

Fisheries Management and Colonialism: deterritorialization and r-existence in the artisanal fishing community of Praia do Siqueira/RJ-Brazil

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Abstract: Colonial domination, established from the 15th century onwards, remains as a founding element of modern western rationality, acting as invisibly as efficiently in the production of subalternities. In the epistemological dimension, the coloniality of knowledge institutionalizes the role of modern science in the discrimination of knowledge between false and true. Decolonization as an unfinished project, associated with authoritarian fisheries management models, has forged contexts of environmental injustice. As a factual example, we analyze the imposition of a period of suspension of fishing activity in Lagoa de Araruama-RJ, based on the narratives of the artisanal fishing community of Praia do Siqueira, located on its banks. In developing the research, non-extractive/participatory methodologies were used. It is concluded that the imposed calendar intensifies the processes of deterritorialization of the community, however, despite the violence, these spaces are percolated by r-existence practices.

Keywords: Fisheries Management, Epistemologies of the South, Colonialism, Sacrificial Zones, Artisanal fishing.

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Introduction

The historical patterns of exploitation established by the mental category of race and used to differentiate the conquerors from the conquered people considered to be an inferior race in the conquest of America (QUIJANO. 2005) are maintained in modernity as a line of abyssal thinking that establishes divisions between “metropolitan societies and sociabilities, and colonial societies and sociabilities” (SANTOS, 2019, p. 248). That injustice generating abyssal line has become so naturalized that its existence is scarcely realized. Santos (2020)¹ points out that it has been amplified in the neoliberal conjuncture, mainly via institutionalized racism. As an example, Santos (idem) calls attention to the weakening of specific public policies for autochthonous peoples who are the target of asymmetries in access to rights.

In the environmental sphere, the asymmetry that subaltern groups experience is categorized as environmental injustice which Acselrad et al. (2009, p. 41) defined as:

(...) mechanisms by which societies, inequitable from the economic and social point of view, direct the greater load of the environmental damage of development to low-income populations, to racially discriminated groups, traditional ethnic peoples, workers neighborhoods, to the marginalized and vulnerable populations.

The historical concentration of environmental injustice in the territories of groups treated as inferiors gained worldwide repercussions in the 1980s with the North American anti-racist movement, in which the term ‘environmental racism’ was coined. According to Herculano (2008), environmental racism, or as Santos (2020) defines it, ontological degradation, embraces, in addition to Negroes, artisanal fishing communities, riverside dwellers, traditional rural coastal communities (*Caiçaras*), traditional Pantanal communities (*Pantaneiras*) and all those groups naturalized as inferior in the social hierarchies of modern rationality. As regards the artisanal fishing communities, the coloniality of knowledge has mainly expressed itself in the systematic deprecation of traditional management. The hegemonic scientific field has historically made it invisible in consonance with the State insofar as it is taken to represent an environmental risk, a hindrance to development and to be synonymous with backwardness.

Thus, just as the colonizers “repressed as much as possible the colonized [people’s] forms of knowledge production (QUIJANO, 2005, p.121), so the hegemonic, centralizing, and authoritarian environmental management processes restrict the participation of traditional groups in the decision-making processes regarding their territories. That authoritarian management perspective is also made up of conservationist movements that have promoted “various types of environmental intervention such as zoning and protected areas without due participation of the people and without acknowledging their right of access to natural resources” (CORDELL, 2000, p.4).

In his thesis, Moura (2013) addressed the agency of the Modern Colonialist State

1 - <https://www.youtube.com/watch?v=V6z0uUeqFcM&t=790s> Accessed on May 01, 2020.

in the mechanisms disciplining fishing territories and sought to show how the imposition of a fishing calendar defined by Joint Normative Instruction 03, 2004 (*Instrução Normativa Conjunta 03 de 2004*) (INC 03/2004), in the sphere of the Lagoa dos Patos Forum (*Fórum da Lagoa dos Patos-Rio Grande do Sul*) represented a process of ‘epistemicide’ in relation to the regional estuarine fishing collectivity. Moura also described the fishing communities’ r-existence tactics, not only silent tactics, exemplified by actions such as camouflaging nets and spreading false information, but also flagrant tactics characterized by ostensive demonstrations. The author understands that the quest for re-appropriation of the territories takes place through the creation of r-existence spaces. Porto-Gonçalves (2006, p.165) underscores r-existence as being a process more complex than resistance insofar as ‘to resist’ refers to “an anterior action and is thus always a reflex action” whereas r-existence is to “affirm a way of existing, based on a *topoi*, that is, a place of one’s own, as much epistemic as geographic”. In other words, it is a way of existing that confront the fundamental essentialism of coloniality, affirming identity as a form of resistance.

In turn, Dias Neto (2010) in his research on fishing activities in the community of Ponta Grossa dos Fidalgos, located in Campos dos Goytacazes, Rio de Janeiro state, highlighted how the technical perspective of the environmental analysts attached to the Brazilian Environment and Renewable Natural Resources Institute (*Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis* – IBAMA) regulates the halieutic activities of that territory via its official calendar. In that study, the subaltern condition attributed to local knowledge is associated with those environmental analysts’ disbelief in traditional forms of management insofar as they do not consider the subjects of the fishing community to be “actors sufficiently competent to manage the Lagoa Feia ecosystem in a manner that is autonomous and distant from particularist interests” (2010, p.183).

