

SUSTAINABLE SUBJECTS:
AN INVESTIGATION OF THE PRODUCTION OF SUBJECTIVITIES IN SAN
FRANCISCO DE COYOTE, COSTA RICA

BY

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PREFACE

The journey from Costa Rica's capital city of San Jose to the coastal town of San Francisco de Coyote on the Guanacaste Peninsula begins in the early hours of the morning. Travelers first take winding residential streets that funnel towards the frantic, multilane highways that lead away from the city center towards the Gulf of Nicoya. Here, a 6AM ferry bears them across the choppy waters to then begin a six hour commute over dusty, gravel roads until reaching Coyote.

This same journey across land and sea was often undertaken by my Great Uncle Fran. In the 1970s, Fran began coming to Coyote to fish with the locals. He often brought my father along with him on lengthy fishing trips on his "panga," as the Coyote fishermen call boats. Together they bought a plot of land in the town in the late 1980s. This land was later passed down to my father.

The ownership of land in the community has not passed unnoticed by the local people in Coyote. After over 30 years, the lot has remained conspicuously empty alongside the houses in the residential center of town. Instead of a house, the empty lot boasts a multitude of fruit trees including three banana, and two carambola, a lime, and several mango. The neighbors are paid by my parents to tend to the land, though they have made several offers to buy it over the years. However, my parents have plans to eventually build on the land and have declined any offers. We visit Coyote every other year, and over time I have become acquainted with the layout of the town and some of the families in the area, particularly the family next door to the lot.

Our neighbors are not the only familiar faces in Coyote. Stationed in Coyote is a field office of a non-governmental organization (NGO) called Sea Turtle Restoration Program (PRETOMA), which coincidentally has ties to my family as well. Randall Arauz and Isa Naranjo, the two founders of PRETOMA, grew up with my father in the capital city of San Jose, and they have remained close family friends over the years. We have often traveled together from San Jose to Coyote to check on the sea turtle and artisanal fishery projects that PRETOMA facilitate in the area. From them, I often heard about PRETOMA's involvement in establishing marine protected areas, sustainable artisanal fisheries, and state-certified fishing associations in Coyote.

These connections to Coyote are what prompted my initial interest in designing and conducting a research project in the area. What particularly interested me was the relationship

between PRETOMA and the fishers of Coyote. Thus far, I had only heard about the efforts to establish a sustainable, artisanal fishery from the perspective of PRETOMA employees, who often talked about “difficult” relations with the fishers – and I wondered what was it that made the relationship difficult between them. To make these investigations into the nature of PRETOMA’s involvement in the lives of the fishers, I was drawn to literature on power as a starting point to formulate my research questions. This, I found out, would involve considerable reading on topics ranging from theoretical treatises on governmentality and environmentality to debates on power topologies and the politics of scale. The analysis that follows is an attempt to bring the experience of the fishers to the foreground to perhaps offer a more inclusive understanding of the effects of power on their everyday lives.

INTRODUCTION

Over the past decade, the fishers of San Francisco de Coyote, Costa Rica have experienced significant changes to the management of their coastal fishery. In 2006 and 2009, two Marine Protected Areas (MPAs) were created, bringing with them regulatory restrictions meant to revitalize the coastal ecosystem and encourage the development of a sustainable artisanal fishery. Involved in the creation of the MPAs and concerned with their management is the Costa Rican non-governmental organization (NGO) named Sea Turtle Restoration Program (PRETOMA). Since their establishment, PRETOMA has been involved in initiatives to promote sustainable artisanal fisheries management among the fishers of Coyote, chiefly through their involvement in local fishing association politics.

The way these changes to the management structure of the coastal fishery of Coyote have impacted the lives of the fishers is the broad aims of this research. More specifically, I seek to answer the following questions:

- 1) What are the techniques of power exercised by PRETOMA to regulate the conduct of the fishers?
- 2) What subjectivities are created as a result of PRETOMA’s immanent presence among the fishers?

These questions will be analyzed according to a Foucauldian theoretical framework on the creation of subjects through technologies of power. This is supplemented by literature on

governmentality, environmentality, power topologies, and scalar discourses. The methods I used to collect information about the history of PRETOMA's involvement in Coyote and current exercises of power being practiced in Coyote include participant observation and 12 informal, semi-structured interviews with PRETOMA employees and fishers. Ultimately, the analysis of the research questions in relation to the data collected centers around two themes: the production of scientific discourses *by* PRETOMA and the production of scalar discourses *about* PRETOMA. Analysis of the effects of these techniques of power reveal the presence and propagation of at least three subject positions among the fishers: that of environmental subjects, political subjects, and non-subjects.

The significance of this revelation is based on the assertion that understanding the way conduct is shaped by techniques of power matters because it has the potential to reveal how and why certain individuals and groups are marginalized in society. Within this awareness of power's effects lies the potential to seek ways that empower rather disempower the people who are most burdened by oppressive regimes of knowledge.

LITERATURE REVIEW

A Foucauldian approach to understanding power and the creation of subjects is founded on at least three key properties of power: power is practiced, power is relational, and power is an immanent, normalizing force (Foucault 1982, Allen 2003, Painter 2004). These three properties contest claims that power can be possessed, transmitted, accumulated, by people, objects, or spaces, or that it can be transferred across space through flows or networks (Allen 2003). Making these distinctions about the nature of power is fundamental for understanding how power is exercised in the creation of subjects. Firstly, I present an overview of Foucault's work on the creation of subjects through a discussion of the 'conduct of conduct' and the way certain "truths" are internalized and shape everyday choices and interactions. This is followed by an examination of governmentality and environmentality to elaborate on the creation of political and environmental subjects, respectively. In addition, I include scholarship on distinctions between the *kinds* of power that can be exercised to influence outcomes and then explore the spatial elements of power through the concept of 'power topologies.' Considering the scholarship that has built upon Foucault's initial exploration of subject formation through

techniques of power is important because it offers conceptual tools to analyze power relations more critically.

SUBJECTIVITY AND POWER

In Foucault's account of the creation of subjects in "The Subject and Power" (1985), he begins by asserting that his purpose is not to investigate power itself but to investigate modes through which humans are made subjects, of which power relations plays a significant part (Foucault 1982). His subsequent analysis of power relations and the formation of subjects is described as the regulation of the conduct of others and self-regulation of one's own conduct, where "conduct" is understood as both "to lead" and "to comport one's behavior" (Foucault 1985, p. 789). He explains this concept, stating "the exercise of power is a 'conduct of conducts' and a management of possibilities" (Foucault 1982, p. 340). One of the key technologies of power used to influence conduct is tied to knowledge production: exercises of power produce ways of knowing the world through popularizing discourses about what the "right" way of doing things is (Foucault 1982, Foucault 1991). These technologies of power are the dominant systems, institutions and everyday actions that regulate how one behaves in the world – such as laws, the church, and economic organization (Foucault 1982). As a result of living within these embedded, relational structures of power, people learn to self-govern their thoughts and actions to fit prescribed societal modes and are effectively made subjects.

Foucault asserts that understanding where power comes from should begin with analyses of forms of resistance to subject-hood, such as opposition to the effects of power which are linked to knowledge, competence, and qualification (Foucault 1982). These are struggles centered around identity that are opposed to techniques of power that "categorizes the individual, marks him by his own individuality, attaches him to his own identity, imposes a law of truth on him which he must recognize and which others have to recognize in him. It is a form of power which makes individuals subjects" (Foucault 1982, p. 781). In reference to this passage, struggles against forms of subjectivity and submission are recognized simultaneously as struggles between a force outside the individual and within the individual as they resist becoming the imposition of certain identities or way of living. The conduct of individuals is influenced by what they internalize and imagine as the 'truth' of their circumstances; therefore, those who feel

‘powerless’ due to the power being exercised ‘over’ them have only internalized a way of seeing the world that emphasizes their subjugation (Allen 2003).

The difference between the parties who exercise techniques of power to seek to create subjectivities and those who use technologies of self to resist subjugation is captured by this distinction between power *over* and power *to*. Power over someone involves restriction, domination, limitation, and constraint while power to refers to creation, expression, production, and possibility (Painter 2004). Though power over and power to are not mutually exclusive, making the distinction between them allows for an examination of ways power acts as a capacity for change or an imposition of one will over another (Painter 2004).

In respect to power *over*, Allen (2003) stresses that “power is always power of a particular kind” and there are different kinds of power such as domination, authority, coercion, seduction, and manipulation that each have their own properties and cannot be used interchangeably. Domination is characterized by discipline, control, and supervision; authority by perceived legitimacy and recognition; coercion by the threat of negative consequences; seduction by appealing to desires, though the possibility of refusal remains; and manipulation by the concealment of intent to achieve desired outcomes (Allen 2003). Making the distinction between these forms of power lends more nuanced understanding of the diverse ways that those utilizing techniques of power can use to achieve desired effects (Allen 2003).¹ However, deploying these techniques of power does not ensure that they will achieve their ends; power relations are not predicated on a relationship of dominance and compliance. As Painter describes, “the capacity of one party to produce effects depends on the liabilities, susceptibilities, and affordances of the other” (Painter 2004, p. 145). These techniques of power aim to channel the conduct of individuals in a certain direction; but the compliance of the targeted individual is not guaranteed.

Power *to*, unlike power *over*, concerns how individuals should conduct themselves through processes of self-regulation (Allen 2003). Within every relationship of power is the potential to subvert the structures through technologies of self-regulation: each individual has the capacity to self-regulate and shape their own conduct within the field of possibilities of action (Foucault 1982). Foucault insists that within the field of action, certain actions modify others and

¹ “To reduce their specific effects to domination is to misunderstand the diverse ways in which power achieves its effects” (Allen 2003, p. 30). Allen offers an extended account of the problem of equating all forms of power with domination in “Lost Geographies of Power” (2003).

one has the capacity to “act on the actions”; herein lies the freedom to act in powerful ways to shape one’s own reality.²

GOVERNMENTALITY AND ENVIRONMENTALITY

Though certain freedoms are restricted within the field of action, one can potentially act on the action of others within the field of possibilities; in effect, to govern is to structure the field of action of others (Foucault 1982, p. 341). In his historical accounts of the emergence of subjectivities through state apparatus of governance, Foucault asserts that state institutions use certain strategies and technologies to structure the field of action of others and, in this way, seek to influence their conduct (Foucault 1982). The normalization of state discourse is captured in the concept of governmentality, which examines the way an individual's conduct is shaped and controlled by regimes of knowledge. Governmentality includes “the institutions, procedures, analyses and reflections, the calculations and tactics” propagated by government institutions, embedded in economic policies, and perpetrated in media outlets that intentionally or implicitly regulate the conduct of the targeted population to comply with certain state-sanctioned epistemologies (Foucault 1991).

The concept of governmentality has been adapted to address questions of environmental governance through the concept of environmentality, or eco-governmentality. Environmentality refers to the way the conduct and self-conduct is increasingly regulated according to an environmental rational (Bridge and Perrault 2009, Agrawal 2005). Environmentality emphasizes three recurrent themes from Foucault’s work on power, subjectivity, and governmentality: 1) the use of scientific expertise and knowledge production to introduce new management practices and create new subject positions; 2) the emergence of an ‘environmentally-oriented subject position’ and the production of uniquely ‘environmental subjects’; and 3) the ways the state and other institutions come to adopt certain positionalities concerning the environment and circulate them in society (Bridge and Perrault 2009).

² Foucault asserts that freedom must exist for power to be exerted: “When one defines the exercise of power as a mode of action upon actions of others, when one characterizes these actions by the government of men by other men-in the broadest sense of the term-one includes an important element: freedom. Power is exercised only over free subjects, and only insofar as they are free. By this we mean individual or collective subjects who are faced with a field of possibilities in which several ways of behaving, several reactions and diverse comportments, may be realized” (Foucault 1985, p.790).

An example is offered by Agrawal (2005), who analyzed the emergence of environmental subjectivities as a result of state-facilitated community forest management counsels in his longitudinal study on the attitudes and perceptions on the protection of forests in Kumaon, India. Within this model of the emergence of environmental subjectivities is the potential to create environmentally conscious subjects who self-govern their actions based on environmental discourses promoted by organizations, the state, and the larger society (Agrawal 2005). As dialogue and regulatory strategies centered on the protection of the environment becomes more widespread and adopted by state, experts, institutions, and individuals, the more environmental logic becomes normalized and affects the everyday conduct of those who internalize the discourse.

POWER TOPOLOGIES AND SCALAR DISCOURSES

The everyday, situated nature of power relations in the creation of both political and environmental subjects brings to light a fundamental element of the spatial imagination of power: power is immanent. Investigated in scholarship on the spatial elements of power is the question of how individuals and institutions such as state governments make their presence felt across space. Considering power as an immanent force is important for interrogating how powers at a distance are made to feel close and affect the everyday conduct of subjects. Allen's (2011) treatment of 'power topologies' and Mitchell's (1999) analysis of the 'state effect' reveal the differences between immanent and transcendent conceptualizations of power. This has implications for the understanding how the spatial manifestation of power as scalar is socially produced.

Looking first at Foucault's reference to immanence, he states, "power relations are rooted deep in the social nexus, not reconstituted 'above' society as a supplementary structure" (Foucault 1982, p. 791). To claim that power relations are embedded in the "social nexus" is a recognition of the immanent, lived, and everyday qualities of power. This is opposed to transcendent conceptualizations of power "above" society (Woodward et al. 2010). Spatially, this calls for "going beyond an understanding of the scalar landscape as one of fixed distances, well-defined proximities and uncomplicated reach" (Allen 2003, p. 13). The immanent nature of power its relationship to proximity and reach is captured by a 'topology of power' (Allen 2011). Thinking of power in terms of 'topologies' transcends physical distance since the topological

concept of twists and folds that brings distant areas within reach parallels the processes through which power becomes embedded and internalized in the everyday experiences of individuals. In sum, “a topology of social relations should help us to focus upon their co-constitutive nature *and* the spaces and times they actively construct in the process” (Allen 2011, p. 192)

In opposition conceiving of power as an immanent force, the transcendent view of power is the product of scalar discourses and brought to bear on individual’s experience of power by the way these scalar discourses are internalized. A theoretical account of the way power exercises us through scalar effects is offered by Timothy Mitchell’s through his description of the ‘state effect’ (Mitchell 1999). Mitchell deconstructs the perceived boundary between state and society, describing how there are seemingly “individuals and their activities on the one hand, and on the other an inert ‘structure’ that somehow stands apart from individuals, precedes them, and contains and gives a framework to their lives” (Mitchell 1999, p. 89). He describes the creation of perceived categorical boundaries as a technique of power, stating,

The ability to have an internal distinction appear as though it were the external boundary between separate objects is the distinctive technique of the modern political order ... one can trace it to methods of organization, arrangement, and representation that operate within the social practices they govern, yet create the effect of an enduring structure apparently external to those practices (Mitchell 1999, p. 77-78).

By operating within the social structure, state actors produce the effect that the state is a united force through a process of social engineering and discourse production (Foucault 1982; Mitchell 1999).³ When this discourse is internalized by political subjects, the state is empowered: scalar discourse privileges spatial units (such as the ‘state’) that are at a higher level on the scalar hierarchy of power. These scales are considered more ‘powerful’ while lower levels, such as that

³ Alison Mountz (2005) offers an empirical analysis of scalar effects and attempts to account for the everyday spaces of interaction by rescaling the discussion of power from the ‘state’ and ‘society’ to the scale of the body. Similar to Mitchell, she investigates the scalar narratives that reproduce the distinct objectives and perspectives of institutions such as the state; so, repositioning scale to the body situates the analysis of power relations to individual actors and accounts for the everyday social spaces in which power is practiced. Re-embodiment of the nation state places people back in the center of institutional analyses – as Mountz describes, “in interviews with those who enact the state on the frontlines, the cleaner narratives of policy recede, and the processes, personalities, and politics surrounding policy come to the fore” (Mountz 2005, p. 339). Her analysis of the statements made by government brings to light the dividing practices that ‘dis-embodiment’ institutions and produce polarizing discourses that marginalize certain individuals and groups.

of the individual, are considered less powerful (Brenner 2001). Scalar discourses thus preserve the scalar hierarchies and persist in popular discourse because they have been internalized by political subjects. This overview of literature on scalar discourses will be revisited in the analysis of the production of political subjectivities through techniques of power.

