



# Narrative assemblages for power-balanced coastal and marine governance. Tara Bandu as a tool for community-based fisheries co-management in Timor-Leste

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## Abstract

Poverty alleviation and resource governance are inextricably related. Mainstream resource management has been typically criticized by social scientists for the inherent power imbalances between fishery managers and small-scale fishing communities. Yet, while a number of mechanisms of collective action to address these power imbalances have been developed, they remain undertheorized. This paper builds upon first-hand experience of the authors in assisting the community of Biacou to strengthen the resource management role of a local ban called *Tara bandu*, as well as a qualitative study conducted one year after its implementation. Our argument is fourfold. First, we suggest that in geographies where mainstream resource management cannot be implemented, strengthening custom-based institutions in hybrid mechanisms provides an opportunity to promote a more sustainable use of coastal and marine resources in a cost-effective manner. Second, by analyzing the different narratives that were embedded in the process, we argue that community-based fisheries co-management can benefit from creating narrative assemblages. Third, we explore how the principles of agnosticism, generalized symmetry, and free association can be integrated in the work of fisheries managers to neutralize power imbalances with fishing communities. Fourth, we contribute to the current conceptualization of hybrid organizations in fisheries co-management.

**Keywords** Community-based fisheries management · Fisheries co-management · Coastal and marine governance · Collective action · Ritual · Timor-Leste

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## Introduction

Narratives are ubiquitous elements of social life. Authors have emphasized their crucial role in the development of the self (Watson 2009; Noy 2004; Goodson 2013), in processes of learning (Biesta et al. 2008), in maintaining order within distinct social units (Watson and Watson 2012), and in the provision of legitimacy in power and counter-power struggles (Alonso-Población and Fidalgo Castro 2014). This myriad of roles played by narratives in daily life reveal that in addition to the immediate communicative functions, narratives are performative.

Natural resource governance is an arena of power dynamics between agents who deploy different practices, contrasting rationalities, and discourses (see, e.g., Escobar 1996, 1998; Gerrard 2000). Yet, although some scholars (Armitage 2004; Fairhead and Leach 1995; Johnson 2006) have already placed emphasis on the importance of narrative dimensions in enhancing resource management policies, the narrative

negotiations involved in marine tenure dynamics and practical fisheries management remain largely overlooked.

Poverty alleviation relies on the adequate governance of resources. The Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (FAO 2015) recognize the multi-dimensional nature of poverty, and refers to it as the result not only of low incomes, but also factors that impede full enjoyment of human rights. To achieve eradication of poverty, the guidelines urge states to ensure that small-scale fisheries enjoy secure, equitable, and socially and culturally appropriate tenure rights to fishery resources, including the recognition of customary rights.

The aim of this paper is to unfold the narrative negotiations involved in the implementation of a project aimed at strengthening community-based resource co-management through the revitalization of a custom-based mechanism called *Tara Bandu* (hanging prohibition or temporary closure in Tetun). To do so, we reflect on the process of re-enacting this hybrid resource management mechanism—based both on custom and newly supported organization, following the typology by Kurien (2013), through what can be considered a “lite-touch” approach (Orirana et al. 2016).

Our argument is fourfold. Firstly, implicit in our argument is the idea that in geographies where mainstream resource management is not appropriate (as in most small-scale fisheries) or cannot be implemented, strengthening and formally engaging custom-based institutions in hybrid modes of resource governance, such as *Tara bandu*, bring along an opportunity to promote more sustainable use of coastal and marine resources in a cost-effective manner. Secondly, by unfolding the different narratives that were embedded in the process of re-establishing the *Tara bandu*, we argue that the creation of narrative assemblages is key to developing hybrid modes of resource governance. Thirdly, we explore how the creation of these narrative assemblages benefited from the application of Michael Callon’s (1986) principles of agnosticism, generalized symmetry, and free association. We contend that these principles—mostly used for third-party analysis on how power operates (as Callon himself)—can be effectively integrated in the work of fishery managers and practitioners when promoting community-based governance from a power-balanced approach, as they contribute to counter-balance the power asymmetries between fishery managers and fisherfolk. Fourthly, we use the case at stake to contribute to Kurien’s (2013) typology of collective action in fisheries by refining the notion of hybrid organizations.

The experience described in this paper is still a young process, and the description below focuses mostly on a very early stage of the re-enactment of the *Tara Bandu*. Proper judgment of the success of this process would require further analysis over time. However, the contribution of this paper is mainly theoretical (specific practical recommendations arising from this case can be found at Alonso et al. 2012; Alonso-Población

et al. 2016), and aims to provide a conceptual framework for further interventions in many different settings. To do so, we dedicate the first sections of the paper to set the theoretical and conceptual basis, followed by the methodology, the ethnographic material and the discussion.

## Setting the stage: narratives, resource management, and assemblages

### Power and narratives in resource governance

One of the dynamics that has drawn more attention among social scientists in fisheries governance is that resulting from the tensions arising from power imbalances between fisherfolk and fishery managers (see, e.g., Durrenberger 1990). As with other power dynamics, these tensions have narrative dimensions. For example, a strongly persuasive narrative which principles are embodied in global fisheries management (Kooiman and Bavinck 2005; Kooiman and Chuenpagdee 2005; McGoodwin 1990) is that of the tragedy of the commons (Hardin 1968); a narrative that portrays the neo-Malthusian dystopia resulting from the activity of selfish producers, seeking their own benefit within a totally unregulated open-access regime.

