

Environmental Racism has Colour: A Look at the Fishing Territory

Fátima Cristina Cunha Maia Silva¹, Júlia Figueredo Benzaquen², Luciano Pires Andrade³,
Horasa Maria Lima da Silva Andrade⁴

¹Doctoral student, Postgraduate Program in Agroecology and Territorial Development, Rural Federal University of Pernambuco (UFRPE) Campus Recife - PE, Brazil.

^{2,3,4}Teacher, Department of the Program in Agroecology and Territorial Development, Rural Federal University of Pernambuco (UFRPE) Campus Recife - PE, Brazil.

Received: 19 Jan 2022,

Received in revised form: 15 Mar 2022,

Accepted: 22 Mar 2022,

Available online: 31 Mar 2022

©2022 The Author(s). Published by AI
Publication. This is an open access article
under the CC BY license

(<https://creativecommons.org/licenses/by/4.0/>).

Keywords — Agroecology, artisanal fisheries,
vulnerability.

Abstract — Artisanal fishing, considered a millenary activity, suffers with deep transformations in the face of coastal developments. Factors that constitute the environmental vulnerability of artisanal fishermen from the "economic development". This being said, this study aims to understand environmental racism in fishing territory, especially the Ilha de Maré, located in Salvador - BA/BR. The resistance and the defense of a Healthy and Sustainable Territory (TSS) for the preservation of its natural resources were important elements brought about in this process. The method was based on action research and popular education. The methodological path was based on meetings between researchers from the Oswaldo Cruz Foundation (Fiocruz) and the community, in order to capture the perception of the residents of the Island about health, environment and work, given the impact of the Industrial Complex and the Port of Aratu. As a result, it was observed that environmental racism affects not only the natural environment, but also the living, health and working conditions of the fishing population. Thus, the need for organization and mobilization of the people involved in the search for social rights, improvement of health and work conditions, preservation, demarcation of fishing territories and the fight against environmental racism.

I. INTRODUCTION

Brazil has a diversity of coastal and continental ecosystems. In the state of Bahia/Brazil, in particular, 2012 data from the Bahia Federal Superintendence of Fisheries and Aquaculture indicate that there are about 130,000 artisanal fishermen registered in the General Register of Fishing Activity (RGAP), thus highlighting the great potential for the fishing production modality.

It is worth noting that artisanal fishing is a productive activity in which traditional knowledge is generational, i.e., transmitted from father/mother to child through orality, which materialises in the exchanges experienced from daily

practices. It is developed with the use of technologies from the local culture, and the work regime is informal and results in low profits. This knowledge "guides and sustains the functioning of community management and is at the basis of decisions and fishing strategies of artisanal fishermen" (Antonio Carlos Sant'Ana Diegues, 2004, p. 195). It is, therefore, an activity that adds value to the management of fishery resources, in addition to observation and preservation of nature, fundamental to such activity.

The observation of nature becomes important for fishing, where the wind, the tides, the state of the mangroves and the crowns will guide the artisanal fisherman for the extraction of the fish/shellfish. It is common to hear the

following quote from fishermen: "the sea is not for fishes", the result of the experience of fishing skills in their daily life. As Diegues states (Antônio Carlos Sant'Ana Diegues, 1983, p.198), what characterizes small-scale fishing is the "control of how to fish and what to fish".

However, despite being an activity with expression to the Brazilian economic scenario, contributing to the survival of thousands of people, especially water populations (artisanal fishermen, riparian dwellers, marine extractivists, caçaras, people affected by dams), it is still on the margins of public policies. Subjected to processes of socio-environmental vulnerability, by combining precarious living conditions, poverty, low education and specific risks (FAO, 2009).

The fishing territories suffer great threats due to different uses, whether by large enterprises, the interference of port enterprises, industries, mining, predatory tourism, human action, among others. There are countless threats to the balance of aquatic ecosystems, where kilometres of mangroves are destroyed, cradle of marine life, polluted, causing environmental damage that impact those who have fishing as their way of survival. More than that, they impact their way of life, which is related to nature, to the aquatic environment and to their ancestry.

Therefore, it is in the recognition, in the fight and in the defence for the preservation and use of natural resources that the fishermen are united in the perspective of caring for a common good, for a sustainable practice, for the rational management and for the preservation and conservation of the fishing environments. This is the situation of several traditional fishing communities in Brazil, especially the

fishing community of Ilha de Maré.

