



Competing voices: Indigenous rights in the shadow of conventional fisheries management in the tropical rock lobster fishery in Torres Strait, Australia

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Abstract

Much progress has been made in recent decades in achieving high-level recognition of indigenous fishing rights. Despite these advances, actualization of indigenous rights to own and control marine resources has proven challenging. Insufficient attention to the centrality of power and its workings in fisheries are often the subject of critiques and of calls for more empirical research. This paper draws on interviews, participant observation, cognitive mapping, scenario workshops, and policy document review to examine power configurations and dynamics in the tropical rock lobster (TRL) fishery in Torres Strait (TS), Australia. Despite recognition of indigenous commercial fishing rights by the High Court in 2013, there have been only limited changes in how fisheries governance operates in the region. The current TRL management plan also risks entrenching non-indigenous interests in the fishery, thereby preventing Islanders from achieving their aspiration to fully own and control TS fisheries. Through an analysis drawing from Foucault's theory of governmentality and Blaser's political ontology framework, we show (1) how current fisheries management structures, processes and discourses are at odds with Islanders' conceptions of the fisheries; and (2) how the existing regime excludes and renders silent Islander priorities. Our findings extend to indigenous-state relations in other state-managed fisheries. We believe our proposed conceptual framework can be useful in unveiling power relations that constrain indigenous rights and in identifying transformation options. We conclude that a sea change in conventional fisheries governance arrangements is needed to respond to new imperatives and expectations around indigenous fishing rights and interests.

Keywords Power · Foucault · Governmentality · Political ontology · Fisheries governance · Indigenous management

Introduction

Legal recognition of indigenous rights to access and participate in commercial fisheries is regarded by Indigenous Peoples “as a critical step towards dismantling dependency and to achieving agency” (Davis and Jentoft, 2001: 237). Much progress has been made in recent decades in recognizing these rights. At the international level, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) provides for a right of self-determination which includes the free pursuit of economic, social, and cultural development

and for a right to own, use, and control resources, lands, and territories Indigenous Peoples possess by traditional ownership, occupation, or use. In 2015, the Voluntary Guidelines for Securing Small-Scale Fisheries explicitly acknowledged Indigenous Peoples and echoes the UNDRIP. Developments at the state level, such as Australia's Native Title Act (1993) which clarified that native title can extend to Indigenous fishing rights, also reflect established recognition of such rights.

Despite these advances, there is ample evidence that Indigenous rights are often inhibited in practice by a host of factors. First, constraints to Indigenous rights to access marine resources include narrow interpretation of Indigenous rights, contestation of Indigenous rights by non-Indigenous commercial fishers leading to conflicts, bureaucratic and legislative requirements that do not accommodate Indigenous fishing practices, and regulations and legislations based on concepts and promoting outcomes that contradict

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Indigenous interests and worldviews (Bess 2001; Wiber and Milley 2007; Ban et al. 2008; McCormack 2010; Richmond 2013; Turner et al. 2013). Indeed, Indigenous fisheries (similar to many non-Indigenous small-scale fisheries (e.g., Allison and Ellis 2001; Coulthard 2011; Weeratunge et al. 2014)) tend to be one component of a mixed economy, are socially and culturally embedded, and thus valued for their multiple contributions to material, relational, and subjective well-being (e.g., McCormack 2010; Thomassin 2016; Donkersloot et al. 2020; Hall 2021). In addition, Indigenous conceptions of well-being are usually underpinned by different worldviews about the nature of the fishing resource, fishers, and the environment, and the relationships and responsibilities between these (e.g., Prosper et al. 2011; Latulippe 2017; Reid et al. 2021; Schiefer 2021). Such issues go beyond conventional fisheries management and are typically not considered in access decisions.

Second, actualization of Indigenous rights to own and control marine resources has been especially difficult to achieve (Capistrano and Charles 2012), and these rights continue to be limited by hegemonic claims of the state (Davis and Jentoft 2001; Carothers 2011; Butterly 2013a; Turner et al. 2013). Indigenous rights and systems of tenure tend to be ignored on the basis that sea space cannot be a property (Jackson 1995; Mulrennan and Scott 2000). As Mulrennan and Scott (2000, 681) explain, coastal Indigenous Peoples are faced with a “double jeopardy of exclusion — jurisdictional and proprietary”.

Issues of power and their influence on social outcomes are widely acknowledged in the fields of natural resource management including fisheries. Yet, insufficient attention to the centrality of power and to its workings in the exercise of fisheries governance and management are often the subject of critiques and of calls for more empirical research (Jentoft 2007, 2017; Fabinyi et al. 2014; Van Assche et al. 2017b). We address this gap by analyzing power configurations and dynamics in the tropical rock lobster (TRL), or *kaiar*, fishery in Torres Strait (TS), Australia.

This case is ideal to explore the tensions between Indigenous rights and conventional fisheries management in State-controlled fisheries. In 2013, Indigenous TS Islanders made history when Australia’s High Court unanimously recognized for the first time native title commercial fishing rights in relation to the largest native title determination to the sea in the country (Butterly 2013b). Known as the “Sea Claim” (*Akiba vs Commonwealth of Australia* 2013), this ruling was heralded as a victory for Indigenous rights that would support Islanders’ aspirations of a 100% owned and managed fisheries (TSRA 2014). However, to date, the Sea Claim has not yielded concrete results in that regard. Indeed, there have been limited changes in how fisheries governance operates in the region and TRL management has steadily continued on the same path towards

the implementation of a quota management system. The latest version of the management plan (Australian Government 2018) does not reference nor acknowledge native title rights in relation to TRL, does not increase Islander TRL ownership nor their ability to control and manage this resource, and runs the risk of entrenching non-Indigenous interests in the fishery. A review of the allocation of quota units to Islanders is due to commence before December 1, 2022. What type of quota will be used and who the quota holders will be still need to be defined and are contentious aspects of the management plan. As the review deadline is approaching, an analysis of how current power structures and dynamics shape constraints to and opportunities for advancing Islanders’ rights is timely.

Our analysis draws on Foucault’s theory of governmentality (Foucault 1991a, b) and Blaser’s political ontology framework (Blaser 2013a, b, 2014). We propose an integrated conceptual framework that supports a focused analysis of the construction and practices of the State while being sensitive to issues of ontological dissonance. Our goal is to identify what is revealed and what is hidden in the current dominating discourses surrounding the TRL/*kaiar* fishery and to understand structures and technologies of control. By doing so, we hope to contribute to the advancement of Indigenous rights as knowing about power can alter its dynamics. Indeed, transformation options are easier to identify when dependencies in governance pathways are diagnosed (Van Assche et al. 2017b).

We begin by first describing our conceptual framework and its rationale and the research methods used. We introduce the TS TRL fishery before applying our conceptual framework to examine the past and present exercise of fishery governance in relation to Islander rights and aspirations, highlighting the conditions that enabled the development of the current management plan. Following our conceptual framework, we present our analysis in two parts. First, we describe the different institutional structures and processes that influence the governance and management of the TS TRL fishery and their embedded power differentials. Second, we compare the discourse of conventional fisheries management with Islander realities and aspirations focusing on connections and disconnections. We then discuss the implications of our findings in the TS context and highlight how the framing of fisheries obscures some indigenous interests and consciously excludes others. We argue that a sea change in conventional fisheries governance arrangements is needed to respond to new imperatives and expectations around Indigenous fishing rights and interests. We conclude that comprehensive shifts in institutional alignments and in existing power relations are necessary in fisheries in order to fully respect Indigenous rights, enhance Indigenous wellbeing, and improve fisheries governance and management.

Investigating power and constraints to indigenous rights in fisheries

Power is a fundamental concept of the social sciences that has inspired a large scholarship. Epstein et al. (2014, 113) delineates three broad categories of “the many competing and overlapping conceptualizations of power that exist across social scientific disciplines”: materialist, discursive, and institutional. Foucault is largely known, and referred to, for his contributions to the discursive conceptualization (Foucault 1980). While an important focus of his work, Foucault did not, however, limit his investigations to discourse. His theory of the entwining of power and knowledge — the power/knowledge concept — offers the possibility to engage with all three categories of power.

Van Assche et al. (2017a, b) consider that the potential of Foucault’s work to the field of natural resource management (NRM) has not yet been realized and they offer compelling arguments for applying his analytics to NRM policies and practices. They contend that the lens of power/knowledge provides a valuable tool to understand how their configurations in current regimes affect sustainability, social justice, and economic development. Unraveling power/knowledge configurations, they continue, can “bring clarity to distributions of benefits and can illuminate the connections between thinking and organizing that are in some ways enabling, in other ways disabling governance adaptation” (Van Assche et al. 2017a, 248). By understanding governance pathways, one can determine how to loosen or replace undesirable connections to better respond to societal needs. They assert that Foucault can also be useful in identifying sites of resistance to change that can be difficult to reveal and disentangle as power/knowledge configurations and institutional structures shape each other over time. Indeed, resistance to change can be located within institutions, or in alternative power/knowledge configurations, or it can be a product of actors strategizing to keep their interests intact or, most likely, be a combination of all three (Van Assche et al. 2017a). Finally, exploring how competing NRM discourses consider the interplay between social and ecological systems can expose how “they reduce complexity in their understanding of the effects of resource use and extraction and even become blind for many of the social and environmental problems that it creates” (Van Assche et al. 2017b, 312).