METHODOLOGY

The following research questions relate to the creation of environmental subjectivities and the techniques of power deployed to achieve this:

- 1) What are the techniques of power exercised by PRETOMA to regulate the conduct of the fishers?
- 2) What subjectivities are created as a result of PRETOMA's immanent presence among the fishers?

To address my research questions, I collected information in four primary ways: firstly, I researched the environmental policies and regulatory mechanisms of the state to better understand the broader context in which the state is acting; secondly, I investigated the conservation initiatives by PRETOMA in Coyote published in academic publications, news articles, and websites; thirdly, I conducted 12 informal, semi-structured interviews with fishers and PRETOMA employees; and lastly, I participated in community life and recorded my interactions and experiences with members in the community while living in the site.

Prior to engaging in interviews with the fishers, I spent three weeks getting to know people in Coyote and the fishing village of San Bernardino. As Creswell describes, it is important to find and form relationships with “gatekeepers” or “key informants” – and for my particular research, this included those at the head of the artisanal fishery activities such as key employees of PRETOMA as well as fishers holding leadership positions in the fishing associations (Creswell, 2007). These individuals directed me to additional resources and potential interviewees during the course of my time there. In addition, moderate participation in the community and attendance at three fishing association meetings allowed me to socialize with fishers and other community members before conducting interviews.

While in Coyote from July 16, 2016 to August 22, 2016, I stayed in the house of a couple in the community who I had known prior to initiating this study. Staying in the house of a family

from Coyote rather than a room offered by PRETOMA was critical for establishing my independence from PRETOMA while interviewing the fishers. Through the family's connections, I took part in church gatherings, festivals, and nightly activities such as fútbol games. I recorded these events and interactions in a journal. Reflecting on my own position and experiences and gaining personal insights was thus a vital part the research. I took into the account the evaluator effect by writing my own interpretations of interactions with research participants and community members and recording my changing interpretations and perceptions of them over time (Patton 1990).

The concept of power topologies stresses that power relations are rooted in the immanent characteristics of a site and are felt experientially. Therefore, give a more localized depiction of the way environmental initiatives in the area are being experienced on the ground, I conducted informal, semi-structured interviews with artisanal fishers from Coyote and PRETOMA employees on their experiences and interactions. I completed a total of 12 voice-recorded interviews averaging about 20 minutes per interviewee. Two were PRETOMA employees and ten were fishers. Potential interviewees were selected as research participants through the snowball method: each individual recommended others to contact at the end of each interview. The choice to speak in either Spanish or English was offered to the interviewee based on their preference. Interviews with the PRETOMA employees were conducted in English and interviews with the fishers were conducted in Spanish, which I later transcribed and translated. Questions were open-ended and referred to three major themes: their perception of the state of the fishery, their current or previous involvement in fishing associations, the challenges and purposes of the fishing associations, and their knowledge of PRETOMA's work in the community (see Appendix B).

The narratives of PRETOMA's involvement in Coyote by the PRETOMA employees lend context to the interviews with the ten fishers, whose identities are kept anonymous. Four of the fishers were members of the Fishing Association of Puerto Coyote (ASPEPUCO) three were members of the Fishing Association of Coyote (ASPECOY), and the remaining three were not part of a fishing association. Excerpts from the interviews are used to illustrate the emergence of subjectivities and techniques of power being exercised among the fishers.

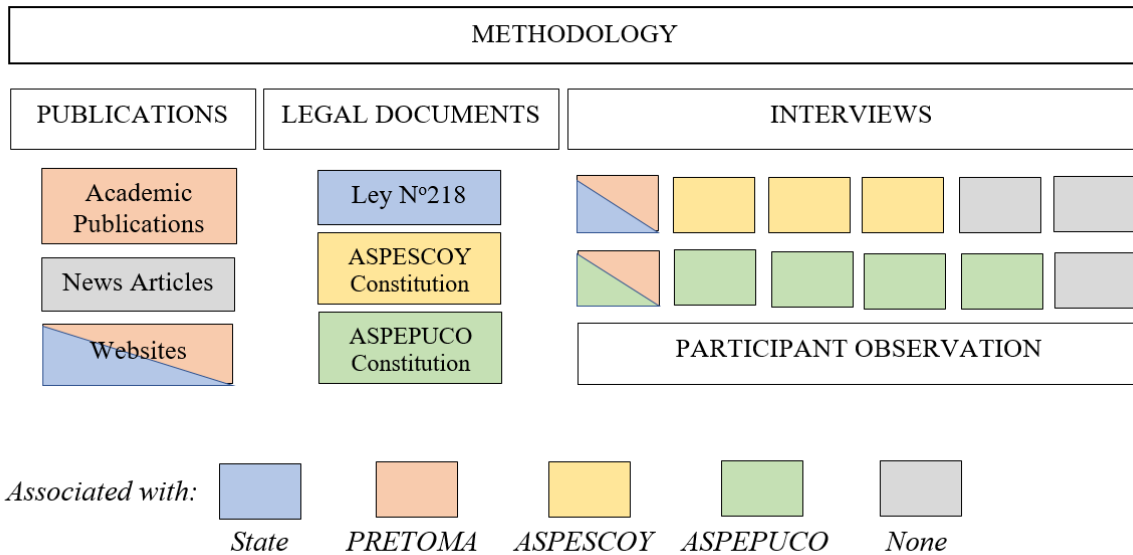


Figure 1. Pictured above is a schematic of the data collection methods. Colors correspond with the author of the material or identifies what groups the interviewees are associated with. “None” indicates that the author or interviewee is not associated with the state, PRETOMA, ASPESCOY, or ASPEPUCO.

BACKGROUND

The combination of published statements and interview responses will provide background on PRETOMA’s involvement in with fishers in San Francisco de Coyote. Andy Bystrom, the Development Director, was interviewed first regarding his work conducting research projects with the fishers on behalf of the University of Costa Rica, MINAE the Interior Ministry of the Environment (MINAE), PRETOMA, and recently the UNDP. Secondly, Erick Lopez Agüero, the fisheries technician for PRETOMA in Coyote, narrates the history of his interactions with the fishers. The interviews offer a more contextual look at PRETOMA’s work in the community and the diversity of tasks they perform in their roles as “Development Director” or “Fisheries Technician” of PRETOMA. Statements by Randall Arauz and Isa Naranjo, the founders of PRETOMA, are their recorded comments in three fishing association meetings that I attended. Though the account offered by Bystrom and Lopez is one-sided, the information they offer presents vital background information that lends context to the statements about PRETOMA made by the fishers.

PRETOMA

The Sea Turtle Restoration Program (PRETOMA), is an internationally recognized conservation organization that had historically implemented sea turtle monitoring and protection programs across Costa Rica (Fendt 2016, PRETOMA 2017a). In 1997 two sea turtle biologists, Randall Arauz and Isabel Naranjo, founded PRETOMA. It began as an organization dedicated to researching, protecting, and restoring endangered sea turtles; and while this mission is still central to the organization, they have since expanded their goals to include political advocacy against shark finning and the establishment of sustainable artisanal fisheries in Costa Rica (PRETOMA, 2016). They seek to achieve these multidimensional goals by 1) directing conservation projects for the protection of sea turtles and sharks, 2) researching and regulating the actions of fishing vessels, 3) increasing public awareness and education for marine conservation, and 4) petitioning for sustainable marine policies in the Costa Rican government and abroad (PRETOMA 2017a). Most relevant to this discussion is the establishment and expansion of their sustainable artisanal fisheries project along Pacific coast of the Nicoya Peninsula in the western province of Guanacaste.

The creation of the marine protected areas in sites along the Pacific Coast of Costa Rica was spearheaded by Arauz and Naranjo of PRETOMA, who identified the area as critical sea turtle habitat and petitioned for its protection (Arauz 2016, Naranjo 2016). PRETOMA's involvement in the rural communities of San Francisco de Coyote and Bejuco in the province of Guanacaste began in 2001 with their petition to establish the Caletas-Ario National Wildlife Refuge (CANWR). The designation of this first Marine Protected Area (MPA) protected important sea turtle nesting habitat along the coast, as well as mangrove, wetland, and marine habitat near the two prominent rivers, Rios Bongo y Ario (PRETOMA 2006). The initiative to create the park was facilitated by the Tempisque Conservation Area of the Ministry of Environment (MINAEACT), a government agency; Arío S.A., a private enterprise; the Coyote Association of Artisanal Fisherman (ASPECOY), a local cooperative; the Environmental Law Center (CEDARENA); and PRETOMA (PRETOMA 2006). The refuge was established in 2006, and it includes a total area of 21,591.6 hectares, of which 313.3 ha is state-owned land, 19.5 ha is privately-owned land, and 21,258.8 ha is the protected marine area (PRETOMA 2006).

The noted success of the CANWR prompted the establishment of the Camaronal National Wildlife Refuge (CNWR) north of CANWR in 2009 (Bystrom 2014). Along with the protection

of nesting sites for four species of sea turtles, CANWR and CNWR also protect important mangrove forest areas, estuaries, and marine areas of high species richness and diversity, hosting a variety of commercially and ecologically important marine species such as groupers, sea bass, snapper, lobster, shrimp, and giant conch (PRETOMA 2006). These rich fisheries are protected from the use of destructive gear types including shrimp trawl nets, gillnet, and surface longlines, which are prohibited in marine protected areas; on the other hand, more responsible artisanal gear types such as handlines and bottom longlines are allowed (Bystrom 2014). Artisanal fisheries are small-scale fishing operations where the fish are used mainly for subsistence or local markets (Allison and Ellis 2001). Unlike large-scale commercial fish trawling, artisanal fishers generally use traditional, low impact fishing techniques and small boats that have less impact on the fisheries, and therefore is a potential method of sustainable marine resource extraction. Following the establishment of the marine protected areas, local people from the communities of Coyote and Bejuco use these artisanal techniques to fish exclusively for spotted rose snapper (*Lutjanus guttatus*) (Bystrom 2014).

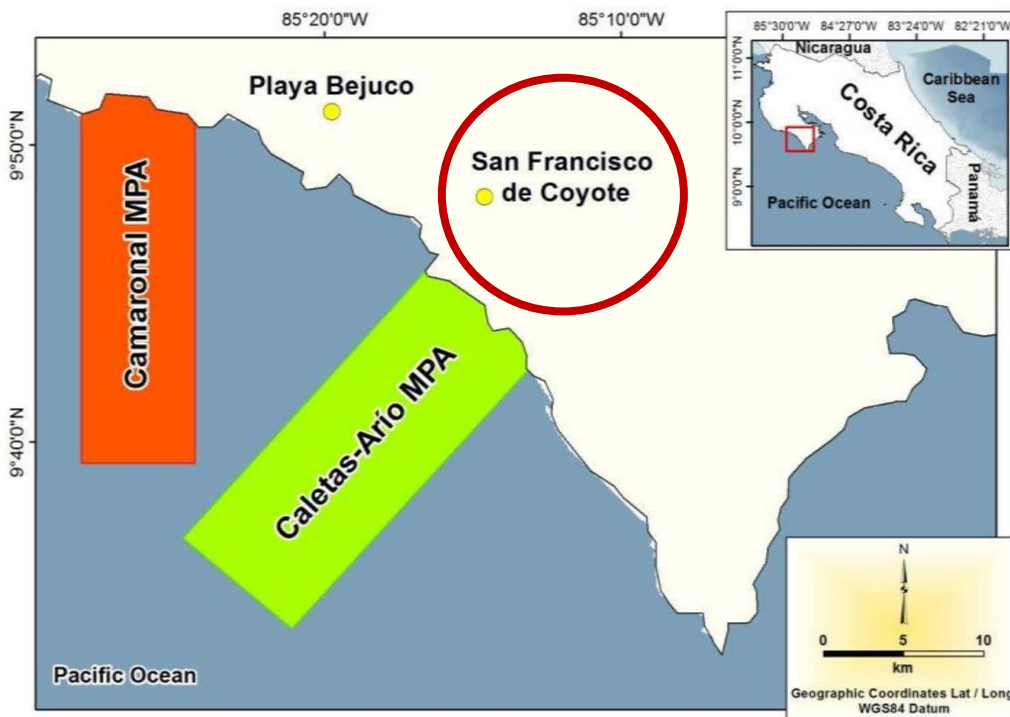


Figure 2. The map above displays the two established MPAs. The proposed MPA is situated between Camaronal and Caletas-Ario MPAs. San Francisco de Coyote – the study site – is marked with a red circle.⁴

Both CANWR and CNWR are managed by the National System of Conservation Areas (SINAC), which is a branch of the Costa Rican Interior Ministry of the Environment (MINAE). MINAE was founded during the political reorganization of Costa Rica during the 1980s when the country became a stable democracy (MINAE 2015). The directives of the ministry change in each political administration, but its officially stated principles have remained relatively constant: to contribute to the improvement of the quality of life of the inhabitants of the country through the promotion of management, conservation and sustainable development of the country's goods, services, and environmental and natural resources, through the generation and implementation of policies, strategies and actions (MINAE 2015).

MINAE's responsibilities for managing protected areas escalated with the passing of the Biodiversity Law of 1998. The law divided the country into 11 conservation zones based on the types of ecosystems in the areas and created SINAC to manage the conservation zones under the direction of MINAE (CISDL 2011). Within the 11 conservation zones there are a total of 34 national parks or reserves, covering 25.6% of the land of Costa Rica (US Embassy in Costa Rica 2016). The role of SINAC is to supervise the conservation and management areas of the parks that are inside. SINAC workers have expertise in forestry, wildlife and the protection and conservation of water systems. They work primarily as “a management system and institutional coordination, *decentralized and participatory*, with jurisdictional power in conservation areas with the institutional capacity to dictate policy, plan and implement processes to achieve sustainability in the management of natural resources” Costa Rica (SINAC 2016, emphasis added). There are SINAC branches in each conservation area that monitor the parks that must be consulted before any major land use change is attempted in the area. Working with SINAC and MINAE is the Costa Rican Institute of Fish and Aquaculture (INCOPECA), which is created in 1994 by the Costa Rican Government to fulfill the directives in the National Development Plan. This includes “managing, regulating, and promoting the development of the fishing and

⁴ This figure first appeared in “Estrategia integral para la pesca artesanal de pequeña escala del pargo manchado (*Lutjanus guttatus*) en Guanacaste, Costa Rica” published by PRETOMA (2017b) and is used here to depict the location of the current MPAs and the study site. The red circle was added by myself and does not appear in the original figure.

aquaculture sector with an ecosystem approach, under the principles of sustainability, social responsibility and competitiveness” (INCOPECSA 2014).