The persuasion of the tragedy’s narrative rests on the effective enrolment of specific entities whose existence can be traced back to discourses about the nature of European XVIII Century Enlightened nobility (Alonso-Población 2014). Among them, the Judeo-Christian figure of the individual self-pleasing man (Sahlins 1996) whose behavior responds uniquely to meeting egoistic interests (Johnson et al. 2005b), or the notion of a limited nature to which some (the irrational producer) are closer to (see Descola 2005).

The narrative association between these two entities (the self-pleasing producer and the limited nature) has shaped—here an example of its performative dimension—what can be considered mainstream fisheries resource management. As pointed by McCay and Acheson (1996), tragedy-informed management measures are twofold; either to restrict access through the coercion of the state apparatus (Johnson et al. 2005a), or to privatize the commons (Chuenpagdee et al. 2005). Hence, providing scientists and bureaucrats with an incontestable role in the design of top-down solutions implemented over a metaphorical *tabula rasa*. These assumptions have had many practical implications. Among them, the fact that mainstream governance in the fisheries sector is resource-intensive (see Cochrane 1999): requiring the presence of extensive infrastructure, as well as a great amount of capital and skilled human resources, as those required to generate scientific outputs, develop management measures, legal frameworks, policing, and enforcement.

At the end of the 1980s (Jentoft 1989), fishers' collective action emerged as a reaction and counter narrative to mainstream top-down management. The development of a counter narrative required a great effort by scholars and practitioners to document the widespread existence of ancient institutions and highly self-regulated fisheries worldwide. This counter narrative implied the enrolment of a different set of entities, as the "rational producer," who does not only behave based on purely economic interest (Sønvisen 2013) or the "conservationist producer" (for a critical view see the examples provided by Berkes 1996; Brightman 1996; Carrier 1996). While community-based management has proven to be a successful approach in covering a wide range of objectives in addition to resource governance (Cohen et al. 2014), co-management solutions have not always been able to breach with some of the above-referred narrative associations of Hardin's argument. An example can be found in those cases in which co-management solutions are implemented as a set of pre-defined tools, and ready to be transferred from one context to the other with no major change, indicating that one issue that has been inherited from Hardin's narrative is the idea that any non-state or private property regimes are open access, and that governance designing is implemented as well over a *tabula rassa*.

### The concept of narrative assemblages

The notion of assemblage has gained increased relevance within the social sciences in the last few decades (Marcus and Saka 2006). Developed in the pioneering work of philosophers Deleuze and Guattari (1987), the concept acquired wider usage through the work of Actor Network Theory (ANT) and the attempt by some authors to build an Assemblage Theory (DeLanda 2006). As put forth by Müller, despite methodological and empirical divergences between ANT and Deleuze and Guattari's inspired assemblage-thinking, both approaches are concerned with the co-constitution between humans and non-humans (Müller 2015) and both share a relational view of the world (Müller and Schurr 2016). Bridging divergences and synergies between these approaches, it is apparent that the notion of assemblage has achieved wide acceptance among scholars concerned with the study of socio-material relations, i.e., the associations between the human and the non-human. In a review paper, Marcus and Saka (2006) point to the idea of assemblage as a resource that attempts combining the recognition of the ephemeral, emergent, and heterogeneous with the structure in social sciences. This characteristic of assemblages, which can be traced in the definition proposed by a number of authors (Rabinow 2003; Collier and Ong 2008), is displayed in the minimal definition provided by Müller and Schurr, for whom "at their most basic, assemblages could thus be thought of as a collection of relations between heterogeneous entities to work together for some time" (Müller and Schurr 2016).

As pointed above, beyond the immediate communicative effect, narratives are performative. In other words, and using Descola's (2005) concepts of enrolment and entity,<sup>1</sup> narratives can be conceptualized as venues where entities and ontologies enroll in associations, resulting in tangible outcomes. Yet, this enrolment rarely takes place once and forever, and can instead operate as an assemblage, i.e., working together for some time.

### Three principles to create assemblages: agnosticism, generalized symmetry, and free association

In one of the founding works in the study of socio-material relationships, Michael Callon sets some of the epistemological basis of ANT theory, from which further developments have evolved then since (see, e.g., Latour 2001, 2007). In his work, on the scallops of St. Brieuc Bay, the author sets three principles over which his analysis builds upon: agnosticism or the impartiality between actors engaged in controversy; generalized symmetry, namely the commitment to explain conflicting viewpoints in the same terms; and free association, understood as the abandonment of all a priori distinctions between the natural and the social (Callon 1986).

Actor network theory has permeated in the study of fisheries (Johnsen et al. 2009). However, either because of the criticism of its conceptual sets or the critical perspective linked to ANT works, neither the concept of assemblage nor some of the ANT epistemological principles seemed to find accommodation among fisheries managers and practitioners concerned with the applied dimensions of social sciences, thus their use has been reduced to the academic discussion. An academic discussion, on the other hand, less concerned with practical matters than with theoretical discussions mostly based on unengaged third-party analyses of the work of fishery managers and focused on the power asymmetries between them and the fisherfolk. Yet, if narrative assemblages entangle the creation of temporary associations between different entities and ontologies, the three principles that form the basis of Callon's work may well serve the practical outcome of connecting entities to ensure more sustainable resource use.

