

# **Analysis of Fishing Activity and Management of Resources in The Artisan Fisherman Colony in Bahia Semiarid**

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## **Abstract**

*In this article we seek to analyze the fishing activity of the Colony of Fishermen and Aquaculture Z-86, in the municipality of Gloria, Bahia. Currently with 246 associates, where randomly, 20 families with low educational level and mostly represented by women were interviewed. The study focuses on the analysis of fishing activity, and the management of its resources against large-scale production. The methodology used was bibliographic research, websites and books, as well as technical visits, where two types of semi-structured questionnaires were applied, one for the colony members, the other for the president. The questionnaires contained questions regarding social, technical and economic aspects. The results indicate that artisanal fishing is going through difficult times due to the changes that man, in general, make in the environment, causing environmental impacts and consequently affecting the community economy.*

**Keywords:** Artisanal fishing. Cologne. Socioeconomic profile. Environmental impacts.

## **1. Introduction**

*“O território é o chão e mais a população, isto é, uma identidade...” (Milton Santos).*

The basis of this research came from the concern about how artisanal fishing communities are surviving the growth of aquaculture activity, where they are increasingly investing in new technologies and techniques for fish improvement.

Pollution, deforestation and sedimentation, degradation of outback lakes, presence of exotic species and uncontrolled fishing pressure have negatively influenced the fishery production in the Bahian semiarid region, as well as the spatial distribution of species in relation to environments (SOARES et al., 2011). environmental issues, channel-based fishermen still face various problems such as housing, health, education, communication, fish economics and territorial disputes (CARDOSO, 2009).

In this context, with the viewpoint focused on the artisanal fishing activity, seeking to know how artisanal fishermen live, as well as their perceptions about the environment from the perspective of sustainability, it was made an analysis of the activity and management, experienced by the Colony of Fishermen and Aquaculture Z-86, located in the municipality of Gloria, Bahia.

The scarcity of fish affects artisanal fishermen not only financially but also socially, but together with fish if the waters of this river are losing their cultural identity (ANA, 2004a, GODINHO; GODINHO, 2003).

The analysis of the socioeconomic profile aims to contribute to a better understanding of the dynamics of this population and its production within the geographical space where it is inserted.

Thus, being fishing the only way to survive the members of the colony, we seek to analyze their way of life and their view of the environment, taking as their north their ethno-knowledge.

The models of culture and knowledge are based on historical, linguistic and cultural processes, and although not isolated from the larger stories, retain a certain specificity of place (ESCOBAR, 2005).

For a better basis, the bibliographical research was used as initial methodology, opportunity in which the theoretical concepts that guided the research were established; This methodology was articulated with the data collected during the field research phase, which used the participant observation methodology, the guided tour (visit accompanied by fishermen to the fish catching environments), and the application of semi-structured forms that were applied. during the meetings. Data collection was performed between March 2018 and September 2019.

The results show that artisanal fishing goes through difficult times due to man-made changes in the environment; This is a very important fact in this case, since the fishermen's colony has as its main economic and subsistence activity fishing; which generally needs a balanced environment so that the local ichthyofauna is in harmony thus meeting the needs of families.

## **2. Development**

### **2.1. Study area**

Gloria is a Bahian municipality located 514 km from the capital Salvador. It is bathed by the waters of the São Francisco River and borders the states of Pernambuco and Alagoas, which facilitates the arrival of tourists not only from Brazil, but also from the world. Formerly called “Curral dos Bois and Santo Antônio da Glória, from July 8, 1931, it had its simplified name for Gloria. It currently has a population of 16,000 inhabitants (<http://www.gloria.ba.gov.br/> accessed on September 11, 2019).



Image 01: municipality of Gloria- BA

Fonte: [https://www.ibge.gov.br/cidades-e-estados/ba/gloria.html/?/](https://www.ibge.gov.br/cidades-e-estados/ba/gloria.html?/) access em 11 de september of 2018.

## 2.2. The colony

Located in the municipality of Gloria -BA, on the banks of the São Francisco River, the Z-86 Fishermen's and Aquaculture Colony was founded on December 1st, 2010. It currently has a total of 246 members, who live on artisanal fishing as subsistence activity. The fishermen's colony aims to assist fishermen in fishery planning, fish processing and marketing. She is currently chaired by a woman in her second term.



Image 02: visits to the Z-86 Fishermen's and Aquaculture Colony, June 2018, presentation of the work proposal.

## 2.3. Diagnosis

In the first moment, the research proposal was presented to the Colony, as well as the clarification of the need for approval by the University Ethics Committee, for the application of the forms.

The second moment became a stage of exchange of experiences, where the academy and the traditional peoples could talk. In this meeting 14 semi-structured forms were applied, one directed to the president of the colony and the other thirteen to the families.

The forms contained questions about social and environmental aspects. Through ethno-knowledge colony members contributed to the research. A visit was also made to their workplace.

