

THE SEA WITHIN

MARINE TENURE AND COSMOPOLITICAL DEBATES

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Hélène Artaud – Alexandre Surrallés (editors)

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IWGIA

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To Pedro García Hierro, *in memoriam*

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From the Land to the Sea within – A presentation

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In 2004, the book I edited with Pedro García Hierro entitled *The Land Within: Indigenous Territory and the Perception of the Environment* was published. The book that I am presenting in this text, reuses part of this title because its purpose pursues the same objective: to reflect on the rights of native populations to enjoy the spaces they occupy. The Sea Within also stems from the necessity to explain a certain Eurocentric bias that the articles compiled in *The Land Within* suggest: the idea that the territory of a people can only be a space of land. When *The Land Within* was published, we were asked why the exploration of particular perceptions of the territoriality of indigenous peoples carried out by the texts that formed that compendium, did not include any cases of marine tenure. We were asked whether this fixation on land, in regard to territory, did not actually reflect an outdated Western perspective, especially falling within a legal context, which may not be shared by all peoples and cultures. The answer is without doubt affirmative. Perhaps it was due to our personal experience as a lawyer and anthropologist from the Upper Amazonian area, so far from the sea, or perhaps it was because we allowed ourselves to be carried away by what, more than a decade ago, seemed to be such important territorial claims - but we did not consider the coastal populations and their territorial vision. However, the idea of territories without land was essential to outline what we proposed in *The Land Within*: namely that the cultural elements by which a human population is linked to its location, can be very varied, even unheard of. It is to complete the project I started with Pedro García Hierro more than a decade ago that we have edited this book with Héléne Artaud.

It should be noted that, on the other hand, recent texts on the rights of indigenous peoples clearly show that indigenous ownership of marine and coastal spaces must be respected. In addition, their rights to their sea spaces must be guaranteed according to local perceptions, and this is masterly described by some articles in this book. This is expressed in the 2007 United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in the articles dealing with territoriality (from 25 to 27). The UNDRIP emphasis on coastal and maritime spaces exists to support the deep tradition of international law considering the sea to be an area of free circulation. In the origins of Indigenous peoples rights, when the lawyers and theologians of the Salamanca School in sixteen century claimed that the indigenous peoples of America were entitled to the posses-

sion (*dominium*) of their lands, marine spaces were expressly excluded. It should be borne in mind that the School of Salamanca doctrine is considered by historians of law as the beginning of international law, advocating even human rights. Thus, the first and most important jurist from this school, Francisco de Vitoria, considers that the only right superior to the right of indigenous people to their lands is the right of transit (*ius peregrinandi*), which, above all, includes transit through the sea, its coasts and ports. So important was this premise that the right of transit, along with the right to trade and preach (*ius negociandi* and *ius predicandi*) were the only foundations on which to legitimise European presence in America. Since then, the sea has been a space of transit defended with arms by the incipient international community, against the whims of nations or groups who would dare to manifest some kind of right of exclusive use. Now that states are expanding the extension of territorial waters and immense ocean areas are being regulated based on environmental protection, it is time that indigenous coastal populations' rights to the tenure of marine spaces be clearly defined.

Another reason that adds to the interest of publishing the *The Sea Within*, in relation to *The Land Within*, arises from the feeling that the sea has become the new frontier, and perhaps the last one, of the colonial expansion of capitalism against native populations. The articles that comprise the book *The Land Within* are concerned with the indigenous peoples of South America who mostly live in the jungle and are protected by difficult access. The harassment of these populations during the time following the publication of *The Land Within*, has not only not been mitigated but has in many cases intensified. Innumerable environmental conflicts have erupted even more frequently and virulently than in the past, threatening these peoples with attempts at territorial plunder through hydroenergetic, agroindustrial, mining and oil megaprojects promoted by the South American states regardless of the political flavour of their governments. Because the gravity of the situation does not allow these populations from the forests and mountains of America to let their guard down, they must today have their own organised associations, the support of public opinion and be monitored by experts of all kinds. In America, as in other parts of the world, agreement that indigenous peoples must advocate their right to land territory is unanimous. Could the same apply to coastal populations and their right to marine possession? It seems that, for the same reasons discussed above, coastal populations have not enjoyed the same attention or been given similar support by analysts and may have been left somewhat outside the process of political and legal recognition enjoyed by continental peoples. In addition, it also seems as though that recently the sea and coastlines have been fully included into the objectives of colonial expansion. The economic interests of states and corporations in marine spaces is not new. What is novel however, is the large-scale implementation of a type of intervention that threatens the livelihoods of local populations, whose level of intensity is increasing. Enumerated by Hélène Artaud in the Introduction, these interventions, by virtue of their virulence and taken as a whole, seem to constitute a new and perhaps last frontier of colonial expansion. The fact that local coastal populations

have begun to protest against this avalanche and to assert their rights, which have hitherto been more discreet than, for example, the mediated demands from indigenous rainforest populations, has perhaps helped to reinforce this view. Today, however, the claims made by peoples who live with the sea must be described, analysed and addressed, and this is the purpose of this book.

However, *The Sea Within* is not a simple prolongation of *The Land Within*. The first difference between the two books concerns the type of populations described. If *The Land Within* only focused on indigenous populations in the strict sense of the term, *The Sea Within* also includes other local populations that most certainly do not identify as indigenous peoples. Another difference is the geographical area that in this book is the world, while in *The Land Within* is limited to cases of South America. Two reasons explain these choices. The first is related to the number of studies carried out in the marine environment compared with the terrestrial. If the anthropological study of territory has carried out hundreds of research studies on all continents, the anthropological study of marine possession is much more limited in number. If one wishes to deal with this subject, with sufficient scope of perspective, it is difficult to restrict such a study to a particular geographical area, because of the scarcity of studies. Another reason not to be limit oneself to a continent concerns the human geography of the seas and oceans, open to the horizon, inhabited by a flow of migratory movements of both humans and non-humans that make this space an environment structured by logics that differ to those that govern terrestrial spaces. These reasons prevailed when choosing the world as a geographical area and not limiting our perspective to indigenous populations, given that when these groups live next to the sea, they share the same problems with other traditional populations.