Maré Island, is part of the 56 (fifty-six) islands that make up the Bay of All Saints (BTS), Salvador

- BA/BR and includes 11 (eleven) communities, six of which are remnants of quilombos, living mainly from fishing, handicrafts and subsistence farming. The communities of the Island are characterised by the presence of crowns and mangroves¹, which are historically exploited by fishing and shellfish. It is worth noting that these communities have their own cultural identity, formed in the midst of a historical process of struggle and resistance to various forms of domination.

The residents of Ilha de Maré report that between the decades of 1960/1970 socio-environmental problems began to be observed, such as the contamination of water, mangroves and marine animals, which have a direct impact on the work of artisanal fishing and shellfishing, affecting their livelihood, health, work and especially the environment in which they live. They thus bring the debate of environmental racism in the territory, which reveals that

there is a logic in the choice of areas that will be exploited and which populations will be impacted by this exploitation.

In general, we observe that traditional peoples and communities are the ones most impacted by environmental exploitation, whether by the exposure of toxic and hazardous waste, affecting artisanal fishing territories, or by the installation of large enterprises and ports. Based on a discourse of "developing the country's economy" and generating jobs and income, these enterprises affect the balance of the local fauna and cause serious damage to the populations present there.

The term environmental racism emerged in a context of manifestation of the black movement in the United States, during its struggle against environmental injustices, from the observation on the unequal ways that certain groups, in general vulnerable populations, such as black people, were exposed to harmful environmental phenomena, a consequence of exclusion from decision-making places (Herculano, 2006). Thus, it reaffirms the need for debate about the condition of being black and the maintenance of colonizing relationships, which historically they were subjected, in a reproduction of social, political and economic domination.

According to Professor Selene Herculano (2006), racism has colour. The colour of the skin of those who live in the peripheral areas, on the trails, in the hills, on the banks of rivers. She emphasizes that racism impacts mainly the populations of different ethnic groups and less expressive social condition, which falls on environmental pollution and the negative impacts of development, given the complexity of

¹ Crowns and mangroves - sand crowns are made by the sea, with high amounts of fine sand at high tide and are part of the natural succession of mangroves, which are ecosystems restricted to tropical and subtropical coasts, which develop in the intertidal zone. They are fundamental to the ecological balance, being a favourable nursery for the development of many species of animals and plants [<https://www.portalsaofrancisco.com.br/geografia/manguezais>], access February 2022.

the regulation of environmental resources of common use and its symbolic dimensions.

In 2018, the Oswaldo Cruz Foundation - Brasília (Fiocruz-Brasília/BR) started a research on "the perception of residents of Ilha de Maré on health, environment and work", after a social demand presented to the presidency by the National Articulation of Fisherwomen (ANP), when the leader Eliete Paraguassu, artisanal fisherwoman from Ilha de Maré, Salvador - BA, saw in this "intervention" a way to add to the struggle for a healthy and sustainable territory and, mainly, to call the attention of the authorities about the

violations of rights that the residents of Ilha de Maré have to deal with in their daily lives.

They highlight the impacts from the Industrial Complex and the Port of Aratu, which are located near the Island. They denounce that the territory suffers environmental racism. Therefore, it is inevitable that we reflect on the development model, the use of the soil and its impact on traditional communities. In addition to a critical discourse, we seek to reflect on how socio-environmental impacts can interfere with fishing and income generation, food insecurity and the health of this population and also the resistance of traditional communities in defense of their territory, where collective actions can enable the visibility of the struggles and, consequently, a healthy and sustainable territory.

II. MATERIAL AND METHODS

The method was developed through action research and popular education. The methodological approach was based on the construction of a participatory agenda for the development of a healthy and sustainable territory in a traditional fishing community on Ilha de Maré, Salvador - BA/BR.

