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Progress Report # 4

The following report summarizes the second part of findings based on data gathered through semi-structured interviews, focus groups, community meetings, and field notes. It continues the descriptions, developed in the third progress report, of the most pressing conditions and dynamics ruling over the management of the reserves that are within the territory of the North East Corridor's maritime zone, *Arrecifes de la Cordillera (AC)* and *Canal de Luis Peña (CLP)*. The participants belong to the following interest groups: artisanal, small-scale commercial fishers, government agencies' personnel (DNER), local schools (teachers from Culebra and Fajardo), environmental NGO's, Diver's Association, and a journalist specialized in the region.

This set of findings is classified into three different categories: Justice Issues, Education, and Direct Knowledge of the Reserves. These categories are related to questions and concerns about the actual management of the reserves and the future protection of the maritime zone of the Northeast Corridor. Developing an effective management plan for the maritime zone of the Northeast Corridor requires an analysis of the ways in which the actual reserves located within the territory of the Northeast Corridor are perceived by its main users and stakeholders.

Justice Issues:

By "justice issues" we mean, everything related with different access towards, and distribution of, natural resources between the groups of users or stakeholders. Is the access towards natural resources of the different stakeholders the same? How does the local context – in terms of the historical development of different groups and communities – shed light towards the impact of top-down state policies?

Since the 1960's major tourism development in Fajardo started to affect the coral mortality of the region. The construction and opening of the Conquistador Hotel began a continuous development of private projects around the coast, and the displacement of the local fishing communities. In the period between the 1970's and 2000's, six private Marinas were constructed. From the gentrification and displacement of local fishing communities to the "physical alteration of coastal morphology and adjacent coastal coral reef and sea grass communities due to chronic coastal water quality decline" (Hernández-Delgado, Edwin A. et. al. 369, 2011), the social



and ecological impacts of these projects in the region are vast. Also, arrays of fish habitats were extinguished due to the construction of the Marinas (ibid). Coastal erosion has increased due to construction of various residential complexes, used by some as second homes for vacationing. Moreover, Fajardo is home of the largest marina in the Caribbean and has the highest concentration of recreational vessels in Puerto Rico (ibid).

Based on local fishermen's statements, a common factor emerges that describes a general sentiment that could be called "social suffering". The fishermen express in their own words that "el pescador es bien sufrido" (the fishermen is a suffering subject, or "fishers suffer a lot"). In part, this is so because they perceive that the "government promotes agriculture and farmers, but it does not promote fishing nor resources that fishers need for their daily work." Furthermore, according to many, "the fisher" as a full-time permanent worker is disappearing. Increasingly, there are "part-time" fishers that also work in other jobs in order to eke out a living. Almost all the participants (fishers, DNER's personnel, tourist concessionaires, local teachers) argued that the number of fishers has decreased.

Paradoxically, while the number of full-time fishers decrease, the amount of fish has also decreased. According to commercial/artisanal fishers, now they must travel longer distances in order to fish, whereas before fish could be found in distances much nearer to the shore. More resources, energy, and time are consumed than before, in order to catch less fish.

On top of this, commercial fishers complain about "too many laws" restricting fishing practices that directly affect their livelihoods, and only theirs, since recreational fishers are not supervised nor are required to obtain any type of license or document that certify them as fishers. There are fishers that have abandoned their particular artisanal fishing practices because they have too many restrictions. A clear example of this is the "pescador de vara". As one fisherman says, "salt water fishermen have been basically eliminated".¹ On the other hand, according to some fishers, another economic factor related to globalization and Puerto Rico's relationship with the U.S., affect their economic survival: mega-stores like Costco, Sam's and Walmart's selling of fish from different parts of the world at prices and convenience that displace local fishers' market. A fisherman expresses in his own words: "The [actual] state of fishing is not easy, each day is going to become worst, and people are buying American fish because it is cheaper."

A common expression among fishers is that "there are not many fishers anymore; they are not much in existence, and in terms of fish, those motor boats scare out fishing, they scare out fishing too much". By "motor boats"

¹ "Los pescadores de agua salada, basicamente los han eliminao'." [Interview]



they are not referring to their small boats, “lanchas” or “yolas”, which also use motor (usually one small or medium size motor), but to yachts from the neighboring Marinas. In Fajardo, for example, fishers are surrounded by marinas. Many of the fishers’ communities were displaced and evicted in order for the Marinas to be built (Hernández-Delgado, et.al.).