That approach is anchored in the theory of the Tragedy of the Commons (HARDIN, 1968) which is premised on the understanding that common property would be the origin of the environmental problems insofar as the freedom of each individual would inevitably lead to the indiscriminate use of natural resources for personal benefit. Brügger (1994) considers that understanding to be fallacious as it renders invisible the sharing of communal spaces structured in specific rules and groups. The theory, even so, is still present in the environmental ideological field favoring liberal, conservationist policies, the privatization of natural environmental resources, and the authoritarian aegis of the State as the solutions for the local communities supposedly undue use of the natural resources.

However, in the field of public environmental administration, there are spaces of peoples’ participation that contribute towards the fishing communities’ r-existence processes. That is the case of the Environmental Education Project Pescarte (*Projeto de Educação Ambiental* - PEA Pescarte). It is a mitigation measure required by federal environmental licensing for oil and natural gas exploration and production activities. The project is conducted by IBAMA and executed by the Darcy Ribeiro North Fluminense State University (*Universidade Estadual do Norte Fluminense Darcy Ribeiro* – UENF), with financial resources of the Petrobras corporation and the object of strengthening the social organization of the artisanal fishing communities through work and income-generating

projects.

Our contact with the universe of this research occurred in 2014 when we began our work at PEA Pescarte, and we received denunciations made by the fishers of Praia do Siqueira, in the municipality of Cabo Frio (RJ) which aroused our concern due to the serious content of the allegations. Among the series of environmental injustices reported, the community emphasized the imposition of a strict closed season² (*período de defeso total*) for the Araruama Lagoon from August 1 to October 31 promulgated by Interministerial Instruction N^o 2 dated May 16, 2013 (MPA/MMA, 2013). Frequent contact with local leaders enabled us to understand the historical demand for the causes the group defended to be heard and acknowledged. After a while, the reflections aroused by those dialogues went beyond the actions that we had the opportunity to engage in under the aegis of the PEA Pescarte and became the starting point for the development of the doctoral research of the first author of the present article.

This text seeks to contribute to the discussion related to the imposition of a closed season for the Araruama Lagoon, its role in the deterritorialization process (HAESBAERT, 2007) that the Praia do Siqueira artisanal fishing community suffers and the r-existence tactics that the group uses to ensure the maintenance of their way of life. To develop the discussion, we take into account a concept of the sociology of 'absences' regarding which Santos (2002) declared that "what does not exist is in fact actively produced as non-existent" and we use it to think about traditional knowledge made invisible in the institutional treatments directed at fishery management of the Araruama Lagoon.

To achieve the study objectives, in the period 2017 to 2019, semi-structured interviews were conducted with thirteen correspondents: one interview script was administered to two public administrators and the other, to eleven correspondents from the fishing community. Of the latter, six took part at least three times in the interviews elaborated for research purposes. The interviews were conducted at the shrimp sales location at the Praia de Siqueira beach, in the backyards of the interviewees' homes, in the fishers' boats, and at the Pescarte project office. The first participants were those fishers who routinely visited the Pescarte office to discuss the issue and they in turn indicated other community members that could be interviewed. Another methodology used was participant observation at the three ceremonies marking the annual opening of the closed season for the Araruama Lagoon held in 2017, 2018 and 2019. In addition, there were three guided tours, a technique whereby the researcher accompanies the social actors involved in the study on trajectories determined by the interviewees themselves. Non-disclosure of their identities was guaranteed to all interviewees because, despite their non-recognition of the legitimacy of the imposed closed season, they are aware that actually fishing during that period constitutes an environmental crime.

2 - The 'closed season' (*defeso* in Portuguese) is the temporary paralyzation of the fishing activities to preserve the species by enabling their reproduction and/or recruitment and may also refer to eventual paralyzation caused by natural phenomena or accidents. Source: <https://www.gov.br/agricultura/pt-br/assuntos/aquicultura-e-pesca/pesca/período-defeso>

The Araruama Lagoon closed season: the expression of an abyssal environmental management

The Araruama Lagoon is located in the Lakes region of the Coastal Flatlands (*Baixada Litorânea*) of the State of Rio de Janeiro, and is inserted in the territories of six municipalities, namely: Araruama, Arraial do Cabo, Cabo Frio, Iguaba Grande, São Pedro da Aldeia and Saquarema (Fig. 1). It is one of the largest hypersaline lagoons in the world with an area of 220 km² (BIDEGAIN; BIZERRIL, 2002). Despite its environmental, economic, and cultural importance, studies show that, in the last few decades, it has been undergoing a process of eutrophication caused by the continuous influx of domestic effluents rich in organic material (FERNANDES et al., 2019).

Degradation of the Araruama Lagoon began to have repercussions in the early years 2000 when pollution reached alarming levels, causing intense mortality of fish species and serious economic problems for the region's artisanal fishing communities (SAAD, 2003). To revert the environmental degradation process, the Lagos São João Intermunicipal Consortium (*Consórcio Intermunicipal Lagos São João - CILSJ*) with the additional support of a series of institutions began studying and monitoring the changes in the Lagoon. According to the Consortium's published report, the following measures have been implemented: environmental monitoring, planning and regulation of fishing activities, and heavy investments in basic sanitation (Relatórios técnicos – CILSJ, 2008 apud CBHLSJ³, 2012).

