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Geographies of the Sea: Negotiating Human–Fish Interactions in the Waterscapes of Colombia’s Pacific Coast

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The realities of many coastal dwellers have been shaped by their interactions with fish and water along the world’s waterscapes. However, human and cultural geographers have largely overlooked how waterscapes influence coastal people’s behaviors and social interactions. Studies of geographies of the sea have acknowledged the importance of human–nonhuman interactions in the context of fluid ocean spaces and political economies. Critically engaging capitalist, industrialized perspectives of oceans, our article contributes to this literature to study how Afro-descendant small-scale fishers in the Gulf of Tribugá respond to intensifying neoliberal fishing regimes in Colombia’s Pacific coast. We do so by examining how fishers negotiate diverse representations of fish and how these influence their behaviors and practices over time and space. We bring the sea to the center of inquiry to investigate how the sociomaterial character of fish intersects with political, economic, and cultural forces and how they influence perceptions, access, and use of oceans. We argue that the scarcity induced by industrial fisheries overexploitation has changed people’s access to and control over fish and enabled biodiversity conservation discourses to marketize and transform fishing practices. This process has added value to fish through the creation of marine protected areas and the rebranding of fish in terms of traceability and “valued-added” sustainability. In this context, however, we highlight how fishers and their practices have endured through situated institutional practices despite being wrapped up in the complex power dynamics that have marginalized Afro-descendant people in Colombia since colonial times. *Key Words:* *assemblage, Colombia, geographies of the sea, institutions, neoliberalism.*

诸多海岸居民的现实，通过其与世界水地景中的鱼与水之互动形塑之。但人类与文化地理学者却大幅忽略水地景如何影响海岸居民的行为与社会互动。海洋地理学的研究，已认识到流动的海洋空间脉络中的人类—非人类互动与政治经济学的重要性。我们的文章批判地涉入资本主义与产业化的海洋视角，研究在罐布加（Tribuga）湾的非裔小规模渔民如何回应哥伦比亚太平洋沿岸加剧的新自由主义渔业体制。我们通过检视渔民如何协商鱼的多样再现、及其如何影响渔民在时空中的行为与实践进行之。我们将海洋带入问题核心，探讨鱼的社会物质特徵如何与政治、经济和文化驱力相互交织，及其如何影响海洋的认知、可及性和使用。我们主张，由产业化的渔业过度开发所引发的稀缺性，已改变了人们捕鱼的管道以及对鱼的控制，并使得生物多样性的论述得以市场化并改变渔业的实践。此一过程，通过创造保育的海洋地区以及以可追踪性和“附加价值”的可持续性对鱼类进行再品牌化来增加鱼的价值。但我们在这一脉络中，强调渔民及其实践如何在情境化的制度实践中持续进行，尽管他们被包裹在自殖民时期便边缘化哥伦比亚非裔人们的复杂权力动态之中。关键词：凑组，哥伦比亚，海洋地理学，制度，新自由主义。

Las realidades de muchos habitantes de las costas han sido configuradas por sus interacciones con peces y agua alrededor de todos los paisajes acuáticos del mundo. No obstante, los geógrafos humanos y culturales en gran medida omitieron considerar cómo influyen estos paisajes sobre el comportamiento y las interacciones sociales de los pueblos costeros. Los estudios de las geografías del mar han reconocido la importancia de las interacciones humano–no humanas en el contexto fluido de los espacios oceánicos y las economías políticas. Abordando críticamente las visiones capitalistas e industrializadas que se tienen de los océanos, nuestro artículo contribuye a esta literatura para estudiar cómo responden los pescadores artesanales afrodescendientes en el Golfo de Tribugá a los regímenes intensificados de pesca de inspiración neoliberal en la costa pacífica de Colombia. Hacemos esto examinando el modo como los pescadores negocian las diversas representaciones del pescado y el grado como éstas influyen sobre sus conductas y prácticas a través del tiempo y el espacio. Llevamos al mar al centro de la indagación para investigar cómo se entrecruza el carácter sociomaterial de la pesca con las fuerzas políticas, económicas y culturales, y cómo determinan ellas las percepciones, el acceso y el uso de los océanos. Sostenemos que la escasez inducida por sobreexplotación

de las pesqueras industriales ha cambiado el acceso del pueblo al pescado y a su control, facilitado a los discursos de conservación de la biodiversidad mercantilizar y transformar las prácticas de pesca. Este proceso ha añadido valor al pescado por medio de la creación de áreas marinas protegidas y la red denominación del pescado en términos de trazabilidad y sostenibilidad del “valor agregado”. Sin embargo, en este contexto hacemos notar el modo como los pescadores y sus prácticas han sobrevivido a través de prácticas institucionales situadas, a pesar de estar envueltos en las complejas dinámicas de poder que han marginado al pueblo afro-descendiente en Colombia desde los tiempos coloniales. *Palabras clave:* Colombia, ensamblaje, geografías del mar, instituciones, neoliberalismo.

Many coastal dwellers create a sense of who they are through the nonhuman interactions they experience at sea (Bear and Eden 2008; J. Anderson and Peters 2014). Coastal narratives in human geographies, however, are often told by “othering” oceans to the background of social interactions, reducing the sea to a transport surface, a container of resources, or a territorial extension of state sovereignty (Peters 2010; Steinberg 2013). Geographers of the sea, maritime anthropologists, and sociologists have pushed for a more critical engagement with the fluidity of oceans and its nonhuman entities (e.g., Helmreich 2011; Steinberg and Peters 2015; Bear 2017). This work has challenged land-centric understandings of waterscapes, opening space to uncover the complexity of marine social spaces (Steinberg 2001; Lehman 2013; Pauwelussen and Verschoor 2017). In particular, human–fish interactions have emerged as central in ethnographies of marine social spaces (Bear and Bull 2011; Probyn 2014; Todd 2014).

Although considerable research has examined the political and economic complexities that shape human–fish interactions (e.g., Mansfield 2004b; St. Martin 2007), less attention has been paid to the human–nonhuman dimensions of fishers’ lived experiences and coastal change (Bear and Eden 2011; Bull 2011; Nightingale 2013). Going beyond and critically engaging Western and industrialized perspectives of marine social spaces (e.g., Bear 2013; Boucquey et al. 2016; Probyn 2016), we examine geographies of the sea to highlight how the realities of the coastal poor—the majority of whom rely on fish as their main source of protein and livelihood—are being constrained and transformed as they become entangled with intensifying capitalist uses of oceans (industrial fishing, marine protected areas [MPAs], tourism, etc.). Incorporating coastal practices and perceptions concerning struggles over livelihood at sea shows how entanglements with fish and wider capitalist uses and framings of oceans have detrimental outcomes for poor coastal dwellers

(Peters 2010). Indeed, previous work on the varied dimensions of nonhuman entities in the lives of humans has shown that how nonhumans are represented—perceived and acted on (Law and Benschop 1997)—is inseparable from their historical and contemporary contexts (McGregor 2005; Yates-Doerr and Mol 2012).

