size of fish caught favors the increase in price and the number of people interested in aquaculture. Considering the lack of information on aquaculture, specifically in the Pará region Salgado, the objective of the study was to outline a socioeconomic profile of the fish farmer, to identify the main motivations for joining the activity, only the income from aquaculture and finally, the weekly fish consumption.

Keywords: Family aquaculture, agricultural diversification, income, technical assistance, and aquaculture extension.

1 INTRODUCTION

Embora or Brazil has the largest and most diversified fauna of twelve water fishes in the world, and the Amazon basin shelters the largest source, in world terms, of species potentially used in aquaculture, in the Northern region, even with its vast territories flattened and dominated by várzeas and mangues, contributed with less than 10% of the national production (LIMA and GOULDING, 1998; EMBRAPA, 2002). The local production of Pará is below other states of the Northern region, representing only 12.8% of the regional production and contributing 0.8% to the national production, occupying the Brazilian

ranking, barely or 21st place (BOSCARDIN, 2008). The decrease in the quantity and size of the fish caught, in the function of the growing pressure on the increasingly distant natural fishing stocks, favors the increase in the price of fish, or that they see an awakening, for this reason, the interest of small producers as much as two governments and encourages or increases the number of interested parties in the activity. Considering the scarcity of studies on aquaculture, specifically not in Salgado, Pará, it is necessary to carry out a more in-depth investigation into the current state of this important economic activity that takes place in the region. The objective of the work was to draw up a panorama of aquiculture, to identify the motivations of the two producers in entering the activity and the socioeconomic profile of the aquiculture farmers, the activities developed by this public, the income coming only from aquiculture and finally, the weekly consumption of fish. This information is valuable, it can be used by environmental, technical assistance, and promotion agencies, not to help in the application of public policies for the sustainable development of activities in the region.