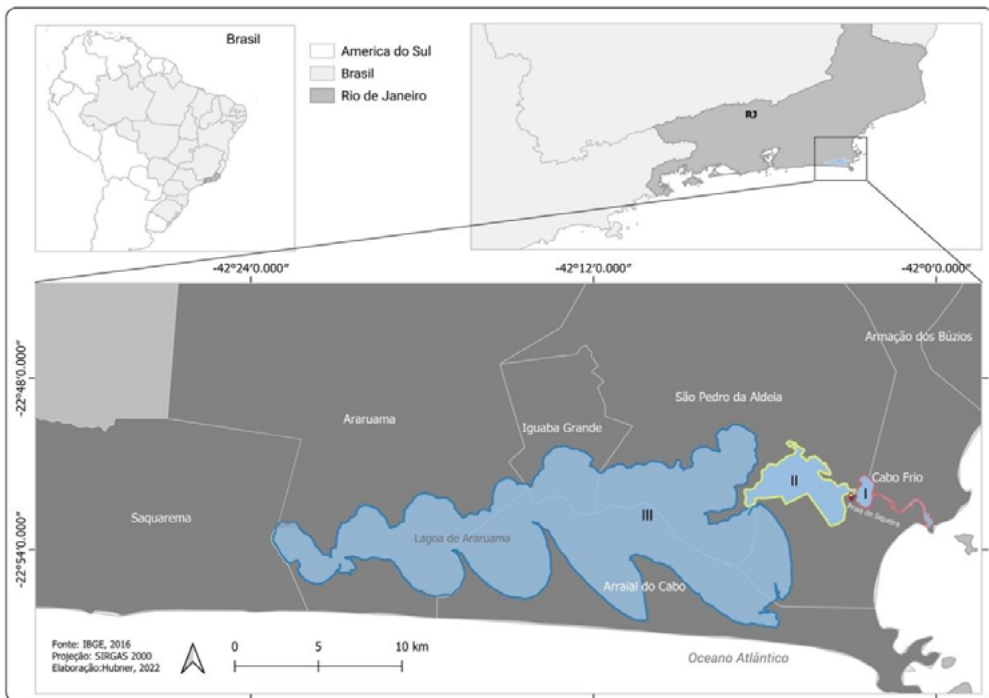
By means of documents and hearings, the artisanal fishers questioned the fishing regulation. Nevertheless, the ordinance 110/97 went into effect without due consideration of the local communities' demands. In the ordinance which consists of specific laws and regulations, the Lagoon was divided into three fishing areas, according to the degree of salinity and the distribution of the fish species (fig. 1). In May 2013, Marcelo Crivella, the Minister of Fishing and Aquiculture, published Interministerial Normative Instruction Nº 2 dated May 16, 2013, establishing a strict closed season for the Araruama Lagoon from August 01 to October 31 (MPA/MMA, 2013). Despite all the published reports of scientific studies⁴ that indicate the need to organize different calendars for fishing shrimp and fish, the period of total paralyzation of all forms of fishing remained unaltered.

The social group most affected by the imposition of that regulation was the artisanal fishing community of Praia do Siqueira, located in area II, in Cabo Frio, insofar as the period of prohibition overlapped the harvesting period for the shrimp that was the target of that group's activities. The process of imposing a fishing calendar and dividing the lagoon into three areas without the participation of the fishing community reveals colonialist practices of the State which deliberately established an abyssal cartography, generating environmental injustices (SANTOS, 2018).

3 - Lagos São João River Basin Committee (Comitê de Bacias Hidrográficas Lagos São João-CBHLSJ).

4 - Environmental studies for specific closed season periods in the Araruama and Saquarema Lagoons. Consolidated Report: Araruama Lagoon, January/2012.

Figure 1: Map of the Araruama Lagoon



Source: Elaborated by researcher Juliana Conti Hubner.

I think we are actually in a closed season for us of 9 to 10 months; look how long we have been without shrimp. And now that we have just begun to take the bigger, better-quality catches, the closed season comes in; the date is completely wrong! The correct closed season is in the months of April, May and June, when it [the shrimp] is small and in smaller quantity and is going to reproduce more and so there is not so much loss for the fishers. (...) look how long the fisher has passed without catching shrimp and now that a little has appeared, the closed season comes in. That is what needs to be said. (Fisher F)

Shut down the fishing today and go 30 days without receiving anything. I have to get a job or steal from the Lagoon in the small hours before dawn; we are left without money for 30 days. It's going to shut down just when the shrimp are in the Lagoon. 6 months passed without shrimp plus three of the closed season, ... 9 months. The shrimp that matures here in the Lagoon goes away and if the southwest wind hits, it sweeps everything away, then, out there (open sea), the trawler boats, from industrial fishing, catch the VG [full-grown shrimp]. (Fisher D)

In coherence with the logic of the hegemonic environmental management a hierarchy of knowledge has been established that makes other social experiences invisible and continually submits them to the risk of occupying zones of nonbeing⁵. An environmental management committed to a post-abyssal perspective has to include the cultural and social aspects of the artisanal fishing communities in addition to defending a collaborative and participative territorial re-mapping to overcome the extant disciplining of the fishing territories (CORDELL, 2000).

In view of all the above we consider that the degradation of the public policies for artisanal fishing and the fishing communities' feelings of nonbelonging in regard to the management of their territories are factors that contribute to the failure of the fishery regulatory process, just as it has occurred in the Araruama Lagoon.