PRETOMA AND ARTISANAL FISHERIES RESEARCH

At the head of the current initiative to promote sustainable artisanal fisheries in Coyote and spearheading the initiative to create the third MPA with the cooperation of MINAE, SINAC, and INCOPECSA is Andy Bystrom, the Development Director of PRETOMA. When I first met him, Andy Bystrom worked silently behind stacks of old and new research papers on the PRETOMA office desk in San José, compiling research data for a study he intended to publish in the following year (Bystrom, 2016). Though originally from the United States, Bystrom moved to Costa Rica after working as an environmental education teacher in South America and completing marine fisheries research projects in the Chesapeake Bay area. Following these post-undergraduate initiatives, he completed a Master’s program at the Universidad de Estatal a Distancia in Costa Rica, publishing a thesis entitled “Analysis of spotted rose snapper (*Lutjanus guttatus*) population dynamics and fisher socio-ecological tendencies, Costa Rica.” He continues to study this fish species and socio-ecological interactions in the fishing communities of Bejuco and Coyote as a lead biologist with the Universidad de Costa Rica, the Development Director for PRETOMA, and a consultant for the United Nations Development Program (UNDP).

In 2007, he launched a study in tandem with the Universidad de Costa Rica and PRETOMA to work with local fishers from Coyote and Bejuco to record changing population levels of rose-spotted snappers in the area (Mongeon et al., 2013). The goals of the study include 1) delineating most productive areas and reproduction times for snappers so that fishers can increase their catch-per-unit-effort (CPUE); 2) identifying snapper spawning grounds so that they can be sheltered during spawning periods; and 3) building social capital in the local communities by strengthening relationships between fishers, researchers, and government officials so that each party is involved equally in future management decisions (Mongeon et al. 2013). Inside of the multiple-use marine protected areas, fishers are allowed to fish up to three nautical miles from the coastline. The gear used by the artisanal fishers of Coyote includes gillnets with 4.5-inch mesh and 500 meter bottom longlines with 400-500 hooks per line (PRETOMA 2017b). The use of gillnets, however, is still contested. Bystrom explained that gillnets are less selective of the kinds and ages of the fish caught and can also kill sea turtles, but

fishers petition for the need to use gillnets because of decreasing catch rates. Though he worries about the depletion of the snappers because of the use of gillnets, he stated that he thinks the fishers will continue to use them, stating, “at the end of the day, it’s what they want.” There are around 70 artisanal fishers from Coyote and the nearby fishing village of Bejuco who have access to the MPAs for their fishing operations (PRETOMA 2017b).

Bystrom recently began work as a consultant for the United Nations Development Program (UNDP) and hopes in this capacity he will be able to create a feasibility study and business plan for the development of a seafood processing center on the Northern Caribbean Coast of Costa Rica. In February 2017, he published his report for the UNDP entitled “Analysis of small-scale fishery development within Costa Rica’s MPA system” in the Forestry and Agriculture Organization (FAO) report of the UN, where he discusses the effectiveness of marine protected areas as management tools for the conservation of fisheries resources. He frames his research paper with a brief history of the fishing community of Bejuco, which is a fishing community next to Coyote, and the shortcomings of PRETOMA’s previous involvement with the developing MPAs:

The Bejuco fishing community was not consulted during the political MPA design process and the MPAs were established in areas outside of its primary fishing grounds. While the MPAs protect the local sea turtles (Adams, López and Arauz, 2014), their effectiveness at stopping destructive fisheries from targeting the locally important snapper stock is less understood (Bystrom, 2017).

Even with this critique of PRETOMA’s involvement in the MPA design and their focus on sea turtle habitat, he goes on to state that conservation groups such as PRETOMA are now concerned with the “Costa Rican government’s inability to adequately manage coastal resource extraction activities” and so have taken initiative in the fishing communities and are working with bottom-longline fishers to design and implement sustainable coastal development strategies and stop destructive fishing behaviors (Bystrom et al. 2017).

His discussion of the use of MPAs as management tools for the conservation of fisheries resources concludes with the following recommendations from a recent socio-ecological perceptions study:

The promotion of alternative markets and sustainability certification strategies for the snapper fishery are advised. Enlargement of the multi-use marine protected areas within the fishery's grounds and improvement of their management strategies is also recommended. In order for this to occur, improved resource user coordination in the form of a fisher association that has the capability to lobby for increased enforcement of the protected areas from destructive fisheries must be realized (Bystrom et al. 2017).

Bystrom elaborated on the development of alternative markets in the summer before the publication of these studies, when he declared that the future of the fishing community depends on building a processing plant close to the fishing communities of Coyote, Puerto Coyote, and Bejuco. He says that this would offer the people of the community more economic independence from pricy "middlemen" who distribute the fish to processing centers in larger cities away from the fishing communities and keep most of the profit – which is also a view shared by Arauz. Bystrom describes the potential economic benefits the fishers would receive as part-owners of the processing plant: fishers and other hired employees from the area would have a supplemental income from the direct sale of fish to commercial markets and local hotels and restaurants – and they may be able to reach larger national and international markets.

The other eventual goal indicated by Bystrom is working with local people to apply for sustainable fishery certification from the Marine Stewardship Council (MSC) – an international organization whose three core principles are to maintain healthy populations of the target species, maintain the integrity, productivity and resilience of the wider marine ecosystem; and promote effective management (Marine Stewardship Council 2015). Certification would make the artisanal fisheries eligible to carry MSC's blue eco-label, which can potentially expand the market for local snappers due to environmentally-conscious consumer demand for sustainable products (PRETOMA 2013). It is also hoped that certification will make governments and legislators aware of the importance of sustainable artisanal fisheries for the economic development of Costa Rica's coastal fisheries, which may also influence the government to establish a marine protected area between CANWR and CNWR (Bystrom 2014; Bystrom et al. 2017). But first, Bystrom stresses that the development of robust fisher associations must be achieved.

According to Bystrom, Arauz, and Naranjo, the success of these initiatives relies on enhancing the efficiency of active fisher associations that have the capability to lobby for

enforcement of the protected areas from destructive fishing methods and illegal trawling (Bystrom et al. 2017). Bystrom comments that the Costa Rican government “has struggled to develop the governance tools needed to establish and manage these new areas,” so the role of PRETOMA is to address the Costa Rican government’s inability to adequately manage coastal resource extraction activities, making the creation of a sustainable artisanal fishery and the development of fishing associations central to the mission of those who run PRETOMA. However, Arauz laments that the fishing association leaders are not running their own meetings or having constructive debates where opinions and goals are shared among the fishers. Arauz states that PRETOMA has been “holding the hands” of the fishing organizations and trying to “help them help themselves.” He explains that PRETOMA’s role in the fishing community has been in efforts to establish “functional” fishing associations so that members of the fishing community can be recognized by the government and receive benefits in return for adhering to Ley N°218 (Law 218).

PRETOMA AND FISHING ASSOCIATION POLITICS

An account of the involvement of PRETOMA in Coyote that offers a situated look at the relationship between PRETOMA and the fishers of Coyote from the perspective of an employee of PRETOMA is offered by Erick Lopez Agüero, the PRETOMA fisheries technician in Coyote. His account emphasizes the complicated relationships between the entity of ‘PRETOMA’ and the fishers at the site of Coyote over time. Lopez works as a fisheries technician for PRETOMA, but the job title doesn’t capture the scope of the work he does in the community or his history with the fishing associations in Coyote. Lopez has worked for PRETOMA for over 15 years, spending the vast majority of his time working in the town of Coyote. His comments on the relationship between PRETOMA and the fishers uncover a multifaceted history between the two, largely due to his involvement with the fishing associations.

Though Lopez came to the area 15 years ago to work exclusively on sea turtle restoration projects, eight years ago he became involved with the artisanal fishers. At first, he only worked collecting data on the fish and recording GPS coordinates for ongoing studies on red-snapper productivity and shark mortality rate. Through this data, he explains that they figure out the movements and changes in maturity levels of the fish since the marine protected areas were created in 2006 and 2009; yet he also notes that the studies have not had significant social

benefits to the fishers. Lopez insists that the fishers are tired of researchers coming to the area and taking data when there are no visible benefits from their presence. He states: “The shark research is good for the scientific side ... but it doesn’t change the lives of the fishermen, and that is one of the dilemmas right now actually.”

Lopez elaborated on the “dilemma” with the fishermen by narrating the history of his involvement with the two local fishing associations. At first, he explains, there was only one fishing association called Asociación de Pescadores de Coyote (ASPECOY). However, he held inhibitions about their capacity to function. He says about ASPECOY,

I think it was not very good, it was just a name. I started getting involved with them, they were my friends and stuff. A lot of fishermen, they don’t write or read very good and that is why they are scared sometimes with people coming. They ask, ‘Why are you gonna help me? You’re gonna help me for nothing?’

The creation the ASPECOY by the fishers 2004 was predicated on the notion that creating a fishing association would allow the people of Coyote to have a say in the governance of their own land and resources. There are about 50 members of ASPECOY, though not all the member are fishers. Legislatively, fishing associations can be formed through Ley N°218, or the Law of Associations, which was instituted in 1939 and describes the conditions and rewards of becoming a state-certified association (CCRCR N°218). In the context of fisheries associations, fishers must meet a series of requirements to become an association, including creating a board of directors that includes at least four officers, giving regular financial reports to the government about their activities and expenses, complying with existing regulations, and meeting with at least six members once a month with recorded meeting minutes. In return, fishers have a platform to offer suggestions to the government about conservation goals and fishing regulations in the area, other fishers in the community have a space to come together and to discuss their needs amongst themselves and come to shared consensus, and fishers can then apply for funding to improve infrastructure and other designated needs (CCRCR N°218).

After spending time with the fishers working at the fishing docks, Lopez was appointed secretary of the association because of his competence reading and writing, he says. The official mission statement of the fishers of ASPECOY is “to promote responsible fishing to ensure environmental well-being; to be able to market their products directly without intermediaries to

address all economic needs”⁵ (PRETOMA 2017b). Lopez confirms aspects of this statement, explaining that the objective of ASPECOY has always been to get rid of the middlemen who transport the fish to other ports to sell and, in turn, sells the fishers bait, gasoline, nets, and fishing hooks and line. He states that the fishers are looking for a way to sell the fish without the middlemen so that they can get a higher price: “they are the exporters, they are the ones that put the price on the fish. But the fishermen always get the lower price.” But he laments that “they are not ready to do that because they need the administration and the organization. First of all, the association has to be very organized. It’s a business, you have to manage a business. ... Fishermen are for fishing, businessmen are for business.”

Though he indicates that the fishers were skeptical of outside aid (“Why are you gonna help me? You’re gonna help me for nothing?”), Lopez asked PRETOMA to give ASPECOY an allowance that would help jumpstart their business plan. They began offering the fishers about \$200 a month, and with the money they made a small “recibidor” building where the fish could be taken and prepared for transport. The money also covered the costs of ice, bait, and hiring a truck to take the fish to the port in Jicaral. But Lopez says that they were often losing money and it wasn’t a good business, so he told the president that perhaps they should think of another plan. However, his position as an employee of PRETOMA and the secretary of the association made his petition difficult. He says:

I didn’t want to get too much involved because I was in both sides: PRETOMA and ASPECOY. I don’t want my decisions to be PRETOMA’s decisions, so I tried to guide them, but I let them be. But then they started to spend the money – very bad decisions – they lose money sometimes.

Lopez was conscious of his position as a representative of PRETOMA, but he felt he had to intercede even though it would appear he (and by extension, PRETOMA) was betraying the fishers. He decided to ask PRETOMA to stop funding the association. He asked instead for a lump sum to “invest the money in something that everyone needs.” The money was used to build concrete steps down to the dock so that it was less dangerous to walk up and down in the rain.

⁵ The original statement in Spanish reads as follows: “Su visión es lograr una pesca responsable para garantizar el bienestar ambiental; poder comercializar directamente y sin intermediarios el producto de sus asociados y suplir todas sus necesidades económicas” (PRETOMA 2017b).

However, he says that taking away the allowance to the fishing association made the members of ASPECOY angry, so they held a private meeting and kicked him and a few other fishers out of the association; but taking the fishers and himself out of the association was “super illegal” and this action sowed the seeds for future conflict.

The fishers who were expelled from ASPECOY founded a different fishing association called Association of Fishers of Puerto Coyote (ASPEPUCO). They officially registered to create the association in December 2015 and the edict was ratified in January 2016 in accordance with the statutes of Ley N°218 (Registro Nacional 2016). ASPEPUCO consisted of 24 active members at the time of its creation, and Lopez holds the position treasurer of ASPEPUCO. Instead of mending the relationship with PRETOMA and the newly formed ASPEPUCO, the fishers from ASPECOY petitioned other organizations for funding, such as the Costa Rica-United States Foundation for Cooperation (CRUSA) which is the legacy of USAID’s development program in Costa Rica. Lopez says that ASPECOY was able to raise funds for the construction of a new recibidor building, but it has never been used: “it was supposed to be for the community and it is just like three guys who have the key and they don’t want to share it.”

Lopez says the recibidor can only function if there are fish to process within it. However, there are not enough boats working with ASPECOY for it to remain productive. The lack of fishers in ASPECOY is due to the fact that many members of the association are not fishers – Lopez says that many women from Coyote are members of ASPECOY. Lopez says that this makes members of ASPEPUCO angry and fuels the resentment between the two associations. Therefore, PRETOMA’s a recent initiative with the fishers has been to try to mend the relationship between the fishers so that the recibidor building could be used. If they can prove that the facility is operating, this may increase the chance of receiving Marine Stewardship Council (MSC) sustainable certification and open new markets to the fishers. For these ends, PRETOMA and CRUSA organized together to hold two workshops in May and June 2016 with a facilitator to mediate the conversation between the fishers. Lopez felt the facilitator was not equipped to resolve the situation, stating, “He was a professional and everything, but he didn’t know the things I am telling you. All the fights all the history that the fishermen have, all the conflicts.”

Idealistically, the fishers would see that working together to form one association would allow them to open the recibidor and then work on developing a business plan to eliminate the

middlemen and apply for sustainable fishing certification. However, the workshops did not achieve this result. A second fallout occurred when the members of ASPECOY insisted on being the administrators of the recidor with control of all funds. Members of ASPEPUCO decided that they no longer want to negotiate with ASPECOY. Lopez states, “Maybe someday they will start working together but right now it is difficult. It’s between them, they have personal things you know. That’s the difficult part.”

In addition to this challenge, the number of fish caught has drastically declined in recent years, which has placed further strain on the fishers. Lopez speculates that it could be climate change, but illegal fishing has also taken a toll. But Lopez insists that illegal fishing in the marine protected areas is going to end: “Some people say we want to make trouble for them and ban the fishing and things like that, like Caletas marine protected area. But the thing is that the regulations are going to come.” He refers to the presence of the Costa Rican Coast Guard in Coyote, who just installed a building in June 2016 next to the fishing docks. The Coast Guard requires all fishers to apply for fishing permits and will be actively enforcing the law in the area. PRETOMA was granted the right to print and distribute fishing licenses. Lopez comments on the presence of the Coast Guard, saying,

They want to be in charge and that is good, I think. And that’s going to be good information too, who’s fishing, because we know about fishermen – the commercial fishers – but we don’t know the other fishers. A lot of people fish from the beach.

With this increase in regulations, the overall decrease in fish, and the conflict between the associations, many fishers have left fishing to work for the teak tree industry. The teak industry offers work but has negative effects on the environment. He asserts, “Some people don’t make that relation, bueno, that is what I think. They don’t relate agriculture to fishing and the effects in the sea, maybe some people don’t see that.” Instead, Lopez insists that the future depends on transitioning to tourism.⁶ He says of the fishers that

they are shooting towards the tourism, a lot of them are getting good money for the tourism. Especially when there is no fishing, they start to value more the resources that

⁶ He has already began initiatives to promote this by hiring fishers to conduct tours of the mangroves for tourists, as noted in the comments of two fishers (Table 7; b, c).

they have, I think, and so when we created the protected zones, I feel like they feel that it is theirs.