### Methodology

The present case study is both the result of an insiders' account and the product of a qualitative study conducted 1 year after the enactment of the *Tara bandu*. Co-authors of the present paper

<sup>1</sup> Following Descola, "Whether they are self-ascribed or externally defined, whether they are crafted by humans or only perceived by humans, whether they are material or immaterial, the entities of which our universe is made have a meaning and identity solely through the relations that constitute them as such. Although relations precede the objects that they connect, they actualize themselves in the very process by which they produce their term" (Descola 2005).

were team members in the Spanish funded, and Food and Agriculture Organization (FAO) executed, Regional Fisheries Livelihoods Programme for South and Southeast Asia (RFLP) in Timor-Leste. The program operated in six countries of the Asia Pacific Region (Cambodia, Indonesia, the Philippines, Sri Lanka, Timor-Leste, and Viet Nam) between 2009 and 2013. One of the program's outcomes was the establishment and strengthening of co-management mechanisms. Among many other activities, the team was involved since 2011 in gathering nationwide information on existing resource management arrangements, assisting the community of Biacou in the development of their local regulation, documenting the community discussions, mapping and drafting of the arrangement, and disseminating the founding document, as well as participating in the *Tara Bandu* ceremony. This work brought along extensive internal technical discussions from which this paper builds upon.

Further to the team's involvement in assisting the community to document the arrangement, this paper is based on the results of a qualitative study conducted in 2013, one year after the enactment of the *Tara bandu* (Alonso-Población et al. 2016). This research included desk research and qualitative fieldwork. Literature review included analyses of the legal framework related to locally marine resource management in fisheries in the country, documentation available on the *Tara bandu* of Biacou (including maps, documentation, fieldwork notes from the time of implementation, photos and audio-visual material) as well as available resources related to the *Tara bandu* in Timor-Leste, including colonial records, ethnographic descriptions, academic papers, and grey literature.

Qualitative research methods included six key informant interviews, semi-structured interviews (with fishers, reef gleaners, middle traders, and farmers from the community of Biacou), participant observation, informal conversations, and short interviews, two focus group discussions with people involved in economic activities or livelihoods that have been directly affected by the regulatory mechanism, and a series of meetings with key staff from institutions involved in promoting cooperatives and others implementing programs that promote the *Tara bandu* as a measure for conflict prevention.

In total, 37 people participated directly in this first fieldwork phase. Once the initial data gathering was accomplished, a participatory validation and diagnosis workshop was held with the participation of 22 inhabitants of Biacou and two neighboring hamlets (for more details, see Alonso-Población et al. 2016).

## Results

### The team's baseline narrative: identifying modes of collective action

Situated within the Coral Triangle, Timor-Leste's fisheries are mostly dominated by small non-motorized canoes for solo

fishing (Alonso et al. 2012; Alonso-Población 2013) that has had little development since the nation's independence in 2002.

In this context, the RFLP for South and Southeast Asia set out, among other aims, at promoting and strengthening co-management. Infused by a narrative closer to that of community-based management than that of the tragedy, the RFLP's team first activities focused on finding out more about what kind of governance arrangements were in place and what could be learned from the past and the present. The main barrier was the lack of data (Alonso et al. 2012), so the project focused a great deal of effort on filling this gap. Among many other activities aimed at gathering and disseminating data (Needham et al. 2013), the RFLP underwent a series of community-based data gathering initiatives in order to fill knowledge gaps by getting government officers and fishing communities to work together in data sharing activities. The RFLP team considered that in supporting co-management, forging relationships between officers and fishers was a necessary first step. This was necessary, as the lack of resources of the National Directorate of Fisheries and Aquaculture (NDFA) resulted in the fisheries officers having no more than sporadic encounters with fisherfolk in the field.

One of these community-based data gathering initiatives was specifically focused on learning more about authority, collective action, conflicts, and marine tenure. Equipped with large pictures of the coastline from Google Earth, government and RFLP team members went all along the country's coastline, meeting with communities and documenting fisheries-related issues in a participative manner. This preliminary data gathering effort served to identify two divergent modes of organization and collective action in fisheries in the country: cooperatives and custom-based<sup>2</sup> modes of resource governance, such as *Tara bandu*.

### State policies, religious regimes, and *Tara Bandu*

A first discovery was that in contrast with the active cooperatives of Atauro Island, the data gathering effort identified the persistence of custom-based modes of governance, such as *Tara bandu*, operating throughout the main island.

It is not possible to delineate the origins of the *Tara bandu*. However, documentation available revealed that practices referred to as *Tara Bandu* (in Tetun) existed as a measure used by local *liu rai* (referred to as "kings" in colonial literature) to regulate periodical resource harvesting restrictions (D'Andrea

<sup>2</sup> We use the term custom-based instead of customary to avoid the perception by the reader that *Tara bandu* has survived unchanged throughout history. By custom-based, we consider those practices that are based on representations of the "customary" and are locally regarded as "based on tradition." We also avoid the use of custom-like or others, that present it as an "invented tradition" created anew. On the negative political consequences and misunderstandings brought along by this latter notion, see the works of Linnekin (Linnekin 1991).

et al. 2003) within their territories (Meitzner Yoder 2005, 2010). During the Portuguese colonization, however, historians point to a number of factors that eroded these practices, such as the erection of a new administrative system (De Carvalho and Coreia 2011), the struggles among the colonial powers to conquer the loyalty of the different *liu rai* (so called “kings” in colonial records), the weakening of the local “kingdoms” caused by the new hierarchies derived from the sandal commerce, and the Christianization campaigns, along with the resulting intersections between religious and political power and the normal state of war among the “kingdoms” (Gunn 1999). Yet, evidence<sup>3</sup> shows that the Portuguese did not always visibly oppose these customary practices.<sup>4</sup>