The false Sophy's choice: deterritorialization of the Praia do Siqueira fishing community as a political choice of the State's

The Praia do Siqueira neighborhood has been traditionally inhabited by artisanal fishers who use small boats with no engines that they move around with bamboo poles in their shrimp fishing activity. The main fishing techniques they use are *trolha*, using long nets and *arrasto* using smaller rectangular-mouthed, funneled dragnets. The shrimp catch is sold by auction held at a spot on the beach administered by the community and known as Ponto do Camarão (Shrimp Point). During most of the year, the fishers usually go out to fish around 6 pm and return at some time between 8 and 9 pm. They negotiate the catch with tourists, middlemen, traders and local residents. However, with the increasing scarcity of shrimp, the middlemen have come to impose whatever price they see fit leaving no room for negotiation.

The predominant fishing technique of *trolha* involves four fishers, two who remain in the water and two who haul the net into the boat after each fishing effort. The minority of fishers who use drag nets (*arrasto*) go out by boat to the spots they choose in the water from where they drag the net. Generally speaking, the women of the community peel the shrimp in their backyards or in the residences of the middlemen who pay around 5 Brazilian Reals a kilo for the peeled shrimp which is the equivalent of 2 kilos of whole unpeeled shrimp. In the interviews the shrimp peelers declared that due to the scarcity of local shrimp, they often work with shrimp coming from Campos dos Goytacazes (Rio de Janeiro state).

According to the fishers, pollution from sewage and chemical products discharged on the shores of Praia do Siqueira (Fig. 2) and the modification of the landscape are the factors that have contributed to the current scarcity of shrimp.

We spend 6 to 9 months without catching anything from the lagoon and there are companies that discharge a residue into the Lagoon that kills the shrimp larvae. There is another company that works with salt

5 - <https://cee.fiocruz.br/?q=boaventura-o-colonialismo-e-o-seculo-xxi>

production and also discharges chemicals that kill the shrimp larvae. All of that does harm to the Lagoon (Fisher D)

A big salt company took over and made a bay to build an airport. The bay reduces the velocity of the water entering the lagoon, the water that used to enter the Lagoon and clean the Lagoon loses its force. How could we, who fish for shrimp, fight a financial power like that? Only if the respective government bodies were on our side. The money speaks louder. (Fisher G)

Figure 2: Images registered during the execution of the guided tours technique. The photo on the left shows the water of the Lagoon with an abnormal pink color and those to the right depict the sewage discharge



Source: Personal collection (2018).

Recently a Term of Conduct Adjustment (*Termo de Ajustamento de Conduta* – TAC) document was drawn up between the municipal authorities of the region and their local water and sewage concession holders and the Offices of the State and Federal Prosecutors (*Ministério Público Federal* -MPF and *Estadual* - MPRJ) which foresees investments in expanding sewage separation networks⁶. However, Fernandes et al. (2019) report that

6 - <https://g1.globo.com/rj/regiao-dos-lagos/noticia/2019/02/26/prefeituras-da-regiao-dos-lagos-do-rio-decidem-ampliar-redes-separativas-de-esgoto-para-protger-lagoa-de-araruama.ghtml> Accessed on April 12, 2020.

the work carried out at the Praia do Siqueira Sewage Treatment Station (*Estação de Tratamento de Esgoto* -ETE) has not been effective in reducing the risks posed by effluents and the process of environmental eutrophication is in full swing.

Associated to that drop in productivity due to pollution, the impact of the closed season on community income has been dramatic because the paralyzation of all fishing for three months jeopardizes the local economy for more than nine months. According to the fishers, during the summer and a considerable part of the autumn, the waters are very warm and the shrimp larvae cannot tolerate them whereas in the winter the species develops far better but that is the period of the closed season.

The shrimp harvesting period is the same as it has been in the past. (...) In the summer the waters heat up and kill the larvae, every one of them and in the winter there is the recess, the rough sea throws the larvae this way. Through August September and October there is shrimp. There have been net catches of 40 to 50 kg when the closed season was in force (Fisher E)

One of the interviewees, a public administrator directly involved in implementing the Araruama Lagoon closed season, declared that initially it had been planned to have two periods of paralyzation since fish and crustaceans have different life cycles. However, representatives of the former Ministry of Fishing and Aquaculture alleged that technical and financial conditions were insufficient for the creation of specific regulations and they restricted the closed season to a single period for all species.

A second public administrator, equally involved in implementing the closed season stated that he understood that those most interested in the depollution and recuperation of the Lagoon are the representatives of the municipalities of Araruama⁷, Iguaba Grande and São Pedro da Aldeia, insofar as they are cities almost entirely dependent on the Lagoon for tourist activities as they have no seafronts.

Regarding the closed season, the same administrator recalled that the initial project had divided the calendar in different stages, separating the fishing of fish and of crustaceans. However it had proved impossible to establish two separate periods because the ministry did not have sufficient resources to maintain surveillance in two different moments. In the light of that circumstance, the consortium representatives were pressured to opt either for a single closed season or for no closed season at all and in the end they chose a single totally closed season.