**2.3.1 Social Aspect of Families**

The Federal Constitution of 1988 began to prioritize the family as the basis of society, admitting its new forms, thus establishing new social values, based on the appreciation of the human person, and ensuring priority treatment to children and adolescents according to their best interests, based on equality and dignity of the human person.

Law No. 8,742 / 93 defined a needy family - which can also be conceptualized as a low-income family - one whose monthly per capita income is less than 1/4 of the minimum wage (ANFIP, 1995, p. 75-76).

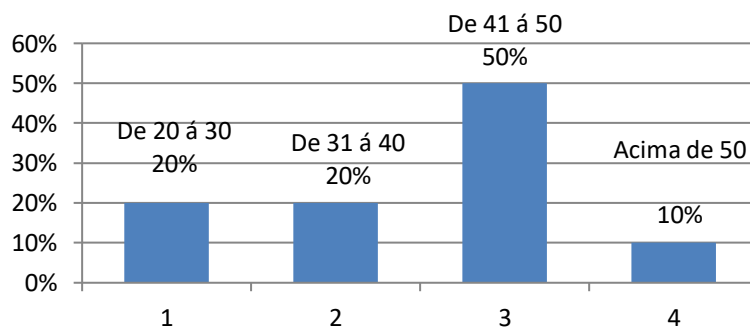
**2.3.1.1 Gender**

The analysis of the collected data shows that 85% of families have women as head of household and 15% of families have men in this role. Being them, the "head of household". Of course, women's achievements were only possible due to a combination of forces, which enabled the bottom-up emergence of women's energy and determination, as well as the top-down forces that opened a window of opportunity as a result of change. social and demographic. Several transitions favored the emergence of female empowerment, such as: urban transition, demographic, nutritional, epidemiological, age structure, family, religious, and so on. It was all these transitions, as well as democratic openness, that ensured freedom of organization, mobilization and expression, enabling women to benefit from the deepest and longest period of democratic normalcy since the constitution of the New Republic in 1985 (ALVES, 2014). ).

**2.3.1.2 Age Range**

The age range of respondents is diverse, ranging from 20 to 60 years (Figure 1). At this point stated the President of the Colony: “Despite the initial difficulties of collective living, here is an exchange: the elderly, besides work, with their experiences help in solving the difficulties; while the younger ones put the guidelines into practice using the vigor of age ”.

Thus, it was observed that in Cologne, the age range is within the standards of labor standards, and no minors were observed contributing to their work to support the family.



**Figure 1:** Distribution of respondents by age group at Z-86 Fishermen and Aquaculture Colony in 2019.

Source: The author.

### 2.3.1.3 Degree of Education

The educational level of the fishermen is low; The data collected showed that 95% of respondents have incomplete elementary school. It was evident that in Cologne members are encouraged to study, which is reflected in the statement by the President, who added that all members are advised to adjust the activity with further studies.

Silva (2002, p. 58) when referring to the importance of education, comments the following:

Currently, we find in the speeches conveyed by the media and government policies a strong appeal to schooling as a way out of the serious problems faced in the country. While it is not correct to imagine that schooling can solve all problems, we have to agree that its role goes far beyond just educating the new generations.

Paulo Freire says that “being a citizen is a political being, capable of questioning, criticizing, claiming, participating, being militant and engaged, contributing to the transformation of a social order”.

### 2.3.1.4 Marital Status

Regarding marital status, half are married people (50%) (Figure 2).

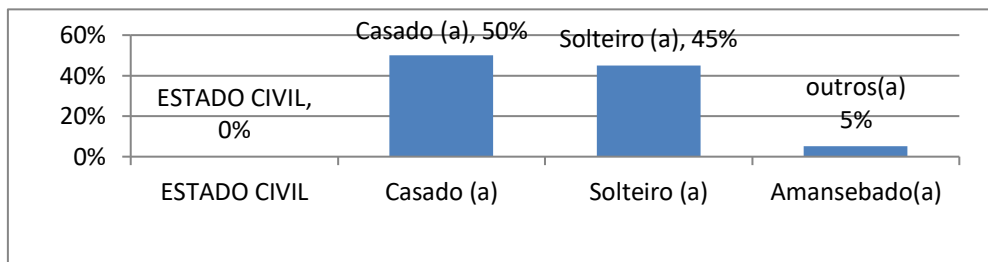


Figure 2: Breakdown by marital status in Z-86 Fishermen's Colony in 2019.

Source: The author.

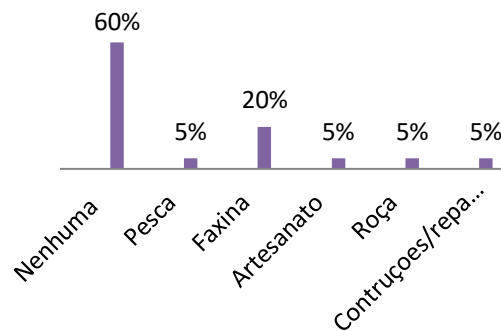
## 2.4 Economic Aspects

### 2.4.1 Monthly Income

The estimated average monthly income of each associate is five hundred reais (R \$ 500.00), according to the president of the colony, in office. what “give individuals and families the peace of mind that the level and quality of their lives will not be significantly diminished, as far as possible, by no economic or social circumstance” (ANFIP, 1995, p. 31). -32).