The initial steps were based on the National Policy for the Integral Health of Farmers, Forest and Water-loving Populations (PNSIPCF), whose objective is to improve the level of health of farmers, forest and water-loving populations through actions and initiatives (...), "aiming at access to health services, the reduction of risks and health hazards resulting from work processes and agricultural technologies and the improvement of health indicators and quality of life". (Brazil, 2013, p. 20)

The interdisciplinary group involved in the research, together with local leaders, took on the challenge of generating other knowledge from real life, understanding that knowledge is not in the research subject, nor in the object researched, but in the ethical and horizontal relationship established between them (Ferreira, 2015). These interactions built with the leaders were essential for the strengthening, mobilization and organization of the community, in addition to contributing to the training and protagonism of local subjects, to the extent that they value traditional knowledge and practices.

a) Characterisation of the study area

Interdisciplinary dialogue is significant for approaching problems in their complexity, but it is also a challenge to be unveiled, in the recognition, in the coexistence with the territory, which demands and makes the understanding of these contradictions flow.

As previously mentioned, Ilha de Maré is part of the municipality of Salvador, BA. "According to data from the

last census (IBGE, 2010), Ilha de Maré has a population of 6,434 inhabitants, distributed in an area of 13.79 km² translating into a population density of 384.80 hab/km²" (Carneiro et al., 2014, p. 6). Although its residents estimate that the population of the island is more than 10,000 people, which greatly impacts the island in its infrastructure, such as sanitation, education, health, water, transportation, for example. Its population lives basically from fishing, subsistence agriculture, basketry handicrafts and

bobbin lace², also making banana sweets wrapped in banana leaves. Surrounded by beautiful beaches and mangroves, being the beach of the community of Praia Grande, the most sought after by tourists, interesting to note that this, is on the opposite side where the Industrial Complex of the Port of Aratu (CIPA).

Access to the island is only by boat. A territory appreciated by tourists in view of the beautiful beaches. However, when you go to Ilha de Maré, you can already come across the smoke coming from CIPA. The smell, a mixture of ammonia and urea, and the irritation to the eyes, already draw attention.

This was the first agenda of the researchers from Fiocruz Brasília to get to know the territory. With short stops in the communities and conversations about apprehensions and environmental and sanitary conditions, they brought us the social, environmental and sanitary context of the Island. An interdisciplinary group, formed by a doctor, political scientist, psychologist, pedagogue, biologist, physical educator, geographer, sanitary engineer and pharmacist.

A strategy used by fishermen leaders of the Ilha de Maré, was the organization of the tour around the island, called "Tox Tour", which aimed to materialize the complaints about pollution, environmental racism and the impact on health, territory and fishing activity. They reported the contamination of water by heavy metals, the emergence of cancers, respiratory problems, dermatitis as an example, that according to the leaders, the "State refuses to discuss this problem and build ways to minimize these impacts.

Another strategy adopted by the fisherwomen of the Island was the making of documentaries such as "Mulheres das Águas³" (Morais, 2017), available on the *YouTube* platform that brings the struggle of artisanal fisherwomen in the mangroves, their way of life and survival in the face of pollution from large industries and by predatory tourism causing damage to the ecosystem; media; participation in congresses, seminars, meetings to add to the discussion and confrontation of environmental racism.

Among the demands presented is the need to carry out an epidemiological, environmental and health diagnosis of the population, with a focus on the families of fishermen and shellfish gatherers; the elaboration of an action plan and

coordination with the Health Unit that takes into account the specificities of each community and its vulnerabilities arising from the geographical location around the CIPA. The negative impacts on the environment (pollution, depletion of natural resources, compromised biodiversity), on the way of life and social reproduction of a traditional fishing community are a wake-up call.

We understood the uniqueness of this moment, the contribution of each one, the respect for the knowledge of the other and the widening of the view of the object observed. The reports also appear as a "cry of indignation". They observe the impact on the ecosystem and the need to

preserve and conserve marine species.

They report the challenges posed in defense of the territory, its environment and especially with the health and work of its population. Especially in the security and food sovereignty of a population, which in the speech of the quilombola and seafood woman leader, points out the impact of environmental racism to Ilha de Maré. According to her, "it is a community of black people, a community that is sick". She points out that Ilha de Maré has its specificity and uniqueness, as it is a population "that lives and feeds on fish, on what it produces". He also points out that the productive food chain has been threatened for years and that

behind this food chain, there are thousands of fishermen who live off the fish, so it is necessary to preserve the fishing territory.

They point out that in the surroundings of Ilha de Maré, there is the presence of numerous petrochemical industries, such as the Aratu Industrial Complex (CIA), the Camaçari Petrochemical Complex (Copec) and the Port of Aratu, where around 60% of the maritime cargo of the State of Bahia circulates and which pollutes both air and water. According to the leadership, Ilha de Maré is "a buffer zone for these enterprises, portraying the denial of the rights of a population and the common good".