From that administrator's perspective, even if two different closed season periods were effectuated, the fishers would continue to disobey the regulations. In his view, a change in the calendar would not necessarily be successful because 90% of the people that complain about the regulations in force are fishers from Praia do Siqueira and some parts of São Pedro da Aldeia such as Mossoró, Poço Fundo and Camerum and stem from communities that do not respect the rules, behaving like 'veritable anarchists of evil'. According to him leaders of those communities were once in favor of a single closed

7 - Araruama has territorial contact with the sea in the Praia Seca district.

season period but they have failed to commit to the decision that was made in the past.

When describing the fishers' reactions to the configuration of the closed season period, the administrator recalled a conflictive moment marked by many demonstrations against it in which, to address the situation there was a distribution of basic food baskets. We understand that approach to be essentially merely assistance-based insofar as it was an action seeking to occasionally and individually compensate historically fragilized groups while failing to present any possibilities for structural changes in that reality. The commentary also expressed a racist perspective insofar as it considers the inability to respect rules to be a characteristic of the Praia do Siqueira fishers. From a perspective quite contrary to that of the administrator, the interviewed fishers expressed their interest in obtaining agreements for changes in the closed season period and their support for the prohibition of the use fishing capture technique called "trolha" as for example in the following citation "I have a trolha net too and that net is an assassin. I would stop using it if everyone else did too. I would put down mine first and set fire to it, everyone would put theirs on top of it and set fire. (...) that is how it ought to be" (Fisher D).

We consider that environmental racism has become institutionalized, especially through discriminatory legislation in which traditional knowledge is systematically vilified in the name of political and scientific interests considered to have greater priority. Corroborating that analysis, according to the Praia do Siqueira fishers, the implementation of the closed season took place without any dialogue whatever with the community.

They didn't ask anyone's opinion, they did not even call on the president of the Fisher's Association, I don't know. That was all [the work of] the people of Iguaba and a certain administrator. If you want to know, it was a money 'feast'. It is the same as having a 'sweep up' ... you have the right to put 15 people on the street to work and you put 10 but the money is going to come in for 15 so you swallow up the 5. This closed season has people who eat up the money; the fisher is the mule used to get the money across. If everything gets straightened out, what will the government send money for then? (Fisher E)

The administrator also stated that the fishers usually behave like criminals during the approaches made by inspectors during the closed season, attacking the marine police. On the other hand the fishing community describes a series of inadequate behaviors on the part of those so-called inspectors.

The inspector confiscates the fisher's net then goes on to sell it up ahead. That business of the city hall, it was not that group that should have made the prohibition, it was the forestry group, IBAMA (...) It's all wrong! There is one at the Southwest beach, a retired policeman, he would confiscate and take everything there then sell it here. It is dangerous messing with a guy like that, see if you don't die; are you crazy! Municipal police, armed, running after fishers, bang, bang, bang. Shooting at fishers there. Municipal police that are not even part of IBAMA, confiscating nets, selling nets to others. (Fisher D)

Last year they were seizing nets there, but they didn't present any catches at the police station, they just seized them and that was that. They didn't register or note down anything. The guy has a gun in his hand; what can you do? It could be anyone. The business is so wrong. For example, inspection can only be done by the environment authority or the forestry people, otherwise you don't hand over the net. I could very well catch a boat and a black shirt and then what would you have to say? They don't identify anything. So it happens just as it has already happened a lot here, on another day your net turns up in the hands of someone else, because they sell them. I heard that those guys, those retired guys and retired police are going to help in the surveillance, it's all wrong! (...) Fisher F).

There were accounts of a specific situation that arose in 2017 when the surveillance inspection was carried out by unidentified armed men who attacked fishers in activity in the closed season period with blows to their faces. Being afraid of some eventual institutional reprisal, the fishers did not report the violations they had suffered.

The State-conducted processes of de-territorializing the traditional communities have “materialized, in the territories, (...) the standardization of conflicts and acts of violence (...) such as intimidation, physical and verbal aggression, death threats, attempted assassinations” (RODRIGUES, 2020, p.475). The fishing territories have increasingly become cut across by the tendencies of necro-policy and necro-power. As Mbembe explains, those forms of power configure ‘worlds of death’, unique new models of social existence whereby vast populations are submitted to living conditions that confer on them the status of ‘living dead’ (MBEMBE, 2018, p.71). Installed in various contemporary territories, that conjuncture fosters the formation of an ‘environmental necro-policy’ which finds fertile ground in neoliberalism in which to “forge agreements that do not satisfy those affected, ‘ploughing under’ the necessary temporality for democratic public debate” (ZAGATTO, 2020, p.272).

According to the fishers, the community respected, in the past, a period of “natural fishing stoppage”: on full moon nights no one fished because the brightness of the moon caused the shrimp to take shelter at the bottom of the lagoon, an area known as crowns, to grow and feed. The fishers took the moon as a sign to be respected and they would only start fishing again after the animals had grown. Furthermore, they told how formerly they did not use the so-called ‘clogs’ wooden devices strapped onto the feet to access the crowns (coroas), areas located in the deepest part of the lagoon where young shrimp cluster to grow (Figure 3)

Figure 3: Differences between the fishing techniques Arrasto and Trolha. Registrations made during the application of the guided tour technique



Source: Personal collection

Thus shrimp capture was restricted to the column of water corresponding to the height of the fisher and made use of open-mouthed funnel-shaped nets also referred to as drag net fishing (*pesca de arrasto*). The details in that account of fishery management are in alignment with the characterization of the central elements of traditional communities that Diegues (1998) proposed which include the existence of a management system marked by natural cycles, based on complex knowledge passed on from generation to generation. Nowadays, with the scarcity of shrimp, the majority do use the clogs and the long nets (*rede de trolha*) which are widely considered to be predatory fishing techniques due to their collateral capture of accompanying fauna species (bycatch).