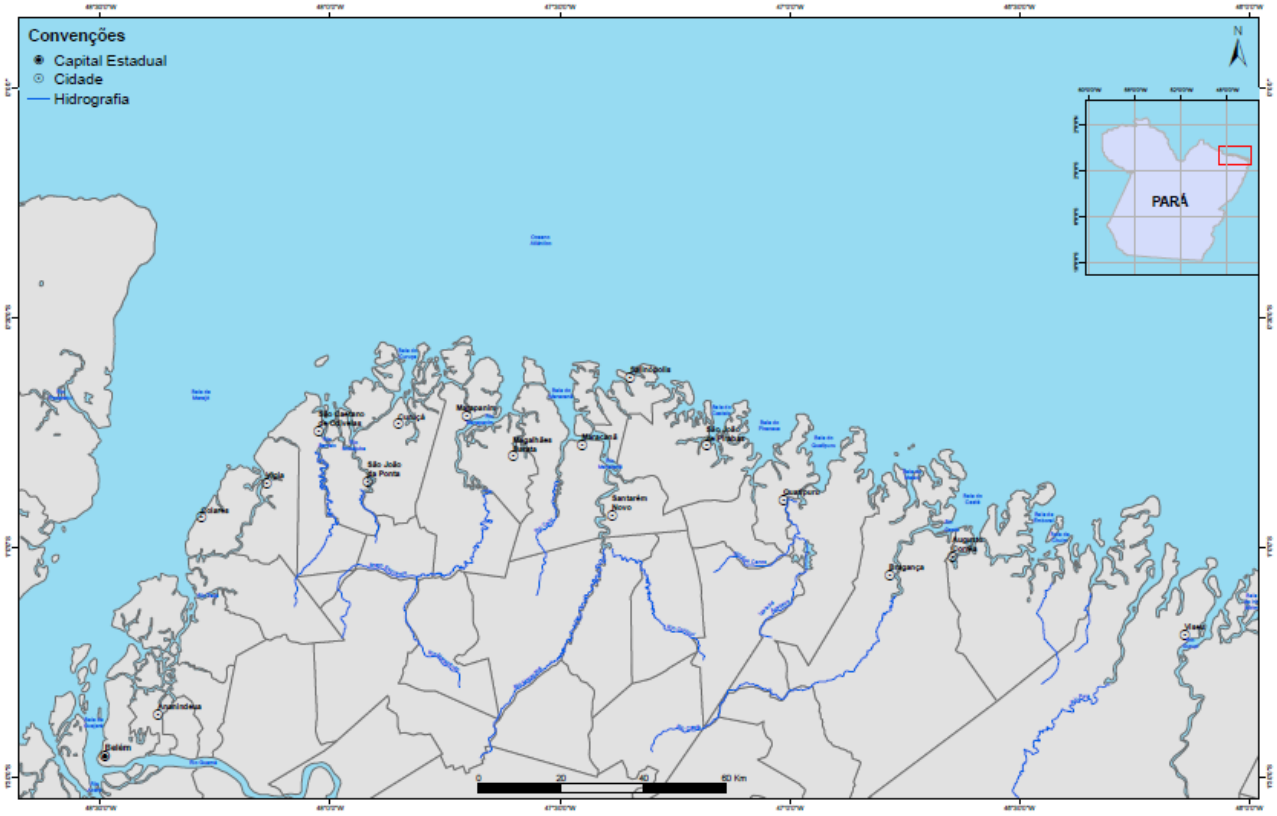
2 METHODOLOGY

The first stage of the research (external secondary data) was tempted to compile information from scientific publications, research reports, and the bibliographical heritage of research and teaching institutions on aquaculture in the study area. Therefore, due to the existence of very little and pulverized information available, it was decided to seek public development agencies, technical assistance, and those that are considered responsible by the non-State sector (both in the state and federal spheres), without success. It is evidenced by a lack of interest in auxiliary work or by the non-existence of data.

For this reason, the research consisted basically of surveys of field data (primary data) by sampling, obtained through technical visits with the application of semi-structured questionnaires to the farmers (RUAS et al., 2006, VERDEJO, 2007).

The locations of the two ventures were carried out through consultations with local organizations such as prefectures, unions of rural producers, fishermen's colonies, and offices of the state technical assistance company. They visited the municipalities of the metropolitan region (Belém, Ananindeua, Benevides, Marituba, and Santa Bárbara), the Guamá-Caetés River region (Colares, Castanhal, Curuçá, Igarapé Açú, Inhangapi, Magalhães Barata, Maracanã, Marapanim, Santo Antônio do Tauá, Santa Isabel do Pará, Santa Maria do Pará, São Caetano de Odivelas, São Domingos do Capim, São Francisco do Pará, São João da Ponta, São Miguel do Guamá, Terra Alta, Vigia) and the region of Rio Caetés just Bragança, Capanema and Nova Timboteua (Figure 1).

Figure 1 – Map of two surveyed coastal municipalities.

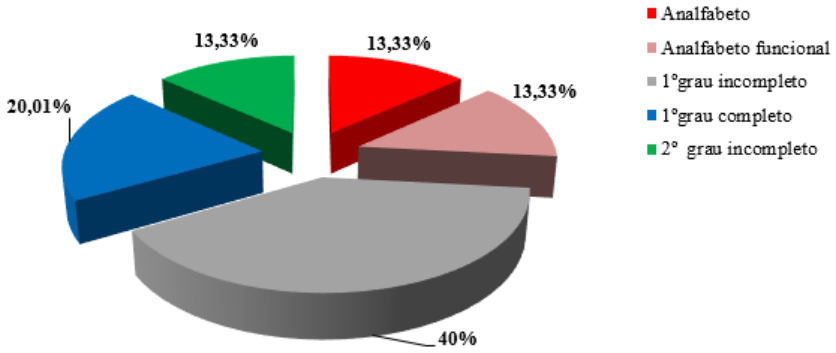


The visits to the municipalities and personal interviews were not previously combined, neither with farmers nor with the technicians of two local organizations, not intended to try to portray the reality experienced by the farmer in the most reliable way possible. The questionnaire continues with key questions about schooling and interest in entering the activity, weekly consumption of fish and quantifying the farmers who survive only from aquiculture, and estimating the income from only the commercialization of farmed fish. In total, 17 farmers were interviewed (one farmer per municipality), characterizing quantitative research (GOMES, 2005). Because the project does not have financial resources, the technical visits are carried out on weekends, using a private vehicle. The results are presented in the form of frequency of observations (when possible) and are graphed using the Microsoft Excel program of cases that exemplify the average pattern of the interviewed aquaculturists.

3 RESULTS AND DISCUSSION

Although other modalities were observed in the study area, such as turtle farming, ornamental fish farming, marine shrimp farming, and malacoculture (all in small proportions), fish farming was the most common aquaculture activity. Figure 2 shows the level of education of the surveyed aquaculturists, where 40% have incomplete primary education, 26% are illiterate and 73% of them perform other activities to generate income.