Foucault’s governmentality framework is particularly useful for investigating networks of governance by drawing attention to discontinuities and change in practices and norms (Massey and Rees 2004; Agamben 2009). Foucault (1991c, 55) recognizes that at any point in time, there are multiple diverging and competing systems and discourses

that interact in “a complex relationship of successive displacements”. Governmentality analysis examines the conditions that make the emergence and hegemony of certain discourses possible at a specific time and how power relations are expressed through modes of authority (Foucault 1991c; Massey and Rees 2004). Langdon (2018) argues that an examination of both the construction and the practice of the State are necessary to understand how conventional fisheries management systems infringe on Indigenous rights and to identify potential levers of change. In Foucauldian terms, such an enquiry requires investigating the “apparatus” (*dispositif*) of governmentality and its “technologies” (*techniques*), i.e., the network formed by the dominant and competing discourses, structures, institutions, knowledge and processes (e.g., laws, regulations and enforcement measures) used in fisheries governance and management as well as how power/knowledge is exercised in everyday practice (Foucault 1991a, b).

Discourse is central to the understanding of governmentality. It transforms individuals into “subjects”, contains claims about its own authority and legitimacy, and prescribes practices for dealing with subjects (Foucault 1982, 1991b). As Hall (1997, 44) explains:

It is important to note that the concept of *discourse* in [Foucault’s] usage is not purely a ‘linguistic’ concept. It is about language *and* practice. It attempts to overcome the traditional distinction between what one *says* (language) and what one *does* (practice). Discourse (...) defines and produces the objects of our knowledge. It governs the way that a topic can be meaningfully talked about and reasoned about. It also influences how ideas are put into practice and used to regulate the conduct of others. Just as a discourse ‘rules in’ certain ways of talking about a topic, defining an acceptable and intelligible way to talk, write, or conduct oneself, so also, by definition, it ‘rules out’, limits and restricts other ways of talking, of conducting ourselves in relation to the topic or constructing knowledge about it.”

Investigating power/knowledge in fisheries must also include an examination of the ontology underpinning “taken-for-granted” concepts, especially when dealing with Indigenous Peoples (Howitt and Suchet-Pearson 2006). Blaser (2009; 2013a, b) warns that “environmental” conflicts may be ontological in nature, meaning that the issue is not simply about different perspectives on the world “out there”, but rather about *what* is there. As examples, he cites two environmental conflicts where Indigenous Peoples speak about the resource at stake as relatives. He argues that in these cases “the Indigenous Peoples are defending not simply access to and control over resources; they are defending complex webs of relations between humans and nonhumans,

relations that, for them, are better expressed in the language of kinship than in the language of property” (Blaser 2013a, 14). Reducing radical differences about reality (ontological differences) to just another cultural perspective on nature (epistemological differences), Blaser (2013a, 21) continues, “reinforc[es] modern ontological assumptions that are central to the very process by which Indigenous worlds are being destroyed”. Indeed, framing such differences as a cultural perspective on how resources should be managed allows those in power to ignore or dismiss Indigenous demands as “unreasonable”, rather than challenge basic assumptions (i.e., an appropriate treatment for a brother can be rejected as preposterous for a resource considered to exist to serve human needs). While Blaser specifies that not all conflicts involving Indigenous Peoples are ontological, he cautions against assuming what the conflict is about to avoid perpetuating existing power relations.

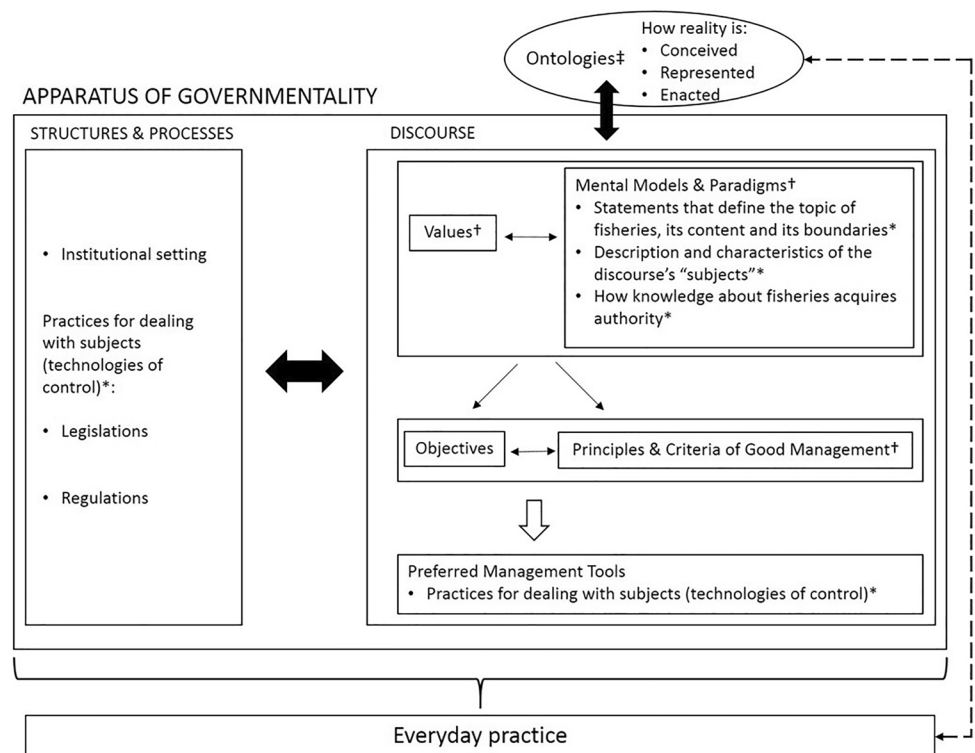
In this paper, we introduce an integrated conceptual framework that allows for a focused analysis of the construction and practices of the State while being sensitive to issues of ontological dissonance (Fig. 1). Song et al. (2013) have suggested that investigating images (i.e., mental models), values, and principles held by fisheries actors and linking them to the analytics of governmentality could reveal intergroup power dynamics and thereby improve the governability of fisheries. While these elements are addressed in comprehensive Foucauldian discourse analysis, we contend that they can provide the basis for a more targeted analysis. Our proposed framework situates these elements within

Foucault’s larger concept of the “apparatus of governmentality” and links with Blaser’s political ontology framework (Blaser 2013a, b, 2014). For Blaser (2013a), ontologies operate simultaneously in three “registers” corresponding to how reality is conceived, represented, and enacted. While it could be argued that some of these aspects are addressed in the concept of governmentality (e.g., enactments of reality), Foucault does not explicitly refer to ontologies nor to different conceptions of realities. To reflect this, we located ontologies outside the box representing the apparatus of governmentality in Fig. 1. Although we do not engage in a deep exploration of different ontologies in this paper, we are alert to the potential co-existence of and collisions between multiple conceptions, representations, and enactments of reality. While our framework illustrates ontology, mental models, values, and principles as discrete elements, we recognize there is a great amount of interactions and overlaps between these and the challenge of differentiating one from another.

Methods

This article revisits research undertaken as part of the first author’s doctoral project. Primary data was collected during the course of four visits to Australia between 2008 and 2011 totalling 13 months. Eleven months were spent in TS, focusing on the three islands with the highest Indigenous participation in the TRL fishery (Thursday Island, Badu, and Yam). The project applied a qualitatively driven research design

Fig. 1 Conceptual framework drawn from Foucault’s theory of governmentality and Blaser’s political ontology framework. *Central elements of discourse analysis following Foucault (Hall 1997). †Meta-level governance elements from the interactive governance framework (Song et al. 2013). ‡Ontologies following the political ontology framework (Blaser 2013a)



(Morse and Niehaus 2016) with a core component consisting of semi- and unstructured interviews and participant observation. Three additional methods were used concurrently as supplementary components: preference ranking interviews (adapted from Walmsley et al. 2005) focusing on different scenarios of catch and effort and the underlying reasons for these preferences (e.g., circumstances, values, personal traits), cognitive mapping of the *kaiar* fishery (adapted from Özesmi and Özesmi 2004, see below), and future scenarios (adapted from Evans et al. 2006) investigating the potential impacts of different management options proposed by the Australian Fisheries Management Authority (AFMA). Details about participants for each field trip and additional details about methods can be found in the first author's doctoral thesis (Lalancette 2017b).

Ninety-one Islanders were interviewed iteratively, resulting in a total of 119 semi-structured and 90 unstructured interviews. The great majority are TRL fishers (including full-time, part-time, and casual fishers), but a few elders, spouses, factory managers, and local leaders were also interviewed.

After the first round of fieldwork, a preliminary collective cognitive map of Islanders' behavior and decision-making processes in the *kaiar* fishery was built using relevant information drawn from semi-structured, unstructured, and preference ranking interviews (i.e., from 91 Islanders). The map focused on fishing motivations and strategies and methods (i.e., why, how, how much, and when Islander harvest *kaiar*), as well as on fishing barriers and facilitators (e.g., economic, social, and cultural influencing factors). The map took into account different and changing fishing identities (e.g., casual, part-time, and full-time fishers). The collective cognitive map was further developed through an iterative process where knowledge gaps and uncertainties were identified in the collective cognitive map in progress and missing information pursued through additional interviews. Factors mentioned by interviewees were combined into higher lever variables or categories using qualitative aggregation to simplify the map (Özesmi and Özesmi 2004; Papageorgiou and Kontogianni 2012). Once a solid "skeleton map" was achieved, it was completed and validated by 34 Islanders in 2011. On Badu and Yam Islands, validation occurred in two steps. First, small focus group sessions were conducted with the three local rangers (five of which are active fishers and the sixth an elder well-respected for his traditional knowledge). They were asked to (re-)create and complete the map by spatially organizing labeled and illustrated cards representing key elements identified through interviews and by drawing arrows to identify linkages and connections between variables. A set of blank cards was available to add new variables if needed. This was followed by an additional round of qualitative aggregation. The whole collective cognitive map was then finalized and validated in a focus group with

scenario workshop participants using the same technique. There were 16 and 8 participants on Yam and Badu Islands, respectively. They included casual, part-time, and full-time fishers, women, youth, and elders. On Thursday Island, validation was done through interviews with four key informants (full-time fishers).