Our article contributes to the emerging literature on the ontological dimensions of human–fish interactions by focusing on how fish themselves inform

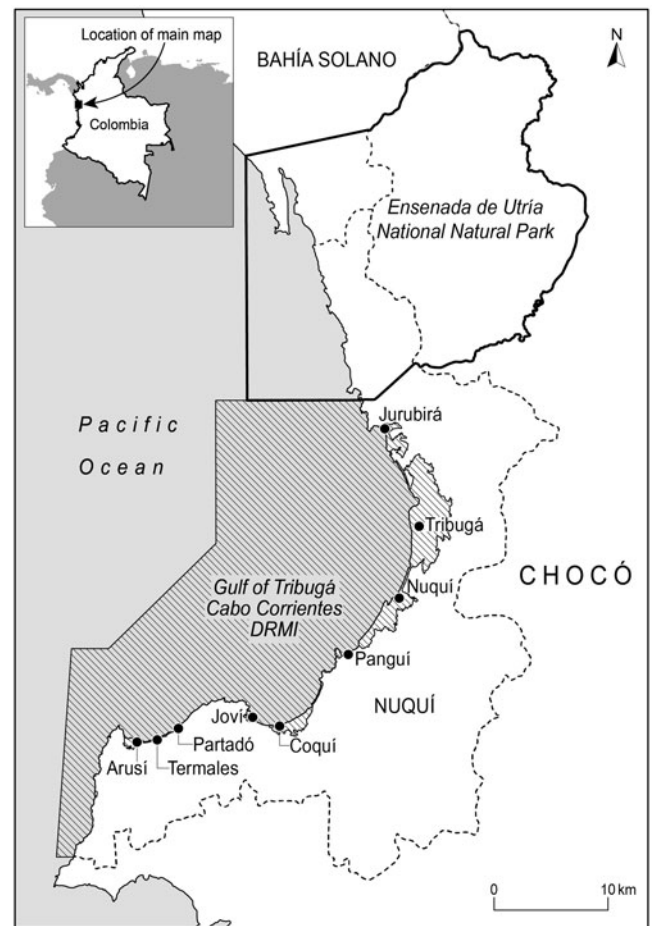


Figure 1. Map of the Gulf of Tribugá. Copyright © Chandra Jayasuriya. Reprinted by permission.

representations, spatialities, and political subjectivities (i.e., performative entities that shape political processes; Hobson 2007). In contrast to other studies on the agency of fish in the configuration of politics of space and governmental power (Bear and Bull 2011; Bear 2013, 2017; Todd 2014), we consider how changing institutional processes inform the ways in which Afro-descendant peoples and their fishing practices change over time along the Gulf of Tribugá on Colombia's northern Pacific coast (Figure 1). As we explore how coastal realities are produced and constrained, we examine how certain ontological positions (claims and perceptions about what exists) emerge and conflict as they become entangled and marginalized with the neoliberalization of oceans (Blaser 2009); that is, the "political economic [process] that posits markets as the ultimate tool for achieving optimal use and allocation of scarce resources" (Mansfield 2004b, 565). We ground our work in indigenous peoples' long history of engaging with relational sociocultural interactions and nonhuman agency (Todd 2016). As such, we focus on fish not only because of their significance in relation to food security and coastal economies but in terms of how their sociomaterial character mediates coastal dwellers' lives and livelihoods, engagement with waterscapes, and regional political economies (Bear and Bull 2011; Probyn 2017).

Drawing on Steinberg and Peters's (2015) "wet ontology" framework—where ontology reflects the production and enacting of realities (Blaser 2013, 552)—we foreground a "perspective of a world of flows, connections, liquidities, and becomings, but also propose a means by which the sea's material and social distinctiveness can facilitate the reimagining and re-enlivening of a world ever on the move" (Steinberg and Peters 2015, 248). As we examine human–fish interactions, we conceive of fish as inseparable from waterscapes and having a "lively and political presence" that intersects with the plight of the coastal poor, declining fish stocks, and global political economies of development and conservation (Bull 2011, 2282). We argue that multiple realities are enacted by relational, open-ended gatherings—or assemblages—of human and nonhuman entities (across space and time) that temporarily engage in "patterns of unintentional coordination" (Tsing 2015, 23). We use assemblage thinking to examine how complex political economies intersect,

cohere, and work in practice by drawing on and conveying varied representations of fish that coexist—sometimes in tension—along the Gulf of Tribugá. We draw out how the sociomaterial dimensions of fish inform sociopolitical relations and subjectivities as assemblages emerge and cohere. As Tsing (2015) noted, "Assemblages drag political economy inside of them" (23) with implications for human and nonhuman entities.

Afro-descendants in the Pacific region of Colombia live in and along waterscapes where the dynamics of the sea and rivers shape sociocultural practices across space and time (Oslender 2004). These peoples have contended since colonial times with processes of racial marginalization and dispossession from the resources on which they depend (Escobar 2003; Restrepo 2011). We examine how changing fishing practices in intensifying political economies transform everyday human–nonhuman interactions along the Gulf of Tribugá. In anchoring our analysis in the sociomaterial configurations of the Pacific Coast and how human and nonhuman relations emerge therein, we examine how certain institutional configurations and representations of fish reproduce themselves through multiple assemblages: fish as *milk*, a metaphor and practice used to refer to fish as a source of protein, a partial noncapitalist assemblage linked to coastal reciprocity networks and diverse forms of collective action; fish as *resources*, wherein fish assemblages emerge and fish are produced as "meat" and as "conservation" resources; and finally, fish as *exotic*, wherein assemblages of locally consumed fish species are traded and reified in sustainable fish supply chains in Bogotá. This last assemblage illustrates how MPAs facilitate market-driven processes that add value to fish meat and promote the neoliberalization of fishing practices. This overall process, we argue, re-creates an intimate relation between customers and (reified) fish meat as *exotic*—an extension of urban imaginaries of colorful, exotic, and wild Pacific waterscapes and time-bound Afro-descendant peoples.

Although we introduce each assemblage and their representations separately for clarity, they unfold simultaneously by constraining and enabling one another as they become nested within larger assemblages (DeLanda 2016). As we navigate these assemblages, we show how coastal life is a precarious life—a life "without the promise of stability" (Tsing 2015, 2) in the context of "glocal" frictions. We

work recursively with the fish as milk assemblage to reflect on how the nurturing relationship between waterscapes and people changes through each assemblage. We show how the intensifying commodification of fish adds pressure that takes *milk* away from coastal peoples.

Methods

We use a multimethod approach to explore different fish assemblages at and beyond the Gulf of Tribugá. We draw on semistructured interviews, participant observations of fishing practices and five community meetings, informal conversations, secondary data, and historical archival analysis. The lead author, a *mestiza* woman from Bogotá, conducted ninety-four semistructured interviews from July 2014 to March 2015, nineteen in Bogotá and seventy-five in the Gulf's nine coastal villages (Figure 1): Jurubirá, Tribugá, Nuquí, Panguí, Coquí, Joví, Termales, Partadó, and Arusí (nineteen women and fifty-six men over the age of eighteen). Participant recruitment involved purposive, snowball, and opportunistic sampling. Respondents included community leaders, fisher people, fish traders, nongovernmental organization (NGO) officials, academics, restaurant employees, funding agents, and government officials from environmental and fishing sectors. The interviews concerned the relationships between people, fish, and the sea and covered the major threats to fish and the management interventions along the coast. Participant observations included notes and reflections about human–fish interactions, fishing practices, community meetings, and informal conversations. Interviews were in Spanish, translated into English, and coded using NVivo. Participant identities are concealed and pseudonyms are used throughout. In this study, we sought to amplify the voices of marginalized coastal dwellers. In doing so, our own analysis was shaped by our presence and active role in translating and interpreting practices, documents, and conversations. This process was informed and constrained by our partial access to participants' lives, the inherent power relations that shaped our research encounters (e.g., class, gender, ethnic, and educational differences), and our own ontological positions (Sultana 2007; De la Cadena 2015).