He thinks that PRETOMA should be supporting this transition to tourism, through applying for grants for fishers to go to San Jose to study for a week and come back and teach others what they learned. He insists that “we need an accountant and professionals in a few fields to do that kind of applying. But first I need them to work together to form the group. But it’s difficult, especially when the fishing is like that.” At this point, Lopez continues to work with ASPEPUCO and PRETOMA, but he is not confident that members of ASPECOY will reunite with ASPEPUCO. The distrust between the two factions prevents the cooperation needed to achieve the goals promoted by Bystrom and others in PRETOMA and CRUSA.

As Bystrom explained, Arauz and Naranjo of PRETOMA have opted for an interventionist approach to facilitating cooperation between the associations, involving bringing in conflict-management/sustainable development “professionals” to create a space for the fishers to voice their concerns and confront each other in a supervised setting. But Lopez argues that this is ineffective, and that PRETOMA should “take a step back and allow the fishers to come to terms with each other and their feuds on their own time.”

This combination of published statements and interview responses provides a manifold look at PRETOMA’s involvement with fishers in San Francisco de Coyote. The interviews in particular present a more contextual and situated look at PRETOMA’s work in the community and the diversity of tasks Bystrom and Lopez perform in their roles as “Development Director” and “Fisheries Technician,” respectively. Their perspectives offer vital background information that lends context to the statements about PRETOMA made by the fishers.

RESULTS

The following sections present an account of the fishers’ involvement in fishing associations, their relationship to PRETOMA, and perspectives on regulation of artisanal fisheries. This account will focus on the perspectives of three fishers: a member of ASPEPUCO, another of ASPECOY, and a third who is not part of a fishing association. The three fishers, who are named Jorge, Raul, and Enrique for the purposes of this research,⁷ offer the history of their lives as fishermen, their interactions with PRETOMA, and their perspectives on the management

⁷ The names of the three fishers are kept confidential; “Jorge,” “Raul,” and “Enrique” are used as substitutes.

of marine protected areas.⁸ Their responses reveal key processes of power at work in the community. The three interviews are not meant to account for every subjectivity present amongst the fishers and PRETOMA, but they do reveal at least three *subject positions* adopted by the fishers. These subject positions are all products of techniques of power, which will later be analyzed and discussed according to the concepts presented in the literature review.

JORGE

The fishers of Coyote leave the dock around 4 PM in the sweltering afternoon sun, whose light slowly fades as the fishers make their way towards the popular fishing grounds in the Camaronal or Caletas-Ario protected areas. Dusk prompts the lighting of small, electric bulbs off the prow of each boat so that the lights drift in and out of sight with the rise and fall of the swells while fishers check on their lines and gillnets. At dawn they carried on the high tide back to the fishing docks, returning home to process their catch from the night and sleep before heading out again in the late afternoon.

Among the fishers returning in the early morning light of is Jorge, who has been a fisherman in Coyote for over 30 years. During this time, he has experienced changes in the community and the fishery following the establishment of CANWR and CNWR, the arrival of PRETOMA, and the creation of both ASPECOY and ASPEPUCO. However, there have been less lights appearing on the water as of late: many artisanal fishers have drifted away from fishing and found new occupations due to declining catch rates of Rose-spotted Snapper.⁹ The declining productivity of the red-snapper fishery has put undue stress upon the artisanal fishers, especially economically.¹⁰ The fishers unanimously agree that the quality of the fishery has been declining (Table 1). Reasons for its current decline include concerns over the changing temperature of the water, listing cycles such as La Niña as possible reasons for lack of fish

⁸ A more thorough account of the comments made by the fishers on several topics can be found in the tables listed after the appendices.

⁹ It would be interesting to consider the role of rose-spotted snapper in affecting the conduct of the fishers and vice versa. This would be following an analysis of the site in terms of a flat ontology, where the “power assemblages” between human beings *and* non-humans are accounted for. An example of this in research is found in Robbins and Marks (2009), who emphasize that nonhumans do not exist or ‘act’ in the world independent of socialized knowledge, discourse, and scientific text.

¹⁰ Fluctuating prices, economic stress, and the pressure to access new markets was often commented on by the fishers and PRETOMA employees. This topic has the potential to be further analyzed in through the lens of neoliberal modes of environmental governance, which according to Bridge and Perrault (2009) is a key area of scholarship in geographic research on environmental governance.

(Table 1; b, g, h). Others maintain that variations in catch rate are a part of fishing; there are simply times when there are a lot of fish and times when there are not (Table 1; a, b).

Jorge has retained close ties to PRETOMA since they first began conducting research on the declining Rose-spotted Snapper population in 2006. When Arauz and Bystrom of PRETOMA arrived in Coyote, they enlisted his help in their research. He explains that when each boat returns in the morning, he fills out a form for PRETOMA that lists the zone the fishing occurred in (Coyote, Bejuco, or Manzanillo, for example), the number of fish caught, the kinds of fish caught, the gender of the fish, and their length. This data is then given to a PRETOMA employee and he is paid 52,000 colones each month¹¹ for his service by MINAE and PRETOMA, which he says is an important supplement to his income as a fisher because of low fishing revenue. Then, every six months, PRETOMA runs a meeting to present the information from their studies to the fishers.

Although Jorge can describe the process of data collection and the kinds of data presented, he struggles to articulate what they are trying to achieve through the studies. He states:

I don't know what for, they said it is for regulating the artisanal fishery. To regulate it. They want to put.. okay.. like this way of fishing is um.. what is the word? Sustainable, sustainable. This way of fishing isn't destructive. Because it doesn't catch turtles, almost never catches sharks, almost never catches sting ray, very little (Table 2, e).

Though Jorge was ultimately able to articulate the goals of PRETOMA's studies, a general sense of confusion regarding the purposes of the studies was noticeable in other fishers' responses. Making statements such as "what do they want to achieve? I don't know," the majority of the fishers were not as familiar with the ongoing studies as Jorge, who has been working closely with PRETOMA employees (Table 2).

His positive relationship with PRETOMA is due in large part to his perception that PRETOMA's involvement in the community has yielded more positives than negatives for the fishers. When asked about the role of PRETOMA, he immediately pointed to the stairs, the cement flooring, the countertops, and the bathroom that have been installed at the fishing docks: these were built because of the funds PRETOMA invested in infrastructure (Table 5, a). As

¹¹ About \$90/month.

Lopez explained earlier, PRETOMA decided to allocate funds to develop infrastructure instead of offering an allowance to ASPECOY, which had been a reason for the tension between members of ASPECOY and PRETOMA. Like Lopez, Jorge used to be an officer of ASPECOY but was expelled from the association in the aftermath of the disagreement over funding. Jorge subsequently helped formed ASPEPUCO in 2016 and currently serves as an officer of the association.

RAUL

Raul, a fisher for 26 years and an officer of ASPECOY, disagrees about PRETOMA's positive contributions to the community. He vehemently asserts, "PRETOMA never did anything. Okay, they arrived here, they went with the fishers – like studies they said to them – and the problem is that they do not give any economic aid, they pay nothing, they never serve. ... There is ASPECOY and there are others, and the others are with them [PRETOMA]" (Table 5, g). His responses confirm the tensions between ASPECOY and ASPEPUCO; PRETOMA, for him, is allied with ASPEPUCO. Raul maintains that the purpose of ASPECOY making sure that "all the fishers and all the women that are here in *this group* have jobs and are able to live" (emphasis added). Raul believes that ASPECOY can collectively improve their lives if they can secure funding; but he did not explain what he would do with the funding if it was acquired. He says that ASPECOY is doing very well and are devising alternative livelihood strategies in the meantime – Raul has even claimed that "the only solution is to work in a different place because there is no fish" (Table 7, g). ASPECOY meets one to two times a month and have up to 12 members in attendance at each meeting, which is much greater amount than the one or two fishers who attend ASPEPUCO meetings.

For a fishing association to be considered "active," members of the association must meet at least once a month, record those in attendance, and file a report of their activities; however, officers from ASPEPUCO struggle to attract fishers to their meetings. Jorge explains that the fishers have other things to do that seem more important than attending a meeting (Table 3, b). One member of ASPEPUCO elaborated on this, saying that there are enough meetings being scheduled, but what is lacking are definite decisions that would move the fishers forward on achieving their goals (Table 3, e). According to this fisher, the sense that nothing will be accomplished even if the fishers attend the meetings keeps the fishers from regularly attending.

ENRIQUE

Enrique, who is not a part of a fishing association but has been a fisher for over 50 years, holds many reservations about the fishing association meetings. He says that there are certain individuals that dominate the meetings, which leaves out constructive comments and suggestions from others who live in the community. Problems arise when the certain individuals' ambitions overshadow the needs of the many. He states:

It hurts me to say it, but there are people that are more lively than others so they want more and want to break apart the other because they are smaller. The benefits are for the same community. Always, always, always there are people that try to go farther than others, and so there are always problems (Table 3, f).

Enrique became disillusioned with the fishing associations because of the conflicts both within and between the two associations. It seems to him that people are forgetting that they have common interests and are missing an opportunity to improve the lives of everyone in the community. Enrique has also distanced himself from PRETOMA and is skeptical of their role in promoting sustainable artisanal fisheries. When speaking about the role of PRETOMA, he emphasized that PRETOMA initially came to Coyote to develop sea turtle conservation projects and has only recently began working with the fishers, stating,

PRETOMA worked a lot with the turtles, right? In fishing, only a little. They come there but very little. This institution comes so that the fishers do not mess in the protected areas and bring fishing lines and nets and all of that (Table 7, e).

He maintains that the only reason PRETOMA is in Coyote is to oversee the MPAs and keep fishers from using banned fishing equipment. The sentiment that PRETOMA polices the MPAs and keeps fishers from entering was shared by Raul as well, who stated, "PRETOMA, in their time, came to help the fishers, but PRETOMA also – we fishers think that PRETOMA will take another function like the Caletas refuge. Boats can't enter" (Table 5, f). In contrast, Jorge maintains that the marine refuge is open to fishers, explaining, "There is a refuge – Caletas-Ario – we are permitted to fish here. Permission is only for fishers from here and Bejuco. Coyote and Bejuco, no more. The law of the zone" (Table 6, a).

Confusion about the regulations of the artisanal fisheries and who enforces the laws in the protected areas is widespread among the fishers, and many believe MPAs are not effective tools to protect the marine environment. Skepticism about the Costa Rican government's ability to enforce the laws against illegal trawling in the protected areas is also prevalent. As Enrique fiercely asserts,

The government, no, they never create any solution. They never do anything. Why? The government put laws but they were not enforced, right? There is that refuge for example and people go there and the government does not hold them accountable!" (Table 6, c).

In Enrique's perspective, the state is not preventing illegal fishing in the refuges. The absence of 'state' presence in Coyote was also noted by other fishers. One fisher reasoned that the government does not serve the people of Costa Rica but are more interested in catering to the interests of the United States and Europe, and that is why they ignore the problems happening in Coyote (Table 6, e). The sense that there is no way to address the problem collectively – through a state institution or otherwise – was reflected in another fisher's response, who believed that "nobody helps anybody" and that both the government and the fishers only act according to their personal interests (Table 6, g).

As evinced through these testimonials offered by the fishers, the fishers of Coyote are faced with similar problems but attempt to solve them in differing ways. For example, Jorge trusts in the initiatives being pursued by PRETOMA. Along with other members of ASPEPUCO, he hopes to work with PRETOMA in their plans to create a new MPA, receive MSC certification, open the 'recibidor' facility, and promote tourism as a supplement or alternative to fishing. Alternatively, Raul seeks to distance himself from PRETOMA. He and members of ASPECOY assert that the fishing association is doing fine without PRETOMA's help and that they will devise alternative livelihood strategies themselves, even if it means giving up fishing and finding other occupations. Enrique and other fishers who are not a part of fishing associations express their disillusionment with the state, PRETOMA, and the fishing associations. These three stances are representative of three potential subject positions adopted by the fishers and are representative of the technologies of power at work in Coyote.

ANALYSIS AND DISCUSSION

In this section, I will strive to answer these questions by analyzing the interviews in light of concepts presented in the literature review. An analysis as such reveals the production of scientific discourses *by* PRETOMA and the production of scalar discourses *about* PRETOMA by fishers as two processes of power at work among the fishers of Coyote. Analysis of the effects of these techniques of power reveal the presence of at least three subject positions among the fishers. Firstly, the production of scientific discourses by PRETOMA promotes the creation of environmental subjectivities through knowledge production. Secondly, scalar discourses about PRETOMA and the state's involvement in managing CNWR and CANWR promotes the creation of political subjectivities through processes akin to the 'state effect.' The third subject position is that of non-subjectivity and is characterized by resistance to processes of subjectification. These three subject positions will be analyzed in turn.

ENVIRONMENTAL SUBJECTIVITY

The first subject position is represented by Jorge, whose experience reveals the powers at work in the creation of environmental subjectivities. PRETOMA plays a role in the cultivation of environmental subjectivities through their presence in the community, in a topological sense.¹² Scientific discourse, knowledge production, and authority are considered here as techniques of power at work in managing the field of action and promoting certain forms conduct among the fishers by promoting the adoption of sustainable fishing practices and responsible management of artisanal fisheries on the fishers.

In terms of proximity and reach, PRETOMA does not have a strong presence in the lives of many of the fishers interviewed; and for them, the discourses of sustainable artisanal management have not been internalized and impacted their conduct. Yet there are other fishers such as Jorge who are often exposed to PRETOMA's discourses. PRETOMA has regularly been able to reach the fishers who, like Jorge, are a part of ASPEPUCO. ASPEPUCO can be thought of as a project by PRETOMA to facilitate the creation of environmental subjectivities. I say this because ASPEPUCO has been funded, overseen, and micro-managed from within by

¹² "Presence" here denotes both PRETOMA's physical presence *and* their presence as it is immanently experienced by the fishers. This related to Allen's (2003) topological definition of proximity and reach.

PRETOMA since ASPEPUCO was founded. PRETOMA founder Arauz even described PRETOMA's role in the association as "holding the hands" of the fishers.

Through this platform, Bystrom and others from PRETOMA address the fishers recurrently at each meeting and stress the importance of protecting the artisanal fishery. The initiatives that they suggest the fishers should take up are petitioning to create a marine protected area between the two existing MPAs, applying for sustainable fishery certification, and opening a functioning recibidor building with the hopes that this will lead to greater catch rates and higher prices for the fishers. Yet at this time, there are few members of ASPEPUCO and many do not attend fishing association meetings, which limits their exposure to PRETOMA's environmental discourses.

Maintaining a persona of authority and expertise is a fundamental mechanism of power that is cultivated by PRETOMA. As Allen (2003) notes, authority depends on recognition and perceived legitimacy to be an effective means of influencing outcomes. Promoting the image of marine biology and social ecology expertise in academic publications has been the method PRETOMA has used to gain repute with institutions such as the Universidad de Costa Rica, the Costa Rican Ministry of the Environment, and recently the UN. PRETOMA's association with key Costa Rica institutions reinforces their perceived legitimacy. In this way, PRETOMA cultivates its identity as an authority in the management of Coyote's artisanal fisheries and produces ways of knowing the environment based on socio-ecological theory.

In Bystrom's publications red snapper on the breeding patterns and changes in life history of the Rose-spotted Snapper, he suggests that the information should be distributed to the fishers so that they know when and where to fish so that the snapper population has time to recuperate in low seasons; but this has not been communicated to the fishers. The lack of discernable benefits or changes as a result of the studies has led to the fishers' indeterminacy about the goals of the research projects. Without the translation of discourse into adopted practices, there cannot be cultivation of environmental subjects among the fishers of Coyote. This signals a lack of communication and presence between the investigators and the fishers. The environmental discourses that Bystrom is promoting have not become normalized among many of the fishers, and the internalization of these discourses by fishers is fundamental to their constitution as environmental subjects. The vocabulary of 'sustainable' artisanal fisheries was only picked up

by Jorge, who understood due to his close working relationship with Bystrom and Lopez of PRETOMA.