Another difference between the two books is reflected in the subtitle; The subtitle for *The Land Within* is *Indigenous Territory and the Perception of the Environment* while the subtitle for this book speaks of 'cosmopolitics'. This term, created by philosopher Isabelle Stengers and taken up by anthropologist such as Philippe Descola, Bruno Latour and Eduardo Vivieros de Castro, refers to the need to overcome the conventional scope of politics so as to ensure non-humans are not excluded, those with whom we humans share the world and with whom we are affectively bound to. The cosmopolitical proposition also requires incorporating diverse discourses on the ontological composition of the elements of the environment - not only expressed by indigenous peoples - that can challenge the idea of nature and the entities that compose it, on which the conventional field of politics is based. When we published *The Land Within*, the idea that cosmopolitics could break through was a still distant hope. Today, it is a reality that can be seen in certain articles in this compilation, and is shown by the numerous examples from around the world that relate to politics and rights, and how they refer to both non-human and plural discourses on properties of the universe, or in cosmopolitical terms, of the 'pluriverse'. ○

Introduction

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The topic explored in this volume has stirred up much debate in the last few decades. The idea that the sea can maintain a privileged relationship with human societies, that claims can be expressed and legitimated based on such non-normative elements as individual biographies and their trajectories, or knowledge of place names and their origins, has recently been taken up with a great deal of interest. There are many reasons for this surge in attention. Increasingly, indigenous minorities are staking claims as they seek to preserve or restore their rights on maritime environments to which they have close ties. State recognition of these claims entails political and legal translations. Inter-state disputes over maritime territorial expansion have proliferated. And finally, environmental crisis raises new issues, and calls for new types of practical response and negotiation. As an unprecedented climate emerges around maritime questions, the sea is, more than ever before, permeated by human affairs. Social anthropologists, whose attention to the sea was previously quite timorous, are becoming more keenly interested in the socialization of maritime space.

“Maritime anthropology,” as it was defined in North America and Europe at the turn of the 1970s-1980s, was, indeed, long defined by its marginal position in the intellectual and anthropological landscape. This belated interest seems to be rooted, at least in part, in the connotations of strangeness and ambivalence that Western thought attributed to the sea. Until recently, the concept of the sea as a human space, marked by cultural diversity, was stubbornly resisted. Perceived instead as a homogeneous space, as *“veuf de routes,”* (“widow of the ways”) (Detienne and Vernant, 1974: 275) and as “irremediably wild” (Corbin, 2010:75), the sea was viewed as refractory to any form of “domestication.” Such otherness could be made legible only through semantic or epistemological comparison with the more familiar terrestrial environment. This land/sea dialectic is omnipresent in early maritime anthropology; this emerges clearly through a close reading of its pioneering texts.¹ That said; the continental referent is mobilized in varying ways. Some authors emphasize continuities between land and sea. Others, conversely, introduce a radical break – one that is both ontological and epistemological – between these environments. In the first instance, the sea is defined as an extension of continental space; it thus also takes up its social structures. To think through and define maritime space, some scholars have projected the logics of peas-

ant communities onto the sea and seafarers (Breton, 1981:8) or made a connection between fishing and hunting activities (Pálsson, 1988; Barnes, 1996). Others, adopting a position of epistemological monism, reduce perceptions of the sea to replicas of continental schemata. By contrast, for the second group of authors, understanding the sea entails a revelation of its radical strangeness. In their work, the maritime environment, described as “hostile,” “unpredictable,” “dangerous” and “alien”,² gives rise to specific social, technical, economic and symbolic structures. Sharing key features across maritime societies, these differ significantly from the structures of other societies, thus calling for a specific common analytical framework.³

Until recently, the law also approached the sea through its radical otherness from the continent.⁴ In this respect, Grotius’ *Mare Liberum* (translated as *The Free Sea* or as *The Freedom of the Seas*) had a durable influence on Western representations. In it, the sea is defined as a “commons,” over which there can be no ownership or jurisdiction. Like the air we breathe, “unlimited in its substance and its uses”, the sea cannot, Grotius argued, become the exclusive possession of any nation. It should therefore remain a space of free transit. This principle was particularly hard to dislodge given the apparent impossibility of delimiting and defending maritime space due to its inherent qualities: “How can one take possession of waves and swell? How can one trace permanent borders on a liquid space, imprint palpable marks into it?” (Cauchy, 1862: 95).⁵

This distinction, between “lands which can become property and the ocean, which is not subjected to such rights” is a defining feature of what Ruddle and Akimichi (1984) call “Western philosophy.” Other human societies, however, relate to the sea on the basis of fundamentally different paradigms. Many perceive the sea not as a hostile world but as an open space, as made up of pathways and transmission. This is a sea to which fishers relate through embodied, sensory and affective ties, and which they can master only by reading its natural clues (fluctuation of the tide, water colour, motion of the stars).⁶ Surely, then, it is incongruous to view maritime space, and the relationships of non-Western societies with the sea, through the lens of property. By automatically resorting to this concept, interpretation risks obscuring ontologies that cannot be understood in terms of confrontation with, and domination over, the natural world. Indeed, most of the chapters in this volume describe ways of relating to the sea that diverge quite fundamentally from the concepts usually associated with “ownership.” Maritime space is not generally delimited in a fixed way; rarely is it marked by tangible boundaries, exclusivity of use, or any major alteration (Locke, 1984). Rather than refer to the concept of “property” – which cannot account for the wide variety of ties forged between societies and maritime environments – the contributors to this volume seek to describe these relationships in all their singularity. When needed, they develop new terms to adequately describe specific ethnographic situations. This volume thus heeds Bambridge’s call to engage in a reflection on the “fundamental nuance (...) in meaning to be given to the term “property” (...) total ‘cultural invention of the West.’” The chapter by Howard and Frances Morphy is perhaps the best illustration of such a

reflection. They describe how, in aboriginal communities' representations of the sea, maritime territory is configured as a set of trajectories rather than as a delimited and concentric space. Here, any form of territorial control or belonging must be justified not by a human transformation of the environment, but on the basis of the wanderings of an ancestral being. This suggests that, with respect to how some human communities relate to maritime space, the concept of appropriation can only be made heuristically useful if it is rethought as a form of mutual belonging or co-substantiality.

If the concept of "property" is, as it seems, so inadequate to the task of defining relationships between maritime societies and their environments in non-Western cultures, then how can we account for the recent, unprecedented proliferation of claims staked on maritime "territories"? Do these claims not imply some form of territorial appropriation, in that demands are made, by indigenous communities, for some form of exclusivity of use to which only the notion of property can guarantee effective rights? This volume brings two elements to bear on these questions. Its chapters all point out, in some way or another, that over the last centuries, Western and non-Western paradigms have become inextricably linked and mutually defined. Through continuous interaction, they have grown interdependent. Identities are thus, very often, defined on the basis either of their fundamental opposition or of their complementarity. Only the attentive historical study of places and communities, through colonial and post-colonial times, can bring into view, as these chapters do, the dynamic interactions between these paradigms that shape representations of the sea – and the impossibility of addressing them separately. The globalization of economic and ecological problems is a second element accounting for the emergence of a shared lexicon of property-related concepts. Indeed, this process has a particularly heavy impact on coastal and island communities. They face economic and political pressures from both industrial firms and states seeking to impose nationwide development programs. This means that if they are to obtain any meaningful recognition of their claims, these must be formulated in normative legal terminology. In other words, a normative translation of qualitative relationships with the sea is necessary. Whether this translation is mediated by indigenous populations themselves (Martinez Mauri) or by the anthropologists they enrol (Morphy and Morphy, Guevara and Le bonniec), power over maritime space is clearly increasingly constructed and redefined through close interaction between paradigms.