Marine Assemblages, Institutions, and Political Economies

Our study builds on long-standing research that explores the multiplicity of human–fish interactions. Early on, Callon (1986) showed that scallops in the St. Brieuc Bay in France could make fishers, scientists, and other actors “comply with them” (201), revealing how the agency of nonhuman entities influences governance. Two decades later, Coates (2006) presented a historical sociocultural account of salmon and its multiple representations (wild, farmed, etc.) across space and time. He contested “salmon” as a universal category, opening analytical space for greater diversity in interpreting fish and associated categories. This earlier work, however, failed to acknowledge the role that waterscapes play in shaping these interactions. To fill this gap, Bear and Eden (2008) and Bull (2011) analyzed fish geographies, arguing that fish are varied and unstable entities inseparable from the water spaces in which they move. Bear (2013) used an assemblage lens to examine the emergent politics of space that shape the Cardigan Bay scallop fishery in the United Kingdom. Moving beyond scale and bounded space, he conceptualized the sea as coconstituted by mobile and emergent human–nonhuman associations in and outside the water (see also Vandergeest, Ponte, and Bush 2015). He highlighted the failure of management practices to engage with these emergent relations and change. Moreover, Todd (2014, 222) studied indigenous–fish engagements as sites of “political and legal exchange” in Arctic Canada. Her work stressed the important role that fish play in the negotiation of indigenous–state relations. More recently, Boucquey et al. (2016) brought together political ontology and assemblages to show how marine planning practices have privileged certain representations and objectives to fit particular realities and configurations of governmental power, a process destabilized by the materiality of oceans. Despite these studies, however, less attention has been given to how marine political economies and institutional processes get caught up in assemblages across space and time (Tsing 2015).

We advance this line of work by studying the role that institutional processes and fish play as cohesive and disruptive forces within assemblages, as they enable or resist particular global forms of techno-science, economic framings, and expertise to change

relations to gain legitimacy (Collier 2006). We build on Deleuze and Guattari's (2005) notion of assemblage: a confluence of forces and powers that form durable, yet temporary relations between varied bodies (social, biological, physical, of enunciation, etc.) across time and space. These configurations are characterized by the associations between diverse sociomaterial elements that cohere and generate outcomes based on the agency and interactions of constituent parts (Deleuze and Parnet 2006). Assemblages emphasize agency in the work needed to forge and maintain the connections between entities across space and time and the coherence given to socionatural orderings or realities (Li 2007; B. Anderson and Harrison 2010). As Grossberg (2014) noted, "Reality is made—comes into being—precisely by making connections among the singularities, the multiplicities, the assemblages, which are always and already relations" (7).

We explore how such realities are made through human–fish assemblages along the Gulf of Tribugá in terms of a broader wet ontology, where the nonlinear volume of oceans, as seen through people and fish, is central to understanding the sociomaterial configurations, access, and use dynamics of marine spaces (Steinberg and Peters 2015). We consider how fluid human–nonhuman relations produce institutions—social arenas of ongoing debate over culturally constructed meanings that inform practices (Rankin 2008)—which, in turn, allows the relations and associations that forge institutions to persist in varying degrees over time and space. Institutional processes work through the social and material relations inherent to wet ontologies to enact and reinforce particular ways of making sense of coastal realities. These institutional processes are not simply forged locally; they are entangled with, and coconstituted by, other assemblages. Adopting a relational and fluid understanding allows us to conceive of institutions as dynamic and changing as they are enveloped in and inform assemblages (Rankin 2008). These institutions become entangled and reassembled by diverse actors, knowledges, discourses, interests, associations, rules, and norms that inform situated practices (Li 2007). We explore how the institutional basis and political economy of fisheries converge through assemblages to generate varied impacts and outcomes at and beyond the coast (Tsing 2015). We offer a more comprehensive, nuanced interpretation of how human–fish

interactions unfold as the neoliberalization of fisheries intensifies with profound impacts on coastal dwellers and waterscapes.

Waterscapes in the Gulf of Tribugá

Human and nonhuman inhabitants of the Gulf of Tribugá are entangled with the social and material rhythms of the Pacific Ocean. The Gulf is located in the northern portion of the coast in the Nuquí municipality and Chocó department (Figure 1). Its geographies are shaped by the confluence of the sea and riverine systems that flow from the Baudó range toward the coast through tropical rainforest (Figure 2A). Seawater temperature and salinity fluctuate in response to the El Niño–Southern Oscillation. Marine primary productivity increases during the first months of the year in response to wind-driven upwelling in Panama (Rodríguez-Rubio, Schneider, and Abarca del Río 2003). In time and space, mixed semidiurnal tides transition during the new and full moon to spring tides (high tidal ranges) locally known as *puja* and to neap tides (low tidal ranges), known as *quiebra*, every first and third moon quarters (Figures 2B, 2C). These dynamics are also influenced by two main seasons, a rainy period (winter) around August to November, and a dry (summer) period between December and April. The coast consists of cliffs bordering coastal ranges, pocket beaches, and scattered mangrove forests (Correa and Morton 2010). Coastal bottoms are predominantly terrigenous muddy sands where there is a reproductive aggregation of pink shrimp from January to May (Rueda, Rico-Mejía, and Angulo Viveros 2011). The abundance of fish increases around coral formations and marine basaltic rocks, locally known as *riscales* (underwater) and *morros* (exposed at the surface). Multiple species temporarily and permanently coexist along the Gulf's waters. They have spatiotemporal dynamics that change along the water column, season, and moon phase. Some species depend on estuarine areas and mangrove swamps to complete their life cycles. Other pelagic and demersal species increase their population sizes between April and July after the wind upwelling in Panama (Díaz Fahrenberger 2011).

Human–fish interactions in the Gulf take multiple forms across space and time (Figure 3). Afro-descendant coastal dwellers primarily live in nine coastal villages, distributed along river mouths and water streams (Figure 2A). *Emberá* indigenous people



Figure 2. Coastal features and tidal rhythms. (A) Aerial photo of Tribugá. (B) High *puja* tide in Jurubirá. (C) Low *puja* tide shellfish collection. (Color figure available online.)

also inhabit the coast, many of whom live in three indigenous reserves located in inland portions of the Gulf. Afro-descendants in the Pacific have experienced a long history of dispossession and violence. Their ancestors were kidnapped and forcibly brought from Africa during Spanish colonization (sixteenth and seventeenth centuries), primarily for alluvial gold mining along the Pacific riverine basins (Offen 2003). After independence from Spain in 1810 and the abolition of slavery in 1851, freed slaves migrated across these riverine basins (Oslender 2008). Shortly thereafter, many were again forcibly displaced during the wars between Liberals and Conservatives, the Thousand Day War (1899–1902) and the *Violencia* civil war (1946–1966; Offen 2003).

Some migrated toward the coast, leaving behind inland riverine spaces as they encountered water-scapes influenced by the sea, moon, rivers, forests, and mangroves. Livelihood practices transitioned from alluvial gold mining to small-scale fishing and agriculture following the movement of water and fish. People learned to read and follow the tides, venturing to sea to follow fish and to travel between places. Their daily routines and sociospatial relationships became centered on the temporal and spatial dynamics of water in the sea, mangrove swamps, coastal rivers, and rain (Oslender 2004). Today, people transition between fishing, agriculture, tourism, and other opportunities, living diverse and multipurpose livelihoods. These transitions respond to daily,



Figure 3. Fishing practices. (A) Social interactions at sea. (B) Going via a *canaleta*. (C) A fisher's handline milk catch. (Color figure available online.)

monthly, and seasonal fluctuations of fish and water in the sea, enabling the diversification of fishing practices and social processes. Human–fish interactions are part of the rhythms, memories, stories, and practices of marine social spaces, wherein the “social rhythms of economy and culture” converge (Jones 2011, 2292).