Jorge was able to describe the purposes of PRETOMA's studies with use of PRETOMA's vocabulary of 'sustainable' management of artisanal fisheries and the need to reduce negative impacts of certain fishing techniques on species such as sharks, sea turtles, and sting rays. Significantly, the other fishers could not articulate why the studies were taking place and how they would affect them. Although Bystrom presents the results of the studies to the fishers at a semi-annual meeting, the results do not mean much without offering the fishers context or a clear next action that could be adopted by the fishers and put into everyday practice. Though the mechanisms of creating environmental subjectivities is present in Coyote, the phenomenon is not widespread.

POLITICAL SUBJECTIVITY

The second subject position is represented by Raul. Raul's involvement in fishing associations reveal the internalization of a transcendent and scalar rather than an immanent view of power. Scalar discourses and domination¹³ are considered here as techniques of power that promote the creation of political subjectivities among the fishers through the internalization of scalar narratives. Together, PRETOMA and state actors such as MINAEACT and INCOPECA play a role in the cultivation of political subjectivities through their presence in the community, in a scalar sense.¹⁴ Raul's case features resistance to PRETOMA's presence in the community: PRETOMA is perceived in terms of scalar discourses that conflate PRETOMA's identity to a 'state' actor in a fashion similar to the 'state effect' (Mitchell 1999). The sense that PRETOMA¹⁵ acts as an extension of state power is due to their involvement creating and regulating the two MPAs, CNWR and CANWR.

Raul's experience reveals the powers at work in the preservation of political subjectivities through his internalization of state discourses on the scalar organization of the state. His choice to become a member of a fishing association constitutes him as a political subject. For example,

¹³ Domination is characterized by discipline, control, and supervision (Allen 2003).

¹⁴ "Presence" here denotes PRETOMA, MINAEACT and INCOPECA's physical presence *and* their presence as experienced according to internalized scalar discourses. This relates to Mitchell's (1999) account of the 'state effect.'

¹⁵ Additionally, as PRETOMA is spoken of and referenced as a singular entity, it becomes more disembodied and transcendent. The various of power are hidden behind a seemingly united structure and institution known only as "PRETOMA," which also may normalize scalar conception of the institution.

fishing associations are part of a state initiatives to become “decentralized and participatory”¹⁶ by incorporating the voices of “stakeholders” like the fishers. Though they state that the initiatives are “decentered,” the language is misleading because scalar hierarchy is preserved in the governing structures: the fisher “stakeholders” must work with INCOPECA, who is overseen by MINAE, who is overseen by the executive branch of the Costa Rican government. The scalar structuration remains.

As a member of ASPECOY since its founding in 2004, he has attempted to govern the fishery from within the governing structure. Though Agrawal noted that the regulatory structure of communal forest management facilitated the development of environmental subjectivities, the same has not been true in Coyote. The regulatory structure of Ley 218 is not founded on environmental discourses or rationalities; the legislation cultivates the creation of political subjects. According the fishers of ASPECOY, revitalization of the fishery is not the primary objective of fishing associations. All of the fishers interviewed indicated that a chief role of the fishing association is to address the economic needs of the fishers (Table 4). This may be because of the structure of the regulation itself: if fishers meet the requirements of becoming an official fishing association, they are able to apply for funding.¹⁷ Beyond the need to comply with artisanal fishing regulations, there are no strictly “environmental” requirements included in Ley N°218. In practice, fishing associations are means through which the fishers can petition for resources to fund initiatives that, according to Raul, are focused on securing *alternative* livelihoods. As Lopez noted, many of these fishers are leaving the fishing industry to work at teak tree plantations, which in turn have detrimental effects on water quality and worsen the already declining productivity of the fishery.

The “mission statement” that the fishers are attempting to protect their marine resources and promote sustainable artisanal fisheries is not validated in practice. This assertion is supported by looking at the statement made by Raul, who said, “The only solution is to work in a different place because there are no fish” (Table 7, g). Other fishers had stressed the need to search for alternative livelihoods as well; and it is important to note that a majority of members of

¹⁶ This was stated in the mission statement of MINAE.

¹⁷ The requirements for being considered an active fishing association are the following: the association must include at least four officers, give regular financial reports to the government about their activities and expenses, comply with existing artisanal fishing regulations, and meet with at least six members once a month with recorded meeting minutes (CCRCR 2014).

ASPECOY are non-fishers. Ironically, in practice the fishing association is not really concerned with improving or managing the artisanal fishery.¹⁸

PRETOMA factors in to the scalar imagination of power through their involvement with MPAs near Coyote. Beginning first with their successful efforts to install Caletas-Ario and Camaronal Wildlife Refuges and followed by their subsequent creation of a field office in Coyote, PRETOMA's presence and effect on the fishing community has been steadily increasing and more closely associated with dominance than authority in the statements made by the fishers. The lack of government enforcement of the marine protected areas unofficially placed PRETOMA in the role of enforcer of its regulations.¹⁹ Raul and others express confusion about their right to access the MPA for artisanal fishing. Raul speaks on behalf of other fishers when he stated: "we fishers think that PRETOMA will take another function like the Caletas refuge. Boats can't enter." He firmly believes that PRETOMA is policing the presence of boats in the MPAs. Jorge, on the other hand, understands the rules and regulations of MPAs due to his interactions with PRETOMA. He asserted that the MPAs are designed so that small-scale artisanal fishers like the ones in Coyote are allowed to access the MPAs.

PRETOMA is also situated in a unique position as a semi-state entity in their role distributing fishing licenses on behalf of the state. As the distributors of the licenses, their identity becomes ever more associated with a state agency which can restrict or allow access to the MPA. Fishers such as Raul feel that their access is being regulated by agencies outside themselves, which differs from Lopez's statement that he thinks the fishers feel that the protected areas "are theirs." The conflation of state identity onto PRETOMA may exasperate the sense that

¹⁸ Interestingly, although he is a member of PRETOMA, Lopez also recommended that it is time for the fishers to find other means of supporting themselves, such as through the development of tourism industry. Perhaps it is best then to separate these two missions of PRETOMA and the fishing associations: one is to research and revitalize the fishery and protect the livelihoods of the fishers so that they can remain *fishers*, the other is to first and foremost ensure economic stability and find ways to distance themselves from a way of life that no longer supports them economically. The first promotes the development of environmental subjects who remain concerned with improving the quality of the fishery; the second moves attention away from the artisanal fishery .and the efforts to protect coastal marine resources, such as through creating the MPA.

¹⁹ The perception of the government's ineffectiveness at enforcing the laws within the MPAs was also noted by Bystrom and Lopez. He asserted that PRETOMA must do much of the policing of the area, mostly through petitions to remove illegal fishing vessels from the area and bringing media attention to illegal activities in the protected areas. Lopez, on the other hand, mentioned the enforcement of laws as a potential negative for the fishers of Coyote since it would require them to carry permits and would also restrict their own use of certain fishing equipment. He feared that they might blame PRETOMA for the clamp down on regulations.

PRETOMA is not on the “side” of the fishers and are pursuing their own agendas. The sense that there would be negative repercussions to opposing PRETOMA reinforces a scalar hierarchy, in which the organization is perceived exert top-down pressure. This, however, invites resistance to perceived oppression by PRETOMA onto the fishers. ASPECOY’s resistance to cooperating with ASPEPUCO and PRETOMA is perhaps validated based on these scalar conceptions of power.

NON-SUBJECTIVITY

The third subject position represented by Enrique is harder to describe. It could perhaps be best identified as a non-subject positionality at the margins of collective groups, governing structures, and intuitions.²⁰ He represents fishers who depend on fishing for their livelihoods and hold opinions, perspectives, and recommendations about the state of the fishery but are not involved in or identify with any collective governing structure.

In Foucault’s description of the ‘conduct of conduct,’ he makes a distinction between the conduct that is imposed on others to structure the field of possibilities and self-regulated conduct that is predicated on the freedom to act. Within the field of possibilities presented to Enrique, he chooses to defy processes of subjectification by not adopting popular discourses, both scientific and scalar. His refusal may be linked to a distrust of PRETOMA, a dislike of certain individuals in the active fishing associations, and disillusionment with the Costa Rican government. In the first case, he de-legitimized the authority of PRETOMA as an “expert” in artisanal fisheries management by associating them with their work with sea turtle conservation and stressing that they have not been working with the fishers for a very long time. Secondly, he stated he feels many voices are overpowered in fishing associations, so they are not effective platforms for political engagement. Regarding the state, he lamented that it “never does anything.” He chooses to disassociate with these institutions and distance himself from them, in a topological sense; thus, environmental and political norms and subjectivities such as those constituted in Jorge and Raul are not normalized in Enrique’s everyday conduct.

Yet as a non-subject in a culture dominated by institutions that necessitate subject-hood as a prerequisite for participation in society, how can he ensure that his voice is heard? It could

²⁰ A further analysis of the fishers ‘at the margins’ ventures into scholarship on difference, identity, and the “constitutive outside” (see Dixon and Jones 2005).

be that individuals such as Enrique have forfeited subject-hood but have still become subject to others. They are swept along the current of changes effected by those with a greater ability to influence the field of possibilities and shape the conduct of others – which only strengthens the perception that institutions have power *over* their lives. When divided, the voice of the fishers becomes weaker.

CONCLUSION

The production of subjectivities is not a new phenomenon – it has been and will continue occur in Coyote. Each action or event affects new topological arrangements of power from which there is the potential for new subjectivities to emerge. The establishment of CNWR and CANWR and the arrival of PRETOMA to Coyote are the events that this investigation of the emergence of subjectivities is predicated on. A Foucauldian approach to understanding power relations and subjectivity was drawn upon to analyze the statements made by the fishers about their involvement in fishing associations, their relationship to PRETOMA, and perspectives on regulation of artisanal fisheries. Analysis of the effects of these techniques of power revealed the presence of three subjectivities in Coyote: environmental subjects, political subjects, and non-subjects.

The significance of this investigation is not necessarily the fact that there are new subjectivities emerging as a result of PRETOMA's presence in Coyote, but what it may say about the future governance of the Coyote's artisanal fishery. For the fishers of ASPEPUCO, PRETOMA employees continue to play a significant administrative role in the fishing association. The ongoing cultivation of environmental subjects through the normalization and internalization of environmental objectives and rationalities among the fishers of ASPEPUCO may facilitate stewardship of the environment. If this were to occur, PRETOMA employees could stop facilitating meetings and allow the fishers to use take direction of ASPEPUCO as a platform to ensure the productivity and sustainability of the red-snapper fishery. However, at this point there are not many fishers who do not understand the mission or PRETOMA or what they can offer the fishers. This is due in large part to poor communication between the fishers and PRETOMA and lack of transparency about what PRETOMA is trying to achieve through their extensive research projects and presence in Coyote.

Members of ASPECOY maintain an antagonistic stance towards fishers of ASPEPUCO and PRETOMA employees. As political subjects who have internalized state discourses on the scalar, hierarchal organization of the state, they attempt to use the state structure of fishing associations to as a platform achieve their goals. These goals are not centered around environmental initiatives or even the revitalization of the fishery – the majority of the members of ASPECOY are not fishers. The fishers interviewed even maintained that their future economic security depends on securing alternative livelihoods to replace their occupation as fishers. Ultimately, there is a trend towards migration away the fishing industry, which puts the very identity of ASPECOY as a fishing association into question. An alternative localized state structure may be more effective for the fostering of economic opportunities in Coyote, such as involvement in local politics and city council.

The fishers who are non-subjects produce their own position of non-subjectivity by distancing themselves from collective groups, governing structures, and intuitions. This means that they are not likely to see fishing associations as institutions capable of improving their quality of life. The fishers interviewed had many concerns about the declining catch-rates of red snapper and the low incomes they receive as fishers, but did not have a comprehensive plan to address it. Paradoxically, they are subjugated to the wills of those influencing the decision-making in Coyote precisely due to their resistance to subject-hood.

The aim of this research is not to condemn or promote sustainable management of natural resources – but it does serve as a critical examination of the techniques used to accomplish this goal. These reflections on subjectivity illustrate the technologies of power that are at work constituting the future of Coyote’s artisanal fishery. Understanding even a small part of the complex ways our thoughts and actions are regulated and self-regulated each day gives to us something invaluable: one can self-regulate their conduct within the field of possibility, which opens the capacity to shape the future of Coyote with a wider awareness of the techniques of power at work in the production of the fishery and not according to a pre-determined schema of how the fishery should be managed. One can then act with intention within the myriad of choices offered with the field of possibility to bring about one’s desired future rather than allowing oneself to be swept away on currents of change.

POSTSCRIPT

Although the month I spent in Coyote wasn't my first time in the area, it was the first time that I was there a significant amount of time, interacting with people and experiencing everyday life in the community. During this time, I lived in the household of the same neighbors who I had known since I was a child. My host mother often brought me along church services, school and church festivals, and soccer games taking place in the community, and after routinely attending these events, I was rewarded with nods and signs of recognition from people on the streets.

My roots within the community, no matter how shallow they may be, have been important to consider during my time in the community and after. I hope to stay in Coyote again, and perhaps in a few years I may even be helping build a small house upon the empty lot owned by my family. What kind of place will Coyote become during this time? Many of the residents of Coyote are fishers or are related to fishers, and changes with the fishery will greatly affect the community. Therefore, I must consider how my research can be applied and/or how it can be further developed. Comments and concerns raised by the fishers extended into areas beyond the scope of this research. Based on the concerns voiced by the fishers, future directions of research include investigating effects (ecological and social) of the growing teak industry, the phenomena of 'glocalization' and what the expansion of global markets into Coyote may have on the fishing industry, (see Swyngedouw 2004), and incorporating non-human materialities (such alternations in the movements of red-snapper) into an extended analysis of power by considering the 'power assemblages' of a site (see Allen 2011, Robbins and Marks 2009, Woodward et al. 2009). Until that time, I will keep in contact with those I met in Coyote and try to keep up to date on events happening in the community.