² Basketry and bobbin lace - basketry is a set of objects or utensils obtained by means of braided objects. The bobbins are wooden objects, with a small head at the ends where the thread is wound to execute the braid, creating beautiful lace. (Artesol, 1998)

³ <https://www.youtube.com/watch?v=P62sFliw7K8>

The narrative echoes as a cry for help, for the preservation and conservation of the fishing territory, its way of life, production and social reproduction and violated social rights. The following is a record of the approach of some researchers to the fishing territory of Ilha de Maré.



Fig.1 - Access to Ilha de Maré by boat only; partial view, 2019.

Source: PSAT/Fiocruz Brasília (FIOCRUZ, 2019).



Fig.2a and 2b - Arriving at Ilha de Maré and returning to the mainland in 2019.

Source: PSAT/Fiocruz Brasília (FIOCRUZ, 2019).

To get to Ilha de Maré, only by boat. Climatic conditions,

such as winds and high tide, are determinant for the access

to the island, as well as the return to the continent. In the fishing territory the moon and the tide determine the movement. Thus, the meetings also depended on low tides, where the tide remains low for a longer period, which makes it possible to navigate in a small boat with greater tranquillity, becoming what I call a "swimming pool". Here we do not exhaust the topics that were addressed during the meetings that took place on the island, in the period 2018-2019, but the reflection from participant observation, where the concept of environmental racism was pointed out by the leaders of Ilha de Maré on several occasions. It becomes evident when we cast on this, the understanding of the value that nature and the environment have for these communities, therefore, the present study aims to understand in the light of environmental racism and the impact of the traditional fishing territory, in particular, the Ilha de Maré.

b) Methodological procedures

The methodological framework is composed of a vast mosaic of theoretical and methodological approaches that contributed to the reflection on its epistemology and praxis. Thus, this study is focused on understanding the concepts of the process of health, environment and work from the conception of the residents of Ilha de Maré, from the perception of the agro-ecological, political, social, economic, cultural and ethical dimensions.

The method was based on action research as pointed out by Thiollent (2007), which reveals that the researcher plays an active role in the solution and revelation of the problems that arise, and that these should be publicised in order to reach the outlined objective and/or carry out a possible transformation within the observed situation, besides being a form based on self-reflection and in this sense the re-evaluation of the process as a constant.

The choice of action-research was made due to the possibility of relying on readings that would provide an insight into the reality of those who live, with their experiences and not only through an external view, that is, the perception of the local population about their real reality and the external contribution to this reality.

Monkem and Barcelos (2017) report on the construction of a sociosanitary diagnosis of the territory, where some sources are identified, one of them is the construction of local maps that allow to identify, organize and communicate data that concern the territory, becoming an important tool for the study.

The use of simple language, dialogue, participation and respect were essential for the communication to flow and for the understanding of the themes addressed in the field guide, the training and participation of the popular

researchers to be successful.

The meetings were held in the communities of Bananeiras, Botelho, Caquende, Itamoabo, Maracanã, Martelo, Neves, Ponta Grossa, Porto dos Cavalos and Santana, in places such as crèches and associations.

The discussions dealt with several issues that were included in the fieldwork, such as health, the environment and the territory. However, there is a feeling of threat to the fishing territory, which the current development in force (capitalist) insists on disregarding the artisanal fishermen's way of life, production and social reproduction in the territory.

Thus, it was developed a narrative built in a temporal way, that is, the observation, listening, dialogue, training and action occurred in a timeline, considering the daily life and experience of artisanal fishermen and shellfish gatherers. Being an essential instrument of transmission and preservation of identity heritages, where the oral form transmits the memories of memory in time and thus passed on to generations. Among the various phases of research and meetings with the leaders of the Island, a recurring theme brought up was environmental racism, which motivated the present reflection.