With the arrival of the Indonesian occupation, indigenous ritual practices and figures were severely impacted (see Mubyarto et al. 1991). Authors have pointed to examples of this, such as the disregard shown by the Indonesian State towards the authority of the customary leaders (Meitzner Yoder 2005), the new administration structure imposed, and the authority given to the officers of the department of forestry and agriculture over natural resource management and forest policing (De Carvalho and Coreia 2011). Furthermore, the imposition of the principles of *pancasila* as the Indonesian State’s philosophical foundation served to legitimize the increased adherence to any of the five official religions recognized by the State. This resulted in the largest increase of Catholics ever recorded: starting from 20 to 30% (Fidalgo Castro 2012; Gunn 1999), 90% of the population became Catholics after the reported “mass conversions” (Legaspi 2011) in order to avoid being considered “communists” (Mubyarto et al. 1991).

Though most of the Timorese converted to Catholicism, the majority of inhabitants of the island of Atauro declare themselves Protestant. This distinction is relevant, as both religious regimes carried out contrasting styles of conversion (see the works of Bicca 2011). While the Protestant Assembly of God promoted a rupture with the local ritual base, the Catholic Church, guided by the policies resulting from the Second Vatican Council, constrained by the local resistance of populations to embrace a rupturist approach and weakened by the lack of human resources, carried out a partial conversion. As a result, the indigenous moral codes coexist in complex ways

<sup>3</sup> One of the classic *Tara bandu* reported during the Portuguese times (Cinatti 1965; King 1965) was the case of *Be-malai* (literally means “foreign waters”), a lake located in the current District of Bobonaro, near the hamlet of Biacou. Both the local narratives and ethnographic records from the mid-twentieth century recount the intervention of the Portuguese administrators in the open conflict between the peoples of the area of Balibó and Atabae for the ownership of the lake, over which two linguistic groups (Kemak-Atabae and Tetum-Balibó) had maintained regular wars.

<sup>4</sup> Developing some form of what is locally referred to as the *adat-plenat* (tradition-government) style of governance (Meitzner Yoder 2005). Recent works by Roque (2011) report on the efforts by the Portuguese colonial powers to understand, codify, and use indigenous practices for the sake of colonial interests (Roque 2011).

with the Catholic morals (see Bicca 2011; Fidalgo Castro 2012; Bovensiepen 2009; Silva 2013).

### Diversity of Tara Bandu

Since independence in 2002, Timorese society witnessed the revitalization of customary arrangements and rituals (McWilliam 2011; Palmer and De Carvalho 2008; Bovensiepen 2014). This revitalization has to be understood in light of specific contemporary and historical processes as the collapse of the market economy after the Indonesian withdrawal (McWilliam 2011), the attempt of communities to get a role in state formation (Palmer 2007; Palmer and De Carvalho 2008), the economic role of rituals as a redistribution and savings mechanism (Fidalgo Castro 2015), the function of ritual practice in allowing communities to deal with past conflicts arising from the Indonesian regime (Bovensiepen 2014), and the post-independence construction of national identity.

Today, a wide range of *Tara bandu* coexist, affecting many different realms of social life. The brackish water lagoon of *Be-malai* is regulated under a *Tara bandu*. In February, marine water invades the lake and flows again into the sea. From that time on, fishing in the lake is completely forbidden. However, during the month of August,<sup>5</sup> the ban is lifted and significant fishing sessions are held for several days. In a similar fashion, a customary ban exists in Liquiçá regulating the harvest and market of maize. Once the crop is ready for the harvest, a ceremony called *Sau batar* is held, marking the lifting of the prohibition to harvest, which is not re-established until the end of the season and the planting of the new crop.

However, the contemporary use of *Tara bandu* goes beyond seasonal resource management measures and serves as a mechanism of dispute resolution or conflict prevention, promoted by a number of NGOs and embedded in a legal pluralist system (see the discussion paper by von Benda-Beckmann 2002), where local justice operates in parallel to the formal justice (see for example Brandão et al. 2013). Other reported uses of *Tara bandu* included the promotion of changes in agricultural patterns (Shepherd 2009).

Environmental conservation has also been a new focus of *Tara bandu* since independence. The local organization Haburas Foundation has acted as the main advocate for the use and conceptualization of this custom-based practice as a tool for nature conservation. While environmental conservation in western terms would mean a shift in the cosmological basis and sometimes encompasses idealized portrayals of past times (Meitzner Yoder 2005), the strategy of re-purposing (Pompeia et al. 2003) the customary ban for resource

<sup>5</sup> Some authors report the lifting of the ban is done every year (Barreto and Silvestre 2011), every 2 years (Cinatti 1965) or every 4 years (King 1965).

management has yielded positive results (De Carvalho 2007; De Carvalho and Coreia 2011).

### Biacou's origin narrative and tenure

Biacou is a small fishing village of around 500 inhabitants located in the District of Bobonaro,<sup>6</sup> on the Northwest border that leads to the Indonesian province of Nusa Tenggara Timur. Biacou is in a Kemak linguistic area. The hamlet is situated at the side of the road that links the district capital Maliana with the country's capital city Dili. The small hamlet is located in a valley leading to the coastal fringe, bordered to the North by a mangrove area that leads to the sea (locally known as the *Tasi Feto*—Woman Sea) and to the South by the mountains.