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APPENDIX A: ACRONYMS AND FIGURES

ACRONYMS

- ASPEPUCO – Fishing Association of Puerto Coyote, *Asociación de Pescadores de Puerto Coyote*
- ASPECOY – Fishing Association of Coyote, *Asociación de Pescadores de Coyote*
- CANWR – Caletas-Ario National Wildlife Refuge
- CCRCR – Constitutional Congress of the Republic of Costa Rica, *El Congreso Constitucional De La Republica De Costa Rica*
- CEDARENA – Environmental and Natural Resource Law Center, *Centro de Derecho Ambiental y de los Recursos Naturales*
- CISDL – Center for International Sustainable Development Law
- CNWR – Camaronal National Wildlife Refuge
- CPUE – Catch-per-unit-effort
- CRUSA – Costa Rica-United States Foundation for Cooperation, *Fundación Costa Rica Estados Unidos para la Cooperación*
- GPS – Global Positioning Service
- INCOPECA – Costa Rican Institute of Fish and Aquaculture, *Instituto Costarricense de Pesca y Acuicultura*
- MINAE – Interior Ministry of the Environment, *Ministerio Interior del Medio Ambiente*
- MINAEACT – Tempisque Conservation Area of the Ministry of Environment, *Ministerio Interior del Medio Ambiente de Área de Conservación Tempisque*
- MPA – Marine Protected Area, *Área Marina Protegida*
- MSC – Marine Stewardship Council
- NGO – Non-governmental organization
- PRETOMA – Sea Turtle Restoration Program, *Programa Restauración de Tortugas Marinas*
- SINAC – National System of Conservation Areas, *Sistema Nacional de Areas de Conservación*

UNDP – United Nations Development Program
 USAID – United States Agency for International Development

FIGURES

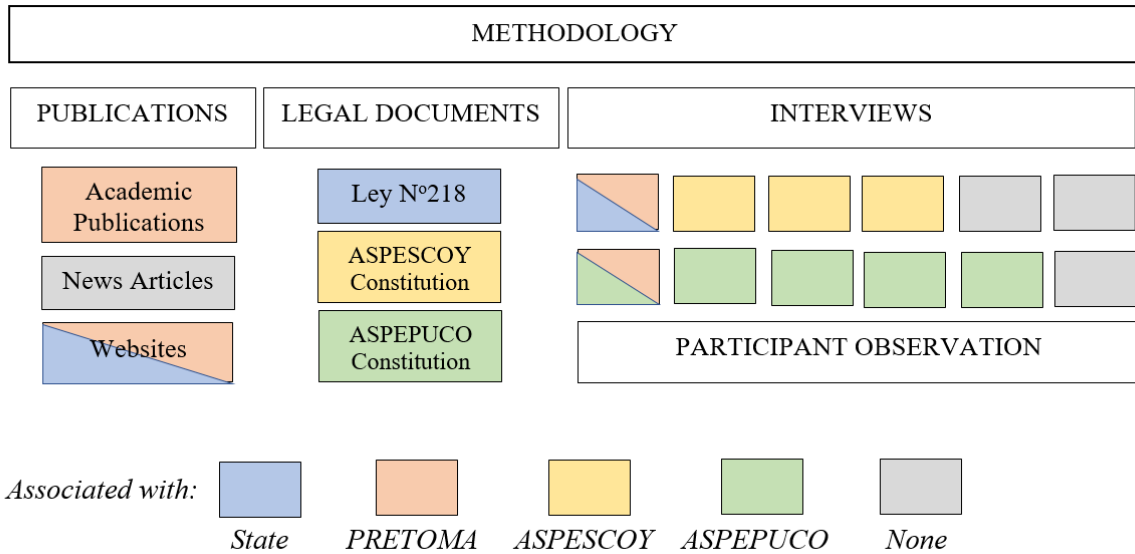


Figure 1. Pictured above is a schematic of the data collection methods. Colors correspond with the author of the material or identifies what groups the interviewees are associated with. “None” indicates that the author or interviewee is not associated with the state, PRETOMA, ASPECOY, or ASPEPUCO.

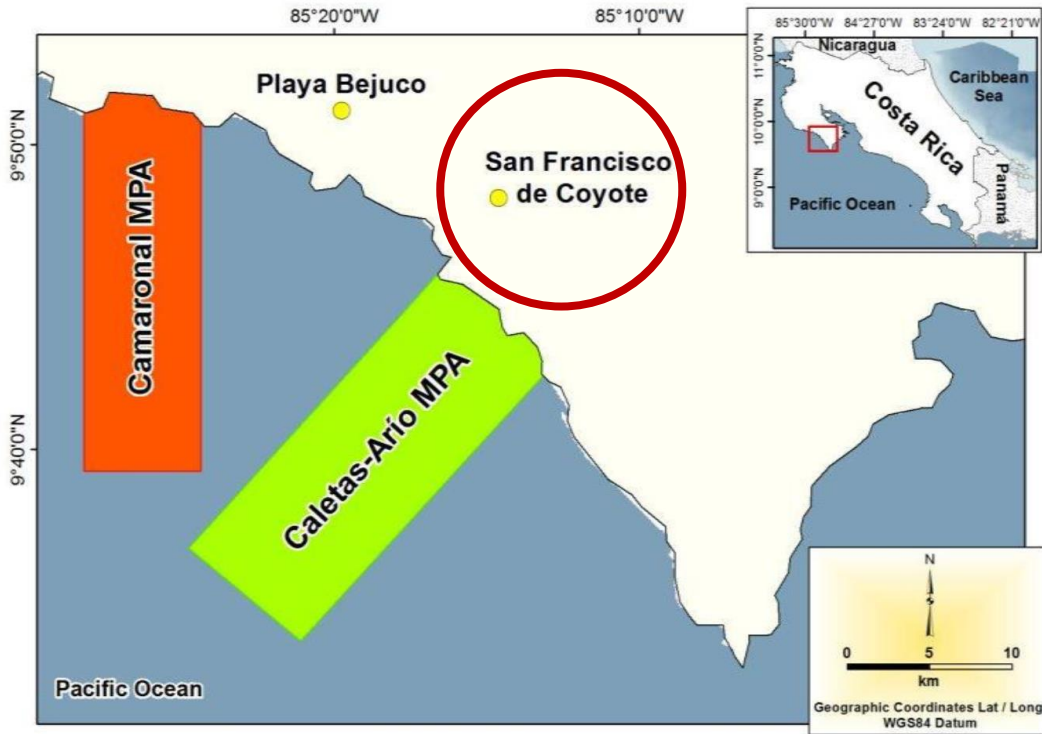


Figure 2. The map above displays the two established MPAs. The proposed MPA is situated between Camaronal and Caletas-Ario MPAs. San Francisco de Coyote – the study site – is marked with a red circle.

APPENDIX B: SUPPLEMENTAL MATERIALS

CONSENT FORM

UNIVERSITY OF WISCONSIN-MADISON Research Participant Information and Consent Form

Title of the Study: Investigating Governance of Marine Fisheries in San Francisco de Coyote and Bejuco, Costa Rica

Principal Investigator: Dr. Ian Baird (phone: 001-608-265-0012) (email: ibaird@wisc.edu)

Student Researcher: Elena Mederas (email: mederas@wisc.edu)

DESCRIPTION OF THE RESEARCH

You are invited to participate in a research study about the management of fisheries in the communities of Coyote and Bejuco. You are being asked to participate in this study because of your involvement in local fishing associations, community planning, or association with the non-governmental organization (NGO), PRETOMA.

The purpose of this research is to better understand the role of local fishing associations and conservation groups in creating ecologically sustainable and economically productive fisheries.

This study includes interviews with adult men and women who are active fishers or community members who are involved in the fishing associations and/or PRETOMA.

Interviews will be conducted either in an isolated location of the participants choosing or in the house of the participant.

Audio tapes will be made of the interviews.

Audio recordings of the interviews will be made so that the answers made by the participants are recorded accurately. These interviews will be transcribed by the researcher. The identity of the participant will be kept confidential; only approved personnel will have access to the audio and transcripts. The audio recordings will be retained until May of 2017 before they are destroyed.

WHAT WILL MY PARTICIPATION INVOLVE?

If you agree to participate in this study, you will be asked a series of open-ended questions regarding your involvement in local fishing associations or non-governmental organizations,

what the goals of the association are, what you would like to see achieved, and the effectiveness of the local associations and organizations at achieving those goals.

Your participation will last approximately 1 hour per session and will require 1 session.

ARE THERE ANY RISKS TO ME?

The greatest risk to the study participant is the potential for the opinions of the participant to be heard by other members of the community who do not agree, which may strain relationships and harm the reputation of the participant. However, the researcher has provisions in place to keep the identity of the participant confidential. Interviews will be conducted in private locations and the identities of the subjects will be kept confidential: the names of the interview participants will be coded and real names will be kept on an encrypted device and there will be no references to previously interviewed participants within subsequent interviews. If the subject reveals personal information in the interview, such as their identity or information that can lead to their identification, the sections will be cut from audio recordings using audio editing software once the audio recordings are downloaded onto the encrypted device (personal computer) and erased from the original audio recording device. Correspondingly, this sensitive information will not be included in personal notes, transcripts, or publications.

ARE THERE ANY BENEFITS TO ME?

We don't expect any direct benefits to you from participation in this study.

HOW WILL MY CONFIDENTIALITY BE PROTECTED?

While there will probably be publications as a result of this study, your name will not be used.

If you participate in this study, we would like to be able to quote you directly without using your name. If you agree to allow us to quote you in publications, please initial the statement at the bottom of this form.

WHOM SHOULD I CONTACT IF I HAVE QUESTIONS?

You may ask any questions about the research at any time. If you have questions about the research after you leave today you should contact the Principal Investigator Dr. Ian Baird at 001-608-265-0012. You may also contact the Local Contact Erick Lopez Aguerro at ericklopez@pretoma.org. The local contact can put you in contact with the principal investigator or student researcher but cannot answer question about the content of the study.

If you are not satisfied with response of research team, have more questions, or want to talk with someone about your rights as a research participant, you should contact the Education and Social/Behavioral Science IRB Office at 001-608-263-2320.

Your participation is completely voluntary. If you decide not to participate or to withdraw from the study, you may do so without penalty.

Your signature indicates that you have read this consent form, had an opportunity to ask any questions about your participation in this research and voluntarily consent to participate. You will receive a copy of this form for your records.

Name of Participant (please print): _____

Signature Date

_____ I give my permission to be quoted directly in publications without using my name.

CONSENT FORM (SPANISH)

UNIVERSIDAD DE WISCONSIN-MADISON Participante en la Investigación Información y Formulario de Consentimiento

Título de la Investigación: Investigando el gobierno de la pesca marina en San Francisco de Coyote y Bejuco, Costa Rica

Investigador Principal: Dr. Ian Baird (teléfono: 001-608-265-0012) (correo: ibaird@wisc.edu)

Investigadora Estudiante: Elena Mederas (correo: mederas@wisc.edu)

DESCRIPCIÓN DE LA INVESTIGACIÓN

Usted está invitado a participar en una investigación sobre la gestión de la pesca marina en las comunidades de Coyote y Bejuco. Se le está pidiendo a participar en esta investigación debido a que su profesión como un pescador, participación en asociaciones locales de pesca, o asociación con PRETOMA.

Esta investigación incluye entrevistas con hombres y mujeres que son pescadores activos o miembros de la comunidad que participan en asociaciones de pesca y/o el PRETOMA organización no gubernamental (ONG).

Las entrevistas se llevarán a cabo ya sea en un lugar aislado de los participantes elijan o en la casa del participante.

Se harán grabaciones de audio de las entrevistas.

Se harán grabaciones de audio de las entrevistas para que las respuestas de los participantes se registren con precisión. Estas entrevistas serán transcritas por el investigador. La identidad del participante será confidencial; sólo el investigador tendrá acceso al audio. Las grabaciones de audio serán retenidas hasta mayo de 2017 antes de ser destruidos.

¿QUÉ IMPLICARA MI PARTICIPACIÓN?

Si usted acepta participar en esta investigación, se le pedirá una serie de preguntas abiertas con respecto a su participación en las asociaciones locales de pesca, lo que los objetivos de la asociación son, lo que les gustaría ver realizados, así como la eficacia de las asociaciones y organizaciones locales en la consecución de esos objetivos.

Su participación tendrá una duración de aproximadamente 1 hora por sesión y requerirá 1 sesión.

¿HAY RIESGOS A MÍ?

El mayor riesgo para los participantes de la investigación es la posibilidad de que las opiniones de los participantes para ser escuchado por otros miembros de la comunidad que no están de acuerdo, que puede tensar las relaciones y dañar la reputación del participante. Sin embargo, el investigador tenga dispuesto en su lugar para mantener la identidad del participante confidencial. Las entrevistas se llevarán a cabo en lugares privados y las identidades de los sujetos serán confidenciales: los nombres de los participantes en las entrevistas se codificarán y nombres reales se mantendrán en un dispositivo de cifrado y no habrá referencias al entrevistado previamente a los participantes en las entrevistas posteriores. Si el sujeto revela información personal en la entrevista, como su identidad o información que pueda conducir a su identificación, las secciones se pueden cortar de grabaciones de audio utilizando el software de edición de audio una vez que las grabaciones de audio se descargan en el dispositivo encriptado (ordenador personal) y borrado del dispositivo original de grabación de audio. En consecuencia, esta información sensible no se incluirá en las notas personales, transcripciones, o publicaciones.

¿HAY BENEFICIOS PARA MÍ?

No esperamos beneficios directos a usted de la participación en esta investigación.

¿COMO VA MI CONFIDENCIALIDAD ESTAR PROTEGIDO?

Si bien es probable que haya publicaciones como resultado de esta investigación, no se usará su nombre. Sólo se publicarán las características del grupo.

Si usted participa en este estudio, nos gustaría ser capaces de citar directamente sin usar su nombre. Si está de acuerdo que nos permita que citemos en publicaciones, por favor, sus iniciales en la declaración en la parte inferior de este formo.

¿A QUIEN DEBO CONTACTAR SI TENGO PREGUNTAS?

Usted puede hacer cualquier pregunta sobre la investigación en cualquier momento. Si tiene alguna pregunta sobre la investigación después de que salga hoy debe comunicarse con el investigador principal Dr. Ian Baird al 001-608-265-0012. También puede comunicarse con el

Contacto Local Erick López Agüero en ericklopez@pretoma.org. El contacto local se puede poner en contacto con el investigador principal o investigador estudiante, pero no puede responder a la pregunta sobre el contenido del estudio.

Si usted no está satisfecho con la respuesta del equipo de investigación, tiene más preguntas, o quiere hablar con alguien sobre sus derechos como participante en la investigación, debe comunicarse con la educación y el desarrollo social / conductual Oficina de Ciencia del IRB al 608-263-2320.

Tu participación es completamente voluntaria. Si decide no participar o retirarse del estudio, es posible hacerlo sin penalización.

Su firma indica que ha leído este formulario de consentimiento, tuvo la oportunidad de hacer preguntas acerca de su participación en esta investigación y dar su consentimiento para participar voluntariamente. Usted recibirá una copia de este formulario para sus registros.

Nombre del Participante (por favor imprimir): _____

Signatura

Fecha

_____ Doy mi permiso para ser citado directamente en las publicaciones sin necesidad de utilizar mi nombre.

INTERVIEW QUESTIONS

INTERVIEW QUESTIONS

Demographic information and introductions (name, age, gender recorded; names coded):

What is your chief occupation and/or the occupations of your family members?

Describe a typical day or week in your life.

Regarding fishing associations:

Are you involved in any fishing associations? If so, which one? If not, why are you not involved?

What are the goals of the association?

Who uses the recibidor building?

How often do association meetings take place?

Describe a typical meeting.

What is typically discussed during the meetings?

Do you feel that much is accomplished during the meetings?

What objectives do you wish to see accomplished in your community in the next 5 years?
Is there anything you would like to see changed in your community, regarding the local fishing industry?

Are you familiar with PRETOMA and their work in the community? If so, what is their role in the community and/or in association meetings?

Do you feel that the research conducted by PRETOMA is relevant to the needs of your community?

Particular questions to fishers:

How long have you been fishing in the community?

What type of fish do you target?

What gear do you generally use?

Has the type of gear you've used changed over time?

Or, more generally, have your fishing practices changed over the years?

Have you noticed any changes in amount caught?

Particular questions to PRETOMA volunteers:

How long have you been working for PRETOMA? How long have you been staying in Coyote?

Are you involved in the efforts to create sustainable and productive fisheries in Coyote? If so, what is your role?

When were the two associations in Coyote created, and what is their relationship to each other?

What would you say are the objectives of PRETOMA? What are their specific objectives in this community?

Do you think that these objectives are being met? If so, what has PRETOMA been doing right in the community? If not, why do you think it has been challenging to meet these goals?

What, if any, are the challenges that face PRETOMA in the past, the present, and in the future, regarding the Coyote community?