During the 1990s, the fifty-year-plus Colombian civil war expanded toward the Pacific region with growing incursions from two left-wing guerrilla groups, the Revolutionary Armed Forces of Colombia (who reached a peace deal in 2016) and the National Liberation Army (Escobar 2003). Right-wing paramilitary groups and criminal gangs followed suit. Armed groups have profited from

extractive economies, infrastructure projects, and drug trafficking, subjecting coastal peoples to violence, displacement, and corruption (Escobar 2003; Restrepo 2011). The war has turned the waterscapes of the Pacific coast into corridors for the illegal trafficking of cocaine toward Panama, temporarily exposing people on land and sea to violent encounters with armed actors. In this context, Afro-descendants emerged during the 1990s as an ethnic political subject and engaged in struggles to secure territorial rights after the Colombian Constitution (1991) defined the country as pluri-ethnic and multicultural (Restrepo 2004). Afro-descendant communities were granted collective territorial rights in 1993 (Law 70) and coastal villages along the Gulf of

Tribugá were titled as *Los Riscuales* collective territory in 2002. The creation of collective territories only granted people rights over the land, however, neglecting their rights over marine social spaces.

National industrial fisheries have intensified along the Pacific Coast since the 1950s. Today fishing vessels in the Gulf primarily come from Buenaventura, the main port in the Pacific coast of Colombia, and target deepwater shrimp (from May to June), tuna, and demersal fish species (all year; Rueda, Rico-Mejía, and Angulo Viveros 2011). These vessels are privately owned by people from outside the Gulf (Bogotá, Cali, and Medellín) and only interact with coastal dwellers at sea. Due to high fuel costs, industrial fisheries maximize profits through the commercialization of by-catch and midwater trawl catches, leading to conflicts with small-scale fishers. Such conflicting interactions follow the rhythms of water. As Raul, a fisher from Arusí mentioned, after several sunny days (*tiempos de verano*) industrial vessels come very near the coast and compete with small-scale fishers as they follow *chernas* (grouper, *Epinephelus* spp.), an offshore demersal species that swim toward the shore as cool land breezes move toward the sea, cooling coastal waters. In trying to redress these issues, in 2004 the fisheries authority granted industrial fisheries rights to fish in three of four exploitation zones beyond the first nautical mile (nm) to 200 nm, thereby only granting small-scale fishers harvesting rights from the coastal line to 1 nm defined from the lowest tide line. These boundaries cut through and neglect the spatially fluid fishing practices and rights of artisanal fishers, doing little to protect coastal fishing grounds.

We next examine how the representations of fish as milk, resources, and exotic emerge through diverse and seemingly contradictory assemblages. We narrate and interpret human–fish relations as observed and discussed by our participants, investigating how place-based institutional processes endure as they reproduce themselves within and through assemblages entangled with neoliberal political economies.

¡La Leche!—The Milk!

Coastal people speak often of fish as milk—as sustenance, protein, and a source of life. Some fishers trade their early morning catches using a wheelbarrow to move around the village while calling out “The milk, the milk!” To be informed of what

species are available, potential buyers ask in response, “Which milk?” When we asked Marino, a village leader, why the notion of milk is used in this way, he explained that fish and maternal breast milk were the main sources of protein in local diets, implying that over time people transition from one milk to another. Like a mother and her infant, the sea, rivers, and mangroves feed local people with their milk. For many coastal dwellers, this relational dimension goes beyond nutritional and health values, fostering deep physical and emotional connection between them and the Gulf’s waterscapes.

Fishers follow fish via a *canalete*—paddling wooden canoes, as well as using motorboats that enable them to travel further offshore (Figures 3A, 3B). Some fish during the day and others by night, capturing and interacting with a wide variety of species, depending on the place, time, and season, as well as on access to technologies and luck. They rely on diverse gear including handlines, longlines, gill-nets, and harpoons. Several fishers transition from one fishing gear to the other depending on the season, weather, currents, and moon.¹ Juanita, who fishes a *canalete* in the mangroves of Tribugá, prefers to use the handline. She explained that fish, like humans, get tired of eating the same food every day, arguing that one should only start fishing after first catching different types of bait. Thus, hand- or long-line fishing is performed only after engaging with a third species (fish, squid, crab, etc.). Fish and water dynamics mediate fishing practices, including technologies and techniques, as well as the individual experiences and shared memories of human–fish interactions. Some interactions persist in local stories and songs. For example, Pedro, a local fisher from Panguí, explained that to fish you must be honest about your strength. He then sang the following verse of a *cumbancha* (traditional musical rhythm) song that told the story of José Reyes, an old fisher who had survived after drifting seven days at sea:

José Reyes went fishing and a *picuda* [sailfish] got him lost with so much hunger and so much cold, look that body how it resisted Oh! he was going back and forth. The Virgin Carmen will save him! Oh! he kept on pulling. José Reyes was despairing!

Pedro had caught many *picudas* (*Istiophorus platypterus*) in his life and shared their milk with family and friends. Now that he was feeling older whenever one bit, he let them go. He was no longer strong enough and knew he would not survive if he drifted at sea

as José Reyes did. Through fish stories, Pedro connects fish to memories, places at sea, and people. Fishers like Pedro might spend more than half of their lives at sea; they rely on people sharing their experiences to guide their fishing practices and learn how to avoid or respond to any given situation. As most fishers mentioned, these stories provide key information about fishing dynamics, including how to find fishing grounds or how to read the moon, tides, and stars. Fishing involves learning by experience and from the experiences of others. Moreover, as Marino explained, to fish one must be connected to the fluid dynamics of fish and water:

With every movement from the sea, you pull the hook and someone down there is pulling back; if you lose your focus, they pull and you won't be able to catch them. It is something so emotional you need spiritual focus; this is why we say fishing is a source of life for us and many species.

The relationship between a fisher's body, the movement of water, and fish connects individuals to the sea. The relational character of the fish as milk assemblage thus interconnects knowledges and lived experiences that inform fishing practices and social life. As shown here, institutional processes mediating human–fish interactions follow this social-natural process, temporally granting coherence to the fish as milk assemblage.

Fish landings have decreased in the Gulf of Tribugá. Most coastal dwellers have experienced this decline and gave different reasons as to why this is the case. They suggest that fish abundance started to decrease in the 1980s. In particular, they pointed to the tuna and deepwater shrimp industries as responsible for high levels of overfishing and by-catch, as argued by Teresa in Joví, “They take away everything and destroy our sea.” Many also linked the decline of fish abundance to the use of gillnets. Fewer blamed the weather, identifying warmer summers and stronger, more frequent El Niño events, whereas others said that it was seasonal and that fish abundance has always been low at the beginning of the year.² Marino recalled that when he was growing up, people caught an abundance of fish but that now “we were running out of milk!”

Emerging from this assemblage are varied practices that enable coastal dwellers to pursue numerous forms of collective actions to deal with shared concerns and enhance milk abundance. This is partly driven by the exchange of stories and milk,

facilitating the discussion of common problems and creating possible solutions—the basis of fluid institutions. For example, villagers in Nuquí, Panguí, Coquí, and Termales argued that they engaged in the construction of artificial *riscales* near the coast, locally known as *payaos*. The *payaos* are constructed by throwing mangrove wood on a set sea site, making a marine garden habitat that shelters and draws new fish communities. These are often constructed in villages where fishers traveling *a canaleta* have limited access to “natural” fishing grounds. They are constructed close to river mouths to aggregate individuals of species that experience ontogenetic habitat shifts, as they migrate between marine rocky habitats and mangrove areas during postlarvae and juvenile stages (e.g., family Lutjanidae; Castellanos-Galindo et al. 2013). Lilia in Coquí described *payaos* as “nurseries, where fish are raised, become adults and reproduce for us.” To build them, fishers call for *minga* (collective work), which is joined by other villagers who help with construction, maintenance, and surveillance. Institutional processes involving *payaos* vary in space and time, creating collective imaginaries of reality at sea. Unlike other villages, as Lilia recalls in Coquí, “We ask people not to fish during the night, when they do, the next day there is no catch, we need to let fish rest during the night.” Generally, gillnets are forbidden around *payaos*, *riscales*, and mangroves because they are not selective, target juvenile fish, and create noise pollution that scares fish away. Sanctions regarding their use vary along the coast but can involve their destruction or confiscation, as well as public shaming. Despite these rules, several fishers acknowledged that when milk is scarce they break their own fishing rules (e.g., catching small fish and using gillnets nearby the *riscales*).