Households of Biacou, as in most rural areas in the country, base their peasant economies on mixed livelihood strategies (see Mills et al. 2013, 2017). Fishing and reef gleaning, along with salt production and some seasonal occupations, are complemented with mixed crop-livestock farming. The hamlet is situated in a strategic area for the fishing activity. On the one hand, the bay where Biacou is located allows for many fishing days per year, despite the small fleet. On the other, it is located near the road that links the two important urban centers, facilitating access to both markets. The last Census of Fishers and Boats registered 44 fishing boats in Biacou<sup>7</sup>; most of them small canoes for solo fishing. Local producers operate with gillnets, hook and line, and cast nets, as well as spear fishing. Reef gleaning is a widespread activity, mostly among women.

In Biacou, as in many other areas along the region (see, e. g., Fox and Sather 2006; Vischer 2009), origin narratives establish the order of arrival of the different *Uma lisan*—origin house groups or lineages. These origin narratives provide legitimacy to differential access to land and marine tenure, indicating which of the house groups is the original one in the area, locally referred to as *rai-na'in*.

In Biacou, one of the origin narratives recount how the current hamlet was created by three origin house groups that formed an alliance to fight against invaders from the area of Balibó (Tetum linguistic group). Elders recount that during the Portuguese time,<sup>8</sup> seafarers from the neighboring island of Alor—where some of the house groups have historical marriage alliances—taught them the art of fishing and seafaring. The original settlements were situated in the upper valley and the land that today conforms the village of Biacou was completely empty. During Portuguese times, some new

fishing techniques were introduced and a better market was available for fishery products, so as fishing and reef gleaning became one of the livelihoods of the inhabitants of Biacou, the new generations progressively established their households towards the coastal area.

The origin narrative is mainly known and transmitted by the ritual leaders of the *rai na'in* origin house groups—locally known as *rai na'in kaer bua malus*—who are considered the only ones with authority to recount them in detail<sup>9</sup> and to perform ritual practices. Each origin house group has one or more ritual authorities who have access not only to narratives but also to the realm of the *lulik*, the spiritual domain of the *rai na'in*, and the ancestors. As such, the narrative serves to set assignments of rights over land and marine tenure, as well as to identify all those subjects, objects, or entities that are locally considered as *lulik*, subject to special protection and worship. In Biacou, ritual leaders recount that “at the time of the ancestors,” several places situated on the coastal fringe were considered *lulik*, such as the so-called *Lulin baun*, the *Namon matan*, and the *Oho no rae*. In the past, they said, the *Tara bandu* established restrictions over forest logging with special observation of areas located near the sources of water. In the *Lulin baun*, ceremonies were held to request assistance of the spirit of the rain. In the *Namon matan*, worship was conducted to request more fish at times of scarcity. The *Oho no rae* is considered the place where the spirit of the *Rai na'in* inhabits, where the *Tara bandu* ceremony is carried out.

### Problematization: assembling narratives

Sergio is the chief of the hamlet of Biacou. He is a charismatic man from one of the *rai na'in* house groups who was concerned about a number of issues, including the increasing violence between the youth of Biacou and the neighboring hamlet of Miguir, the reduction of the tamarind forest cover and the flooding resulting from forest degradation, the potential risks for the community if new occupants enter the salt production area that provides livelihoods to many local dwellers, and the increased degradation of the mangrove area and the poor shape of the coral reefs, which are locally extracted for the production of lime.

When asked about the reasons to re-establish the *Tara bandu*, his arguments were varied. He articulated a discourse concerned with environmental issues, recounting that since independence the community members had been recipients of a number of dissemination and training activities on environmental issues promoted by state institutions and international NGOs. Among these, he places emphasis on what he

<sup>6</sup> Administratively, Timor-Leste is divided in 13 Districts. The Districts are subdivided into 65 Sub-districts, 442 *Sucos* and 2225 *Aldeias* (hamlets).

<sup>7</sup> Note that the hamlet only accounts for 84 households.

<sup>8</sup> To recount the history in terms of four phases or “compartments,” informants use: the ancestors time (*tempo bei ala or avó sira nian*), the Portuguese time (*tempo português*), the Indonesian time (*tempo indonesia*), and nowadays or the time of independence (*tempo agora or tempo ukun an*).

<sup>9</sup> Note that we have avoided any detail in the transcription and have avoided recounting the origin narrative per se in this paper.

“learned” about the importance of the reefs and the mangrove cover during the dissemination of the current fisheries laws conducted by the NDFA. Since the time of the transitional administration (1999–2002), the resource management framework has had a special focus on environmental protection,<sup>10</sup> as revealed by the subsequent regulations on forestry and protected areas (Palmer and De Carvalho 2008). This approach, initiated during the period of the United Nations Transitional Administration in East Timor, was transferred to the new administration in several different ways (see Nunes 2003) through a number of policies (MAF 2001) and the development of a fisheries legal framework<sup>11</sup> that envisioned species protection (turtles, crocodiles, etc.) and Marine Protected Areas (MPA) development as resource management measures.

In his account, Sergio remembers additional projects that appeared in the area from national and international NGOs: among them an initiative to establish an MPA in the neighboring village of Batugade, on the border with Indonesia. Further to this, Sergio emphasizes the importance of a recent visit by the Secretary of State for Environment, who encouraged the community to take an active role in environmental management and to re-establish the *Tara bandu* as a means to do so.

When analyzing the causes of the current problems of the community, Sergio points to the “modern” decreased attention to community, which from his point of view informs the current conflicts among youth. Therefore, he considers *Tara bandu* to be a measure to obtain “balance between development and culture.” In his words, “if ancestors had it [*Tara bandu*], why would we not have it?”