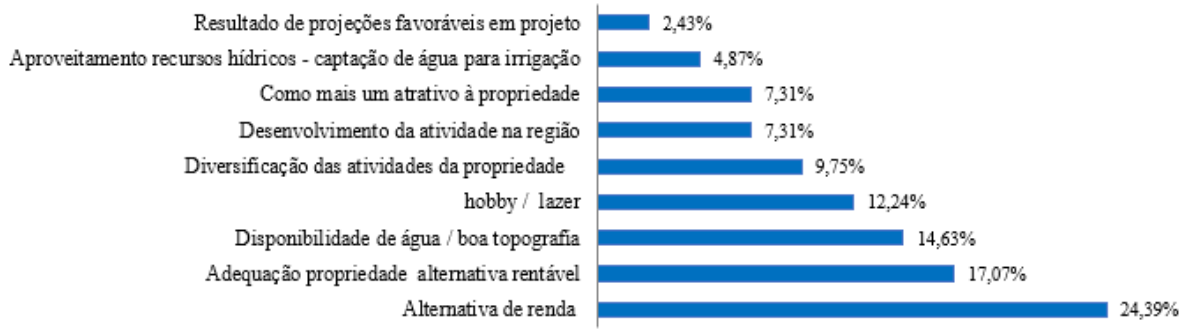
Figure 2 – Schooling of aquaculturists in the study area.



Subtitle: Illiterate
Functional illiterate
incomplete 1st grade
complete 1st degree
incomplete high school

Most respondents saw aquaculture only as an income alternative (24%), adapting their properties to an activity they consider profitable (17%), availability of adequate water and topography (15%), and 12% entered aquaculture as leisure/hobby, ahead of other reasons considered more important, such as agricultural diversification, development of activity in the region, among others (Figure 3).

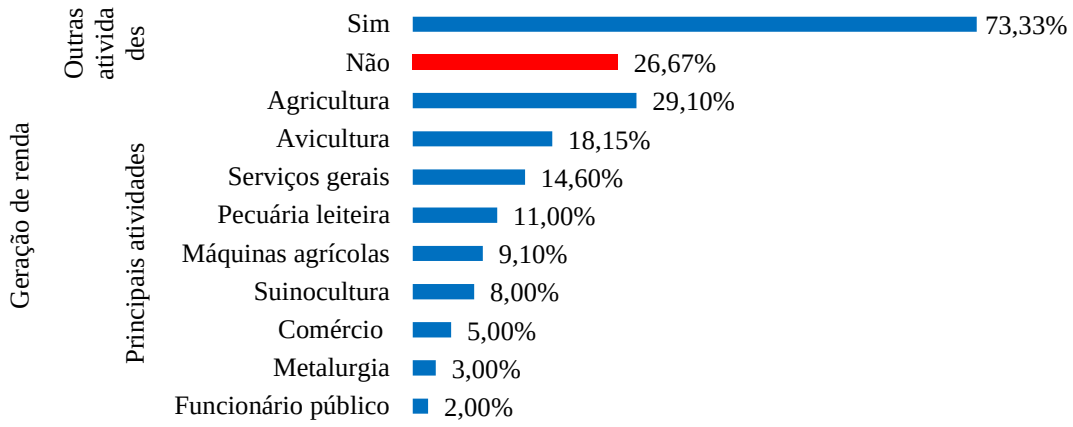
Figure 3 – Main reasons were given by producers for entering aquaculture.



Subtitle: Result of favorable project projections
Harnessing water resources - capturing water for irrigation
As one more attraction to the property
Development of activity in the region
Diversification of property activities
hobby/ leisure
Availability of water / good topography
Profitable alternative property suitability
income alternatives

In this study, contrary to what Mathias and Conrad (2004) recommend, entrepreneurs entered aquaculture, mainly as an income alternative, to the detriment of market research and this is probably contextualized by their low level of education and current technological level (Figure 2). In the survey, it was found that none of the interviewees lives exclusively in aquaculture (73%), and among the various activities carried out, subsistence agriculture is predominant (29.1%), mainly from the cultivation of cassava, also highlighting poultry farming (18 .2%) and occupation in various services (14.6%) (Figure 4).

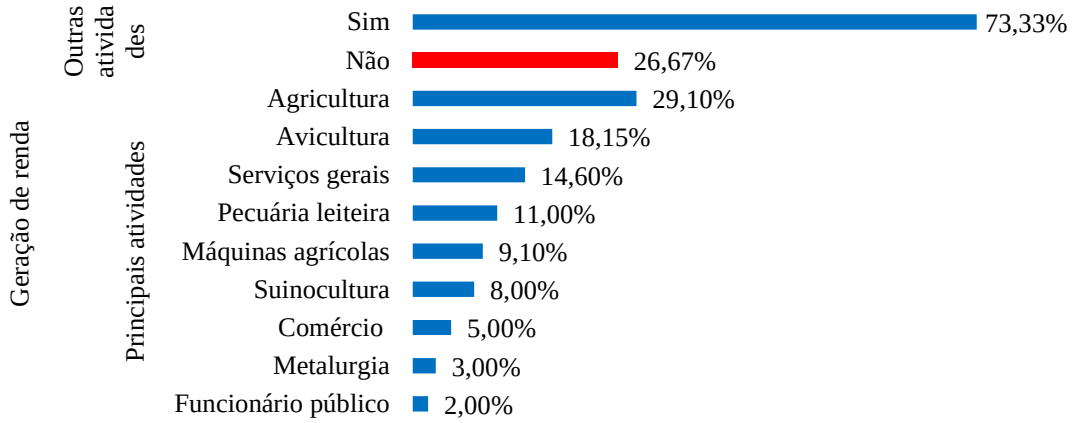
Figure 4 – Main activities for income generation of respondents.