Our intention in this volume is *not* to cover the entire range of debates and reflections that have placed maritime environments at the heart of geopolitical, environmental and sociological processes. Instead, it seeks to offer an illustrative sample of studies. In these, we take specific situations – those of given communities, themes or ecosystems – as collective our point of departure. Such local "entry points" in no way reduce this volume's scope of analysis, as is clearly shown by the rich diversity in its authors' terminology. Indeed, their concerns vary widely. Some attend to local representations of maritime space perceived as a "seascape" and on the idiosyncratic, symbolic or cognitive meanings that are invested in it. Others instead focus on how the sea

is approached as a resource generator and as a subject of “traditional management.” Moreover, they address a sea that is viewed in different ways, defined, for example, in relation to its terrestrial counterpart, as “marine-land tenure” (Calinaud, 1993 cited by Bambridge), or as a territory to be claimed (Le Bonniec and Guevara).

The themes addressed in this volume are crosscutting, making it difficult to divide its chapters into distinct headings. Instead, we opted for a flexible structure, from which a thread gradually unfolds. A first set of chapters (Morphy and Morphy, Artaud) illustrates how heterogeneous premises – cosmological, social, and epistemological – frame human societies’ relationships with the sea. Because these tenets are multiple and idiosyncratic, the challenge is to grasp their diversity but also how, at the same time, they address a shared contemporary goal: the “rational” management and use of fishery resources (Ruddle and Aswani). The second set of contributions (Bambridge, Boutry and Ivanoff, Cormier-Salem) explores, from social and legislative perspectives, the dialectic between maritime and terrestrial spaces. They reveal how these spaces are connected by dense human traffic, involving a large range of actors and resulting in remarkably flexible identities. The chapters in the last section (Doyon, Martinez Mauri, Le Bonniec and Guevara) point out how even highly singular ways of appropriating maritime space can be absorbed into – by surrendering to or mutually reinforcing – national policies.

The first part, entitled “Roots and Efficacy of Maritime Tenure”, begins with the text of Morphy and Morphy. It offers a revealing glimpse of how, in some societies, maritime space is imbued with subjectivities and thus inextricably connected to a collective mythological worldview. Perceptions of the sea such as those of Yolngu communities (northern Australia) would be, they show, impossible to understand in isolation from their underlying social, mythological and epistemological values. These values not only give meaning to the seascape. The seascape is also, in a way, their materialization. In its minute textures, in every reef and sandbar, the seascape bears the footprints of ancestral beings, whose original journeys distinguish one clan’s territory from another’s. The sharing out of tribal space thus does not proceed by subdivision into bounded zones. Rather, it operates as an interlinking of trajectories, between which some space is left vacant. The wanderings of these ancestral being cuts across terrestrial and maritime space, extending into the sea. These territorial configurations run counter to Western assumptions, perhaps in part because, for Yolngu communities, there is no real break between land and sea: “the coast seems to be an arbitrary boundary.” Indeed, the main heuristic distinction here is not between land and sea, but rather between fresh water and salt water, which interact in “dynamic interrelationship.” Thus the landscape is discerned, and expressed, as “bodies of water.” Each is associated with a specific clan. Allocation of space among clans is not the only function of this definition of the landscape. Its arrangements and crisscrossing trajectories also prescribe the ways in which social relations are to be initiated and strengthened. Just as the landscape bears witness to the journeys and encounters of ancestral beings, it also, as the authors

show, instructs communities as to how they should forge alliances, privileging links between clans whose mythic beings are joined together. The maritime landscape is thus both narration and injunction, which can be deciphered only through each clan's cosmology. This is what the Morphys call an "eco-mythology."

In Artaud's chapter, the sea as scape is associated, not, as above, with an origin myth, but rather with a shared perceptual and sensory relationship. The genesis and maintenance of this relationship can be understood through a careful analysis of local marine toponymy. The place-names of the Banc d'Arguin form a sophisticated apparatus, which is effective on two levels. Most obviously, it provides a set of detailed clues about the maritime environment, enabling those who pass through the sea to acquire some hold over it. Yet this toponymy also creates a space of shared memories and sensibilities among the communities who have elaborated its vocabulary. To understand how topological terms act on Imrâgen fisher communities' perceptions of the maritime environment, it is essential to move beyond their remarkable diversity in order to discern, through typological consistencies, their underlying logic. This is the analytical move this chapter aims to make. It thus offers an ethnographic illustration of how collective memory is preserved and reactivated through the specificities of the maritime environment. Echoing the Morphys' use of the term "eco-mythology" to describe how territory is manifested in mythical narratives, Artaud calls this foundation of Imrâgen communities' relationships with the maritime environment an "eco-aesthesia." By this she means a way of connecting self and environment by adjusting, through sensory and embodied mediations, to the singularities of its terrain and ecosystems. Far from being a fixed terminology, the Imrâgen toponymical system is, Artaud points out, highly flexible. She shows in particular how place names have been able to incorporate new referents that have arisen as a result of sociological and legislative changes, notably those initiated by the creation of Banc d'Arguin National Park.

A key question in contemporary debates is about how paradigms of nature coexist and interact. Two paradigms appear, today, as distinct. The first, founded on holistic tenets such as those briefly described above, is associated with local or "indigenous" peoples' representations of nature. The second, the "ecological" paradigm, is more normative, and adopts, by and large, the principles of Western Science. In their chapters, Ruddle and Aswani call for a more careful examination of this articulation. Indeed, they open pathways between a "local" sea, which can only be understood through its cultural, symbolic, embodied or affective underpinnings, and a "rational" sea, constructed as a space to be administered by global policies of resource conservation. Through these openings, the affective and sociological dimensions of communities' engagements with the sea are vested with potential ecological efficacy by taking the form of "traditional resource management systems."

Current interest in the potential "ecological functionality" (Artaud, 2015) of traditional mechanisms emerged from two major, successive shifts in Western thought that took place in the past few decades. The first was a re-legitimation of "traditional" or "local"

representations of the environment, whose epistemological validity was, until recently, discredited. The generalization of this position is illustrated by the widespread use of acronyms such as TEK (Traditional Ecological Knowledge), LEK (Local EK)⁷ and FEK (Fishers' EK). The second shift was initiated by discussions that arose around the "tragedy of the commons," as Hardin entitled his landmark article (1968). Although serious attention was being paid to TEK, LEK and FEK, there was still a lack of evidence for the efficacy of traditional mechanisms in preserving and regulating natural resources. On this point, discussions about the "commons" seem to have made a significant impact. Refuting Hardin's thesis, according to which only private management could guarantee resource conservation, work by Johannes, Hviding and Ruddle instead demonstrated that common principles and responsibilities were, by and large, capable of restricting and containing overexploitation. Mechanisms such as reef and lagoon tenure are effective because of the limits they define. These can be spatial (delimiting between spaces where fishing is allowed and those where it is proscribed) or temporal (circumscribing the *times* when fishing is permitted). Both regulate the use and extraction of maritime resources. Ruddle's chapter, also reprinted here, describes the wide range of forms of "limitation" and "delimitation" found in traditional tenure systems, and which have a potential for significantly impact on resource management. Here, Ruddle aims, following Orstom, to identify invariable elements operating across traditional management systems. He finds that two principles, which he categorizes as "spatial boundaries" and "social boundaries," tend to consistently structure traditional maritime tenure systems. Within the first category, Ruddle discerns a typology of spaces such as fishing territories, sacred sea space, and integrated resource territories (held jointly by a kinship-based group). Though these spaces may overlap, a clear distinction is made between their respective functions. Ruddle also elucidates a typology among social boundaries, consisting of primary and secondary rights that define rules of access to the sea and guarantee its conservation. While showing how common principles subtend traditional mechanisms, Ruddle's main emphasis is on the permeability of the boundaries that structure these mechanisms and on the flexibility of the use rights they uphold. By emphasizing these systems' mutability, Ruddle also engages in a critical analysis of the concept of "property." In marine tenure systems, the concept of "property" applies not only to territorial wholes, but also, in some cases, to more specific parts and elements such as reef zones, spawning grounds, nursing areas, as well as fishing techniques and even species with which a group has a particular affinity. By pointing out the variety of objects that can be brought under some form of hold or control, Ruddle thus highlights the flexibility of "physical and biological boundaries [which] are not immutable," and the dynamic nature of fishing systems as they contend with a globalized economy.