Further to his identification of the above problems and solutions, his discourse mobilized a narrative that implicitly identified other causes for the current situation. This narrative, which was registered in discourses of many dwellers of Biacou and the ritual authorities interviewed, inextricably linked three entities: nature, the individual, and the *lulik*. He ultimately considered that issues of environmental degradation and the conflicts between youth were the result of current disrespect for the realm of the *lulik*: a disrespect identified as the result of practices introduced by the Indonesian state in regard to forest, land, and marine exploitation (including destructive fishing techniques), along with “modern” neglect of traditional ritual practices. For this reason, he believed that recovering the environment should be paired with, and result in, a revitalized respect over all deemed as *lulik*.

<sup>10</sup> See Weber (2008) for a quick overview of the subsequent regulations during the United Nations Transitional Administration in East Timor.

<sup>11</sup> The 2001 fisheries policy (MAF 2001) was notably oriented on sector development. The shift to an approach more focused on environmental protection of the domestic fisheries sector was linked to the progressive arrival of international development projects beginning in 2002, and was visible in the new drafted policy of 2005 (MAF 2007; MAFF 2005).

## Strengthening the assemblage: the arrival of Junior

Junior is originally from Bobonaro. After finishing his studies in fisheries in Java in 2002, he joined a small FAO project aimed at establishing a statistics system and piloting some MPA initiatives. In 2005, he carried out a field visit to Thailand with colleagues, where they were trained in the establishment and management of MPAs. After the project finished and due to the skill set gained, he was contracted by the NDFA as fisheries officer in Bobonaro and continued collaborating with partner projects related to marine and coastal management and conservation. During his time at the NDFA, he faced significant challenges in order to implement activities in the field, given the shortages of resources the institution faces. For instance, his office was located in Maliana, which is more than 2 hours from the coast, and NDFA barely had any resources available for transportation.

In 2011, he joined the RFLP as district staff. As field officer for the RFLP, he was relocated to the fish landing center of Biacou, where he worked up until 2013. By moving his duty station and residence to Biacou, he integrated into the daily life of the community, where he was already well-known.

Soon after arriving to Biacou, Junior knew about the interest of political and ritual authorities in re-establishing the *Tara bandu* as a means to deal with some of the problems faced locally, among them resource degradation. Drawing from the training he had received and influenced by the work of local conservation initiatives that conceptualized traditional rituals as modes of environmental conservation, he considered *Tara bandu* to be the local version of the MPAs he had learned about. When he arrived back to Biacou in 2011, he found that discussions held among community members on the initiative of re-establishing the *Tara bandu* were advanced but not documented. He notified the central RFLP office and was tasked with the duty of documenting the results of the meetings held within the community on the issue. Together with the Chief of the hamlet, he became a main promoter of the initiative of *Tara bandu*.

## Codifying the narrative assemblage

The technical assistance provided by the RFLP and NDFA was essentially to help the community write down the arrangement of the *Tara bandu*, to develop maps and to disseminate the regulation. This was done in three phases: first, Junior transcribed the first handwritten versions of the community meetings and engaged the community in further discussions around the issue. Second, RFLP team members engaged in dialog with ritual and political leaders, to be able to develop a written version of the arrangement based on the agreements reached. This more advanced document included a section on the background of the regulation and a short description of the reasons for the ban, as well as the places under protection.

Three versions were written of this second draft until a final one was agreed upon by all involved.

In parallel, the team took georeferenced photographs of all the places that are referred to in the *Tara bandu* document. On this basis, the RLFP team developed Google Earth maps containing tagged photographs with the protected spaces, and commissioned a group of local artists to paint a map with the information over the wall of the fish landing center.

In May 2012, the ritual authorities and political authorities as well as members of the community acting as witnesses signed the final document that summarized the agreements held during more than one year of community dialog to establish the norms, penalties, and regulation measures under the new *Tara Bandu*. The document explains the background and provides a justification for the re-establishment of the *Tara Bandu*, setting restrictions on resource use (a summary of the document can be found in Alonso-Población et al. 2016).

A process for the resolution of conflicts and a series of penalties were also set up. Penalties include meat and consumables such as beverages, rice, areca nut, and betel leaves as well as cigarettes. If the *Tara bandu* is broken, all of these items are to be consumed in the communal feast once the reconciliation arrangement is achieved. The ceremony in which they are consumed is conducted with the aim of seeking forgiveness from the ancestors and the spirit of the *rai'nain*.

While writing and registering the agreement may provide legitimacy in the context of the modern state, at the local level, the legitimacy of the *Tara bandu* is granted by ritual performance.

### Enacting the assemblage through ritual performance

In August 2012, Francisco Talimeta, one of the *lia na'in kaer bua malus* (ritual leaders) with authority within the area of Biacou, carried out the ritual *Tara bandu* as he always had. He first sacrificed a goat in a *lulik* (sacred, taboo) place called *Oho no rae* (mountain and land), communicating with the *rai na'in* (spirit of the land) and interpreting the signs through the viscera of the animal. He then offered the land food, areca leaves, betel nut, and palm wine. A man in a boat landed on the shore, dragging two fish behind them. They were covered in areca leaves and carried to another *lulik* place called *Namon matan*, where a pig was sacrificed. Again, Francisco interpreted the signs in the viscera and did the offerings to the *rai na'in*. The ritual concluded with a big communal feast, in which all participated. However, in this occasion, the *Tara bandu* ceremony was not a usual one. In addition to the dwellers of Biacou, the Chief of the hamlet, and the ritual authorities, there were important *bainaka* (invitees) from the outside. These included the Secretary of State of Fisheries and Aquaculture, along with high-level officials from the government, local political authorities such as the Chief of Suco or the Sub-district Administrator, the local Catholic priest, and

officers of the FAO Regional Fisheries Livelihoods Programme (RFLP) for South and Southeast Asia.