As milk, fish are socially embedded in everyday practices. They are given away as gifts, locally traded, or bartered for food (known as *mano cambiada* [hand exchange]). Coastal people value dark meat species, including *burique* (Pacific crevalle jack [*Caranx caninus*]), *sierra tuna* (striped bonito [*Sarda orientalis*]), *champeta* (Mexican barracuda [*Sphyrna ensis*]), and albacore tuna (*Thunnus alalunga*; Figure 3C). As noted by Pacho in Joví, “Black meat tastes better and it has a lot of vitamins, have you seen how strong these fish are?” In his account, the physical strength of the fish is transferred to humans by eating their meat, reproducing a connection between fish and human bodies. Coastal dwellers mentioned

that pregnant and menstruating women, ill individuals, and some elders should avoid eating black meat because the strength of the fish can be detrimental to their health. Moreover, several fishers occasionally gift a portion of their catch to their families and old or sick members of the community. When fish abundance decreases, villagers also negotiate milk before catching it. These negotiations, as well as *mingas* and *payaos*, produce social networks from which many benefit, including family members, friends, and neighbors. Those benefiting from these exchanges are not only trading food but also sharing stories of human–fish interactions at sea. This enables knowing who, when, how, and where the fish they eat are caught. Fish as milk remains attached to the sea, river, mangrove swamps, or streams where they came from, and to the fisher(s) who caught it.

In some respects, fish as milk is a partial noncapitalist assemblage, where self-employed individuals practice fishing as they distribute fish landings and stories that are inseparable from the Gulf's waterscapes. These experiences sustain coastal dwellers' fishing knowledge and facilitate their participation in different forms of collective action. Here, institutional processes facilitate coherence in practice, granting temporal stability to the socionatural configurations that shape the fish as milk assemblage—an open assemblage that interacts with capitalist relations and markets, including the processes that create price distinctions between white, pink, and dark meat species.³ Pink and white meat species are sold at higher prices because they are salvaged for the accumulation of capital, where there is limited local control over how fish are commodified (Tsing 2015). Moreover, fishing relies on technologies that are not locally produced—hooks, nylon, motorboats, fuel, gillnets, wheelbarrows, and other items are sold by middlemen in Nuquí, the head of the municipality, or ordered from Buenaventura, paying up to five times their price. The fact that milk partly depends on capital, because fishers require fishing technologies, exposes how partial noncapitalist spaces serve and intersect with capitalist assemblages.

Fish as Resources—To Eat or Not to Eat?

Two emerging assemblages of fish as resources coexist, interact, and compete with fish as milk. As fish emerge as resources, they are subject to the mutually reinforcing nature of (neoliberal) capitalist

projects, where the production of capital is driven by fish exploitation and conservation. On the one hand, commercial species are exploited for intensifying capital accumulation, alienating fish from coastal people and the sea (Tsing 2015). This assemblage turns fish into pieces of meat, valued in relation to global supply chains rather than local circumstances (Greenberg 2006). On the other hand, commercial fish resources are protected through enclosures to defend them from humans (Mansfield 2004a). Yet these enclosures also alienate fish from people and the sea through the enforcement of fixed ideas of space that disregard the fluid dynamics of fish in the water, as well as add value to scarce resources subjected to commercial exploitation. As such, enclosures provide the conditions for capital accumulation processes that might only benefit elite commercial actors (Kelly 2011). Importantly, fish as resources encompasses varied meats as resource commodities, from white and pink meat species, as well as dark meat tuna species—also conceived as milk locally. These resources are linked to, and further integrated with, global value chains. The realities produced by these two assemblages are thus shaped through the frictions between the global political economies of development and conservation (Tsing 2015).

Fish to Fork. Transforming fish into a meat resource is not something that everyone in the Gulf of Tribugá can do—not all fish or fishers participate in these value chains. Two major fish traders operate all year in Jurubirá, Nuquí, Panguí, and Arusí. Other small traders temporarily trade fish outside the Gulf. Some external traders also come by boat from Buenaventura and buy fish directly from local fishers. The major challenges faced by local traders are maintaining the cold chain, high fuel costs, difficulties in distributing fish outside the Gulf, and trust issues with external traders.⁴ Nuquí has a twenty-four-hour power supply, but other villages along the coast only have a four-hour daily supply. If these villagers want to trade meat externally, they must buy generators to produce ice to preserve fish and cover transportation expenses, something often only traders can do. Fishers and traders halt fish decomposition processes using ice, enforcing a strong association between (commercial species) fish bodies and ice, which is central in linking fish meat and its material quality with external value chains. Sergio, who works at a fish collection point in Arusí, explained, “The commitment is clear, if the traders

bring ice, they can take fish to Nuquí. No ice, no fish, it is that simple.” This relation intersects with the history of marginalization of peoples in the Pacific, who still face limited access to basic services such as electricity. Fish meat is transported by plane to Medellín and Quibdó, which incurs very high costs, as well as by boat to Buenaventura.⁵ Traders in Buenaventura mainly buy *cherna* and *merluza* (Pacific bearded brotula [*Brotula clarkae*]), white meat demersal species captured offshore using motorboats or along the coast after sunny days.

Notably, fish meat trajectories outside the Gulf are governed by complex and often imbalanced trading conditions. As argued by the owners of a fish trading company in Nuquí, once the meat arrives at the port in Buenaventura, traders know that people have no other option but to sell, so certain traders modify their scales and reduce meat prices at a whim. In their words:

Once you get there, if the guy is not willing to buy it, he says, well you have to decide if you want to go back with all that fish. They are very difficult, they trick us, only half of what we send arrives, sometimes they even steal it from the ice boxes!

Additionally, external traders are unconcerned about the fact that in times of scarcity fishers must travel further offshore and spend more time at sea, and therefore increase their fuel costs. For them, the price of fish meat is only linked to market forces, driven by external value chains, as Emilio in Jurubirá questioned, “Until when are fish prices going to remain the same? Fuel and fishing gears costs are going up, we are also spending more time outside [offshore], yet fish prices do not rise.” For fishers and traders, it is a better deal to trade fish with local eco-tourist hotels, but those mostly operate during the humpback whale (*Megaptera novaeangliae*) season between July and November. Once fish is transformed into meat, commodification processes alienate meat products from fishers, the water, and places at sea. Sometimes even the species identity is concealed or erased to create more added value farther down the chain. Fish consumers outside the Gulf can only access labels with species names and meat expiration dates, revealing how supply chain processes erase the connections between fish, people, and places in the sea. In this assemblage, market forces largely govern human–fish interactions, where fish identities are shaped and transformed to maximize profits.

Two major regional development projects created by the Colombian National Planning Department during the 1980s and 1990s helped transform fish into meat resources. First, from 1983 to 1992, the Plan for the Integral Development of the Pacific Coast was replaced by the *Plan Pacífico* (Pacific Plan) from 1992 to 2007 (Escobar 2008). These projects sought to bring development to the Pacific region and were part of Colombia’s “neoliberal opening” (Asher and Ojeda 2009). The imaginary of the Pacific they promoted was of a place full of natural resources that needed to be exploited for Colombia’s development (Restrepo 2013). These projects pushed for the “modernization” of coastal fishers, organizing them in fishing associations to train and create productive businesses and to receive equipment subsidies and technology transfer, like motorboats. Fishing associations are still a prerequisite to participate in development programs. Yet fishers suggest that the resulting associations and related benefits are not sustained over the long term, as mentioned by Alberto in Nuquí: “These associations have never given any results, often gathering people that are fishing for money, they are all talk and no action!” (see Saavedra-Díaz, Pomeroy, and Rosenberg 2016).