Semi-structured interviews and informal conversations were also conducted with fisheries scientists from the Commonwealth Scientific and Industrial Organisation (CSIRO), and staff members from the Australian Fisheries Management Authority (AFMA) and from the Torres Strait Regional Authority (TSRA). Finally, all AFMA managers that served in TS since the opening of the office on Thursday Island in 1989 until 2014 were interviewed. The two last managers were interviewed while in office. This data is supplemented by a review of policy documents and official meeting minutes extending the coverage of our analysis to 2021 and by the second author's experience and insights derived from more than three decades of research partnering with Islanders.

All interview and workshop material and field notes were coded and analyzed in Atlas.ti following the computer-assisted Notice-Collect-Think (NCT) process described by Friese (2012). In summary, the data was coded using a mix of inductively and deductively developed codes. During the first stage of coding, themes were identified applying descriptive or topic coding (Miles et al. 2014) while elements of discourse (e.g., mental models, values, principles) were identified with the framework introduced in Fig. 1 in mind, as suggested in provisional coding (Miles et al. 2014). For mental models, particular attention was paid to identifying images, analogies, and metaphors. After a first point of saturation was reached, the code list was structured into categories corresponding to the elements of discourse presented in our framework and different levels of subcategories derived empirically. During second-stage coding, the structured list of codes was applied to the rest of the material, while continuously refining the code list as needed. The different elements of discourse were then queried and all citations under each were reviewed. In this paper, we focus on the most representative elements, i.e., those that were part of the collective cognitive map and/or cited by an overwhelming majority of Islanders or subgroup of Islanders (e.g., part-time fishers).

Study site: the TS TRL fishery

TS is located between Australia and Papua New Guinea (PNG) (Fig. 2) and is the traditional territory of indigenous TS Islanders and Papua New Guineans from the southeast coast of PNG. TS Islanders are of Melanesian descent and include several communities living on numerous islands within the strait (estimated at 6626 people in 2016) as well as a large population who live

25% of the Australian total allowable catch (TAC) under the *Torres Strait Treaty* (more on this later).

Output controls² have been under discussion since 2005 when the Protected Zone Joint Authority (PZJA) first agreed to introduce a TAC for the TRL fishery. Negotiations over quota allocations between the indigenous and non-indigenous sectors have been very contentious because Islanders consider that non-indigenous fishers are accessing an unfair portion of the catch (Lalancette 2017a). Islanders demanded at least 70% of the Australian share of the TAC at the outset of TAC management with the objective of achieving full ownership of the TRL fishery (Hand 2008). The Commonwealth conducted voluntary buy-backs of non-indigenous licenses which brought Islanders' share to approximately 56% and negotiations were at a deadlock for years. In 2014, in the wake of the Sea Claim win, it was widely anticipated that fisheries management would undergo profound transformations. The PZJA committed to support Islanders' aspiration for 100% ownership (PZJA 2014) and the TSRA began drafting a roadmap to reach this goal (TSRA 2014). However, the roadmap was never finalized and the draft management plan continued on the same course until its formal approval in 2018.

The following sections analyze the fisheries governance and management apparatus in TS closely following the framework in Fig. 1. We do so in two parts: we begin with the structures and processes pertaining to the TS TRL fishery (left-hand side box in Fig. 1) and then address the central elements of discourse from the official fisheries management discourse and Islander realities (right-hand side box in Fig. 1). Each subheading in these sections corresponds to an element referred to in Fig. 1.

The apparatus of governmentality: structures and processes

The official fisheries management apparatus in TS comprises a complex structure that tightly aligns legislation, regulations, and fisheries science. We provide an overview of this assemblage and highlight dependencies, rigidities, and direct impacts on Islanders.

² Output controls are fisheries measures that control what and how much people fish. They include quantitative catch limits such as a total allowable catch (TAC) which can be further allocated or not as quotas to different subgroups. They also include qualitative measures such as size limits, prohibition on taking certain species or harvesting certain maturity stages. In contrast, input controls are measures that target how, when, and/or where people fish. Popular input controls include fishing seasons, limits on the number of licenses, boat sizes, gear regulations, and spatial areas (Morison 2004; Bellido et al. 2020).

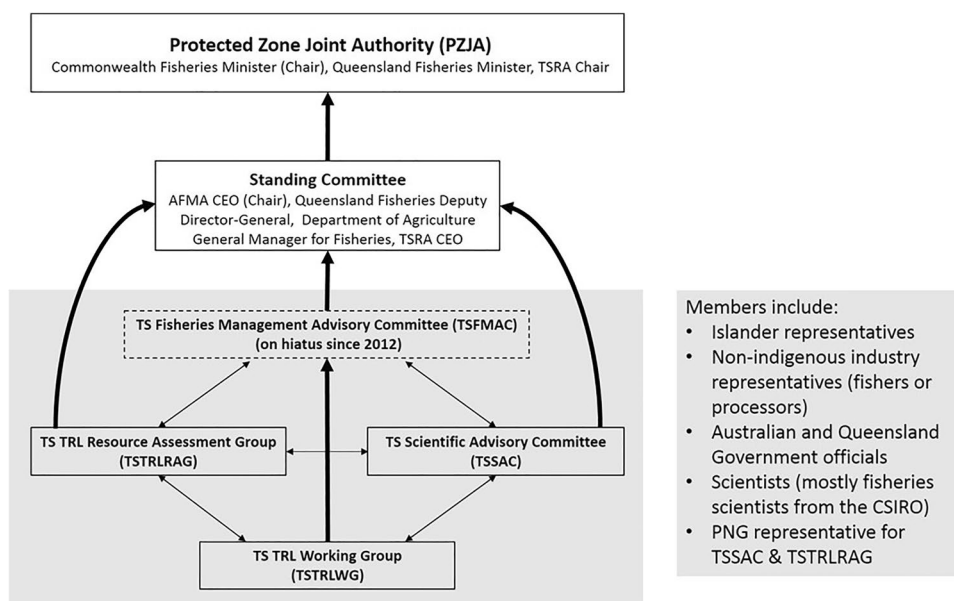
Legislative framework

Due to its location, TS is subject to a plethora of legislations and competing jurisdictions that limit and control movements and permitted activities in the region. At the international level, the regime of transit passage applies to TS pursuant to the United Nations Convention on the Law of the Sea. This regime prevents Strait States from interfering with navigation and thus provides user States unlimited and maximum freedom of passage (Spadi 2000; Roberts 2006). TS is also the site of an international border between Australia and PNG. The *Torres Strait Treaty (1985)* is an international arrangement that defines a complex set of jurisdictional lines between the two countries and established an area known as the Torres Strait Protected Zone (TSPZ) (Fig. 2). The principal purpose of the TSPZ “is to acknowledge and protect the traditional way of life and livelihood of the traditional inhabitants including their traditional fishing and free movement”. Indigenous Peoples of TS and of coastal PNG have the right to access and use land and marine areas within or adjacent to the TSPZ for traditional activities such as visits and subsistence activities, including harvesting of protected species (e.g., dugong and turtles). However, everyday movements of traditional inhabitants on both sides of the border are negatively affected by immigration, customs, quarantine, and health procedures. Regarding fishing specifically, the TS Treaty recognizes the primacy of traditional fishing³ over commercial fishing interests in the TSPZ. Although traditional fishing is allowed throughout the TSPZ, no commercial fishing can be conducted across the fisheries jurisdiction line without a license endorsement of the other country. The enacting legislation for the TS Treaty in Australia is the Commonwealth Torres Strait Fisheries Act (1984). It defines fisheries management objectives closely following the TS Treaty and established the Protected Zone Joint Authority (PZJA) as the highest governance body for fisheries in TS.

In recent decades, indigenous TS Islanders have gained legal recognition through the Australian common law of Native Title that their rights and interests to their lands come from their traditional laws and customs. In 2013, native title recognition was extended to an area covering approximately 37,800 km² of sea, resulting in the largest marine native title claim in Australia (Butterly 2013b). The Sea Claim does not recognize exclusive rights to resources for Islanders nor does it confer the right to control the conduct of others. However, it recognizes the right of Islanders to access

³ The TS Treaty defines traditional fishing as “the taking, by traditional inhabitants for their own or their dependents' consumption or for use in the course of other traditional activities, of the living natural resources of the sea, seabed, estuaries, and coastal tidal areas, including dugong and turtle” (art. 1 (1)).

Fig. 3 Consultative structure of the Protected Zone Joint Authority (PZJA). Thick and thin lines indicate primary and secondary lines of communication respectively. Adapted from (PZJA 2016, 7)



and take resources for any purpose, including for trading or commercial purposes. While the Sea Claim is a significant legal decision for potentially advancing Islander sea rights, it is constrained by the prescriptions of the *Native Title Act* and its delegated legislations. For example, once Native Title is recognized, a Registered Native Title Body Corporate must be established in accordance with pre-defined functions, characteristics, and procedures under the framework of Australian law. The imposition of a corporate model creates problems for Islanders in terms of operation, representation, and authority among other constraints (for a detailed legal and anthropological analysis, see Mantziaris and Martin 2000).

Governance structures and processes

Fisheries governance in TS operates through a technocratic structure in which many different government agencies and political levels interact (Fig. 3). It is based on a model that essentially mirrors the structure imposed on other Commonwealth-managed fisheries, except for the PZJA which is a significant departure. In short, it is composed of advisory bodies that share information to the Standing Committee which then provides strategic and operational advice to the PZJA which is responsible for decision-making.