According to a leader of one of the region’s fisheries, a reason for some fishers not applying for permits to transport tourists in the area, is because they “are scared to loose ‘federal help’ and other social benefits,” like food stamps. This suggests that many fishers live in socio-economic conditions characterized by poverty. Their economic conditions force them to look for different alternatives in order to survive and help their families.

Water taxis and concessions to transport tourist to the different cays of *Arrecife de la Cordillera*, especially to Icacos, Palomino and Polominito:

Some tourist concessionaires and fishers agree that transporting tourists to different “cays” in the area is an economic alternative to fishers. However, since 2010 DNER’s stopped giving new concessions. Furthermore, DNER’s requirements seem to be an important obstacle to fishers’ legalization of their status as tourist concessionaires. Fishers are need to take an exam in order to acquire a license and to pay what for them is a costly fee. This procedure clashes with fishers’ perceptions of themselves as knowledgeable of, not only their craft as fishers and boat riders, but of the great diversity of cays, corals, fish, and ecosystem in the region. They feel they should receive a concession since they are part of a long tradition of fishers that have worked, as water taxis to the cays since the 1930s. In practice this is a dissuasive to their incorporation into the sustainable tourism economy. This is a real problem since acquiring licenses for transporting tourist and becoming local tourist concessionaires is an economic alternative.

On top of this, fishers complain that they are fined for too many reasons. From different interviews with DNER’s personnel, both high-rank officials and rangers, it is evident that there is a lack of information related to enforcement practices. For example, when asked about the existence of a formal protocol for appropriate interventions in the enforcement of regulations a DNER ranger official answered in the negative. Fishermen criticize the punitive way in which DNER’s rangers enforce fishing regulations. One of the most conflictive aspects of the management of the area is precisely the little communication between these two groups. Some can even make the decision to leave the part-time craft and economic survival as fishers and search for other alternatives. On the other hand, there seems to be too many tourist concessionaires, and DNER might be reluctant to provide more concessions. According to the new DNER’s Secretary, Carmen Guerrero, the new DNER’s



administration is a law abiding one that makes sure that the different regulations are followed (El Nuevo Día, 24 de Julio de 2014).

According to a leader in one of the fishing communities, there is no “commercial fishing in Puerto Rico”. “What we have here is artisanal fishing”. In other words, fishers are engaged in a sort of survival fishing that allows them to live but with great effort, since there has never been a fishing industry – where tons of fish are caught – in Puerto Rico. In other words, commercial fishers do not have the access to the amount of fishes nor the economic infrastructure necessary for the distribution that conforms a “fishing industry”. On the hand, for most participants, recreation fishing is ubiquitous in the region. The differences between the regulation of recreational fishers and commercial/artisanal ones are indeed appalling, since there seems to be very little enforcement and regulations for recreational fishing. For some, recreation fishers catch even more fish than commercial fishers. As one DNER’s ranger argues, today, “recreation [fishers] captures a bigger amount of fish than commercial fishers.” Moreover, an administrative official from DNER also manifests this: “a great part of the [negative] impact towards the [marine] resource comes from recreation fishing.”

A common argument among tourist concessionaires, fishers, and NGO’s, is that private boats and Marinas are main sources of local environmental degradation without much supervision and enforcement from DNER’s rangers.

Direct or actual knowledge of the reserves:

There is some confusion with the term “reserve”, of what it is that a “reserve” entails and what are its limits. Most fishermen associate the term reserve exclusively with a non-take zone. In other words, is fishing activity is allowed, then it is not a “reserve.” Furthermore, some fishermen associate the reserve with the buoys that mark the territory. Following this, a great number of fishers assume that the only reserve in existence is the *Canal de Luis Peña* no-take reserve, which has buoys marking the area as a reserve as a no-take zone. This is also confirmed in other studies about Marine Protected Areas (MPA) in Puerto Rico (Aguilar-Perera et. al.). In their, “Marine protected areas in Puerto Rico: Historical Currents and Perspectives”, the authors argue that there is confusion about the meaning and language used for MPA’s “among scientists, managers, fishers and politicians because of the variety in levels of protection incorporated by MPA’s (962).”