According to the fishers the process of changing the fishing technique from *arrasto* to *trolha* is related to the activities of the Alcalis company that was installed in the municipality of Arraial do Cabo in the 1950s. The factory created a lot of jobs in the region but it had a significant impact on the Lagoon insofar as the company extracted millions of tons of shells used in the production of 'barrilha' (*Sodium carbonate*) and constructed long dykes known as *marneis*⁸ for salt production (OLIVEIRA, 2013). The fishers also described how the building of the *marneis* had led to the destruction of important shrimp nurseries in area 3 of the Lagoon (figure 1).

When they allowed Álcalis to build a 25 km long *mamel* that was up to 6 meters wide at some points, the company destroyed important shrimp breeding grounds in Camboinha Pequena, Camboinha Grande,

8 - The *marneis* are long dykes constructed by salt extraction companies and also by the extinct Alcalis company and they hamper the hydrodynamics of water exchanges between Lagoon and ocean, jeopardizing the growth phases of both fish and crustaceans (OLIVEIRA, 2003 apud TANGERINO, 2017).

Leão Pequeno, Leão Grande, Coroa Branca, Oliveira and even as far as Praia Seca. They imprisoned that water to make it stronger, to mobilize the company's equipment (Fisher C)

Thus the shortage of shrimp led the fishers from those locations to seek other fishing spots such as Praia do Siqueira where the fishing was mostly done with small pull nets (pesca de arrasto). Being on average six times the size of "arrasto" fishing nets, the "trolha" fishing net is mostly used in area 3 of the Lagoon which is much larger and where the waters are deeper than in Area 2. When they saw the fishers from other areas coming in with their big nets, the fishing community of Praia do Siqueira entered in conflict with the new workers attempting to maintain their usual practices. However, given the absence of the State, the community understood that it was impotent in its effort to avoid the trolha fishing and it too began to make use of the same fishing technique.

Here at Praia do Siqueira there were no shrimp *ganchos* [fixed nets] nor any floated seine nets. The worst thing that ended up happening was that the police superintendent, the judge, the civil police became the proprietors of the fishing *ganchos*. They took up with the older fishers in a "coerced" way, to the registry office to officialize a document stating that the fisher was an employee of theirs, worked for them and had conceded the *ganchos* to them. What made matters worse, was when they started to develop the long seine activity, various companions came here to set up their *ganchos* armed with machine guns, telescopic sights; they put up barbed wire, installed refrigerators, stones, glass. So the *trolha* fishing was created here (Fisher C)

To consubstantiate the discussion the next topic will present analyses related to the closed season opening ceremonies held from 2017, to 2019.

Celebration of the deterritorialization of the Praia do Siqueira fishers

With the object of analyzing the deterritorialization process of the Praia do Siqueira community, the first author of this article took part in the annual meetings held to inaugurate the closed season period in 2017, 2018 and 2019. What follows below is her written report.

On August 14, 2017, at the invitation of one of the contacts that I was dialoguing within a bid to obtain more in-depth knowledge of the fishing management of the Araruama Lagoon, I took part in a ceremony at Iguaba Grande intended to referend the intermunicipal technical cooperation agreement for the development of the integrated surveillance/inspection of the Lagoon during the closed season. That year the ceremony was held 17 days before the first day of the closed season which, every year, was from August 1 to October 31. In 2018 and 2019 however, the event took place on July 31, just one day before the paralyzation. My presence at the beginning of the event was noticed and one of the mayors even questioned me as to what my interest in that meeting might

be. Most of the participants in the event were representatives of public authorities and of the environmental policing unit (*Unidade de Policiamento Ambiental – UPAM*). There was no participation of the artisanal fishers. Members of the Lagos São João Hydrographic Basins Committee (*Comitê de Bacias Hidrográficas Lagos São João – CBHLSJ*) announced that the surveillance that year would have pedagogical intent by means of which they intended to make those fishers who worked in the closed season and whom they considered ‘bandits’ aware of the need to not disregard the law. At no moment was there any mention of shrimp fishing. The debate that took place on that occasion was entirely directed at increasing mullet production which was seen as the symbol of success of the regulatory system in force.

The following year, 2018, the meeting to mark the beginning of the closed season took place on July 31 at the Cabo Frio city hall and was attended by representatives of the municipal government, of the Office of the Federal Public Prosecutor, of the Environmental Policing Unit and of the Praia do Siqueira fishing community encouraged by the PEA Pescarte team to attend the event. Although once again the UPAM was charged with the task of safeguarding the Lagoon against illegal fishing the mayor of Cabo Frio called on the Committee to pay special attention to the closed season for shrimp since many fishers had been complaining of the inadequacy of the calendar. The Praia do Siqueira participants then took the opportunity to underscore the urgency of changing the calendar since the current circumstances only favored the fishers of fish. In light of those manifestations of the people themselves, representatives of the MPF and the municipal authority committed themselves to seeking a solution for those problematic issues at a later date.