If such codified modalities of access to fishery resources are indeed effective for ensuring their conservation and renewal, then there is little point in "reinvent[ing] the wheel and attempt[ing] to impose a state plan of command and control" (Aswani, 2012). Instead of imposing rules that populations are likely to perceive as authoritarian

and coercive, many managers of protected spaces have thus sought to maintain or to reinstate what they interpret to be traditional forms of management. Such processes of conciliation and hybridization between traditional and modern systems for managing protected spaces are the focus of Aswani's chapter. These, as he points out, are not always easy. Given the heterogeneous foundations of traditional mechanisms – which, as noted above, can be social, mythological or embodied – methodological obstacles tend to arise in their application to standardized contexts. R.E. Johannes and B. Neis (2007) found that such obstacles result not only from the internal structures of local knowledge. They also emerge from the sometimes trivial, often anecdotic, language with which this knowledge is communicated. Transferring knowledge is challenging because, essentially, it is anchored in radically different paradigms, which are, in turn, underpinned by explanatory systems that are just as heterogeneous. Because traditional mechanisms fuse ecological and mythical (eco-mythology), ecological and sensory (eco-aesthesia), or ecological and social dimensions, their manipulation and application is problematic. Yet, the very symbolic, religious and sociological foundations from which maritime tenure is so difficult to extricate are exactly what make it work, ensuring its respect and preservation. The destruction or displacement of a single element is enough to unbalance the whole system. Recently, however, a confluence of factors has worked to erode these traditions, from the impact of colonization to sociological changes such as urbanization and the arrival of new religions. As traditional power loses legitimacy, there is an inevitable weakening of mechanisms that once had a major, sometimes irreversible, role in structuring space. Although Aswani acknowledges these problems and sources of resistance, he also points to elements within traditional mechanisms that facilitate or even elicit connections between these and modern forms of management and knowledge. There are, he argues, several points of compatibility between traditional and modern systems. There are also qualities inherent to the first that are conducive to their successful association with modern management models. Among these, the most crucial is clearly a capacity for self-transformation in the face of the changing contexts and successive disruptions brought about by colonial and post-colonial jurisdiction.

Some traditional mechanisms are more suited than others to being applied within the framework fishery resources management policies. A good example is a "*rahui*," which refers to a restriction placed on the consumption of a good for a specified duration. Like all practices based on a traditional "taboo," this type of restriction works, directly or indirectly, to regulate anthropic pressures (sometimes through their temporary suspension) on the natural environment. It is thus very tempting to ascribe an ecological teleology to *rahui*. Indeed, many marine protected areas in the Pacific (Hoffman 2002) have chosen to maintain or to reintroduce *rahui* as a means of promoting stricter adherence to the legal restrictions adopted by administrations. It is not the intention of the Bambridge text that opens the second part of the volume entitled "The dialectic of land/sea spaces". His main goal is not to show how *rahui* have been newly appropri-

ated by conservation policies. Instead, he draws on the example of *rahui* to question the validity of the concept of “property” as deployed by the French administration. Indeed, he emphasizes just how inadequate the logic of appropriation is, still today, in describing the ways in which many Polynesian societies relate to the “land” and to the natural environment. Here, the individual is as much possessed by, as possessor of, “nature.” The land/sea binary, which also underpins French legislation, similarly lacks relevance at the local level. Like the concept of property, it diverges from the principles by which these communities govern their natural environment. Indeed, *rahui* can be applied to both terrestrial and maritime zones, mobilizing the same modalities (access rights, extractive rights, penalties for violations and relevant jurisdictions). In pointing this out, Bambridge exposes the contingency of the land/sea delimitation. He thus poses a key question – about how maritime and terrestrial spaces are connected in non-Western representations – in new ways, as part of a broader reflection on the compatibility, and the modes of articulation and integration of divergent paradigms over time. Legal pluralism – that is, a legislative order in which heterogeneous juridical entities are combined without being forced to fuse – is, he concludes, the only real solution to this problem of coexistence.

Connections between terrestrial and maritime spaces are also the focus of Boutry and Ivanoff’s contribution, but they explore these in light of complex sociological and symbolic stakes rather than legislative issues. Here, again, they describe sea that departs from Western representations of a closed and wild space that basically leans against terrestrial space. Instead, land and sea are interdependent. By exploring the deployment and renewal, within this land/sea relation, of local social, economic, matrimonial, ritual and symbolic interactions, they reveal how modes of sociality are intrinsically tied to this interdependence. This process of continuous interchange has, indeed, structured the very identity of those who inhabit this space nomadically – of which the iconic example is the Moken people. Their relationship with the sea cannot be understood in an autarchic way, that is, in isolation from the relationships they form with the land. On the contrary, it is through their close ties to the land, which are embedded in a symbiotic economy and system of alliances with its inhabitants, that they relate to the sea. The couples that form within this social dialectic are so intimately and “structurally linked” that they co-develop adaptation strategies. These are based on a segmental dynamism, anchored in structural dualism, which make up increasingly expansive wholes. Like all segmental logics, this interplay of opposites, which distinguishes Moken (“people of the islands”) from Moklen (“people of the interior”), or Moken (marine nomads) from Burmese fisher communities (a society of agriculturalists who only recently converted to fishing), is at once constitutive of fluid identities and a condition for maintaining the specificity by which they differentiate themselves.