Subtitle: Yes
No
Agriculture
poultry farming
General Services
dairy farming
Agricultural machinery
swine farming
Metallurgy
Public Agent

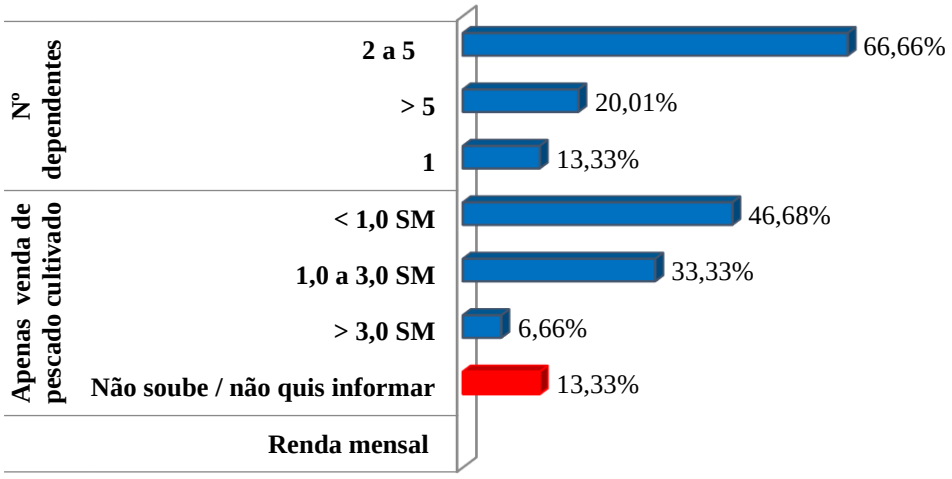
When asked about weekly meat consumption, respondents stated that they consume poultry meat practically every day, followed by beef (3 to 4 times during the week), with pork meat (27%) and fish in the highest proportion. than the previous one (87%), consumed only once or twice a week. This is probably due to the price of poultry meat being relatively less expensive (and therefore more accessible) than the others and the culture of raising these small animals (birds) on properties to obtain eggs and/or meat. Pork meat is not part of the interviewees' eating habits, although fish (whether marine or inland waters) is part of their eating habits, its inclusion in the diet does not occur every day, due to the high price, being, for this reason, another incentive to enter aquaculture (Figure 5).

Figure 5 – Weekly frequency of fish and other meats by the surveyed public. Subtitle: bovine /birds / swine/ Fish - Every day / 3 to 4 times / 1 to 2 times



The family nucleus comprises an average of 4.31 people (67%) and the income derived solely from cultivated fish is less than a Minimum Wage (MW) in 47% of cases; and only 7% manage to earn more than three salaries from the sale of farmed fish, a much lower rate than those who did not want to or did not know how to answer (13%) (Figure 6).

Figure 6 – Average number of dependents and income exclusively from cultivated fish. SM - Minimum Wage.



Subtitle: Monthly income
Only sale of farmed fish
Dependents
Did not know/did not want to inform

It was found in the research that practically all of them said they did not receive Technical Assistance and Rural Extension service (ATER); and when you receive it, it is of very dubious quality, below your needs to carry out technically and economically viable crops, carried out in very poor production and productivity, inefficient and environmentally harmful practices, with long cycles and unaccounted for losses.

4 CONCLUSIONS

The present study indicates that the activity is present throughout the coast of Pará, where fishing has been established for decades, indicating that it is not an obstacle to the development of aquaculture in the region, being this one more alternative to the consumption of fish from the capture, increasingly costly and less accessible to the population. The entry of entrepreneurs into the activity in the researched area is primarily based on an income alternative and not on market studies as it should be. None of the interviewees lives exclusively from aquaculture (fish farming), which is the second or third source of income. Fish is currently consumed once or twice a week, increasing consumption during Holy Week and festivals. Due to the low level of schooling of aquaculturists, the absence of specialized technical consultancy and qualified

and constant public technical assistance services characterizes aquaculture in the researched area as subsistence fish farming, where the production surplus, when it exists, is sold in natural (without adding value) and in the local market.

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