However, this was not the only difference with previous *Tara bandu* ceremonies. In this occasion, the final document containing the regulations and penalties set and agreed upon by the community was disseminated and distributed, and the wall of a public building displayed a painted map showing the visitors the areas under protection. Finally, an official website of the National Directorate of Fisheries and Aquaculture ([peskador.org](http://peskador.org)) made the signed document publicly available, and a Google Earth map with georeferenced photos and polygons demonstrated the areas under special protection.

### Beyond the narrative: the performative dimension of the assemblage

Several months after the enactment of the *Tara bandu*, five residents from Biacou burned down a 100-year-old tamarind tree within the protected forest area. They were grilling fish and drinking palm wine under the tree, and when they went home after a few hours, they forgot to put out the fire. The fire spread to the tree and at three o'clock in the morning, the tree fell and woke the residents. The issue triggered a rapid response. The offenders sat down with the local authorities in the *nahe biti* (mat),<sup>12</sup> discussed the occurrence, and agreed they should pay the corresponding penalties for breaking the ban: animal meat, rice, cigarettes, betel, areca, and beverages, which would be used for the communal feast accompanying the new ritual, by which the broken prohibition would be re-established. By paying these penalties, the offenders would avoid punishment from ancestors and the spirit of the *rai na'in*, which are believed to occur in the form of illness, misfortune, or sudden death to those who break traditional rules.

In 2013, around one year after the enactment of the *Tara Bandu*, a construction company expressed interest in the quality of the stone of the forest area under protection to build the road that connects the capital of the district (Maliana) with the country's capital, Dili. The issue provoked divisions within the hamlet between those who wanted to ban the company from quarrying in the *Tara bandu* area and those who wanted to allow the quarrying, as they saw it as an opportunity to create jobs and contribute to the economic development of the area. The issue was finally resolved in favor of the latter opinion, after state authorities and a national political leader made a formal request to the community to grant permission for quarrying by lifting the *Tara bandu* over that part of the forest. As compensation, the company committed to providing jobs and benefits for the local community. This occurred

<sup>12</sup> *Nahe biti*, literally "unrolling the mat," has been conceptualized in the academic literature as a local mode of reconciliation (Soares 2004). For a discussion on the multiple use and meanings of *nahe biti*, see Fidalgo Castro (2015).



right when the government was about to approve the new law of land expropriation, by which private land could be taken by the State for the sake of public interest, so the choice for the community was seemingly limited. Since the quarrying involved tree cutting (prohibited under the *Tara bandu*), a new agreement had to be reached in the *nahe biti* among all the affected parties. As a result, the ritual authorities performed a sacrificial ceremony to request permission from the spirits.

By that year, however, the community members noted that as a result of the *Tara bandu*, the pressure facing the reef (where they had previously extracted coral to prepare lime) had been significantly reduced. In addition, the community recognized that the mangrove area under protection was no longer being continually used for firewood.

One year after its enactment, in addition to these achievements, the *Tara bandu* still faces many challenges, such as the effective incorporation of women into the governance structure, the raised workload for salt producers derived from the restrictions on collecting wood from the nearby forest, the increased expenditures incurred by households resulting from the ban over coral extraction as lime then needed to be bought from the market, and the need to attain further recognition and engagement from state institutions to deal with larger problems, such as illegal fishing by larger foreign vessels (Alonso-Población et al. 2016). However, the community demonstrated their capacity to develop an effective mechanism for resource management, as they had increased transparency by codifying and disseminating local regulation and had used the document as a tool to assert tenure rights—as shown by the quarrying issue.

## Discussion

In this paper, we have provided a brief overview of the early stages of the re-enactment of a *Tara bandu* and have described the way RFLP provided assistance to the community. To do so, we have developed a conceptual framework to interpret the process and the results. In this process, three narratives formed a temporary and heterogeneous assemblage. Firstly, the narrative of the RFLP team, detached from the tragedy of the commons and closer to the rational producer embedded in community-based fisheries management narratives. Secondly, the origin narratives of Biacou, that while can only be recounted by the ritual authorities, provide legitimacy to tenure rights and clearly establish the spaces subject to special observance, so-called *lulik*. Thirdly, the narrative displayed by Sergio and many of the dwellers, which identifies current environmental problems as the result of the influence of foreign forces, such as the influx of “modernity” or the exploitative patterns and resource depletion brought along by the Indonesians’ practices. We suggest that in order to re-enact the *Tara bandu*, these three narratives created an assemblage,

in the sense that they worked together for some time (see Müller and Schurr 2016), enrolling entities such as reefs, mangroves, and forests, the spirit of the *rai na’in*, the ancestors (*bei ala sira*), and all *lulik* spaces and objects, along with the State and the Church, the rational producers and even the figure of the “modern” individual.