In these chapters, the sea thus appears far-removed from Corbin’s “space of emptiness,” (“*territoire du vide*,” 1989). It is instead a space pervaded with sociability, stakes and actors, whose coexistence and interdependence are crucial to its analysis. This

applies also to maritime spaces that were long dismissed as marginal. In her contribution, Cormier-Salem reveals the surprisingly dense relational network of an ecosystem that was, until recently, associated with deviance in Western thought. This seems to be linked to a blurring of the land/sea distinction in this space, often erasing the disjunctive categories that normally differentiate between the maritime and the terrestrial. Mangroves, which the Diola of Casamance describe as “the amphibian *terroir* of peasant-fishers,” have generally been portrayed in Western thought as a liminal space, defined by their inherently ambivalent nature and by the instability and versatility of their landscape. Menacing and unhealthy, they were to be eradicated or converted. Many peoples, as Cormier-Salem points out, have, however, approached mangroves as spaces of domestication. These lend themselves to specific usages, representations – oriented by complex beliefs and epistemologies – and a form of socialisation that she links to the concept of “grabbing” (Benett *et al*, 2005). By using a broad comparative framework of analysis, cutting across both time (extending from the colonial period to the recent past) and space (moving between Casamance and Vietnam, *via* Madagascar and South Carolina), Cormier-Salem manages to identify parallel transformations and drivers of change among mangrove ecosystems. Redefined from periphery to heritage, mangroves now count among the spaces to be conserved and protected. Reinvented as sources of both ecological and economic benefits, these maritime spaces are being refashioned amid a proliferation of sometimes convergent, sometimes conflicting stakes (environmental, economic and political), pursued by a wide range of actors as they seek to acquire or strengthen legitimacy.

The last part of this volume, entitled “Maritime Ontologies: From Erasure to Visibility in Public Policies”, highlights the remarkably wide range of issues (economic and patrimonial) that now characterize maritime space and which unequally benefit the “local” communities. Some continue to be marginalized, perhaps even increasingly so. Others, however, have instead gained new visibility and recognition by virtue of their longstanding ties to the sea. Doyon’s contribution describes how both economic and ecological policies shape how human communities relate to their natural environment, notably by constraining their fields of practice. She illustrates this impact through a comparative and diachronic analysis of three “emblematic” species: the beluga whale, the eel, and the Atlantic sturgeon. All three have been intensively fished in the Saint Lawrence Estuary, but this exploitation has been either restricted or stimulated under the influence of different interests. Economic stakes periodically redraw the contours of the maritime environment by directing fishing practices and anthropic pressures towards certain species, which are then, according to the same logic, excluded from conservation policies. Doyon thus questions the notion of a unified Western bloc by revealing its core contradictions, as well as the contingency and antagonism of the tenets on which it rests. Maritime spaces are thus caught up between economic policies that generate intensive environmental pressures and conservation policies that redraw the rules of access to resources on the basis of opaque principles; between the

environmental damage inflicted by industrial firms and the tourism industry's marketing of the landscape. In this process of continuous redefinition of the sea, its main users, namely fishers, most often feel dispossessed and excluded.

This is in striking contrast with the situations described in the following chapters by Martínez Mauri, and by Le Bonniec and Guevara. Here, sensory representations and "ontologies" of communities who were once discounted by national policies now occupy a central position in the political landscape. Each chapter examines the case of an indigenous people whose maritime territorial rights have been formally recognized, and enshrined in legislation, by their respective states of Panama and Chile. Martínez Mauri charts the interactions of the Gunas people with their maritime environment over time. She follows this history from a relatively recent settlement of the insular zone, prompted by new economic opportunities generated by the 19th century surge in demand for coconut, up to the official recognition of the Panamanian State. She thus describes the unfolding of a process of socialization of the environment, enacted through its tangible alteration and constant negotiations with the spiritual entities that inhabit it. Gradually, these interactions imbued the Gunas animist ontology with a maritime quality. Outlining the extensive scope of Gunas communities' knowledge of marine species, Martínez Mauri shows that this knowledge cannot be dissociated from the affective and inter-subjective relationships they cultivate with the non-human world. This is a universe that has been socialized by considerable effort, using multiple forms of competence and limitation. This is recognized in article 205 of the region's Basic Law, which gives the Gunas exclusive rights to the exploitation of their territory's resources. This sovereignty, however, may yet be jeopardized as new realities emerge, from the development of tourism to climate change.

Le Bonniec and Guevara's chapter addresses the lengthy process that led to the promulgation, in 2008, of the "Lakfenche Law," which gives the "original peoples" of Chile legal rights to marine coastal space. Here, perhaps even more than in previous chapters, the authors show how deeply politics and ontology have become entangled and trace the making of these connections. Obtaining recognition of the Lakfenche communities' territorial rights did not happen without struggle. As is often the case, their claims were staked in response to abusive exploitation of the territory; in this instance, they were prompted by the Celulosa Arauco y Constitución (CELCO) firm's plans to construct a pipeline. As they sought to legitimate their sovereignty, the Lakfenche updated an entire field of values, rituals and representations pertaining to the maritime landscape, which, in the past, had been passed down from one generation to the next. This is a particularly striking example of how power relations can shift, sometimes to the advantage of indigenous peoples. It also shows that conflict between antagonistic models of nature – one oriented towards short-term profit and economic development, and the other forged as part of an affective relationship with nature, from which "permission" for any form of extraction must be obtained via dedicated entities – can in fact be resolved in favour of the latter, more singular one. Like all the contributors to this

volume, Lebonniec and Guevara underline the dynamic, flexible and resilient nature of traditions, their openness to renewal and reconfiguration. In this example, these dynamics compelled a state that was formerly defined by its staunch monoculturalism to surrender to new principles.

Until quite recently, Western models dominated ideas about the sea. In parallel, they contributed to a gradual dissolution of the forms of domestication cultivated by the communities who inhabit maritime space. In the past few decades, however, a striking reversal seems to have taken place. This does not necessarily entail a “return” to original principles, for these have been buried deeply by a series of disruptions (colonialism, independence, developmental or conservationist policies). Rather, this shift seems to be opening up a middle path: a new space of reflection that is both scientific and political, and in which singular ways of relating to nature, and specifically to the sea, can acquire legitimacy without necessitating translation into extraneous normative categories. This is what the unprecedented scholarly interest in TEK seems to suggest, as does the emergence of the concept of cosmopolitics in the political and legal fields. To define this new paradigm, innovative conceptual and methodological tools are needed. This, clearly, is the emerging challenge for maritime anthropology. ○

Notes

- 1 Smith, 1977; Mollat, 1979; Poggie 1980; Acheson, 1981; Breton, 1981 ; Palsson, 1989; Geistdoerfer, 2007.
- 2 “The sea is a dangerous and alien environment” (Acheson, 1981 :175)
- 3 Following Malinowski, who accounted for a widespread use of magic and rituals by pointing to the fear generated by maritime environments (1948:30-31), Acheson (1981: 278) and McGoodwin approach the economic structures of fisher communities as a response to the fluctuations and unpredictability of catches, while Poggie and Pollnac (1988) locate the slow process by which the maritime environment alters humans at the level of individual psychologies, in the fashioning of common features.
- 4 Maritime law was thus long limited to this principle of freedom of the seas, which was open to all and directly owned by no one, except for a band of three nautical miles (equal to the range of a cannonball at the time) of shoreline over which coastal states exercised their full sovereignty. It is only much later, with the Geneva Convention (1958) and the Montego Bay Convention (1982), that spaces were defined in which common and differentiated rules applied.
- 5 In the original French: “Comment prendre possession des vagues et des flots ? Comment tracer des frontières permanentes sur l’élément liquide, y imprimer des traces sensibles (...) ?”
- 6 “When a Puluwatan speaks of the ocean the words he uses refer not to an amorphous expanse of water but rather to the assemblage of seaways which lie between the various islands. Together these seaways constitute the ocean he knows and understands. Seen in this way Puluwat ceases to be a solitary spot of dry land; it takes its place in a familiar constellation of islands linked together buy pathways on the ocean” (Gladwin, 1970: 33-34).
- 7 “(...) a cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment. Further, TEK is an attribute of societies with historical continuity in resource use practices; by and large, these are non-industrial or less technologically advanced societies, many of them indigenous or tribal” (Berkes, 1993).