Following Native Title recognition for their land territories, Islanders successfully expanded their role in the consultative structure, but their decision-making power remains limited. Islanders are represented in each committee either by individual Islanders or by the Torres Strait Regional Authority (TSRA). The TSRA is an Australian Government Statutory Authority established under the *Aboriginal and*

Torres Strait Islander Commission Act (1989).⁴ It has the responsibility to develop, implement, and monitor programs for indigenous people in TS, advise the Minister for Indigenous Affairs, and protect the *Ailan Kastom*⁵ of TS Islanders living in the TS region (TSRA 2016). The TSRA Chair became a member of the PZJA in 2002, joining the fisheries ministers at both the federal and state (Queensland) levels. However, the TSRA's influence is constrained as the Commonwealth Minister has the casting vote in case of disagreement between its members (Commonwealth Torres Strait Fisheries Act 1984, art. 40). The Malu Lamar Corporation (the Registered Native Title Body Corporate for the Sea Claim) is not a member of the PZJA nor of any consultative group. However, in August 2015, it formally requested PZJA membership and that the Standing Committee be replaced by an elected management committee. The PZJA agreed to consider the request for representation if the Malu Lamar Corporation submits a paper justifying its request (PZJA 2015). To our knowledge, there have been no new developments regarding this issue.

Meaningful Islander participation within the structure is impeded for various reasons. First, Islander issues and concerns must fit within the pre-defined composition, mandate, and rules of operation of each particular advisory group or consultation process about new management policies and regulations (AFMA on behalf of the PZJA 2008). The TS TRL Working Group (TSTRLWG) allows for broader

⁴ Now known as the *Aboriginal and Torres Strait Islander (ATSI) Act 2005*.

⁵ *Ailan Kastom* refers to the body of customs, traditions, observances and beliefs tied to Islander culture. These long-standing institutions are rooted in traditional stories and creation myths.

considerations, but these “ordinarily, (...) [should] deal with the fishery specific issues” (AFMA on behalf of the PZJA 2008, 7). This framing goes against Islander conceptions and everyday practices where subsistence and commercial fishing for different species are intermeshed with social, cultural, and spiritual considerations. Also, the Working Group was the only body that did not directly report to the Standing Committee. It does so since 2012, but only because the TS Fisheries Management Advisory Committee (TSFMAC) has stopped operating. During 2008–2013, Islanders had to resort to other political means to persuasively protest against original allocation shares for the TRL fishery agreed to by the PZJA. It is telling that they were successful in stalling decisions by boycotting the TSTRWLG rather than engaging with it (see Lalancette 2017a).

Second, even if Islanders are able to voice their concerns within the set frame, there are no requirements for Islander perspectives to be acted upon. Indeed, these can simply be “noted” by the PZJA and effectively cast aside. This was made painfully clear during the development of the TRL management plan. The TSRA, the Islander fisher-led Torres Strait Fisheries Association, and Malu Lamar provided official comments during the exposure draft consultation in 2016. The Malu Lamar submission was especially elaborate and reiterated many points they had made in relation to an earlier TRL draft management plan released in 2015. The main concerns and demands expressed by Islanders relate to the quota share allocated to the non-indigenous sector, the fact that the plan does not acknowledge Native Title rights or Native Title holders, the inability of the plan to protect Native Title rights and the traditional way of life and livelihood of traditional inhabitants, the absence of measures to advance Islander economic development and ownership of the fishery, and the risk posed by quota leasing of further entrenching and expanding non-indigenous interests in the fishery. None of Islanders’ concerns and demands are reflected in the final plan. In fact, there are no substantial change in content between the exposure draft and the final plan which casts doubts on the usefulness of the PZJA consultation process.

Third, Islanders must contend with other powerful actors who are advantaged by and reinforce the dominating official discourse. The Australian Fisheries Management authority (AFMA) and the Commonwealth Scientific and Industrial Organisation (CSIRO) have considerable influence. AFMA’s CEO is a member of the Standing Committee along with senior representatives from the TSRA, and from the Queensland and Commonwealth Fisheries Departments (PZJA 2016). The Standing Committee is very influential and two AFMA managers indicated in interviews that its recommendations are usually adopted at the PZJA level. The agencies that sit on the Standing Committee oversee the implementation of

the PZJA’s agreed policy commitments. In order to improve accountability and efficiency, some efforts have been made in recent years to transfer different management tasks and responsibilities to the AFMA office based in TS. In addition, AFMA acts since 2010 as Standing Committee Chair and Secretariat as well as the PZJA Secretariat, consolidating its influence. CSIRO scientists occupy many of the scientific positions within the governance structure. There is a high level of trust and good relationships between AFMA personnel based on Thursday Island and CSIRO scientists working on TRL stock assessment. These actors work closely together and interact with one another on many consultative committees. Although they do not always agree, they share a similar vision of fisheries management. CSIRO scientists are also favored by the dominant discourses that prioritize fisheries science. This is evidenced by the TS Scientific Advisory Committee (TSSAC) funding priorities. Since it reconvened in 2008 to establish the strategic research direction in TS, the TSSAC has funded 37 research projects. Twenty-nine of these address issues related to the health of the stock of marine resources and 22 were carried out by the CSIRO. While financial details are only available for a few years in PZJA annual reports, they make it clear that CSIRO has received the bulk of the TSSAC budget which has amounted to approximately 5 million AUD in over the last 10 years.

Regulatory environment of the TRL fishery

Commercial fishing regulations comprise different types of licenses and input controls that apply to both indigenous and non-indigenous fishers (listed in Table 1). These are typical measures except for the interim measures that were originally introduced to control non-indigenous effort as a strategy to promote Islander economic development and recently to also restrain their catch in attempt to avoid exceeding the nominal TAC.

In 1984, a community license system was put in place to cover commercial fishing for the indigenous sector. In 1999, the PZJA changed this community system and imposed licenses for individual dinghies (Traditional Inhabitant Boat (TIB) licenses) instead. To be eligible, traditional inhabitants must first be recognized by lodging a “Torres Strait Traditional Inhabitants ID Form” that has been supported by the councilor of the relevant community and the mayor of the same council. TIB and non-indigenous fishing boat licenses are transferable and both have the same minimal fees. Islanders protested that licenses were infringing on their rights as traditional owners. These arguments were largely dismissed by fisheries agencies as being unrelated to the issue of licensing and as being politically motivated. However, in 2010, the Commonwealth, the State of Queensland, and

Table 1 TS TRL fishery commercial fishing regulations

Regulation	Type		Detail
License	Boat	•TS traditional inhabitant boat (TIB)	- Limited to traditional inhabitants - Open entry
		•TS fishing boat (also referred to as transferable vessel holder — TVH)	- Held almost exclusively by non-Indigenous fishers - Limited entry since 1985
	Master Fisherman Processor/carrier		Required to operate a non-traditional vessel Required to process and carry commercial products
Input controls	Fishing season		December 1st to September 30 inclusive
	Hookah seasonal ban		December 1st to January 31st
	Fishing method		Harvest by hand or with the use of a hand held instrument, such as a spear or scoop net
	Minimum size Processing or carrying prohibition		115 mm tail size or 90 mm carapace length TRL meat removed from any part
Interim measures*	Monthly hookah closure		6–7 days prohibition to use hookah during moon tide
	Tender reduction		30% reduction for non-indigenous vessels

*Interim measures have been negotiated each year and were adopted almost every year since 2003

the Commercial Fishing Parties (non-traditional fishers and marketing agents/buyers) appealed the Sea Claim decision recognizing Islander non-exclusive commercial fishing rights rendered by the Federal Court of Australia, arguing *that fishing licenses had extinguished Islander commercial rights*. This argument was eventually rejected by the High Court, but the State nevertheless attempted to use licenses as a technology of control in the Foucauldian sense, confirming Islanders' original concerns.

The TRL management plan commenced on December 1, 2018. It originally established the traditional inhabitant quota share at 56.2% of the Australian quota. This share was increased shortly after to 66.17% (Australian Government 2018). Non-indigenous fishers are allocated individual transferable quotas (ITQs) while the Islander share is held in trust by the TSRA until the PZJA reviews the allocation of quota units to the sector which is due to begin before December 1, 2022. The plan lists three options that the PZJA may consider: (a) allocation to an NGO, (b) allocation to individual fishers, or (c) a combination of options (a) and (b). Earlier discussions of quota management included the option of allocating quota to individual Islander communities or island clusters — an option viewed favorably by many Islanders (Lalancette 2017a). However, this option was never mentioned in any draft or approved versions of the TRL management plan. As mentioned previously, the management plan does not acknowledge the commercial fishing rights recognized in the Sea Claim nor the PZJA's previous commitment regarding full ownership. It does not provide any mechanism for

Islanders to increase their share besides buying non-indigenous licenses, making Islanders' aspiration of 100% TRL ownership dependent on their financial capacity and the willingness of non-indigenous license holders to sell. The company MG Kailis is a major buyer of seafood in TS and owns 5 non-indigenous vertically integrated licenses. With its significant financial capital, it is in a position to buy other non-indigenous licenses and quota, consolidating its interests in the fishery.

The apparatus of governmentality: central elements of discourse

This section examines the official fisheries management discourse and Islander realities focusing on the central elements of discourse identified in Fig. 1. In the text below, we group certain of those elements to highlight contrasts, but a detailed comparison that mirrors the categories of Fig. 1 is presented in Table 2.

We first analyze the fisheries management discourse. While we focus on the official version, we acknowledge that discourse is dynamic and contested. Many AFMA managers made a distinction in interviews between their personal views and those from the agency they represented. We then examine the same discourse elements in Islander life and again note that Islanders are a heterogeneous group with multiple shifting perspectives. We attempt to represent this diversity but cannot do justice to all the nuances here.