### 2.4.2 Activities performed during time off

Most respondents do not engage in any activity during their free time, as they spend an average of 6 hours a day on the river (Figure 3).



**Figure 03:** Activities Performed on Off Time at Z-86 Fishermen's Colony in 2019.

**Source:** The author.

### 2.4.1 Profit Sharing

The data collected indicate that the distribution of profits is made by the family, that is, if parents and children fish, the value obtained by the sale is shared by all. Associates affirm that there is no consensus on “how to spend money”, that is, bringing weaknesses in their economic model.

### 2.4.2 Average Price of Fish Sold

The fishes mentioned below were related by fishermen, considering those that focus more on fishing. It is noteworthy that, according to the fishermen themselves, these are sold at a lower price, compared to the values traded in fairs and large markets.

Fish Type Ethno-knowledge *	Scientific name	Value middle of the Kg sold
Pacu	<i>Myleusmigans (Reinhardt, 1874)</i>	R\$ 2,00**
Tucunaré	<i>Cichla ocellaris</i>	R\$5,00**
Curimatã	<i>Prochilodus lineatus</i>	R\$ 6,00**
Curvina/Corvina/Cruvina	<i>Plagioscionsquamosissimus(Cuvier, 1830)</i>	R\$ 10,00**
Piranha	<i>Pygocentrusnattereri</i>	R\$7,00**
Piranbeba	<i>Serrasalmusrhombeus</i>	R\$1,00**
Tilápia	<i>Oreochromisniloticus</i>	R\$4,00**
Apanharí	<i>Astronotusocellatus (Agassiz, 1831)</i>	R\$3,00**

\* Ethno-knowledge

\*\* The above values refer to large fish. (over 600 grams);

**Table 1:** Average Fish Price Sold by Z-86 Fishing Colony in 2019.

**Source:** The author

## **2.4 Technical Aspects**

### **2.4.1 Physical Structure of the Colony**

The Colony does not yet have its own headquarters, the meetings are held in the City Council of Glory; In addition to this space the Colony has at its disposal a specific space in the Secretariat of Environment of the municipality.

### **2.4.2 Relationship with the Environment**

According to the president "the environment needs to be preserved, since it is the environment is for them, their children and for other generations." He added: "The need to preserve the environment is our part, our homework, for the sake of future generations."

### **2.4.3 Mortality**

Fish are cleaned by the river and the waste is buried at a distance of approximately 300 m from the river bank. Associate Silva emphasized: "We know of the need to bury dead fish to avoid water contamination and care of animal species and native vegetation, in the name of preserving the environment, which is of all and for all, for many generations".

### **2.4.1 Environmental Impact**

During the application of the forms, it was found that the focus of the Colony is focused on the successful accomplishment of ecologically sustainable fishing, where the practice of self-management is sought.

To this end, members of the colony must rationally use natural resources without degrading the ecosystems in which they are inserted and should generate jobs for the local community, raising their quality of life and respecting their culture (VALENTI, 2002).

Still within this context, the author cites that "Sustainability is the management and conservation of the natural resource base and the technological and institutional orientation, so as to ensure the continuous satisfaction of human needs for present and future generations".

## **3. Final considerations**

The artisanal fishing practiced in the Z-86 Fishermen's and Aquaculture Colony is a subsistence fishing, which happens in a familiar way, using small equipment (nets, fishing net, fishing rods, etc). It is the fishermen's main source of income, and much of the fish caught goes to the fishermen's own table.

It is noteworthy that, according to the fishermen themselves, the other part of the fish is sold at a lower price, compared to the values traded in fairs and large markets, thus contributing to the revenue generated in the local trade, directly and indirectly. indirect.

With regard to education, it is necessary to raise the level of education to facilitate fishermen's knowledge of legislation and to bring them closer to the public authorities in order to seek development for the sector.

The socioeconomic data obtained portray the difficulties faced by the community, resulting from the changes that men, in general, make in the environment, such as the growth of large-scale fishing, such as fish farming; open sewers, garbage thrown directly into the river, which causes various damage, among others the existence of baroness.

It is noticed that the fishermen of this Colony, for the most part, work based on the principle of sustainability, even if not academically. They work to ensure the future of their children, because they imagine that they, too, will live on fish, since they have no prospect of leaving.

Thus, the reality experienced by the Colony of Fishermen and Aquaculture Z-86 leads us to a reflection on the quality of life of the actors involved, with regard to the execution and management of this activity, aiming to find ways that provide them with conditions of sustain themselves through fishing in an orderly and sustainable manner.

It is concluded, therefore, that artisanal fishing goes through difficult times due to the changes that the man, in general, makes in the environment, causing environmental impacts and consequently affecting the economy of the community.

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