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ROOTS AND EFFICACY OF
MARITIME TENURE

PART I

Tasting the waters Discriminating Identities in the Waters of Blue Mud Bay, Australia

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In this article we are concerned with what Barbara Bender (1992: 735) calls 'the active presence of landscapes'. In her analysis she is referring to the active engagement that people have with landscapes and their contested nature. Here we explore a related aspect of that active presence: the landscape conceived of as a determinant of or as an active component of people's lives. Landscape as environment has an active role because of the potentialities it affords. However it can also be an active component in people's lives because of its history, because of the intrinsic properties it is believed to have, because of the memories located in it, because of the way it is conceived and what it is thought to be.

The article is focused on the system of ownership of the sea and land of the Yolngu people of eastern Arnhem Land in northern Australia, in particular of those clans whose traditional country is located in the north of Blue Mud Bay. The society is divided into two moieties, the Dhuwa moiety and the Yirritja moiety, each of which comprise a number of separate clans, which are the primary level of land ownership. The moieties (and clans) are patrilineal and exogamous: Dhuwa people marry Yirritja and the children belong to the moiety of their father. Not only are people and land divided on the basis of moiety but so too is the whole universe with plants, animals, fish and birds belonging to one moiety or the other. Each moiety has its own spiritual identity with discrete sets of ancestral beings. The ancestral beings created features of the clan's territories and are integral to the spiritual identity of its members. Networks of intermarriage link clans to each other. A man marries his mother's mother's brother's daughter's daughter (MMBDD), who is also his mother's brother's daughter (MBD). This creates a strong bond between a person's own clan, the clan of his mother (ngāndi clan) and that of his mother's mother (māri). A reciprocal set of relations connects a person to the clan into which a woman of a clan marries (waku

or woman's child's clan) and the clan into which that woman's daughter marries (gutharra clan or woman's daughter's child's clan or sister's daughter's child's clan [ZDC man speaking]). Māri (MM(B)) and gutharra ((Z)DC) clans belong to the same moiety as ego. Ngāndi and waku clans belong to the opposite moiety (for a detailed account see Morphy, 1978).

From a Yolngu perspective land is a determining component of their lives. One of the ways of explaining why people marry in the way they do, or more generally explaining kinship relations between groups is to state simply: 'We marry that way because that is the relationship between our foundational places'. Relationships in land and water are not simply signs of relationships between humans, rather both are manifestations of the same established ancestral pattern – in that sense both are thought to be living embodiments of the ancestors with a capacity to act.¹ The land itself may be in some senses ontologically closer to the creative forces of the ancestral beings than people, since it is both created by the ancestral beings and the place to which human spirits return. Perhaps it is simply that land has greater stability and outlasts a human lifespan. Yolngu represent the relationships between people as following the ancestral pattern manifest in the landscape. Indeed Yolngu metaphors of relationship with the past all emphasize following the ancestral beings, fitting into pre-existing footprints (djalkiri, luku) visible in the landscape. It is part of a process that makes human relationships stable at the centre – as Djambawa Marawili explained it to us, 'the land always pulls us back'. At the core there is a persistent emphasis on conformity to pattern; however around the margins there is, if not chaos, at least a degree of contest, to use another of Bender's key words.

This article comes out of the past several years of our research on the recently completed Blue Mud Bay native title claim.² Our research was centred on the ownership of the sea though the claim also included adjacent areas of land. We have worked with the Yolngu people of Blue Mud Bay for some 30 years and Yolngu interests in sea have, from the beginning, been as central to our work as Yolngu interests in land (e.g. Morphy, 1983). But what we want to say in this article comes from an insight gained through concentrating on the sea. In the course of this research it became clear to us that for the coastal Yolngu of north-east Arnhem Land, the interaction of the sea with the waters that flow off the land is a powerful influence on their lives and a rich source of socially significant metaphor. Yolngu patterns of estate ownership reflect the particular characteristics of the terrain, whether it is on sea or land, and, to marine hunter gathers, the sea is equally as differentiated and full of features as the land.

The past 30 years since the passing of the *Aboriginal Land Rights (Northern Territory) Act* 1976 has seen a transformation in knowledge about Indigenous systems of land ownership in Australia.³ The Yolngu people of eastern Arnhem Land have been largely divorced from the land claim process as their land was transferred to their ownership as a part of the original Act,⁴ not requiring them to go through any

claim process. Nevertheless despite the absence of land claim hearings the theoretical debate over systems of land tenure has been as intense in the Yolngu case as elsewhere (Keen, 1995; Morphy, 1997; Williams, 1986). Yolngu were at the forefront of the struggle for land rights and their system of land ownership informed the Land Rights Act. However the research that was undertaken remained largely centred on the principles of land ownership with no published case studies mapping in detail the pattern of land ownership.⁵ As for the sea, that remained a lacuna for most of Australia (see Peterson, 2005).

The Land Rights Act had left the question of the sea open or excluded, depending upon one's point of view. Yolngu were granted ownership of their land down to the low water mark, yet as coastal people much of their life centred on the sea. *The Native Title Act* of 1993 provided the opportunity, under a different legislative framework, to gain some recognition of their rights in the sea, albeit much more limited rights than the rights in fee simple granted over the land under the Land Rights Act.

We were engaged by the Northern Land Council to research the claim on behalf of the Indigenous claimants. In addition to producing a number of reports covering systems of social organization, language, post-contact history, principles of land ownership, and an account of the traditional laws and customs, we had to produce detailed genealogies of the claimants, maps of the area claimed showing where possible the boundaries between groups and a register of place names. In total our expert reports would have totalled nearly 200,000 words (Barber, 2003; Clark and Faulkner, 2003; F. Morphy, 2004; H. Morphy, 2004). This article is based primarily on the map that we produced as part of our expert evidence.⁶

Mapping the sea, seeing the wangarr

We begin this article by illustrating Yolngu ownership of the sea through maps of two areas on the north of Blue Mud Bay. The maps are simplified and emphasize the division of estate areas in the sea, leaving the land boundaries unmarked. The first map (Fig. 1) illustrates part of Myaoola Bay. The map marks the waters associated with a number of different ancestral beings and cannot be analysed in detail here. There are five main bodies of ancestral waters represented. Two bodies of Yirritja moiety waters – Mungurru and Widiyarr – are shown; these will be discussed in more detail later. Mungurru is the main body of the saltwater tidal flow, moving from the deep waters outside the bay into the shore. Offshore it belongs to three Yirritja moiety clans, the Madarrpa, Manggalili and Dhalwangu. Closer inshore the sea belongs to just one of those – the Madarrpa – whose estates also occupy the adjacent land (this area is indicated by the cross-hatched zone of water to the left of the map adjoining Madarrpa land).