III. RESULTS AND DISCUSSION

The fishing communities in Brazil and in particular, the communities of Ilha de Maré, Salvador - BA, have been facing several difficulties to survive, with their territory constantly threatened, by the impacts of large enterprises, oil spills, in addition to other metals such as propene, butadiene, aqueous liquid products, colorless, which has the same odor as gasoline, floats in water and produces flammable vapors (ASCON/CONDEBA, 2016)

The territories of water populations (artisanal fishermen, riverbank dwellers, marine extractivists, among others), are directly impacted, as well as the survival of traditional communities by big capital, that is, symbolic losses are also registered when it comes to landscape transformations, the absence of consumers, food insecurity and, consequently, uncertainty about the future.

The importance of artisanal fishing for communities is essential, because it reflects directly on the daily lives of people living in the locality, who try to take care of the environment and defend their territory and as pointed out by Elionice Sacramento (2015, p. 140-141), quilombola and artisanal fisherwoman, it is in the "nature and the tide that submits and controls four types of winds at the same time", the relationship of the "moon with the environment as a determining source of production and reproduction, health and life", and the "sacred forces that govern the waters" (...)

has always been, among others, "a determinant of our relationships, especially of survival, besides being a space of faith and/or worship, manifestation of culture, recreation, work, musicality, rehabilitation and healing".

Small-scale fishing is also essential for the ecosystem. It is a political decision, ecological and dialogues with the marine ecosystem. Just as Agroecology is an agricultural practice, a political option, which dialogues with the preservation and conservation of biodiversity. Both are integrated by a systemic look and ensure another relationship with nature and can be understood from the understanding of the principles of agroecology, focused on sustainability and, especially, the environment in which they live, produce and socially reproduce (Altieri, 1989; Caporal, 2009; Caporal et al., 2006; Casado et al., 2000).

They also refer to underlying issues that permeate the discussions on the development model and are close to the food security debate, converging with the strategic principles around the proposal of food and nutritional sovereignty and security, based on the confrontation of structural problems that generate poverty and hunger.

In the search for sustainability in agro-ecosystems that will form the basis for the construction of sustainable rural development, artisanal fishing sets out to defend and sustain marine biodiversity, which will form sustainable marine development, in the preservation of natural resources and their values, as a necessary condition for the continuity of socioeconomic and cultural reproduction processes of its population, in a perspective that considers future generations, being one of the conclusions of the dialogues with the leaders of Ilha de Maré (Sacramento, 2015).

The list is long, where environmental racism stands out, when leaders realize that industrial contamination does not happen in just any territory, but the territory where traditional communities, quilombolas, artisanal fishermen, riparian dwellers, marine extractivists, fishermen, peasants, family farmers, indigenous peoples, among other populations, impacting greatly on the way of life of production and social reproduction of these traditional peoples and communities.

Thus, the way of life is realized from the material and immaterial dimensions, from the relations where the subjects insert themselves in the territory, defining their practices and the relationship with nature. The fishing territory is alive and needs to stay alive, so the need for preservation of the aquatic and terrestrial ecosystem.

To report this experience, in particular, is to bring the path taken between the stages and the challenge in paying attention to sensitive listening and building spaces that are comfortable for the manifestation of the oralities that are expressed in the community. Understood here, between the

researcher/researched object/relationships built, in other words, there is much tide to be overcome, however, environmental racism must be taken into consideration for the promotion of health, environment and work.

Through dialogue, it highlights and alerts people to the use of territory and environmental resources that are differentially shared. In particular, it is observed that it is the communities with few economic resources that suffer most from the impacts of environmental degradation, signalling the presence of practices of injustice and environmental racism and the need to reflect on this theme.

Juan M. Alier (2007) brings the tension over access to natural resources and the relationship between economic growth and the use of these resources, resulting in a series of conflicts, among them, environmental racism. He points out a list of situations, including the resistance of the population to environmental degradation, seen as those who are on the opposite side, because they have little environmental space, whose livelihoods are threatened by large enterprises. It also highlights that ecological conflicts arise from contradictions between environmental sustainability and economic growth. However, it can be seen that environmental racism is intertwined with the concentration of power and wealth and is associated with the social vulnerability of a population and greatly affects the process of health and illness of a population, and consequently evidences the violation of human rights.

IV. CONCLUSIONS

Historically, this field of disputes in defence of territory, health, work, food sovereignty and resistance are reaffirmed and faced in the daily lives of traditional communities. Vigilance is a constant for the preservation mainly of the way of life and social production of artisanal fishing, which from the collective denounce and call attention to environmental racism, which vulnerable populations are the most impacted, regardless of the millennial knowledge involved.