Explain the role PRETOMA has in enforcing Ley 218 on the formation of fishing associations (in charge of the money?).

INTERVIEW QUESTIONS (SPANISH)

PREGUNTAS DE LA ENTREVISTA

La información demográfica y las introducciones (nombre, edad, sexo; nombres codificados):

¿Cuál es su ocupación principal y/o las ocupaciones de los miembros de su familia?

Describe un día típico o de la semana en su vida.

Con respecto a las asociaciones de pesca:

¿Está involucrado en alguna asociación de pesca? Si es así, ¿cuál? Si no es así, ¿por qué no involucrado?

¿Cuáles son los objetivos de la asociación?

¿Cuándo fueron fundadas las dos asociaciones de Coyote y que es la relación entre de los dos?

¿Quién usa el edificio del recibidor?

¿Con qué frecuencia ocurren reuniones de la asociación?

Describe una reunión típica.

Lo que normalmente se discutió durante las reuniones?

¿Siente que tanto se logra durante las reuniones?

¿Qué objetivos que desea ver realizado en su comunidad en los próximos 5 años? ¿Hay algo que le gustaría ver cambiado en su comunidad, en relación con la industria pesquera local?

Está familiarizado con PRETOMA y su trabajo en la comunidad? Si es así, ¿cuál es su papel en la comunidad y/o en reuniones de la asociación?

¿Piensas que las estudias y trabaja con los asociaciones de PRETOMA ayudan su comunidad?

Preguntas particulares a los pescadores:

¿Cuánto tiempo ha estado pescando en la comunidad?

¿Qué tipo de pescado qué objetivo?

¿Qué equipo utiliza generalmente?

¿El tipo de artes de pesca que ha utilizado ha cambiado con el tiempo?

O, más generalmente, ¿han sus prácticas de pesca cambiada con los años?

¿Ha notado algún cambio en la cantidad atrapados?

Preguntas particulares a voluntarios de PRETOMA:

¿Cuánto tiempo ha estado trabajando para PRETOMA? ¿Cuánto tiempo ha sido quedarse en Coyote?

¿Está involucrado en los esfuerzos para crear una pesca sostenible y productivo en Coyote y Bejuco? Si es así, ¿cuál es su rol?

¿Cuáles diría que son los objetivos de PRETOMA? ¿Cuáles son sus objetivos específicos de esta comunidad?

¿Cree que se están cumpliendo estos objetivos? Si es así, ¿qué ha estado haciendo PRETOMA derecho en la comunidad? Si no, ¿por qué cree que ha sido un reto para cumplir con estos objetivos?

¿Lo que, en su caso, son los retos a los que se enfrentan PRETOMA en el pasado, el presente y en el futuro, en relación con las comunidades Coyote / Bejuco?

FOOTNOTES

¹“To reduce their specific effects to domination is to misunderstand the diverse ways in which power achieves its effects” (Allen 2003, p. 30). Allen offers an extended account of the problem of equating all forms of power with domination in “Lost Geographies of Power” (2003).

²Foucault asserts that freedom must exist for power to be exerted: “When one defines the exercise of power as a mode of action upon actions of others, when one characterizes these actions by the government of men by other men-in the broadest sense of the term-one includes an important element: freedom. Power is exercised only over free subjects, and only insofar as they are free. By this we mean individual or collective subjects who are faced with a field of possibilities in which several ways of behaving, several reactions and diverse comportments, may be realized” (Foucault 1985, p.790).

³Alison Mountz (2005) offers an empirical analysis of scalar effects and attempts to account for the everyday spaces of interaction by rescaling the discussion of power from the ‘state’ and ‘society’ to the scale of the body. Similar to Mitchell, she investigates the scalar narratives that reproduce the distinct objectives and perspectives of institutions such as the state; so, repositioning scale to the body situates the analysis of power relations to individual actors and accounts for the everyday social spaces in which power is practiced. Re-embodiment of the nation state places people back in the center of institutional analyses – as Mountz describes, “in interviews with those who enact the state on the frontlines, the cleaner narratives of policy recede, and the processes, personalities, and politics surrounding policy come to the fore” (Mountz 2005, p. 339). Her analysis of the statements made by government brings to light the dividing practices that ‘dis-embodiment’ institutions and produce polarizing discourses that marginalize certain individuals and groups.

⁴This figure first appeared in “Estrategia integral para la pesca artesanal de pequeña escala del pargo manchado (*Lutjanus guttatus*) en Guanacaste, Costa Rica” published by PRETOMA (2017b) and is used here to depict the location of the current MPAs and the study site. The red circle was added by myself and does not appear in the original figure.

⁵The original statement in Spanish reads as follows: “Su visión es lograr una pesca responsable para garantizar el bienestar ambiental; poder comercializar directamente y sin intermediarios el producto de sus asociados y suplir todas sus necesidades económicas” (PRETOMA 2017b).

⁶He has already begun initiatives to promote this by hiring fishers to conduct tours of the mangroves for tourists, as noted in the comments of two fishers (Table 7; b, c).

⁷The names of the three fishers are kept confidential; “Jorge,” “Raul,” and “Enrique” are used as substitutes.

⁸A more thorough account of the comments made by the fishers on several topics can be found in the tables listed after the appendices.

⁹It would be interesting to consider the role of rose-spotted snapper in affecting the conduct of the fishers and vice versa. This would be following an analysis of the site in terms of a flat ontology, where the “power assemblages” between human beings *and* non-humans are accounted for. An example of this in research is found in

Robbins and Marks (2009), who emphasize that nonhumans do not exist or ‘act’ in the world independent of socialized knowledge, discourse, and scientific text.

¹⁰Fluctuating prices, economic stress, and the pressure to access new markets was often commented on by the fishers and PRETOMA employees. This topic has the potential to be further analyzed in through the lens of neoliberal modes of environmental governance, which according to Bridge and Perrault (2009) is a key area of scholarship in geographic research on environmental governance.

¹¹About \$90/month.

¹²“Presence” here denotes both PRETOMA’s physical presence *and* their presence as it is immanently experienced by the fishers. This related to Allen’s (2003) topological definition of proximity and reach.

¹³Domination is characterized by discipline, control, and supervision (Allen 2003).

¹⁴“Presence” here denotes PRETOMA, MINAEACT and INCOPECA’s physical presence *and* their presence as experienced according to internalized scalar discourses. This relates to Mitchell’s (1999) account of the ‘state effect.’

¹⁵Additionally, as PRETOMA is spoken of and referenced as a singular entity, it becomes more disembodied and transcendent. The various of power are hidden behind a seemingly united structure and institution known only as “PRETOMA,” which also may normalize scalar conception of the institution.

¹⁶This was stated in the mission statement of MINAE.

¹⁷The requirements for being considered an active fishing association are the following: the association must include at least four officers, give regular financial reports to the government about their activities and expenses, comply with existing artisanal fishing regulations, and meet with at least six members once a month with recorded meeting minutes (CCRCR 2014).

¹⁸Interestingly, although he is a member of PRETOMA, Lopez also recommended that it is time for the fishers to find other means of supporting themselves, such as through the development of tourism industry. Perhaps it is best then to separate these two missions of PRETOMA and the fishing associations: one is to research and revitalize the fishery and protect the livelihoods of the fishers so that they can remain *fishers*, the other is to first and foremost ensure economic stability and find ways to distance themselves from a way of life that no longer supports them economically. The first promotes the development of environmental subjects who remain concerned with improving the quality of the fishery; the second moves attention away from the artisanal fishery and the efforts to protect coastal marine resources, such as through creating the MPA.

¹⁹The perception of the government’s ineffectiveness at enforcing the laws within the MPAs was also noted by Bystrom and Lopez. He asserted that PRETOMA must do much of the policing of the area, mostly through petitions to remove illegal fishing vessels from the area and bringing media attention to illegal activities in the protected areas. Lopez, on the other hand, mentioned the enforcement of laws as a potential negative for the fishers of Coyote since it would require them to carry permits and would also restrict their own use of certain fishing equipment. He feared that they might blame PRETOMA for the clamp down on regulations.

²⁰A further analysis of the fishers ‘at the margins’ ventures into scholarship on difference, identity, and the “constitutive outside” (see Dixon and Jones 2005).

²¹*Diay* is a colloquative saying in Costa Rica, usually said to emphasize a point.

TABLES

The comments made by the fishers are grouped according to topic and presented in table format. Each response is then coded according to whether the answer was discernably positive or negative. The letters beside each comment are not associated with the same fisher throughout the sections i.e. letter (a) in the first section is not the same fisher as letter (a) in the second section. The original Spanish response is recorded in the table with the English translation below with the translations of the responses into English done by myself.

LEGEND

 Positive Response  Neutral Response  Negative Response

TABLE 1

Fisher comments on the condition of the fishery

(a) “La pesca no es muy estable. La pesca – hay temporadas buenas y temporadas muy malas.”
Fishing is not very stable. Fishing – there are good times and very bad times.
(b) “En invierno es más bueno a veces, hay anos que no. Depende el calentamiento del agua.”
The winter is better sometimes, some years it isn’t. Depends on the temperature of the water.
(c) “Cuando hay pescado todo están contento cuando sin pesca todo son ahuevados.”
When there is fish, everyone is content, when there isn’t fish everyone is depressed.
(d) “El principal problema es que no hay pescado. No pueden vivir a la pesca porque no le da.”
The principle problem is that there is no fish. We can’t live on fishing because it does not give.
(e) “Si no hay producto, no si puede mejorar.”
If there is no product, we can’t make it better.
(f) “Muy mala la pesca ahora, muy poca plata, precios muy barato. Antes en Coyote, 30

pangas, ahora en coyote, diez pangas, menos pangas. Antes más pescados, más pescados.”
The fishing is very bad right now, very little money, prices are very cheap. Before in Coyote, 30 boats, now in Coyote, ten boats, less boats. Before more fish, more fish.
(g) “Tal vez porque el tiempo, la temperatura del agua es muy caliente, no lo sé. La culpa es de todo porque todo que andan. Todos los ríos están secos, no tienen agua.”
Maybe because the weather, the temperature of the water, I don’t know. The fault is everyone’s because of everyone is here. All of the rivers are dry, they don’t have water.
(h) “Esta es la cuestión del tiempo. Llegamos La Niña y calientan el agua y todo de esta fenómeno, si, y no sale mucho pescado.”
This is the question of the time. La Niña came and warmed the water and everything else about this phenomenon, yes, and it doesn’t leave many fish.
(i) “Hay mucho, mucho extranjeros ahora muchísimo, muchísimo, y también drogas son una problema grande.”
There are a lot, a lot of foreigners now, so many, so many, and also drugs are a big problem.
(j) La industria de teca no es buena, muy feo porque los bosque lo destruyen. Y este pueblo de aquí de Guanacaste, falta de agua. Es que antes destruyen todo los bosque y no hay retención de agua.”
The teak industry isn’t good, it’s very bad because it destroys the forest. And this town here in Guanacaste lacks water. It’s because before they destroyed the whole forest and there is no retention of water.

Note: The question of how the fishery has changed over time was one of the first topics covered in each interview. The fishers unanimously agreed that the fishing has been very poor lately – though there were different reasons offered as to why. Fishers (a), (b), and (c) each commented that variations in catch rate are part of fishing; there are times when there are a lot of fish and times when there are not. Fishers are in a good mood when there is fish and they are not when there is no fish (c). Their sentiment was that one should persevere through the low points in the hopes that the fishery will get better over time.

More negative views on the state of the fishery were voiced by the others. Fisher (f) referred to the past nostalgically, describing times when there were many more fish, more boats, and higher prices for fish than there are now. Fishers (e) and (d) shared the sentiment that the

lack of fish is a drastic blow to the fishers, stating that one cannot live off of fishing and that one cannot improve their livelihood if there is no fish. Fishers (b), (g), and (h) commented that the changing temperature of the water and cycles such as La Niña as possible reasons for lack of fish.

On the other hand, external factors were also mentioned. Fisher (i) lamented that the increase in foreigners and drugs in the area have negatively affected the fishers, perhaps indicating a fear of changes to their way of life. Fisher (j), like Lopez, spoke of the negative effects of the teak tree industry in Coyote. He maintained that there have been changes in the water cycle since the teak industry expanded in Coyote due to the deforestation that occurs to install the plantations and the large amount of water the trees consume. This aligns with the sentiment voiced by fisher (g) who asserted that the poor state of the fisher is everyone’s fault since they all use water and the rivers are running dry. The pairing of the problems with the fishery with larger water problems overall, such as drought and lowered water levels, reveals knowledge of the larger water system and the ways they are connected.

TABLE 2

Fisher comments on their knowledge of ongoing research projects in Coyote

<p>(a) La información que ellos quieren es cuantos pesca por una noche de pesca. Entonces tantos kilos, tantos hembra, tantos machas. Ellos, no sé que hacen, se llevan la información y meten en una computadora y hacen un evaluó. Cada seis meses cada ano reunión a todo el pescador y se presentan toda la información que yo le da y hacen una reunión que presenten una pantalla allí con proyector y presenten el volumen, tantas hembras, tantos machos un ano, tanto de otros.”</p>
<p>The information that they want is how many fish in one night of fishing. Then how many kilograms, how many female, how many male. They, I don’t know what they do, they take the information and put it in a computer and do an evaluation. Every six months each year all the fishers meet and they present all the information that I gave and have a meeting where they present a screen there with a projector and present the amount, how many females, how many males, lots of other (data).</p>
<p>(b) “La universidad viene aquí mucho. Ellos pregunto que tiene la pesca, la problemática que la pesca. Entonces ellos pregunto todo eso, cuantos kilos, datos. ¿Que quieren</p>

lograr? No sé.”
The university comes here a lot. They ask what kind of fish we have, the problems with the fish. They ask all of this, how many kilograms, data. What do they want to achieve? I don’t know.
(c) “Yo estoy trabajando con MINAE también, yo estoy haciendo ese, ese descarga ellos le llaman descarga.”
I am working with MINAE also, I am doing this, this discharge, they call it discharge.
(d) “Una investigación que están haciendo, para, no se para que.”
A study that they are doing, for, I don’t know what for.
(e) “ <i>Diay</i> no se para que, ellos dicen que para regular la pesca artesanal. Para regularlas. Quieren poner, bueno, como este arte de pesca es.. um.. como es la palabra? Sostenible, sostenible. Este arte de pesca no es destructivo. Porque no se agarró tortugas, casi no se agarró tiburón, casi no se agarró las raya, muy poco.”
I don’t know what for, they said it is for regulating the artisanal fishery. To regulate it. They want to put, okay, like this way of fishing is.. um.. what is the word? Sustainable, sustainable. This way of fishing isn’t destructive. Because it doesn’t catch turtles, almost never catches sharks, almost never catches sting ray, very little.

Note: A general sense of confusion regarding the studies was noticeable in each response. While certain fishers knew what data the researchers were collecting, they did not know why it was being collected or what impact it may have on them. Fishers (a) and (b) describe the process of data collection and the presentation of data, but, like fisher (d), do not know what they are trying to achieve through the studies. Fisher (c) is hired to work with MINAE and is paid to collect the data, but that is the extend of their involvement. Fisher (e) says they are regulating the artisanal fisher to make it more sustainable, which was a word the fisher struggled to recollect. The answer seemed rehearsed and was said without conviction, as if the less destructive nature of artisanal fishing wasn’t very convincing.

Bystrom conducts the studies on red snapper in Coyote and Bejuco to determine the breeding patterns and changes in life history of the species. In his publications, he says that this is to give the fishers information about when and where to fish so that the fish have time to recuperate in low seasons. However, according to the fishers’ reactions, there hasn’t been much communication between the researchers and the fishers. Lopez addressed the studies as well,

stating that they were beneficial for the wildlife but did not help the fishers. The lack of discernable benefits or changes as a result of the studies has led to the indeterminacy of the goals of the research projects.