The imposition of fishing associations, fish trading power asymmetries, and issues with species labeling show how the assemblage that turns fish into meat resources creates relationships of distrust within fish supply chains. Moreover, market incentives push for the transition from multispecies fisheries to specialized ones that target commercial species. As argued by a few coastal dwellers, several fishers are targeting quantity rather than quality, marginalizing the fish as milk assemblage. Local traders support this transition by offering free ice, cheaper fuel rates, money loans; lending fishing gear; and granting fish meat when they are sick or cannot fish, tying them to pay back with fish landings. These new social interactions and institutional processes enable fishers to temporarily or permanently engage in dependency relations with local traders. In doing so, fishers distance themselves from the collective actions and social networks produced by the fish as milk assemblage. For instance, during the first months of 2015, when fish landings were very low, a restaurant owner in Nuquí complained that it was very difficult to buy milk at the time. In her fury, she said, “Now everything is for money!,” claiming that many fishers would rather go offshore to catch white meat fish

and sell it to local traders than trade milk with the community. Although intersecting, fish as resources marginalizes the fish as milk assemblage.

Our Milk Is Running Dry. Coupled with the earlier industrial overfishing, growing by-catch since the 1980s, and extreme El Niño events (e.g., 1973 and 1982), there has been a reduction in commercial fish stocks along the Pacific coast (Wielgus et al. 2010). Coastal people and conservation NGOs have attributed this decline to industrial fishing and the use of gillnets. As Camila, a village leader, noted:

The vessels [industrial] take everything, even juvenile fish, if they do not need them they throw them back dead into the water. I have seen fish reduced a lot, and it also makes me so sad that we own this [signaling the sea] and still they come to take our fish.

Ramiro, a fisher from Nuquí, also noted that

nowadays you need to go further to catch fish because the gillnets and vessels [industry] have scared them away, or it could be that species are slowly getting depleted.

Overall, the discursive association between fish depletion and the impacts of the industry and the use of gillnets has fueled conflicts between coastal dwellers, industrial vessels, and gillnet users. Early on, in 1987, the north portion of the Gulf became enclosed as the *Ensenada de Utría* National Natural Park. Afro-descendant people living within the park were evicted but continued to fish in their customary fishing grounds, at times clashing with park officials, as noted in the Park Management Plan (2005–2009):

Communities have developed cultural resistance patterns ... staging permanent and repetitive conflictive actions ... since 1987, when ... fishers were obliged not to fish inside the protected area using gillnets, casting nets, harpoons, dynamite, under penalty of confiscation of gears and catches. (187)

Although the park has tried to set up agreements with the communities to solve these conflicts, it still governs fish species as fixed to places and alienated from people, reinforcing static and terrestrial understandings of the sea, where fishers are seen as a threat to fish.

In 1992, the *Proyecto Biopacífico* (Biopacific Project)—the environmental counterpart of the *Plan Pacífico*—started promoting global biodiversity

conservation discourses in the Pacific. The project funded biodiversity conservation interventions carried out by conservation NGOs and pushed for the development of sustainable fisheries, drawing on global ideals and discourses. Again, fishing associations were promoted to facilitate financial and technical support to fishers and reduce the environmental impacts of fishing practices. This included fish technology transfers, fish size control, and strategies to reduce by-catch and the incidental catches of threatened species (e.g., *mero* [*Epinephelus* spp.], and *picuda*). Two fish traders who previously participated in conservation projects claimed that some of the restrictions designed by these projects failed to reflect coastal fishing realities. In their words:

If I catch mero that is 30 to 40 meters deep, when I take it to the surface, it comes up drowned [dead], so what can I do with 200 pounds of meat on board? What should I do? Should I throw it back at sea because it is forbidden or because no one will buy it, what should I do?

These traders argued that externally designed institutions have overlooked the fluidity of fishing practices and the biophysical requirements of fish species. Moreover, some of these institutions are incompatible and clash with place-based institutional processes. The assemblage produced by fish resources conservation practices tends to relegate the spatio-temporal complexity of fish, people, and sea to the background, instead relying on top-down tools to regulate fishing practices.

Recently, however, MPAs have also emerged as tools for the legitimization of the local authority over the sea, to the exclusion of industrial fisheries, with an apparent recognition of the marine territorial rights of coastal Afro-descendent collective territories (Satizábal and Batterbury 2018). For instance, in Juradó and Bahía Solano municipalities (in the north), coastal communities with the support of conservation NGOs participated in the creation of the Exclusive Artisanal Fishing Zone (ZEPA) since the 1990s. The ZEPA became permanent in 2013 and banned the entry of the tuna industry. Similarly, in the Gulf of Tribugá a participatory process led to the declaration of the Regional District of Integrated Management (DRMI) in 2015. This MPA is co-managed by the local authority of the collective territory (General Community Council *Los Riscuales*) and the regional environmental authority (Autonomous

Regional Corporation for Sustainable Development of Chocó), formalizing local authority over a fixed portion of the sea. The DRMI is restricted to sustainable practices; controversially, however, the deepwater shrimp industry has claimed that it fishes sustainably, challenging coastal people and conservation NGOs to demonstrate that this is not the case.

The creation of enclosures has added (market) value to marine resources and allowed the state to engage more actively in the control of coastal fishing practices. A new powerful representation of exotic fish has thus emerged from the capitalist integration of the realities created by fish as meat and as conservation resources. As shown next, these new associations are intensifying the commodification of fisheries, linking dark meat species only traded as milk to sustainable fish supply chains.

Exotic Fish

Over time, as the conservation and marketization of fish converged in the waterscape, new trajectories of added-value production have unfolded even further—new neoliberal means of drawing financial value from the meat of fish. Sustainable fish markets arrived in the northern Pacific coast after the creation of the ZEPA, in a process started by a gourmet restaurant in Bogotá. Initially, this restaurant bought frozen fish from Asian markets but found the quality to be lacking. Tuna quality is primarily measured by the color of the meat, with fresh tuna having a vibrant red color that oxidates with time into brown. The restaurant owners suspected in some instances that the meat had been injected with chemicals to prevent the decoloring process and started to search for different, more sustainable options wherein they could control the quality. The importance of meat's vibrant colors highlights the efforts of humans in maintaining or staging the liveliness and freshness of fish meat, revealing how the sociomaterial character of fish shifts according to value judgments and associated prices (see Jackson et al. 2018).