It is observed that the strategy adopted by the fisherwomen did not reduce the environmental impacts to marine ecosystems and mangroves, aiming to ensure healthy fish and seafood, income generation, guaranteed livelihood and social reproduction of water populations. And despite the complaints by the artisanal fishermen, either through the media, participation in conferences, forums, as well as by the academia that awakened the point of view of researchers, and even then, still failed to draw the attention of society to what happens, not only with the traditional communities of the Ilha de Maré, but with other traditional communities of the coastal coast of Brazil.

Racism is structural and that there is a pattern in the impacted populations; however, it is these populations that contribute to the conservation of a healthy and sustainable territory, as they depend on it for their survival.

The relationship between artisanal fishing and Agroecology is also perceived, in the sense of preserving a healthy environment as a productive matrix. Being one of the means to achieve food sovereignty, having a potential not only for the production of artisanal fisheries and the supply of healthy food, but also for the population that consumes this food.

It is in the territory that we receive and share valuable learning to deconstruct knowledge and strengthen others. It is the way to observe what is invisible, to listen to those who are constantly silenced, to understand the other side of the coin, and how the so-called "development" impacts on life, health, the environment, work, the agroecological work of traditional communities, in addition to the daily effort of not being able to let down one's "guard".

In terms of social and environmental sustainability, they demand a dialogic openness, epistemic creativity and the valorisation of traditional knowledge, but which above all incorporate the dimension of the interculturality field, in addition to the space of economic reproduction and social relations, since the quilombola and fishing territory has a relationship with nature, with its ecosystem (Silva et al., 2020).

They also point to the search for a development model that strengthens standards of social equity and environmental sustainability in the area of production, linking fishing with agro-ecology, which, thinking strategically on the side of consumption, promotes healthy, diversified and culturally rooted foodstuffs, in contrast to the prevailing pattern of "economic development".

However, the confrontation of environmental racism has colour, it mirrors the economic disadvantage, the exclusion from the processes of political participation of a population, in changing their way of life, thus demonstrating the complexity of this confrontation, which is not homogeneous, because "they affect more blacks than whites, poorer than rich"⁴, revealing that there are certain groups on which the damage of the current modes of production fall on them, more than others. Discrimination against a certain group is evident, in view of actions and omissions intentionally practiced to the detriment of environmentally vulnerable people.

And yet, it is observed that those who decide, who have the power to draft laws, are little concerned

⁴ WANDERLEY, L. J. Geographer at the Rio de Janeiro State University (UERJ) and researcher for the Politics, Economics, Mining, Environment and Society Research and Extension Group (POEMAS), in an interview with Combate do Racismo Ambiental, 13 November 2021.

about the environmental impacts, the morbidity and mortality of a population, the impact on the ecosystem. Their priority is economic and they decide how and where to use the territories, revealing the power relations that permeate the environmental damage and degradation.

Environmental racism is also related to health-disease-death processes, as they affect not only the environment, but also the living, health and working conditions of a population, and are issues to be addressed in the various segments of society, in order to reverse the history of social inequalities, especially racial inequalities (Herculano, 2006).

Thus, it is evident in the speech of the leader of the Ilha de Maré, Eliete Paraguassu, when she says that we live in a silent war against an invisible monster, which is chemical contamination, imposed by this model of development that is perverse and murderous. Environmental racism makes us sick, contaminates our bodies, especially women's bodies, and so we continue to fight for guaranteed rights and in defence of our territory'.

Therefore, the promotion of citizenship, the social historical recognition of the population of the waters, the strengthening of the black and fishing identity, is the responsibility of us all, so we keep on sailing, in the hope that another world is possible.