Table 2 Comparison of key elements of discourse according to our framework between the fisheries official discourse and Islander discourses

	Islanders	Fisheries management
Ontology, paradigms, and mental models	<ul style="list-style-type: none"> ●The sea can be and is property (although this is conceived as “belonging to territory”) ●TS Islanders are the legitimate owners of resources within their sea territories ●Customary marine tenure (CMT): <ul style="list-style-type: none"> – Sea is owned, shared and managed – Stewardship responsibilities – Linked to identity – Sea places contain history ●<i>Kaiar</i> one element of a larger interconnected system <ul style="list-style-type: none"> – <i>Kaiar</i> not harvested is available for future use ●Subject: <ul style="list-style-type: none"> – Embedded in seascape, kinship and social relations – Different and varying motivations – Engaged in self-management through Islander institutions ●Wealth accumulation generally disparaged ●Ethic of sharing, moral economy ●Indigenous rights <ul style="list-style-type: none"> – Self-determination: economic development on their own terms 	<ul style="list-style-type: none"> ●The sea is an international commons, it cannot be owned ●The State is the legitimate owner of marine resources within its coastal waters ●Tragedy of the commons: <ul style="list-style-type: none"> – Sea is open access – Fishers solely driven by profit and must be controlled ●Maximum sustainable yield (MSY): <ul style="list-style-type: none"> – “Surplus biomass” of no value if not harvested – Focus on single species ●Subject: <ul style="list-style-type: none"> – Separate from and superior to nature – Rent-maximizing individual – Client in need of management “services” ●Neoliberal development ●Mainstreaming <ul style="list-style-type: none"> – Islanders are in a “pre-capitalist” state
Objectives and values	<ul style="list-style-type: none"> ●Ensure future availability of <i>kaiar</i> <ul style="list-style-type: none"> – Inter-generational equity – Stewardship responsibilities ●Economic development <ul style="list-style-type: none"> – Based on changing needs – Accommodate sociocultural values and responsibilities (e.g., time in community and with family) ●Ownership, management and control of the <i>kaiar</i> fishery ●Equitable distribution of benefits: equal opportunity (Islanders, between sectors) <ul style="list-style-type: none"> – Community well-being – Wealth accumulation discouraged ●Utilitarian value <ul style="list-style-type: none"> – Multiple functions 	<ul style="list-style-type: none"> ●Protect fishery resource <ul style="list-style-type: none"> – Conservation value ●Optimal utilization of TRL ●Increase (full time) employment opportunities for traditional inhabitants ●Acknowledge and protect the traditional way of life and livelihood of traditional inhabitants <ul style="list-style-type: none"> – Limited focus on traditional fishing ●Share the TAC with PNG in accordance to the TS Treaty ●Promote economic development in the TS area <ul style="list-style-type: none"> – Individual freedom – Wealth accumulation encouraged ●Utilitarian value <ul style="list-style-type: none"> – Commodity production
Criteria and principles	<ul style="list-style-type: none"> ●Controlled by Islanders ●Respect <i>Ailan Kastom</i> and <i>gud pasin</i> ●Economic viability of small-scale operations ●Respond to different and changing needs ●Take only what you need ●High local abundance in individual sea territories ●Based on holistic knowledge and daily observations of the environment ●Long-term view 	<ul style="list-style-type: none"> ●Effectiveness: compliance <ul style="list-style-type: none"> – Ease of enforcement – Legislating all rules – Formal mechanisms for enforcement by government agencies ●Respect obligations set out in legislation ●Maximize profit of the fishery (regional scale) ●Sustainability at the stock level: target biomass in function of MSY ●Based on the best available science <ul style="list-style-type: none"> – Objective and neutral (apolitical) ●Yearly temporal scale

Table 2 (continued)

	Islanders	Fisheries management
Preferred tools	<ul style="list-style-type: none"> ● Adjust effort based on: <ul style="list-style-type: none"> – CPUE – Costs (mostly fuel) and landing prices – Needs – Other economic and/or subsistence opportunities ● Decentralized: CMT ● Informal input controls by way of small-scale operations and cautious adoption of technology to control effort creep ● Enforcement of norms through social sanctions (e.g., “take only what you need”) ● Open entry for Islanders to promote equal opportunity ● Access to fishing grounds controlled by CMT 	<ul style="list-style-type: none"> ● Single-species and technical <ul style="list-style-type: none"> – Stock assessment – Visual surveys and catch monitoring – Target and limit reference points based on estimates of unfished spawning biomass ● Centralized ● Output controls: TAC ● Preference for ITQs ● Incentives to encourage and reward profit maximizing behavior (avoid regulation that limit fishing “efficiency”) ● Limited licensing <ul style="list-style-type: none"> – Remove latent effort

Official fisheries management discourse

Paradigms, mental models and ontological basis

The official discourse of fisheries management in TS does not occur in a vacuum: it is influenced by and influences other ideological trends. The concept of management itself is founded on unquestioned assumptions expected to be of universal relevance. First, the State considers itself the legitimate owner and steward of common resources, a status reinforced by the declaration of Exclusive Economic Zones (EEZ) and by the TS Treaty (with regards to conservation and management obligations). These constructs are what grant the State the authority to assign rights. They also create the discursive space for scientific management or managerial ecology to emerge (see Bavington 2002). Second, management is based on an ideal of progress defined by predictable productivity that can only be achieved through control. The legitimacy of management interventions rests on an ontology that situates humans as superior to and separate from nature (Howitt and Suchet-Pearson 2006). Lastly, fisheries science is based on a positivist paradigm and is believed to produce an objective and value-free representation of reality. Recommendations stemming from fisheries science are thus seen as apolitical and its authority is derived from this supposed neutrality.

At the national level, Australian public policy has been strongly informed by neoliberalism since the 1980s, emphasizing individual rationality, commodity production, efficiency, and marketization (Cahill 2007, 2010; Bayari 2012). There is a powerful rhetoric that promotes “mainstreaming” as the solution to indigenous economic development (Altman 2004; Dockery 2010). Indigenous economies are often characterized as “welfare dependence”, ignoring the vital contributions of subsistence, stewardship, and cultural activities (Howitt and Suchet-Pearson 2006). Indigenous

economies, including that of TS Islanders, are generally perceived as “pre-capitalist” (sensu St. Martin 2005), rather than a viable alternative to capitalist economies. It is assumed that given the proper incentives and capacity building, the “drivers of behavior” for Islanders will change allowing them to achieve a greater quality of life.

Conventional fisheries management in TS is informed by fisheries bioeconomics and the concept of maximum sustainable yield (MSY). Gordon (1954) redefined the fisheries problem from a sustainability problem to an economic one. He argued that since the sea is open to all, fishers will inevitably plunder marine resources because rent is dissipated by competition. Such patterns of overexploitation, the logic goes, can only be solved by assigning property rights, either private or public. In short, fisheries bioeconomics is well aligned with neoliberalism (Mansfield 2004) and is consistent with the “Tragedy of the Commons” metaphor (Hardin, 1968). In the MSY paradigm, fish populations are aggregated and reduced to abstract “biomass.” The theory posits that when the population size is at the point of maximum growth rate, it produces a “surplus” that if not harvested, is wasted. In TS, this view is reinforced due to the characteristics of the TRL migration and the highly variable stock-recruitment relationship (Dennis et al. 2015). The combination of MSY, neoliberalism, and bioeconomics means that the subject of fisheries management is constructed as a rent-maximizing individual whose behavior is to be *both* encouraged and controlled (see Johnsen et al. (2009) for a detailed historical account of the transformation of fish, fishers, and fishing practices into abstract biophysical systems and techno scientific networks).

Conventional fisheries management is conceived along the lines of a business model and this is most evident in the pervasive economic vocabulary and metaphors used in official documents and by AFMA managers. For example, during an interview, an AFMA manager quoted the

recommendation from an administrative review to “establish a one-stop fisheries management shop in TS”. Management responsibilities are framed as “services” and fishers as “business managers”, adding a client dimension to the definition of fisheries’ subjects.

Objectives and underlying values

The TS Fisheries Act defines the objectives of the PZJA as follows: to acknowledge and protect the traditional way of life and livelihood of traditional inhabitants (including traditional fishing), to protect and preserve the marine environment, to adopt necessary conservation measures in a way that will minimize any restrictive effects on traditional fishing, to manage commercial fisheries so as not to prejudice traditional fishing, to manage commercial fisheries for optimal utilization, to share the TAC with PNG in accordance to the TS Treaty, and to have regard, in developing and implementing licensing policy, to the desirability of promoting economic development in the TS area and employment opportunities for traditional inhabitants. The TS Treaty also specifies that the TAC for fisheries should be based on MSY.

The combination of these objectives in the official discourse promotes values of conservation and utilitarianism framed by MSY; i.e., the resource should be used up to a pre-determined target point and only conserved beyond that catch level. It also reflects neoliberal values such as individual freedom and wealth accumulation.

“Good management” and preferred management tools

The hallmark of good management is foremost to be able to achieve its objectives. As mentioned above, obligations set out in legislation concern the environment and resource sustainability, the traditional way of life and livelihood of traditional inhabitants, and economic development.