Each place name along the shore marks an estate area belonging to the Madarrpa clan associated with a particular ancestral being or event. Lulumu, for ex-

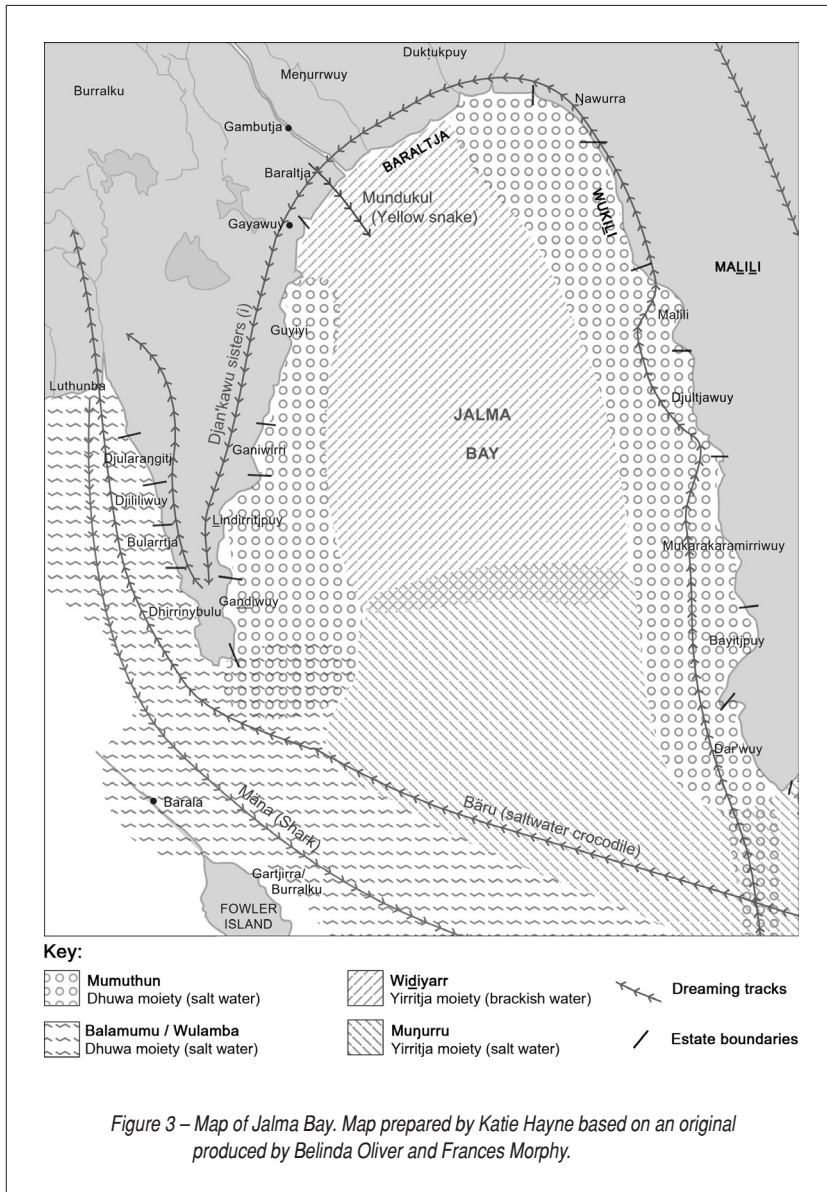


Figure 2 – The reef Bangara joined to the shore by a sand bar representing the ancestral turtle hunter's rope. Photograph Howard Morphy

of Dhuwa moiety water, Gutultja, associated with a second Marrakulu clan before we encounter a second body of Yirritja moiety brackish water, Widiyarr, belonging to the Munyuku and Manggalili clans.

The second map (Fig. 3) illustrates the clan ownership of the waters of Jalma Bay. The estate areas in this case are associated with four clans, the Yirritja moiety Dhalwangu and Madarrpa clans and the Dhuwa Moiety Djarrwark and Dhudi Djapu clans. The waters on either side of the bay are Mumuthun, marking the travels of the Djan'kawu sisters in their canoe. On the east side of the bay the waters are jointly owned by the Djarrwark and Dhudi Djapu clans. The waters on the other side are Djarrwark alone. Mungurru can again be seen flowing into the centre of the bay from the south; here it is jointly owned by the same three Yirritja clans, Manggalili, Madarrpa and Dhalwangu. Widiyarr flows out of the mouth of the Baraltja River and joins up with Mungurru. These brackish waters are associated with the ancestral yellow snake Mundukul and are owned by the Dhalwangu and Madarrpa clans, whose countries the wet season freshwater flows through before it enters the sea.

Gawirrin Gumana's painting of the bay (Fig. 4) closely reflects the structure of ownership recorded in the maps we made and uses Yolngu clan designs to mark the ownership of the different bodies of water. Widiyarr is shown stretching into the waters of the bay as it does in the wet season, when the plume of freshwater issuing from Baraltja pushes Mungurru back from the shore. Gawirrin's painting marks important sites and promontories along the shore associated with the Djan'kawu sisters' journey, each of which marks, in our terminology, a separate Djarrwark estate area.



Yolngu eco-mythology and the pattern of estate ownership

We think it is fair to say that working on Yolngu paintings which relate directly to the form of the land and sea it never crossed our minds that sea was owned in a different way to land.⁷ Indeed in relationship to the ownership of sacred law, or madayin, the