TABLE 3

Fisher comments on the effectiveness of fishing associations

(a) “Todo está bien! Todo está normal. ”
Everything is good! Everything is normal.
(b) “Es difícil para los pescadores venir a una reunión y, <i>diay</i> , tienen que hacer otras cositas.”
It’s hard for the fishers to come to a meeting and, <i>diay</i> , they have other little things to do.
(c) “Si, estoy en una asociación, cinco años. ... Yo casi no voy a reuniones. Casi nunca voy. No me gustan ven a reuniones.”
Yes, I am in an association, five years. ... I almost never go to meetings. I almost never go. I don’t like going to meetings.
(d) “Hay dos asociaciones, pero no dinero, no hay ayudas a nadie, muy poca pesca, tiene que pescar en el otro lado.”
There are two associations, but no money, no aid for anyone, very little fish, we need to fish on the other side.
(e) “ <i>Diay</i> ²¹ , no faltan reuniones, no faltan comunicación. Lo que falta es una decisión. Hay reuniones. ... Es la falta de entendimiento y consentimiento.”
There are no lack of meetings, there is no lack of communication. What is missing is a decision. There are meetings. It’s the lack of understanding and consent.
(f) “Me duele mucho decirlo, pero hay personas que son muy vivas que otras entonces quieren más y a lo otros hacen aparte porque son más pequeño. Los beneficios son para la misma comunidad. Siempre, siempre, siempre hay personas que tratan de ir más adelante que otros, entonces si siempre hay problemas.”
It hurts me to say it, but there are people that are more lively than others so they want more

²¹ *Diay* is a colloquative saying in Costa Rica, usually said to emphasize a point.

and want to break apart the other because they are smaller. The benefits are for the same community. Always, always, always there are people that try to go farther than others, and so there are always problems.

(g) “Yo pienso que ellos tienen otra forma de vida que nosotros. Entonces quizás tal vez no nos entiendan, quizás no entiendan.”

I think that they have another way of life than us. So maybe they do not understand us, maybe they understand.

Note: The effectiveness of the associations at achieving their goals was questionable according to the majority of fishers interviewed. For a fishing association to be considered “active” in the law, the fishers must meet at least once a month and file a report of their activities; however, fishers (b) and (c) confessed that fishers don’t want to attend meetings and have other things to do during the time the meetings are held. Fisher (e) builds on this, saying that there are enough meetings being scheduled, but what is lacking are definite decisions that would move the fishers forward on achieving their goals. According to this fisher, the sense that nothing will be accomplished even if the fishers attend the meetings keeps the fishers from regularly attending meetings.

Fisher (f) held many reservations about the fishing association meetings. He stated that there are certain individuals that dominate the meetings, which leaves out constructive comments and suggestions from others who live in the community. Problems thus arise when the certain individuals ambitions overshadow the needs of the many. On the other hand, fisher (a) maintained that the fishing association is functioning fine and that everything is “normal.” However, “normal” could indicate that the fisher is used to the way things are currently being run, for better or worse.

TABLE 4

Fisher comments on the purpose of fishing associations

(a) “El rol es la asociación reciba el pescado y lo llevo directo a la portadora o a San José.”
The role of the association is to receive fish and take it directly to the port or to San José.
(b) “Precios son variables. Yo quiero un precio estable. Eso es el objetivo.”
Prices vary. I want a stable price. This is the objective.

(c) “El principal objetivo sería llevar el precio de pescado.”
The principle objective is the raise the price of the fish.
(d) “Ayudas, nada más. Económicas.”
Monetary aid, nothing else. Economics.
(e) “El pescador lo que pide esta ayuda para mejorar el precio porque los precios son muy malos para nosotros y el listo es muy largo: gasolina, trasmallos, anzuelos, es mucho.”
The fisher asks for help to make the price better because the prices are very bad for us and the list is very long: gasoline, nets, fish hooks, it’s a lot.

Note: Of the ten fishers interviewed, nine had either been a part of an association in the past or were current members. Five were currently active members and four used to be a part of either ASPESCOY or ASPEPUCO but became disillusioned with the process and no longer attend meetings. Those who are active members of their fishing association explained the current role or objective of the fishing associations, which overwhelmingly concerned raising the price of the fish. Fishers (b), (c), (d) and (e) referred to price directly and fisher (a) referred to price indirectly. As fisher (e) described, the costs of being a fisher is high – one must pay for gasoline, nets, fish hooks as well as bait and other equipment; however, the price of fish is low and as the fishers stated previously, there are very low catch rates, so it is difficult for fishers to sustain a steady income. In effect, the fishers see the major role of the association as a way to increase the amount received for their fish and to apply for and receive economic aid from the government (ayudas).

Fisher (a) suggested a plan of action, stating that the association should receive fish and take it directly to San Jose to sell, which would eliminate the middlemen who profit from the transportation of fish to other sellers. This would increase profit gained by the fishers. This plan of action was also stressed by Bystrom and Lopez, who aim to create opportunities for the fishers to access new markets and sell their fish directly. However, as Lopez stressed, the removal of the middleman would require a robust association to organize the preparation, shipping, and selling of the fish.

TABLE 5

Fisher comments on the role of PRETOMA

(a) “PRETOMA tiene cinco años aquí – ayudando aquí – esas escaleras – ese plancha, el cemento, el baño, *diay* sí.”

PRETOMA has been here five years – helping here – those stairs, that slab, the cement, the bathroom, yes.

(b) “PRETOMA este momento, está trabajando muy bien, están ayudando. Hecho ayudas para las asociaciones.”

PRETOMA in this moment, they are working very well, they are helping. They get aid for the associations.

(c) “*Diay*, mejorar. Este galerón está muy malo. Cuando llueve que le pasan agua, necesita una ayudita para mejorar, este galerón, porque está en mal estado. Casi no puede trabajar. Ellos ayudan mucho, PRETOMA.”

To make it better. This port is very bad. When it rains water comes in, it needs a little help to make it better, this port, because it is in a bad state. We can barely work. They help a lot, PRETOMA.

(d) “Hace dos años, PRETOMA ayudaron. Ahora no. Antes cuando está muy mala PRETOMA ayudan los pescadores.”

Two years ago, PRETOMA helped. Now no. Before when it was very bad, PRETOMA helped the fishers.

(e) “Bueno, PRETOMA trabaja mucho con las tortugas, ¿verdad? En la pesca, *diay*, muy poco. Ellos andan allí pero muy poco. Esta institución viene porque los pescadores no se metan en áreas protegidas y traiga un línea y trasmallos y todo eso.”

Okay, PRETOMA worked a lot with the turtles, right? In fishing, only a little. They come there but very little. This institution comes so that the fishers do not mess in the protected areas and bring fishing lines and nets and all of that.”

(f) “PRETOMA en su tiempo viendo a ayudando los pescadores, pero PRETOMA también – nosotros pescadores pensamos que PRETOMA lo va a sacar otra función como Refugio Caletas. Barcos no puede entrar.”

PRETOMA in their time came to help the fishers, but PRETOMA also – we fishers think that PRETOMA will take another function like the Caletas refuge. Boats can't enter.

(g) “PRETOMA nunca echo nada. Bueno, llega allá, van con los pescadores, como estudias dicen a ellos y el problema es que no le da nada las ayudas económicas ya, solo page nada, nunca sirve.”

PRETOMA never did anything. Okay, they arrived there, they went with the fishers, like studies they said to them, and the problem is that they do not give any economic aid, they pay nothing, they never serve.

Note: There were mixed responses as to the role of PRETOMA in the lives of the fishers. Fishers (a), (b), (c), and (d) all refer to the positive aspects of PRETOMA’s involvement that Lopez described: PRETOMA used funding to improve the infrastructure of the port by adding cement stairs, cement landing, and installed a bathroom at the site. Fishers (b) and (c) insist that PRETOMA is still helping the fishers and will continue to improve the quality of the dock. Fisher (d) recognizes that PRETOMA helped improve the dock in the past, but does not believe that they are currently contributing to the fishers. Contrary to this perspective, fisher (g) voices a negative view of PRETOMA, stating that they arrived, conducting studies, but never gave any economic aid to the fishers.

While the visible changes to their dock were looked on favorably, not all the actions of PRETOMA were perceived positively. Fishers (f) and (g) criticize PRETOMA’s involvement in the creation and subsequent management of the Marine Protected Area. Interestingly, they both suggest that it is PRETOMA who keeps the fishers from access to the Marine Protected Area and ban certain gear. Fisher (e) mentions the history of PRETOMA and their work with sea turtles and then stresses that PRETOMA has only recently began working with the fishers. Fisher (e) maintains that the only reason PRETOMA is in Coyote is to oversee the MPA and keep fishers from using the banned fishing equipment. Similarly, fisher (f) speaks on behalf of the others fishers, suggesting that many fishers see PRETOMA as restricting their access in the MPA. Both suggest a negative view of PRETOMA as an overseer of the MPA and policing the local population.

The responses of the fishers also aligned with which association the fisher was a member of. Those in ASPEPUCO spoke of the benefits PRETOMA has brought to the fishers and the ways PRETOMA helped the fishers; those in ASPESCOY voiced negative perceptions of PRETOMA. This commentary aligns with Lopez’s account of the allegiances between PRETOMA and ASPEPUCO following the fallout with members of ASPESCOY.

TABLE 6

Fisher comments on the role of the government

<p>(a) “Bueno, el MINAE – hay un refugio – Caletas-Ario, se nos permite pescar aquí. Permiso solo pescador de aquí y Bejuco. Coyote y Bejuco, nada más. La manda de la zona.”</p>
<p>Okay, MINAE – there is a refuge – Caletas-Ario – we are permitted to fish here. Permission is only for fishers from here and Bejuco. Coyote and Bejuco, no more. The law of the zone.</p>
<p>(b) “Ah si, aquí, hay áreas protegidas aquí. En San Juanillo, otro aquí y otro allá. Lo cerraron en que nadie pueda pescar para que el mar vuelve otra vez hacer la multitud que tiene que tener.”</p>
<p>Ah yes, here, there are protected areas here. San Juanillo, another here, another there. They closed it in so that nobody can fish so that the sea comes again to make the multitude that it has to have.</p>
<p>(c) “El gobierno, no, no puede hacer una solución. Hacer nunca nada. ¿Porque? El gobierno pone leyes pero no se cumplí, verdad? ¡Hay ese refugio por ejemplo y gente va por allí y que va por esos, el gobierno no cumple!”</p>
<p>The government, no, they never create any solution. They never do anything. Why? The government put laws but they were not enforced, right? There is that refuge for example and people go there and the government does not hold them accountable! "</p>
<p>(d) “Si el gobierno llega a sentensarse ya cumplir con la ley que tiene que hacer, yo pienso que en dos o tres años hay más pescado. Pero los barcos no los pagan y entonces siguen matando todo. Los barcos destruyo todo.”</p>
<p>If the government begins to sentence and comply with the law that they must do, I think that in two or three years, there will be more fish. But the ships do not pay them and so they continue killing everything. The ships destroy everything.</p>
<p>(e) “Nadie hace nada. Porque? Porque gobierno no le sirve. Gobierno prefiere estadounidense, el europeo, venir y aprobar trabajos a Costa Rica.”</p>
<p>Nobody does anything. Why? Because the government doesn’t serve us. The government prefers US citizens and Europeans, they come and support jobs in Costa Rica.</p>

(f) “Yo sé que en este país hay muchos intermediarios, hay mucha gana, gana, gana, y los pescadores – muy poco. ¿Entonces que va a hacer? ... Todos son muchos ladrones.”

I know that in this country there are a lot of middlemen, there is a lot of win, win, win, and the fishers – very little. So what can we do? ... They are all thieves.

(g) “El gobierno esta ayudando pescadores? Aquí no, aquí no. Aquí yo creo que nadie ayuda nadie. Nadie ayuda para nadie. El gobierno o MINAE y pescadores.”

The government is helping fishers? Here no, here no. Here I believe that nobody helps anybody. Nobody helps anyone. The government or MINAE or fishers.

Note: The comments made about the Costa Rican government – more specifically the agency MINAE – related to the enforcement of laws in the protected areas. Fisher (a) spoke positively of the installment of the marine protected areas, since only fishers from the area are allowed to fish there. Fisher (b) sees the closing of the area as a necessary measure made to replenish the stock of fish as long as foreign vessels are kept from entering the area. However, fishers (c), (d), and (e) voiced harsh words about the government’s ability to manage the areas. Fisher (c) fervently rebuked the government for not enforcing the laws and allowing foreign fishing vessels to enter the area. Fisher (d) agreed, describing how ships enter the area and “destroy everything,” but they are not held accountable. Fisher (e) reasoned that the government does not serve the people of Costa Rica but are more interested in catering to the interests of the United States and Europe, and that is why they ignore the problems happening in Coyote.

The general perception of the Costa Rican government’s inability to manage the protected areas is shared by many of the fishers and Bystrom. He contends that PRETOMA must do much of the policing of the area, mostly through petitions to remove illegal fishing vessels from the area and bringing media attention to illegal activities in the protected areas. Lopez, on the other hand, mentioned the enforcement of laws as a potential negative for the fishers of Coyote since it would require them to carry permits and would also restrict their own use of certain fishing equipment. He feared that they might blame PRETOMA for the clamp down on regulations.

Fisher (f) referenced a problem with the country more broadly: that there are many middlemen and the fishers cannot contend with them on a large scale. The sense that there are not many options left for the fishers was reflected in fisher (g)’s response, who believed that no one helps anyone and that each person only acts according to their personal interests. Such a

perspective impedes the hope of collaboration and compromise that is necessary for working together in a democratic institution such as a fishing association.

TABLE 7

Fisher comments on alternative livelihood opportunities

(a) “Ahorita estoy trabajando con ellos de asistente.”
Right now I am working with them (MINAE) as an assistant.
(b) “Si más turismo es bueno porque traje más dinero y trabajo.”
Yes, more tourism is good because it brings more money and work.
(c) “A mi manejar un tour una semana, pero pasan días que no pasan nada.”
I handled a tour one week, but there are weeks when nothing happens.
(d) “Ahorita, la trabaja que yo tengo es mejor que pescando.”
Right now, the job I have is better than fishing.
(e) “Yo estaba pescando, pero ahora en la finca porque está muy mala la pesca.”
I was fishing, but now I work on a farm because the fishing is really bad.
(f) “Muchachos van a trabajar en la teca o construcción porque la pesca es muy mala.”
Boys go to work in the teak industry or in construction because the fishing is very bad.
(g) “La única solución es a trabajar por otro lado porque la pesca no hay.”
The only solution is to work in a different place because there are no fish.

Note: The downturn in fishing has led fishers to search for alternative sources of income. Fisher (a) is being paid by MINAE to collect data for their study. There are two fishers currently being paid for fishing data, both from ASPEPUCO. Fisher (b) sees tourism as a potential for more jobs and money in the community, which is similar to Lopez’s perspective. Fisher (c) has conducted tours before, but says that they are irregular right now and have not been a constant source of income. On the other hand, there are signs that some fishers do not believe that there will be an upturn in the quantity of fish and the quality of the Coyote fishery. Fishers (d), (e), (f) and (g) speak of abandoning fishing and finding alternative employment. Fishers (d), and (e), already work on farms instead of fishing and fisher (f) says that other fishers have decided to work in construction or with the teak industry. Fisher (g) stresses that the only solution is to work in a different place because there are no fish. All in all, the lack of fish remains the chief problem among the fishers, and it is putting their lifestyles as fishers at risk.