First, resource sustainability is defined as a function of the biomass required to achieve the MSY (B_{MSY}). This objective is thus evaluated in terms of abundance of a single species at the stock level on a yearly basis to ensure proper recruitment and the longevity of the fishery. This is reinforced by stock assessments that are conducted at these scales. The harvest strategy for the TS TRL fishery follows the internationally recognized “best practice” of setting target and limit reference points to determine needed fishery measures and closures (Plaganyi et al. 2019). Managing for sustainability is thus a technical endeavor that relies on stock assessment models that require information on stock status, spawning-recruitment relationships, and fishing mortality. Another principle of fisheries management is that it should be based on the best science available which in turn will seek to use the most “unbiased” data. Scientific management favors data collection about abundance through fishery-independent

data (i.e., visual surveys) and about catch rates through direct catch monitoring at landing or selling sites.

Second, the objectives of enhancing economic opportunities and economic development are interpreted as maximizing profit from the fishery.⁶ This was also mentioned as a general principle of good fisheries management by AFMA managers during interviews. According to this view, fishers should maximize their catch (within the limits of sustainability) at the lowest cost possible. The objective of optimal utilization is thus perfectly aligned with this principle. Maximizing profit implies adopting a certain level of technology to improve catch “efficiency”. Conventional fisheries management will thus favor measures that will encourage and reward this behavior and marginalize or devalue other sustainable alternatives.

Effective management depends on compliance and many interviewed managers mentioned ease of enforcement as an important principle when devising rules. Concerns about ease of enforcement, TRL stock sustainability and maximizing fishery profits explain fisheries agencies’ preference for output controls. A TAC facilitates optimal utilization by setting an explicit catch target and allows Australia and PNG to share the fishery as outlined in the TS Treaty in a transparent manner. Dividing the Australian share of the TAC between the Indigenous and non-indigenous sectors through explicit quotas is seen by the Commonwealth and managers as the best way to promote economic opportunities for Islanders. ITQs tend to be preferred by the Commonwealth for fisheries management as they encourage profit maximization behavior and often lead to consolidation which facilitates enforcement by reducing the number of license holders. Also, in line with the principle of profit maximization, managers tend to favor the removal of effort controls under TAC-management.

Other criteria referred to by AFMA managers are typically associated with good governance. The most common criteria mentioned were efficiency and effectiveness. Efficiency was discussed in relation to the timing and costs of decision-making and operations. This view favors centralization. Effectiveness was seen by AFMA managers as necessitating legislating all rules and having a mechanism for formal enforcement by government agencies. Transparency of decisions is also an important governance principle that guides the flow of research information in TS.

Finally, interviewed managers discussed matters of “good and bad practices”. The “open access” nature of the traditional inhabitant sector was the factor of greatest concern that was raised. Having a large latent effort goes against

⁶ The interpretation of economic efficiency in fisheries science as maximizing *economic* rent has been criticized as being misconstrued from its meaning in economic theory which rather promotes maximizing *resource* rent. This debate is beyond the scope of this paper, but for a detailed analysis see Bromley (2009).

the basics of conventional fisheries management. Limiting access is a fundamental measure designed to avoid the “race for fish” created by profit-maximizing individuals and to facilitate enforcement. Because this measure is not an option due to traditional inhabitants’ rights set out in the TS Treaty, output controls are seen as the only alternative to ensure future sustainability.

Islander discourses

Paradigms, mental models and ontological basis

As mentioned, Islanders and Islander fishers are neither homogeneous nor static groups. However, the degree of agreement with respect to ontology, paradigms, and mental models concerning the *kaiar* fishery, the fisher subject and *kaiar* is striking. Many Islanders used similar or identical analogies, images, and metaphors to explain and describe their external realities. It is how these constructs are interpreted and enacted in everyday life that produces the greatest level of diversity (as discussed in the following sections).

The Islander worldview is based on networks of relationships and an ethics of sharing, equity, and reciprocity (Mulrennan and Scott 2000; Scott and Mulrennan 2010) which challenge assumptions about separation, hierarchy, and progress as well as neoliberal assumptions about property, individualism, and profit maximization. Community is emphasized and many Islander fishers expressed in interviews willingness to trade-off some level of immediate individual wellbeing in favor of greater and long-term community wellbeing. Wealth accumulation is generally discouraged and commercial fishing is based on a moral economy with strong values and norms. Islander aspirations are broadly framed by indigenous rights to self-determination and they see rights to ownership as stemming from their detailed knowledge and continuous occupation and use of their land and sea territories (Nietschmann 1989; Scott and Mulrennan 2010) — a view that is also supported by Australian Native Title.

In the Islander world, the sea is not open access: it is effectively owned, controlled, managed, and shared following the rules of customary marine tenure (CMT). Islanders do not make strict distinctions between land and sea but rather recognize a continuum along environmental gradients (Nietschmann 1989; Mulrennan and Scott 2000; Sharp 2002). Access is controlled based on principles of stewardship, reciprocity, and kinship and social relations (Scott and Mulrennan 1999). Sea territories also contain history which is anchored in place and is an important component of one’s identity (Nietschmann 1989; Scott and Mulrennan 1999). As Nietschmann (1989, 60) stated, “A territory is social and cultural space as much as it is resource or subsistence space.” In interviews, some AFMA managers seemed unaware of the extent to which CMT rules are applied and enforced.

Our observations in the field indicate, as do those of others (e.g., Mulrennan, 2007; Thomassin, 2016), that CMT has not only strong legitimacy, it is also highly respected and enforced: most fishers do request permission to enter another sea domain and adhere to requirements and expectations imposed by owners.

In contrast to fisheries managers, for Islanders, a fisher is not defined by his past or current level of effort but by his knowledge of and relation to harvested species. This was evident during fieldwork when asking for recommendations for people to interview (i.e., during snowball sampling).

Finally, *kaiar* is seen as one element of a larger interconnected system and plays multiple roles in Islander life. The fishery is important economically as a primary or supplementary source of income, for its welfare functions and as one of the few employment alternatives in the region. It also enhances Islander well-being by supporting subsistence and food security, learning, knowledge transmission, cultural practices, and the maintenance of social and kinship networks and relations, ultimately strengthening Islander sense of attachment to place and identity. *Kaiar* that is not harvested is therefore not seen as a waste but as being available for other uses — now or in the future. Many Islanders expressed this through investment analogies and metaphors. As one part-time fisher in Yam stated: “The Sea is the bank that never says no.”

Objectives and underlying values

Islander objectives for the *kaiar* fishery are multiple and cut across the sustainability, cultural, economic, and political domains. Islanders’ overarching aspiration for self-determination is expressed through objectives of 100% ownership and control of territories and resources. Islanders are prepared to share resources, but on their own terms. As a full-time fisher from Badu stated:

Everybody has a right to work, you know. But as long as it’s being managed and controlled by those who own the sea.

The great majority of Islanders have a diversified livelihood with varying and flexible combinations of subsistence, state allowances, and employment in commercial fishing (*kaiar* and/or other species) and outside of fisheries. The combination of differences in terms of economic needs, capability, sociocultural obligations, and personal preferences about fishing effort has an impact on individual fishing motivations. This results in multiple fishing identities with different and changing practices, levels of effort and participation in the fishery, resulting in a range of different personal objectives. While definitions of personal objectives vary, they tend to be articulated around a similar set of shared values and norms.

Islanders, similar to the Commonwealth, see TRL as a cornerstone of economic development for the region as do Islanders. However, views about what economic development entails differ. All Islanders expressed in interviews their desire to enhance their economic autonomy, but in a way that will cover their material needs while at the same time allow them to spend time with family and in the community, attend to sociocultural responsibilities, and participate in cultural and ceremonial life. Equity in benefit distribution is an important value for Islanders. They consider that the fishery should provide equal opportunities to everyone in terms of access, catch, and revenue. In other words, economic development does not supersede other sociocultural values and responsibilities.

Safeguarding *kaiar* sustainability is another strongly shared value among Islanders, motivated by inter-generational equity concerns and stewardship responsibilities. Because *kaiar* fulfills multiple functions in Islander society, ensuring the continuity of this commercial fishery for future generations is seen as crucial. A woman on Badu captured this sentiment:

Very few young people are fishing now, very few. The economic times, the changes. Some of our kids are more attracted to the city lights and a full time job. (...) It's not like everyone will leave, some of them will stay. There will be a few that will have the knowledge. It's not something that will ever die out. At the end of the day, it has to be something that will be there for our children and their children. (...) [You need] to make sure that you have crayfish down along the track. Because you might have two generations that skip on crayfishing and then at the third generation they're all fishermen again. You just can't say what's going to happen in 20 years' time.

“Good management” and preferred management tools

For Islanders, good fisheries management starts with them being in control and respecting *Ailan Kastom*. According to all interviewed fishers, management should be based on CMT and respect the authority of traditional owners to control their marine estates, resulting in decentralized management. It also means that fishers should adhere to principles of reciprocity and respect the norm of only harvesting what is needed.

A well-managed *kaiar* fishery should be dynamic and flexible. In order to meet various needs as they arise, Islanders require high and stable catch rates within their individual sea territories. The fishery must accordingly be managed to maintain high local abundance. Access and effort are adjusted based on a holistic knowledge of the environment, daily observations, and needs (which will differ between

fishers). Development of the fishery must therefore maintain the flexibility to accommodate various levels of efforts and participation so that fishers can adopt practices that will enhance their well-being and allow them to adapt to changing responsibilities, opportunities, and ecological conditions.

Islanders tend to prefer small boats with low overhead costs because it gives them the freedom to choose when and how much they will fish. However, dinghies cannot operate in strong winds and currents. Most Islanders therefore concentrate their fishing during the neap tide. Good management is thus one that can support the economic viability of their small-scale operations. In addition to maintaining local abundance, good management must thus control competition and minimize conflict to achieve equitable distribution of benefits.