During this period, the restaurant owners met officials from the MarViva Foundation, a marine conservation NGO that participated in the ZEPA process—who recommended buying fish from a fishing association in Bahía Solano, which was initially created to access funding from the Ministry of Agriculture. In 2009, the restaurant and the fishing association, supported by MarViva, created a

sustainable fish supply chain. This only traded fish captured using hand- and longlines that were then maintained at a temperature below 4°C. Fish sizes needed to meet maturity standards defined by MarViva and excluded the commercialization of threatened species. As described by Carlos, a local trader, “The fish [tuna] has to have at most 4°C, no more, they [the restaurant] want it to arrive red, practically alive, it has to have at least 35 cm.” Implementing a sustainable fish chain that maintained meat quality involved administrative and technical training for the fishing association and support for infrastructure development. This restaurant became the first in Bogotá to offer ocean-to-plate fish traceability, wherein fish are captured following the responsible fishing guidelines developed by MarViva. Fishers who follow these guidelines can access this value chain, which offers higher prices than those paid by local traders.⁶ Although fish in this assemblage might be somewhat less alienated from people and place, their market value is more abstract and discursively entangled in national ideals and global conservation discourses, as promoted by *Plan Pacífico* and *Proyecto Biopacífico*. As shown by Restrepo (2013), exotic imaginaries of the Pacific during the 1990s became inseparable from perceptions of biodiversity, in particular, through the recognition of the region as a biodiversity hotspot. Fish meat in this assemblage is revealed as an extension of the Pacific's exotic waterscapes, evoking romantic imaginaries of timebound places and people. As Orduz (2015) wrote in the article “The Crusade of Chefs to Save Fishing in the Pacific” for the Colombian digital newspaper *Las 2 Orillas*:

Fish of tender and white meat, aromatic and with crispy tail. You just have to close your eyes to feel on a beach in Chocó, between the sea wind and the murmur of the jungle. The only way for fish to arrive fresh to the table at any other corner of the country is by maintaining it cold since it is fished until it is cooked. This has been achieved by the alliance of restaurant owners from Bogotá and artisanal fishers from the Pacific.

Stories of the success of the ZEPA and the existence of sustainable fish supply chains spread along the Gulf of Tribugá. In 2013, MarViva, with support from BIODDED+, the environmental program of the United States Agency for International Development (USAID), expanded the process by creating a commercial partnership between a local

fish trading company and a group that owns nine restaurants in Bogotá, as well as a national supermarket chain. Due to the diversity of fishing practices along the Gulf, as well the lack of infrastructure, however, this process has been much more difficult than in the ZEPA. To trade sustainable fish, fishers need to change their fishing practices, both on land and at sea. They are required to fish with an icebox, comply with species and gear restrictions, follow size limits, and change their methods of fish handling to ensure high-quality meat. Angela, a restaurant fish trader who participated in local fish handling training, claimed that it was challenging to ensure that fishers followed their guidelines. For example, she had tried to prevent fishers from gutting fish at the beach, informing them it was better to do so offshore for hygiene reasons and to lessen the weight they carry back to shore. To her, such practices were logical, but many fishers refused. When we asked Ramiro, who fishes in Nuquí, whether he guts fish offshore, that he said he did not, and explained:

We believe the others [fish] when they see the guts down there, those from the same species, feel scared and go away. Look, when the fish school is moving and fish within the school do not hurt each other, but if another fish school from a different species comes to kill and eat them, when they see the guts they go away. The same happens if we throw the guts.

In Ramiro's coastal reality, throwing the guts overboard makes no sense because it scares fish away. Clashes over how and why to fish expose the complex interactions between different realities and the institutional arrangements they produce. These clashes also permeate trading practices, as mentioned by Carlos:

We take the fish using wheelbarrow to the airport, and there the police opens the box to check what is inside, then we pray that there are no delays for the rain. Once the meat arrives to Medellín, it is taken using a Thermos King to Bogotá where the restaurant measures the temperature and if it is above 4°C they do not receive it.

Among the associations that emerge from this assemblage, however, restaurants have started to interact and deal with the dynamics of fish and water in the Gulf of Tribugá. Now they know that fishers cannot catch fixed volumes of species, because many target multiple species. They are also aware that they must deal with periodic fish shortages linked to the

unstable dynamics of armed conflicts that temporarily interfere with fishing practices. More recently, there have been commercial efforts to trade black meat species, marketing them in the imaginary of exotic fish from the Pacific. The trajectories of this emergent commodity involve changing fish consumption patterns in Bogotá, as explained by Veronica, who supported the fisher training process:

The restaurants have started to offer species that they did not offer before. They are now part of the menu, things that people in Bogotá have never heard of, like a fish that is called *Berrugate* [triple-tail fish (*Lobotes pacificus*)]. They [the restaurants] originally said, "Oh it has such ugly name!" but little by little started to introduce it. The waitress and the people in the restaurant explained to the customers that it is one of the most exquisite things on the menu. This is a process. Obviously, the customer will not change their mind overnight, but it has to be done.

The commodification of species that were once only traded as milk by turning them into exotic fish exposes how the creation of MPAs has enabled added-value capitalist projects to intensify fish exploitation. All of this can increase the dependence between fishers, fish traders, and added-value fish supply chains. The restaurants that commercialize "responsible" fish catches enforce the emergence of a culture of eating fish in Bogotá as an experience that invokes the exotic Pacific. There are parallels here with the history of racial discrimination against Afro-descendant communities, where people and fish only matter when they are exoticized. Fish familiar to coastal people are rebranded as exotic in Bogotá. Similarly, Afro-descendants in Colombia are only valued for their cultural expressions (music, dances, poems, etc.). The imaginaries emerging through this assemblage freeze people and fish in time, placing them in remote "wild places" and rendering them invisible once they transgress categories (Wade 1993, 349).

Discussion and Conclusion

Rather than being a container of resources or transport surface ripe for exploitation, the meanings and representations that emerge from different fish assemblages reveal an ocean saturated with social interactions and identities. Fish representations result from the multiple associations between heterogeneous entities across time and space that cohere

and enact diverse coastal realities in the Gulf of Tribugá. We have used assemblage thinking to examine the role that institutional processes and fish themselves play in bringing disparate elements together, granting coherence to particular socio-natural processes. In doing so, we have navigated different representations of fish, seeing them as emerging from assembling processes that temporarily homogenize and delimit particular ways of knowing and engaging with fish (DeLanda 2016). Our analysis engages with the fluidity of oceans and its nonhuman entities, showing how intensifying political economies of fish constrain the trajectories of Afro-descendant coastal realities (Steinberg and Peters 2015). In exploring the socio-natural implications of these transformations, however, we reveal the active role that fish and situated institutions play in buffering these constraining processes.

Fish as milk, meat and conservation resources, and exotic are not only active but influence how human and nonhuman entities act; for instance, in terms of how they are being followed within and across waterscapes, transformed into commodities, and transported across space (Bear 2013). Coastal engagements with fish as milk primarily support a nurturing relationship between coastal people and the sea. This assemblage encompasses dark and pink meat species, which can be accessed via a *canalete* and constitute the main protein in coastal diets. The multiple associations between fish, people, and waterscapes enact fluid and relational understandings of space. Past human–fish experiences remain active, as memories of fish and places at sea shape current institutional processes and become entangled with the rhythms of water and fish. For example, *payaos*, in Coquí, notions of fish needing to rest during the night, inform the emergence of night fishing sanctions that prevent fishers from scaring fish away. In relation to fish as milk, it is impossible to separate people’s bodies from the strength of black meat fish, illustrating the relationality between human and nonhuman entities. Moreover, institutions such as *mano cambiada* and *minga*, which are ancestral practices not exclusive to fishing and shared between indigenous and Afro-descendant peoples in the Pacific, unveil how institutional processes become sustained as they produce shared meanings across different contexts. Emergent forms of collective action often lead to convivial interactions between fishers, places at sea, and fish. The scarcity of fish, however, challenges the temporal

coherence within this assemblage, particularly as fishers start to engage with the assemblage that turns fish to meat resources.