REFERENCES

- [1] Alier, J. M. (2007). *O ecologismo dos pobres: conflitos ambientais e linguagens de valoração* (M. Waldman (trans.)). São Paulo: Contexto.
- [2] Altieri, M. (1989). *Agroecologia: as bases científicas da agricultura alternativa*. Rio de Janeiro: PTA/FASE.
- [3] Artesol, A. S. (1998). *Renda de Bilro de Poço Redondo - As Filhas da Renda*. As Filhas Da Renda;
- [4] Rede Artesol. Retrieved from <https://www.artesol.org.br/asfilhasdarenda>
- [5] ASCON/CONDEBA. (2016). *Porto de Aratu-Candeias registra aumento na movimentação de Nafta*. Retrieved from https://www.codeba.gov.br/eficiente/sites/portalcodedeba/pt-br/site.php?secao=noticias_gerais&pub=4113
- [6] Brasil. (2013). Política Nacional de Saúde Integral das Populações do Campo e da Floresta. In Diário Oficial da União. Brasília: Ministério da Saúde. Retrieved from http://bvsms.saude.gov.br/bvs/publicacoes/politica_nacional_saude_populacoes_campo.pdf
- [7] Caporal, F. R. (2009). *Agroecologia: uma nova ciência para apoiar a transição a agriculturas mais sustentáveis*. Brasília:

SAF/MDA.

- [8] Caporal, F. R., Costabeber, J. A., & Paulus, G. (2006). Agroecologia Matriz disciplinar ou novo paradigma para o desenvolvimento rural sustentável. *III Congresso Brasileiro de Agroecologia, 2002*, 1–26.
- [9] Carneiro, F. F., Pessoa, V. M., & Soares, R. A. S. (2014). Análise de contexto Ilha de Maré. In Observatório da Política de Saúde Integral das Populações do Campo e da Floresta. Salvador: FIOCRUZ/UNEB/NESP.
- [10] Casado, G. I. G., Molina, M. G. de, & Guzmán, E. S. (2000). *Introducción a la Agroecología como Desarrollo Rural Sostenible*. Madri: Ediciones Mundi-Prensa. Retrieved from https://www.researchgate.net/publication/272127962_Introducción_a_la_Agroecología_como_De_sarrollo_Rural_Sostenible
- [11] Diegues, Antonio Carlos Sant'Ana. (2004). *A Pesca Construindo Sociedades: leituras em antropologia marítima e pesqueira*. São Paulo: NUPAUB-USP.
- [12] Diegues, Antônio Carlos Sant'Ana. (1983). *Pescadores, camponeses e trabalhadores do mar*. São Paulo: Ática.
- [13] FAO, O. de las N. U. para a A. y la A. (2009). *Asegurar la sostenibilidad de la pesca a pequeña escala: unir la pesca responsable y el desarrollo social*. Roma.
- [14] Ferreira, M. J. M. (2015). *Saúde, trabalho e ambiente: práxis emancipatórias, lutas e resistências frente ao agronegócio na Chapada do Apodi/Ceará*. Curitiba: CRV.
- [15] FIOCRUZ. (2019). *Programa de Promoção da Saúde, Ambiente e Trabalho (PSAT)*. FIOCRUZ.
- [16] Retrieved from <https://www.fiocruzbrasil.fiocruz.br/programas-projetos/psat/>
- [17] Herculano, S. (2006). Lá como cá: conflito , injustiça e racismo ambiental. *I Seminário Cearense Contra o Racismo Ambiental*, 1–15.
- [18] Monken, M., & Barcellos, C. (2017). O território na Promoção e Vigilância em Saúde. In A. F. Fonseca & A. M. D. (Org. . Corbo (Eds.), *O território e o processo saúde-doença* (pp. 177–224). Rio de Janeiro: EPSJV/Fiocruz. Retrieved from <https://www.scielo.org/article/csp/2005.v21n3/898-906/>
- [19] Morais, B. (2017). *Mulheres das águas*. Brasil (Português): FIOCRUZ. Retrieved from <https://www.youtube.com/watch?v=P62sFliw7K8>
- [20] Sacramento, E. (2015). Água: ambiente livre para saúde dos pescadores e pescadoras do Brasil. In Brasil (Ed.), *Saúde e Ambiente para as Populações do Campo das Florestas e das Águas* (pp. 139–154). Brasília: Ministério da Saúde.
- [21] Silva, F. C. C. M., Kinierin, G. S., Moura, B. C., & Mattos, J. L. S. (2020). A pesca artesanal e sua relação com os princípios da Agroecologia. *Artigo Publicado No VI Encontro de Agroecologia Do Agreste de Pernambuco; II Seminário Internacional Agrofamiliar de Agroecologia e Sustentabilidade*.
- [22] Thiollent, M. (2007). *Metodologia da Pesquisa-Ação* (15ª). São Paulo: Cortez Editora. doi: 10.1590/s1517-74912003000500011