As mentioned, for Islanders, equity of benefit distribution rests upon the principle of equal opportunity. All interviewed Islanders were adamant that the fishery should be equally accessible to all Islanders, regardless of their level of effort and participation. Interviewed Islanders recognize the importance of the fishery for older people to be able to get “pocket money” and as a general supplement for the community before holidays among other things. The importance of the fishery is valued by the number of households that benefit rather than by the aggregate revenue it produces for the region. A part-time fisher from Badu, reflecting on the various contributions of *kaiar* to the community, stated: “It would be sad if they forced everyone to be full-time [fishers].”

Islanders are alert to the possible impacts of technologies that improve catch efficiency and they tend to disapprove of regulations or technologies that confer an advantage to only some fishers to the detriment of others. Islander perspectives about hookah (and other technology such as GPS) vary and are constantly adapting to new realities as more Islanders adopt its use to take advantage of the much more lucrative market for live TRL rather than spearing lobsters for tails.⁷ Arguments put forward by Islanders for using hookah (who represent approximately 50% of Islander fishers) relate to sustainability, better economic returns, fierce competition with non-Indigenous bigger boats, and spreading of effort which reduces competition within the indigenous sector and risk of local depletion (see Lalancette 2017b for a detailed review of Islanders' arguments for and against hookah). Regardless of their position on the issue and their level of effort, Islanders have a strong awareness and concern for free-divers who must compete with hookah divers. Because

⁷ Live produce usually fetches a higher price per kg than tail meat which only represents approximately one third of the animal's total weight.

hookah makes harvesting easier, Islanders have devised informal rules to level the playing field such as prohibiting the use of hookah on top of reefs. Some communities have also instated hookah bans in their waters motivated by both equity and sustainability concerns.

Equal opportunity does not mean equal access to knowledge or information. Nietschman (1989) recounts how dugong hunters will sometimes share misinformation to protect their hunting locations but will cooperate when hunting for feasts. Similarly, some *kaiar* fishers described how they will sometimes make large detours on their way back from fishing to misdirect other fishers. Information is not neutrally shared but embedded within social and kinship relations.

As mentioned earlier, for Islanders, sustainability is an extension of the principle of equal opportunity for future generations and a responsibility that comes with ownership. A sustainable fishery is thus one that can provide for both the environment and people in the future. This is where the principle of “take only what you need” takes on its full meaning as a central component of Islander management. As a part-time fisher on Badu explained:

See when the white people came... they wanna make money all the time: you know what I mean. Here we are in TS, we fish at certain time. We can stay here [on land] for months and certain time we can go out fishing: just get enough for the family. Like that's how we be live before: never overfish.

This principle is also shared by full-time fishers based on Thursday Island who tend to be considered by AFMA as profit maximizers. While it is enacted differently (i.e., they have higher catch and effort levels), they insisted that catch should be restrained by need. As two full-time fishers on Thursday Island repeatedly stressed during an interview: “We are not here to kill everything.”

According to Islanders, sustainability is best achieved by a combination of restraint, careful adoption of technology so that fishing is not “too easy”, and adjusting effort to environmental conditions such as weather and *kaiar* abundance. In addition, as a general norm, Islanders do not fish on Sundays and during social events and fishing is prohibited during other cultural events. The general view is that what remains in the sea is a long-term investment for the future. When discussing *kaiar* catch and fishing effort, a fisher on Yam indicated: “If I've got money in the bank, what's the use of going out fishing? There's only one shop here, might as well leave it there [in the sea].” All these constraints are viewed as positive effort controls. As a well-respected elder and retired fisher stated: “That way it just manages itself.”

Implications for Islander everyday practice and rights

The apparatus of governmentality in the TS TRL fishery is composed of governance structures and processes and a powerful discourse based on conventional fisheries management and neoliberalism that mutually shape and reinforce each other. To be clear, we are not suggesting that any one actor or alignment between certain actors wield power in the Machiavellian sense, but that the tight assemblage between legislation, regulations, the consultative structure, and discourse creates blind spots and rigidities that ultimately marginalize alternative perspectives. As Van Assche et al. (2017b, 318) stress, even though conscious strategic decisions are made at certain moments, “(...) mostly, the logic of administrative governance follow[s] its own course once set in motion. Once a new regime of power/knowledge is settled in governance, this acts as an infrastructure framing the strategizing by all actors”.

The TRL governance regime limits the agency of all actors, including that of AFMA managers. As the only representative of formal management based in the region, AFMA managers' personalities and management styles have a tremendous influence on everyday practice. They play an important role in Islanders' perceptions of and relationships with fisheries management as well as in the perceptions and understanding of TS fisheries by AFMA's CEO and staff based in Canberra. All interviewed AFMA managers highlighted that TS fisheries do not correspond to “standard” fisheries and that this appreciation grew for them as they spent more time in the region. One AFMA manager stated: “These fisheries can't be managed like other fisheries because of many other factors that are not economics. You can't compare: they're apples and oranges.” For this manager, the biggest challenge for fisheries management in the region was: “Effectively taking into account the very unique social and cultural aspects of these fisheries in a contemporary fisheries management context.” Despite this awareness, AFMA managers indicated that the regime is very resistant to change. First, they repeatedly emphasized that management is constrained by legislative requirements. Second, the need to legislate all rules and the formal decision-making structures make any modification to TRL governance and management a lengthy process. A manager even described fisheries governance in TS as “a big unwieldy beast.”

While legislation frames management practices, the official fisheries discourse also strongly influences how legislations are interpreted and therefore applied. The TS Treaty clearly makes a distinction between the objectives of protecting the traditional way of life and livelihood of

traditional inhabitants and ensuring the primacy of traditional fishing over commercial interests. The terms “traditional way of life and livelihood” are not defined in the TS Treaty and are thus open to interpretation. However, in defining “traditional activities”, the TS Treaty indicates: “(...) except in relation to activities of a commercial nature, “traditional” shall be interpreted liberally and in the light of prevailing custom” (art. 1 (k)). A liberal interpretation has clearly not been applied in pursuing the objective of protecting the traditional way of life in TS and any aspect not explicitly mentioned in the Treaty (i.e., traditional fishing and visiting rights) is seen as being outside the mandate of fisheries management.

Such interpretations result in management that is narrow in scope. For example, when asked about the factors that limit their fishing, Islanders overwhelmingly discussed issues related to infrastructure. Recurrent fuel shortages and difficulties in accessing mechanical support or parts have been a problem on the outer islands for decades. These problems are well-known to managers but have not been addressed despite the direct positive impact they would have on Islander capacity and well-being. The need for commercial fishing infrastructure to realize the objective of promoting Islander economic development and employment was also highlighted by Malu Lamar in their review of the TRL Management Plan in 2015 to which AFMA responded that this “was beyond the scope of the management plan” (Malu Lamar RNTBC 2016). This points to another issue also raised by Malu Lamar: TRL management is compartmentalized and issues tend to be addressed individually rather than in a holistic manner.

The current framing of fisheries management obscures and excludes Islander objectives, values, institutions of traditional governance, and ontologies in everyday practice. First, the desirability of optimal utilization and of maximizing the total revenue from the fishery are unquestioned by the State. Profit maximization behavior is encouraged and the interests of fishers with lower level of efforts are dismissed as “cultural” or “lifestyle choices”. The welfare function of the *kaiar* fishery and the importance of the economic contributions provided by lower effort are absent from management considerations even though economists have argued that a reduction in profits from the TRL fishery following increased Islander ownership could be offset by increased Islander employment and reduced Islander reliance on welfare (e.g., Hand and Davies 2010). Some managers recognized the sustainability of Islander ways but highlighted the Commonwealth imperative for achieving optimal utilization:

But it doesn't seem like the government is willing to just say: 'we'll just leave this thing and it'll just

be a little fishery ticking along wherever it finds its natural level below some sustainable level.'

I'm not sure of the government's appetite for to see a good output fishery being reduced to one that's chopped in half.

Second, defining statements about the fisher subject (Table 2) leave little room for notions of reciprocity, community, stewardship, and rights to self-determination. Sociocultural differences are often portrayed as challenges as management tries to make Islanders “fit” into the fisheries management's conventional model. The solution put forward is to raise Islanders' capacity: to understand fisheries science, to participate in meetings, and to increase their catch by “honing their business skills.” Capacity-building is only directed at Islanders and there are no initiatives in parallel to improve state and government agency representatives' capacity to understand Islander perspectives and worldviews in order to improve communication and relationship-building. In addition, fisheries management casts traditional inhabitants as a stakeholder group, one towards which the Commonwealth has special obligations, but one among others nonetheless. A manager emphasized:

All [Islanders'] views cannot be implemented because their interests have to be balanced with other stakeholders' views, legal requirements, the environment, the wider Australian society.

As highlighted above, this approach is unable to recognize different Islander fishing identities. It also runs counter to Islanders' indigenous rights to own and control resources in their traditional territories.

Third, the current regime has been reluctant to clearly acknowledge and engage with Islander traditional governance. Not all Islanders are traditional owners but this distinction is absent from fisheries governance, despite the creation of Malu Lamar after the Sea Claim win. The traditional governance institution of CMT — which shapes Islander everyday life and is paramount in governing fishing — is ignored in a similar fashion. While all actors in the fishery are cognizant of CMT, these boundaries are rarely taken into account by other fishers or in discussions about raising Islanders' catch. The ontological, social, and cultural dimensions of sea territories are rendered invisible. When Islanders request that fishers show respect by asking permission to enter their territories, it is not simply a question of access to resources, but these other aspects are concealed.