Fish as meat resources gathers together commercial species (white and pink meat, as well as tuna) that are capitalized in terms of quality, quantity, and value. This assemblage performs multiple associations between fish, meat, and money, where meat prices are primarily governed by external market forces and do not follow the movement of fish and fishers at sea. Although most fishers prefer to eat milk, they temporarily or permanently engage in this assemblage as a source of daily cash income. As fish move along supply chains, the information about who caught them, from where, and how is purposely “lost” through processes that hide the connections between fish, fishers, and the sea. Commercial fish species actively shape the temporal and spatial interactions within this assemblage, not only as fishers follow fish rhythm patterns along the ocean but as they battle against fish decomposition, relying on access to ice and transport (and consequently on traders) to turn fish bodies into meat. Emerging entities such as fishing associations have increased distrust among coastal dwellers and started to erode the reciprocal relations forged by the fish as milk assemblage. Moreover, in times of scarcity, dependency relations between fishers and traders limit local access to milk, posing a temporal threat to coastal food security. As fish as milk practices become gradually constrained by this assemblage, clashes between place-based institutional processes and external institutional arrangements emerge both on land and at sea. Fishers interacting in this assemblage, however, still rely on coastal reciprocity networks as the means to fulfill their basic needs (e.g., access to water, education, health assistance).

The scarcity induced by industrial overexploitation of fish and conservation discourses has also assembled and transformed fish into resources that need protection from humans. In this assemblage, fish become enacted as objects of study where their links with coastal dwellers are ignored. Waterscapes become biodiversity containers that need to be enclosed and regulated to ensure the protection of these species. Charismatic and commercial species are mainly enacted as fixed to places at sea, enforcing static and atemporal imaginaries of fish. Overlooking such complexity requires work—effort to devise new associations that legitimize global biodiversity conservation discourses. At times, though, fish themselves disrupt

these new configurations; for example, when their biophysical constraints across depth gradients unsettle the practice of “saving” protected species by returning them to the water. Here, scarce fish species acquire value through new enclosures and marketization processes. Importantly, along the Pacific Coast, enclosures have also emerged as a tool to defend marine social spaces from industrial fisheries and legitimize local authority over the sea (Satizábal and Batterbury 2018). Despite this, rather than returning the milk to the people, enclosures have added value in processes that continue to take it away.

By extension, the exotic fish assemblages resulted from the further intensification of market processes that added value to fish by connecting meat to global biodiversity discourses and fish markets. This assemblage emerges from the creation of MPAs in the northern Pacific, where sustainable value chains are performed as a solution to conserve fish resources, as well as to create fairer trading conditions for coastal dwellers. At the same time, this assemblage legitimizes the expansion of capitalist governance projects across partial noncapitalist spaces, a process that links fish meat (including milk) with gourmet restaurants in Bogotá. Here, fish meat is fresh, enacted as an extension of the exotic waterscapes in the Pacific, constructed through the lens of biodiversity conservation discourses. Colonial and romantic views of places in the Pacific are thereby reproduced—untouched wilderness, precariously occupied by ecologically noble fishers, turning fish and people into atemporal and exotic objects (Wade 1993; Ulloa 2005).

As new institutional arrangements are externally produced and enforced through market incentives, fishers and fish “in composition with” the Gulf’s waterscapes constrain the transformation of fishing practices (Bear 2013, 36). Moreover, fish prices remain mostly consistent, failing to respond to the costs that fishers face as they respond to changing dynamics of fish and water across space and time. As noted by de la Cadena (2015), in the Andes, indigenous and Afro-descendant peoples do not receive state recognition as they engage with externally constructed added-value commodification processes. Indeed, fishers and coastal dwellers continue to deal with limited access to basic services such as water, health care, electricity, sewage, pension, and transportation systems. They endure these difficulties in the context of the hardships of Colombia’s internal armed conflicts.

Our analysis exposes the different ways in which place-based institutional practices and fisheries’ political economies work through assemblages. This framework enables us to understand how certain practices have resisted change, despite being immersed in historical processes of marginalization. Moreover, the transition between these assemblages reveals a broader historical trend in the political economy of fish, where the scarcity induced by the industry is drawn on by biodiversity conservation discourses, in processes that add value to fish as a commodity. The creation of enclosures and rebranding of fish products in terms of sustainability emerges from these processes, driving market expansion and the intensification of fish overexploitation (Mansfield 2004a). In this regard, fish as meat and as conservation resources involve mutually reinforcing dynamics that induce the exploitation and alienation of fish from the water and the people. The neoliberalization of the ocean thus acts through phases of creative destruction, where “the struggle to maintain profitability sends capitalists racing off to explore all kinds of other [lucrative] possibilities” (Harvey 1989, 106; Mansfield 2004a). These processes enact realities that transform fishing practices, as a means to control the relationships between fish, people, sea, and land as they become entangled in external markets. In this context, fisheries governance tends to represent fish as isolated from water and people, neglecting their multiplicity and the enactment of diverse coastal realities. This has privileged those representations of fish that enable the accumulation of capital to dominate, influence, and inform private and state-led institutional processes.

Fish assemblages reinforce the coherence among the relations between different entities. In this process, shared understandings of social practices emerge, temporarily enabling certain institutional configurations to endure. When different realities meet and clash, however, fish bodies become sites of tension between socionatural, political, and economic forces (Bull 2011). Encounters between conservation NGO staff, park officials, coastal dwellers, restaurant staff, customers, fish traders, and fisheries authority officials fail to interpret and act on fish in a corresponding manner. When coastal dwellers talk about protecting fish, they usually see themselves as attached to them and entangled in the water, whereas those entities that shape the political economy of fish perform realities that alienate fish

from the people and from the sea. As such, the institutional configurations reinforced by the fish as milk assemblage are constrained by the exclusion of coastal Afro-descendant communities from state-led fisheries governance.

Going beyond earlier studies (Bear 2013; Steinberg and Peters 2015), we have engaged how place-based institutional processes become wrapped up and reconfigured through political economic changes within and through entangled assemblages. We stress the need to draw past and present ocean political economies into analysis of how institutional processes and human and nonhuman relations emerge and cohere as assemblages over time and space. In making political economy more explicit in assemblage thinking, we argue that future research could further engage with how varied politics and economy become entangled in, reinforced, and destabilized in assemblages. In using a wet ontology framework, we thus advocate for studies of geographies of the sea to adopt a deeper and explicit understanding of how ocean political economies intensify and discipline coastal dwellers to exert control and authority over complex, fluid realities (Todd 2014; Escobar 2016). In doing so, however, the value of assemblage thinking remains in how it enables a relational analysis of the elements and meanings of people's lived experiences and struggles situated in changing political economies. Drawing out and relating the violent exploitation of oceans that emerges from intensifying neoliberal political economies with the substance and meaning of lived experiences foregrounds a deeper understanding of the socionatural processes that constitute waterscapes and how human–nonhuman relations are produced and impacted therein (Ojeda 2016). In doing so, one can better understand how and why place-based institutions might (or might not) endure in such contexts and why situated investments and nourishment in these institutions through sustained human–fish interactions along the Gulf of Tribugá matter more than ever.

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Notes

1. Among the fishers interviewed, twelve traveled via a *canalete*, twenty-one using motorboats, and twenty-two transitioned between the two; thirty-four used diverse fishing gears depending on the season and access to fuel, forty-six used handlines, twenty-seven used longlines, ten used gillnets, and one used harpoons.
2. Seventy coastal dwellers perceived a decline in fish abundance: Sixty-six held industrial fisheries responsible, fifty-three also linked this decline to the use of gillnets, and twenty attributed it to the weather.
3. Milk refers to dark and pink meat (snappers—*Lutjanidae*) species, sold at \$4,000 COP/kg and \$6,000 COP/kg, respectively. White meat was sold at \$8,000 COP/kg.
4. Fuel price per gallon: Nuquí, \$13,500 COP; Bogotá, \$7,700 COP.
5. Transportation fees: plane, \$1,500 to \$2,500 COP/kg; boat, \$300 to \$400 COP/kg.
6. The restaurant paid: dark meat, \$21,000 COP/kg; white meat, \$23,000 COP/kg.

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