The closed-season opening ceremony in 2019, was on July 31 and took place at São Pedro da Aldeia in an open space on the shores of the Araruama Lagoon. We were invited by the Praia do Siqueira community to take part in the activity. Prior to the meeting we elaborated posters with phrases of opposition to the closed season as it was then. In addition, the group produced a large banner with the words “No to the Shrimp Closed Season” to be fixed alongside a poster of the Cabo Frio Z-4 Fishers’ Colony (*Colônia Z4 de Cabo Frio*) which was supporting the movement (figure 4).

Unlike the situation in previous years, most of the people present at the event were fishers, both from São Pedro da Aldeia and Praia do Siqueira. In the chairs under a small canopy near to a pulpit and a microphone were stickered the names of city councilors, reporters, and others whose comfort would be ensured while they took part in the event, unlike the fishers who mostly remained standing outside in the sun.

The meeting was mediated by representatives of the Basin Committee (CBHLSJ) and the first item on the agenda was the announcement of the achievement of a small amount of financing to support the surveillance activity during the closed season. It was to be used to buy snacks for the environmental guards. The fishers indignantly repudiated that information as they found it hard to understand why funding should be directed at snacks for the guards at a time when the fishing community was actually going hungry. On hearing the information, the fishers protested with jeers and catcalls which made

the meeting host withdraw from the location and the meeting ended without any further clarification.



Figure 4: Banner with the words “No to the Shrimp Closed Season” created by representatives of the Praia do Siqueira community with the support of the Colônia Z4 of Cabo Frio

Source: Personal collection (2019).

Bordenave (1983) considered that participation involves two key questions: the extent to which control is concentrated in certain members and the importance of the decisions in which it is possible to participate. That author categorized participation in various levels ranging from the most precarious to the most consolidated and measured according to the greater or lesser control of certain members in the midst of the decision making. In our analysis, the ceremonies referred to express the lesser degree of the people's participation, the level that Bordenave defined as 'information' in which no reaction is tolerated and the “heads of the organization merely inform the members of decisions that have already been made” (idem, p.31, 1983).

From all the above, we understand the eutrophication of the Lagoon, the pollution of the body of water with chemical products, the absence of any shrimp fishery statistics,

the imposition of an inadequate closed season, the absence of specific public policies and the surveillance and inspection that violates human rights to be synergic processes that contribute to turning the fishing territory of Praia do Siqueira into a sacrifice zone which Acsehrad defined as an area in which:

(...) in addition to the presence of a source of environmental risk, there is a verifiable tendency for it be chosen as the site for the implantation of new ventures with high polluting potential. Those who study environmental inequality call such locations 'sacrifice zones' or 'pollution paradises' where environmental deregulation favors predatory economic interests and tax exemptions lead them to be considered 'tax havens' (ACSELRAD, 2004, p.12).

That context fits in with what Mbembe describes as necro-policy (2018), what Santos (2020) elucidates regarding ontological degradation and Herculano (2008) denounces as being environmental racism. That model of abyssal environmental management promotes the deterritorialization of traditional groups by means of the State's colonialist regulation.

R-existences and the Ecology of Knowledge

The space for dialogue that Pescarte has made possible has fostered the creation of bonds of confidence between the Praia do Siqueira community, and the technical team and researchers connected to the project. Among the actions carried out we would highlight: the documentary with the title "A VER NAVIOS – Narrativas da Praia do Siqueira"⁹ (Left in the lurch - Praia do Siqueira Narratives) which exposes the communities' main struggles, especially in regard to the discharge of raw sewage in the region; the articulations with the public authorities in a bid to exert political influence for change in the closed season calendar and environmental sanitation; and the doctoral thesis that addresses the theme of this article.

Attention must be drawn to the importance of the UENF in its role as executor of the Pescarte, a space mainly occupied by environmental consultations. Thus, albeit the line along which the PEAs are developed is very tenuous, at environmental licensing's very limits and under the aegis of a capitalist State (SERRÃO, 2012), nevertheless, we do believe that the artisanal knowledge shared by the fishers and the scientific theoretic input provided by Pescarte's technical team and researchers in the form of participative/non-extractive methodologies have molded a context that is propitious for the ecology of knowledge (SANTOS, 2019).

One conquest stemming from that intercultural dialogue that is worth mentioning is the alterations made to the Araruama Lagoon Closed Season ordinance after almost 10 years of effort. The alteration came about after a public hearing in Brasília in July 2022,

9 - <https://www.youtube.com/watch?v=zD7iwUxDoiQ>

to discuss the topic, which was called for by a Cabo Frio councilor who is also an artisanal fisher and a participant in the Pescarte. The hearing was attended by representatives of various institutions including IBAMA, the Department of Aquiculture and Fisheries (*Secretaria de Aquicultura e Pesca-SAP*), and the CBHLSJ. The hearing had a hybrid format insofar as the Pescarte team with the support of the Z-4 Fishers' Colony made arrangements that enabled the Praia do Siqueira fishers to participate remotely. There were spaces for the speeches of the community and that of the first author of this article who took the opportunity to present parts of her doctoral thesis. After the hearing, a work group was set up in the WhatsApp environment and through it the SAP representatives requested new documentation and a new, more detailed presentation of the thesis to guide decision-making. In response, the first author chronologically systematized the requested documents in a drive, including among them, academic works, CBHLSJ reports and accounts of Pescarte activities related to the theme. After the detailed presentation of the thesis and reading of the documents in August, the SAP determined a new ordinance to be issued, nº 1.217/22, which replaced the dates the former close season period of August 01 to October 31 with the new period of April 01 to June 30.