Interactions between optimal utilization and the focus at a regional scale in terms of sustainability, economy, and centralized management do not account for the very serious impacts of competition and conflicts between sectors, local depletion, and economic viability of indigenous small-scale operations. Non-indigenous fishers harvest on some of the

reefs claimed by Islanders, competing with both hookah and free-divers. Their boats can remain anchored at reef sites and harvest continually while Islanders stop during the spring tide to either work on land or because the tides are too strong. Many Islander fishers expressed discouragement and frustration by the constant presence of boats — a situation that they have been denouncing and that has been a source of conflict for decades. Local depletion is a general concern, but the risk is heightened in certain locations (Lalancette 2017a). Even though fisheries scientists and the local AFMA fisheries managers have clearly expressed an awareness of this scale issue in personal interviews, there seems to be an unwillingness to address these concerns in management. These biases are also apparent in fisheries science. For example, Dennis et al. (2015) published a cost–benefit analysis on conducting one or two annual fishery-independent surveys as opposed to using CPUE data alone to set the TAC. Their argument is based on the additional revenue afforded by a more precise and higher TAC, with the prerequisite that a certain portion of this extra catch would be harvested. The authors do not acknowledge, however, that the traditional inhabitant sector does not fully harvest their quota share and that any increase in TAC would, for the moment, only benefit the non-indigenous sector thereby intensifying the adverse economic and environmental effects of competition for Islanders.

Fisheries governance in TS has been averse to incorporating non-scientific knowledge. The explicit requirement of managing for MSY privileges statistical knowledge at the stock level. The pre-defined mandates of the different advisory bodies also reinforce the primacy of Western science. This defines who can credibly talk about fisheries management and creates a hierarchy of knowledges that manifests itself in different ways. For example, the Resource Assessment Group (RAG) is strictly concerned with stock assessment. To meaningfully participate, one has to master the language and the science — any other type of knowledge is pushed aside. Fisheries science has certainly contributed to the sustainability of the fishery, but other types of knowledge are also needed to address issues of competing values, legitimacy, social justice, and trade-offs, as well as the contextual specificities, complexities, diversities, and dynamics of social life (Jentoft 2006, 2020). Jentoft (2006, 2020) has argued that fisheries management must also include “experience-based knowledge concerning how to exercise ethical and moral judgment in particular, and concrete situations” (Jentoft 2006, 673). However, the validity of Islander knowledge in fisheries management is recognized insofar as it can complement science within the existing framework. Consideration of Islander participation in scientific research has to date been limited to how Islander knowledge and skills can be at the service of scientific research rather than Islanders being equal partners.

For Islanders, knowledge is gained by experience and is socially embedded. It is not shared openly and must be earned. Some Islander fishers expressed frustration at the fact that CSIRO scientists make the results of the surveys freely available before the end of the season. Non-indigenous fishers will use this information to decide the location of TRL fishing. When local abundance is high in an Islander sea territory, this increases the likelihood of boats coming to harvest which, again, has serious impacts in terms of competition and economic livelihood.

Fisheries governance has been unable to accommodate alternative management views and practices. Environmental, sociocultural, and self-imposed technological constraints to fishing are seen by Islanders as positive measures that contribute to sustainability, while management considers these as “inefficiencies” contributing to the TRL fishery being “underutilized”. As a result, there is considerable pressure for Islanders to either increase their catch or to lease it to the non-indigenous sector with the implementation of quotas (Lalancette 2017a). Islander demands for spatial limitations are also considered to be incompatible with the objectives of optimal utilization and maximizing revenue. Principles of equal opportunity and precaution beyond the target reference point are generally ignored on these bases. Since the introduction of hookah in the 1980s, Islanders have cyclically called for hookah-free zones at fisheries meetings and in consultations, motivated by competition, sustainability, and equity concerns (e.g., Hand and Davies 2010). Positive discrimination towards free-divers is seen by managers and Fisheries Departments as unjustifiable as they have significantly lower catch rates. Moreover, Islanders’ resistance to hookah is viewed by other actors as politically motivated, which is true to some extent. Islanders are well-aware of the non-indigenous sector’s reliance on hookah. Nevertheless, any technology that improves the non-indigenous sector’s catch also exacerbates the effects of competition on their small-scale operations. Islanders’ priority of ensuring long-term access to future generations means that they do not see “underfishing” as an issue and are thus cautious about any means that can threaten long-term sustainability. Besides optimal utilization and maximizing revenue, some managers have also argued that hookah-free zones would be very difficult to implement and nearly impossible to enforce, ignoring the possibility for Islanders to control their territories through traditional governance arrangements such as CMT.

Islanders have been successful in advancing their interests within the current governance structure insofar as they do not seriously challenge the hegemony of the State or objectives of sustainability based on MSY and optimal utilization coupled with profit maximization. Eight years after the recognition of fishing rights through the Sea Claim, Islanders have not been able to achieve nor significantly advance their aspirations of full ownership and control of the *kaiar* fishery.

Taken together, the points above provide some insights on why and how the TRL management plan was realized in its current form despite the Sea Claim decision. The governance structures and processes enabled the move to quota management to continue on the same course, while legislations and the official discourse are used to justify the plan's content. On the basis of its statutory responsibilities, the Australian Government exercised its power to allocate shares of the TRL fishery to indigenous and non-indigenous fishers, consolidating its de facto ownership of the resource. Rather than using its authority to cancel non-indigenous licenses with compensation, the Australian Government — motivated by neoliberal ideals of the market — chose to grant a share of the TRL fishery for free to non-Islanders and is now expecting Islanders to buy back this share despite the High Court's recognition of Islanders' status as traditional owners. Indeed, AFMA's response to any consideration of Islanders' aspiration of 100% ownership has invariably referred to the possibility of leasing quota units held by the indigenous sector to the non-indigenous sector to provide a source of revenue that could then be used to purchase non-indigenous licenses and quota units over time. This ignores previous studies and reports from economists (Hand 2008), CSIRO scientists (Pascoe et al. 2013), and an independent panel hired by the PZJA (Menham et al. 2002) who all concluded that achieving Islander full ownership through the market is unrealistic. The risk posed by consolidation in the non-indigenous sector following the introduction of ITQs is also strangely absent from official management documents. The power granted to non-indigenous interests to remain in TS and block Islanders' 100% ownership aspiration is never addressed, but very real.

Conclusion

In this paper, we proposed a framework that combines elements of the analytics of governmentality with the political ontology framework as a lens to analyze issues related to Indigenous Peoples' rights and aspirations in state-controlled fisheries. This framework has allowed us to conduct a targeted analysis of conventional fisheries management in the TS TRL fishery. We have shown how current structures, processes, and discourse forming the apparatus of governmentality in the TS TRL fishery mutually reinforce and shape each other and are at odds with indigenous Islanders' conceptions of fisheries, fishers, and good management. We highlighted how the framing of fisheries by the official management discourse obscures and excludes Islander objectives, values, institutions of traditional governance, and ontologies.

Our analysis indicates that achieving Islander aspiration to fully own and control fisheries will require significant

shifts in fisheries governance and that these would be extremely difficult to achieve within the current regime. Indeed, fisheries governance in TS contradicts indigenous rights and aspirations in fundamental ways. Uneven relations of power are deeply embedded in governance structures and processes and, as the development of the TRL management plan has shown, these cannot be completely resolved by simply increasing indigenous participation. The recent call for fisheries reform put forward by Malu Lamar may seem like a radical proposal, but it may be necessary. Reforming the consultative structure may be a good place to start as this is where actors have the best chance of setting change in legislations. Reviewing fisheries objectives outlined in the TS Treaty, in particular the objective of optimal utilization, to better reflect Islander rights would create significant space for alternative perspectives and practices.

By advocating for indigenous rights to own and control marine resources, we are not suggesting that customary governance is a panacea that can appropriately address all contemporary fisheries management challenges on their own. Just like conventional fisheries management, customary governance can, and does at times, fail to produce sustainable outcomes (Foale et al. 2011; Sulu et al. 2015; Hamilton et al. 2019). It has been noted in other Melanesian fisheries that science and external assistance (government and/or external organizations) are often necessary to support and strengthen local customary governance of marine resources (Foale et al. 2011; Barclay et al. 2019; Hair et al. 2020). In addition, changing conditions and external pressures can overwhelm local capacity (Cohen and Foale 2013; Barclay et al. 2019; Hair et al. 2020).

Although wary of external top-down management interventions, most Islanders appreciate and recognize the value of scientific knowledge. The interest expressed by fishers during CSIRO presentations on the islands, the incorporation of fisher scientists in TSRA's fishery programmes through the years, as well as the request from Malu Lamar to obtain funds to hire an independent technical fishery expert to assist them in developing a broader TS fisheries reform proposal (Malu Lamar RNTBC 2016) attest to this. Moreover, as firsthand witness of climate change, Islanders recognize that they can no longer predict their environment like they used to. Islanders are also well aware of capacity issues related to infrastructure development needed for the economic growth of their fisheries, and to compliance and enforcement — especially regarding PNG fishing in Australian waters.

Science and external support have certainly a role to play in a 100% Islander owned and controlled fishery, but they should be at the service of an Islander reframing of fisheries so that it can improve their wellbeing according to their own terms. This would include broader objectives such as avoiding local depletion, sustaining the economic

viability of small-scale operations, and ensuring respect for local institutions, norms, and values. Islanders should also be given the space to experiment and fail as it is our firm belief that Indigenous rights entail the right to learn from both potential successes and mistakes.

We believe our findings extend to indigenous-state relations in other state-managed fisheries. We suggest that an investigation of the apparatus of governmentality, while being sensitive to issues of ontological dissonance, can be useful in unveiling power relations that constrain indigenous rights. But most importantly, we advocate for comprehensive shifts in institutional alignments and in existing power relations in fisheries to fully respect indigenous rights, enhance indigenous well-being and ultimately improve fisheries governance and management.

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Declarations

Conflict of interest The authors declare no competing interests.

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