The assemblage is created by two processes: one of translation, the other of codification. Translation occurs as a result of the assimilating *Tara bandu* as an environmental conservation measure or an MPA. One of these means through which this occurs is through the process of “learning”—as expressed by both Sergio and Junior. The second process is the codification, which was accomplished through writing, registering, and mapping by using GPS cameras. In this vein, RFLP’s main role was to codify this assemblage in maps and text. Codification brings the assemblage to a different status, as once codified, the assemblage can be witnessed. Legal pluralism brings along different paths for legitimacy; while for the state, codification is key to drive legitimacy, whereas for the local community, enactment of the law relies upon ritual practice.

As pointed out above, until now, the notions of enrolment and assemblage, as well as the principles of symmetry, agnosticism, and free association, have been mostly circumscribed to academic discussion, and for the most part used for third-party analyses of phenomena. In this paper, we have shown how they can serve as a departure point to engage in more balanced relationships between fishery managers and communities. To promote the re-enactment of this custom-based arrangement, we considered all narratives and ontologies as having the same value and departed from an agnostic approach, by which none of the parties had privileged access to the truth. For example, the Chief of the hamlet’s identification of the reasons leading to current problems and the potential solutions were never deemed as an error of judgment. Finally, we set the stage for the free association of entities pertaining to different realms (the *rai na’in* and ancestors, along with the State and the mangrove, for example). We contend that practitioners seeking to engage in more symmetric relationships with fishing communities to promote enhanced governance of resources may benefit from applying Callon’s (1986) principles.

Within this paper, we have referred to the *Tara bandu* as both a custom-based and hybrid organization. We preferred using the concept of custom-based to avoid giving the impression that the *Tara bandu* is an institution that has remained “untouched,” which is implicit in the idea of the customary organization. Instead, and as described in the brief historical notes above, *Tara bandu* currently has many different roles and usages, which have changed significantly over time and are currently going through a process of revitalization. In his typology, Kurien (2013) refers to hybrid organizations in fisheries as new organizational forms, characterized by

heterogeneity and a strong ICT component. Beyond this definition, we consider *Tara bandu* as a hybrid organization, due to its capacity to enroll entities (the ancestors and the State, for example) pertaining to different ontological sets in a temporary, heterogeneous, assemblage-like arrangement.

## Conclusion

As put by Bavinck et al. (2015), organizations with a pre-modern origin have proved relevant and adaptive for resource governance in a varied range of institutional and natural settings, filling multiple objectives beyond resource management, as other community-based management initiatives do (Jupiter et al. 2014). The *Tara bandu* in Timor-Leste is one such community-based resource governance mechanism that combines custom-based elements in a hybrid innovative arrangement. *Tara bandu* has shown a resilient and adaptive mechanism that has gone through significant change over time. Yet, while custom-based institutions have some recognition in Timorese law (Alonso et al. 2012; Alonso-Población et al. 2016), and despite the recognition by political authorities of the *Tara bandu* of Biacou, a further challenge will be *Tara bandu*'s integration into legal development in a context of state building.<sup>13</sup> This movement from legal pluralism to co-management (Jentoft et al. 2009) can lead to different outcomes, so it is recommended to learn from other experiences and monitor developments to be able to ensure greater adaptive capacity.

In a well-documented discussion, David Hicks (2015) describes the social polarization that the Portuguese style of colonization produced in Timor between the social elites arising from the capital, Dili, and the *ema foho* (literally “people of the mountain”). Owing to the greater attention given by the Portuguese and the Church to the capital of Dili, in terms of infrastructure and education in comparison with rural areas, Hicks suggests that contemporary Timor-Leste has inherited two characteristics from the colonial encounter: first, that the *mestiço* (Portuguese-Timorese) generation that shaped the history of the mid-1970s continues to dominate the political scene, and second, that the people of the *foho* (mountain) continue to remain alienated from the capital of Dili (Hicks 2015). In this context of marginalization of rural populations, Palmer and De Carvalho (2008) contend that the resurgence of rituals related to nature governance, such as *Tara bandu*, is a strategy developed by local communities to claim a new status in state formation (see also Sousa 2009). Beyond its purely economic dimension, poverty alleviation involves ensuring

peripheral communities to increase their capacity to raise their voice in the political domain. *Tara bandu* can be then interpreted as a mechanism through which communities raise their voice by making effective the agency of their spirits, ancestors, and narratives.

The *Tara bandu* of Biacou was a small pilot experience in the context of a much broader co-management strategy, but the experience served to draw several lessons. The solution presented many challenges and would require further support, but it should not be neglected as a viable mechanism for improved governance in a context characterized by lack of human and capital resources.

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**Authors' contributions** Enrique Alonso-Población was Technical Advisor/Team Leader of the RFLP project in Timor-Leste. One year after the end of the project implementation, he led the qualitative research upon which this paper is based. He conducted fieldwork, accomplished data, and information analysis and was lead writer for the paper. Pedro Rodrigues worked as National Project Coordinator of the RFLP in Timor-Leste. One year after project implementation, he participated in the qualitative research project. He conducted fieldwork, transcribed interviews, and co-authored the first case study report. Crispin Wilson was Co-Management and Livelihoods International Consultant at the RFLP Timor-Leste. Beyond project implementation, he contributed to the conceptualization and writing process of this paper. Mario Pereira participated in the implementation of this project as per his role as Co-management and Livelihoods National Consultant of the RFLP Timor-Leste. Robert Ulric Lee contributed to the writing process of the first version of the case study over which this paper builds upon.

## Compliance with ethical standards

**Competing interests** The authors declare that they have no competing interests.

<sup>13</sup> Elsewhere, we have proposed their recognition under the article aimed at regulating the co-management commissions within Fisheries Government Decree 5/2004 (Alonso et al. 2012)

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