Conclusions

The process of epistemicide analyzed at Praia do Siqueira accompanies the ontological degrading of traditional communities promoted by the hegemonic science and the State with its colonialist epistemic model. That perspective naturalizes the neoliberal model of development as the societal apex.

In our analysis, the negotiations with the MPA concerning the closed season period favored the lifecycle of the fish species, mainly for political reasons, and did so because the public administrators involved in the process had institutional ties with those municipalities where shrimp is not the target species. The analysis of the context identified that the maneuver was to implement a fishery management model compatible with the poor budget and technical capacity of the State which was favorable to the fish harvest but ethically flawed in its lack of commitment to the artisanal fishing community of Praia do Siqueira.

In their opposition to the authoritarian fishery management models like the one in force at Praia do Siqueira in the period from 2013 to 2022, the traditional communities have demanded from the State adequate space for participation in the establishment of regulations so that they can maintain their way of living. In that context, we would underscore the role of the PEAs, especially the Pescarte, as partner institutions in the bid to obtain a post-abysal fishing management for the Araruama Lagoon.

For many years, the community leaders have actively participated in the actions that the PEAs carry out in the region with the aim of mobilizing knowledge and abilities that are important for the protection and the recovery of their territory. That group has come to acknowledge itself as such and be duly acknowledged in the ambit of the PEAs as being veritable 'PEAers' (*peeiros*) given their continuous participation in various projects at the same time. In addition to the expressive performance in the PEAs and other relevant spaces of participation for claiming its demands, the community was able to count on

the support of an individual artisanal fisherman, an acknowledged regional leader who had been elected to the City Council of Cabo Frio in 2021. That political representation of the artisanal fishing on the Municipal Council, the political pressure promoted by the PEAs and the protagonist role of the community narratives of the environmental injustice they had suffered, all analyzed in the thesis that was defended in 2022, contributed to the alteration of the closed season calendar and consequently to the r-existence of the Praia do Siqueira fishing community. Intending to achieve other conquests such as environmental sanitation, the community has organized a re-territorialization movement. The process includes the reform of the fishers' pier, the creation of a fishing museum and the implementation of community-based tourism.

Given all that has been set out above, we hope that the debate conducted here can contribute towards the valuing and inclusion of traditional communities' knowledge in public environmental management.

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Gestão pesqueira e Colonialismo: desterritorialização e r-existências na comunidade pesqueira artesanal da Praia do Siqueira/RJ-Brasil

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Resumo: A dominação colonial estabelecida a partir do século XV mantém-se como elemento fundante da racionalidade moderna ocidental, atuando de forma tão invisível quanto eficiente na produção de subalternidades. Na dimensão epistemológica, a colonialidade do saber institucionaliza o papel da ciência moderna eurocêntrica na discriminação de conhecimentos entre falsos e verdadeiros. A descolonização como projeto inacabado, associado a modelos de gestão pesqueira autoritários, tem forjado contextos de injustiça ambiental. Dentre estes, destacamos o processo de desterritorialização de comunidades pesqueiras artesanais, reconfiguradas pelo Estado como zonas de sacrifício. Como exemplo fático, analisamos a imposição do período de defeso na Lagoa de Araruama-RJ a partir das narrativas da comunidade pesqueira artesanal da Praia do Siqueira, localizada as suas margens. No desenvolvimento da pesquisa, primou-se pelo uso de metodologias não-extrativistas/participativas. Conclui-se que o calendário imposto intensifica processos de desterritorialização da comunidade, no entanto, apesar da violência, estes espaços são percolados por práticas de r-existência.

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Artigo Original

Palavras-chave: Gestão Pesqueira, Epistemologias do Sul, Colonialismo, Zonas de Sacrifício, Pesca Artesanal.

Gestión pesquera y Colonialismo: desterritorialización y r-existencia de la comunidad pesquera artesanal de Praia do Siqueira/RJ-Brasil

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Resumen: La dominación colonial establecida a partir del siglo XV sigue siendo un elemento fundacional de la racionalidad moderna. En la dimensión epistemológica, la colonialidad del conocimiento institucionaliza el papel de la ciencia eurocéntrica en la discriminación del conocimiento entre falso y verdadero. La descolonización como proyecto inconcluso, asociado a modelos autoritarios de gestión pesquera, ha forjado contextos de injusticia ambiental. Entre estos, destacamos el proceso de desterritorialización de las comunidades pesqueras artesanales, reconfiguradas por el Estado como zonas de sacrificio. Así, analizamos la imposición de la veda en Lagoa de Araruama-RJ, a partir de las narrativas de la comunidad pesquera artesanal de Praia do Siqueira, ubicada en sus márgenes. En el desarrollo de la investigación se utilizaron metodologías no-extractivas/participativas. Se concluye que el calendario impuesto intensifica los procesos de desterritorialización de la comunidad, sin embargo, a pesar de la violencia, estos espacios son percolados por prácticas de r-existencia.

Palabras-clave: Gestión Pesquera, Epistemologías del Sur, Colonialismo, Zonas de Sacrificio, Pesca artesanal.

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