Also, apart from “semantic confusions” of what a MPA entails, many are not aware of the reserve (in this case, *Arrecifes de la Cordillera*) because its “presence” is not made explicit by marks or signs in the territory. One of the participants declares:



“There are no buoys in here, there is nothing in here. The only buoys [that are around] are the ones for boats, but in Culebra [the reserve] is marked with buoys, and if they catch you there fishing you get fined, they confiscate [your equipment or boat], and you could be jailed because you are not allow to fish anything...Here no, people say [that there is a reserve] but there is nothing in here, there is no mark, all that ‘cordillera’ is clean. I say that because I travel it [the cordillera] almost everyday.”

This suggests that a much more intentional and in-depth educational process about the different reserves that exist and a system of buoys and other mechanisms that mark and identify the area as a reserve is needed. In many ways the “presence” of the reserve is acknowledged through its marks, which make the reserve ‘real’ and ‘concrete’ to the users since they literally mark the territory. Naming a territory a “reserve” does not turns it into one. In fishermen’s perceptions, there needs to be a more concrete presence marking the territory, and a clear a practical understanding of the different types of Marine Protected Areas.

Other stakeholders confirm the perception that *Arrecifes de la Cordillera* is not a reserve. For example, according to a high-level DNER’s official, the *Arrecifes de la Cordillera* reserve was designated as such in 1989 but people are not aware that it is a reserve. “Designation of the area as a reserve ‘makes the agency happy’ but there is no change in the water.” Accordingly, it gives a “wrong impression” of protection.

Education:

In terms of education and relationships among government agencies, scientists, and fishermen, some fishermen feel that their knowledge about the area and marine life is not acknowledged and taken into consideration during the design, development, and decision-making processes related to the management of the natural reserves.

There is a general consensus among participants of the need for developing education and awareness strategies focused on the Marinas and owners of private boats. Everyone seems to agree that this is an important source of negative environmental impact from direct human practices.

A common perception among participants is the need for creating diverse educational approaches catered to the different stakeholders and the general public (schools, churches, local visitors, tourists).

Participant’s general recommendations:



- The need for more information, which also gives “presence” to the reserve: posters, flyers, banners, with both ecological and behavioral information (what is allowed and what is not, etc.).
- Educational training for tourist concessionaires and follow up workshops, to guarantee that they are instructing visitors in the protection of marine resources and biota.
- The need for a better and constant communication and feedback between rangers, fishermen, and tourist concessionaires.
- The creation of festivals and communal activities focused on the protection of, and education about, the reserves within the maritime zone of the Northeast Corridor.
- The provision of Bilingual information.
- The need for publications about the maritime zone of the Northeast Corridor and the protection of its resources.
- Importance of being present at schools through new contents in curricula and workshops with students and teachers.
- The use of technology (blogs, webpages, Facebook, twitter, among others) in the spread of information about the reserves: ecological, cultural and economic information, images, calendars, and regulations, among others.

A thorough analysis of the collected data suggests a urgent need for developing mechanism of environmental awareness among private boaters, recreation fishers, Marinas, and the general public. It is also necessary that both tourist Concessionaires and the different actors in charge of the management of both reserves participate in educational workshops that train in the management of the area. Furthermore, and acknowledging fisher’s deep knowledge of natural life in the region (both land and marine), it is important to integrate the socio-cultural and socio-ecological knowledge of local groups into future descriptions, analysis, and management plans for the region. For this, a participatory approach becomes necessary.

Conclusion:

A review of the data gathered through an array of qualitative research techniques suggests that there are justice and education issues that need to be taken into consideration in any broader management plan that covers the maritime zone of the Northeast Corridor. Looking at the two maritime reserves located within the Corridor – *Canal de Luis Peña* and *Arrecifes de la Cordillera* – one can notice that there is a lack of awareness of what a “natural reserve” means and the different types of reserves that exist. For example, at least from the perspectives of most fishers, *Arrecife de la Cordillera* is not a reserve, since it is not a no-take zone. Furthermore, DNER’s rangers need constant training and workshops in order to keep them up to date in both environmental and legal (regulations, etc.) conditions of the reserve. Also, a protocol and communication mechanisms that allow for a better understanding and recognition of fishers realities – is a crucial initiative for



the betterment of relations. Finally, the “presence” of the CEN Marino and the different maritime reserves within its territory, need to be more evident through concrete references. Marks like buoys, signs, posters, flyers, among other materials, can help in the everyday presence of the reserve in peoples’ perceptions.