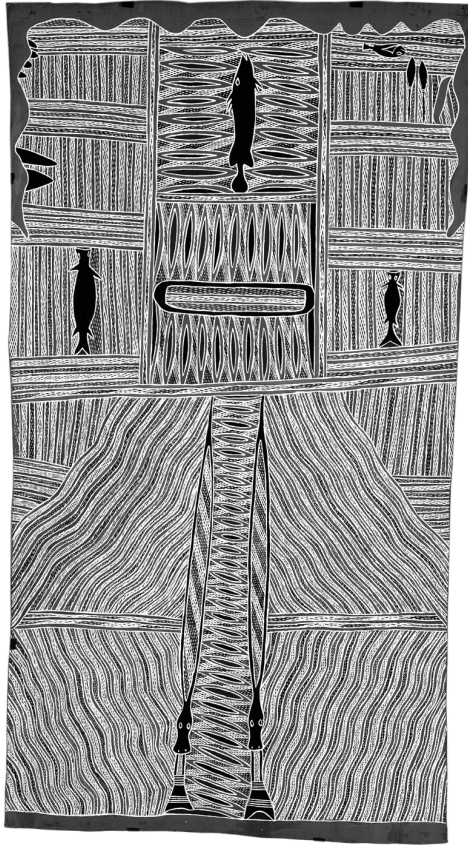


Figure 4 – *Djarwark ga Dhalwangu*, a painting by Gawirrin Gumana, Dhalwangu clan, 1999 representing the juxtaposition of Dhuwa and Yirritja moiety waters in Jalma Bay. At the top is the shoreline at the head of the bay. From left to right the artist represents Gandiwuy, Lindirritjpu, Ganiwirri, Guyiyi, Gayawuy, Baraltja, Duktukpuy, Wukili, Ngawurra, Malili, Djultjawuy, Mukarakamirriwuy, and Bayitjpu. The Yirritja waters associated with the snake Mundukul flow out into the bay through the Madarrpa river of Baraltja. The brackish waters, Widiyarr, are marked by the pointed oval design. They are associated with both the Dhalwangu and Madarrpa clans. On either side of the Yirritja waters the Dhuwa moiety Mumuthun water spreads to the Dhuwa moiety land along the coast. The clan designs comprising bands of parallel lines belong to the Djarwark clan. These waters and the designs are associated with the Djan'kawu sisters who paddled their canoe from Buralku to the east and left it at Malili. As the Widiyarr water moves out along the bay it merges with Mungurru, the major body of Yirritja water associated with the Dhalwangu, Manggalili and Madarrpa clans. At the height of the wet season a plume of brackish water extends well beyond the mouth of Jalma bay. (Based on the documentation in *Buku Larrnggay Mulka* 1999: 36, and additional information from our own research.) The painting is part of the Saltwater Collection of the Australian National Maritime Museum Photograph courtesy Buku Larrnggay Mulka. Painting copyright the artist. Reproduced by permission of Buku Larrnggay Mulka.

coast seems to be an arbitrary boundary. Arbitrary because the estate areas of clans and the ancestral activities associated with those areas cut across the coast, linking the waters off shore across the intertidal zone with the beach and inland. Arbitrary, and yet many of the core distinctions in Yolngu eco-mythology seem to depend on the distinction between salt water and fresh water. But the apparent dualism imposed by the contrast 'salt' versus 'fresh' fails to capture the complexity of the environmental, ecological and mythological relationship between the two. There is a mediating state in the dynamic interrelationship between salt and freshwater – brackish water. This is a potent source of metaphor in Yolngu thought.

What produces the pattern of ownership that we observe? Yolngu ideology is that the pattern is ancestrally ordained, that the estate areas owned by the patrilineal clans are as they always have been. Yet the ancestral beings in effect created variations in the pattern of ownership that accord with ecological and environmental factors, and they also created relationships in the land and sea that reflect connections between groups. No clan is an island: social and environmental realities impinge upon any simple notion of mutually exclusive ownership.

How do the metaphors of water reflect the relationships between groups? The answer is complex since Yolngu can use metaphor creatively with immense precision to refer to any contextually produced relationship. If a relationship is real then it must have an ancestral precedent and ancestral precedents are expressed metaphorically. The fact that the system is flexible and capable of being couched in the language of connection has encouraged some anthropologists to focus on the flux of Yolngu social relationships and to downplay the stable underpinnings that are reproduced on a daily basis (e.g. Keen, 1995). We will focus on two of these in particular. The first is the *māri-gutharra* relationship between clans of the same moiety – two clans one of which calls the other *māri*, or mother's mother. The second is the relationship between mother and offspring, *ngāndi* and *waku*, sometimes expressed through the compound *yothu-yindi* (child-big). Together these are the matrilineal connections that produce the patrilineal landowning unit: without these connections the clan could not reproduce itself.

The main aims of this article are descriptive and analytical – we want to show the ways in which characteristics, features and relationships observed in water – its flows and distribution – have meaning to the Yolngu people of Blue Mud Bay. We will concentrate mainly on the social relationships manifest in water, in the ownership of seas and rivers, but also on some of the metaphors of connection that explicate or elaborate those relationships. We will begin by outlining some of the core relationships, properties and processes observed in water that provide the basis for Yolngu metaphor. Metaphors are built on core properties of things. These provide the basis for analogy and the extension of meaning into other domains. The properties of water provide a rich vocabulary or repertoire for metaphor.

Yolngu have an overall model of water as process. That model, unsurprisingly, has synergies with western ecological, climatological or geographical models. In essence

the Yolngu model involves the cyclical flow of water from the inland to the ocean and back. There are cycles within cycles: the daily cycle of the tides interacts with the monthly lunar cycle, the time of the neap and king tides, and the seasonal cycle of the wet and the dry seasons. The daily cycle of the tides results in the flow of salt water from the deep sea into the bays, pushing up the foreshore and into the river mouths, covering the reefs and sand banks and then withdrawing, leaving the beach dry and clean, the reefs and mudflats exposed and the roots of the mangroves visible. At certain times in each lunar month and at the king tides the flow of the salt water is greater; it pushes further up the river mouths, inundating coastal salt flats, or conversely leaving greater areas of the intertidal zone and reef exposed. The movement of the sea articulates with the fresh water cycle. In the dry season, as the fresh water contracts and the rivers cease to flow, the salt seeps far inland, past the tidal flats and into the bottom reaches of the inland river systems. As the wet season develops the rivers begin to flow again, the floodplains are inundated with freshwater, much of the land is flooded and the rivers push out into the bays, creating great plumes of freshwater on top of the salt. In places it even bubbles up from underground, as little springs in the mangrove mud or on the beach, in the intertidal zone.

Both the tides and the inundation of the wet have their point of origin out at sea. In the north of Blue Mud Bay, Mungurru, the powerful Yirritja saltwaters, are said to begin at the rock called Maymuru south east of Cape Shield, and the clouds that bring the wet season build up out on the horizon before moving into the land. Maymuru and the massing clouds are in the same conceptual space: they are the seaward boundary of the Yolngu world. Beyond them lies other people's country. Further to the west, the Mungurru waters flow beside another body of saltwater, the Dhuwa moiety Balamumu waters that stretch to Groote Eylandt. The incoming movement of the sea and the corresponding onrush of the floodwaters as they push out into the ocean are associated with processes of amalgamation and differentiation. The Mungurru and Balamumu waters out in the deep sea are each associated with several clans of the moiety to which they belong – this is where they are least differentiated. And while they enter the bay as two separately named streams, it is acknowledged that they mix together at the edges and are often identifiable only by their specific characteristics. As the waters move into the smaller bays they become more precisely defined, but still the waters belong to sets of clans of the same moiety rather than individual clans. When they get close to the shores and river mouths, although their names do not change, they become the waters of the clans that own the adjacent land.⁸

There is no precise, undifferentiated freshwater equivalent of the deep seas unless it is the wet season clouds: these are associated generally with either the Dhuwa or the Yirritja moieties as a whole, although individual clans have their own designs to represent them, as is the case also with Mungurru and Balamumu. The floodwaters that flow down the rivers present a complex pattern of differentiated ownership; where they pass successively through the lands of clans of the same moiety, the passage of the water

links the clans together, and when the fresh water flows out of the estuaries to meet the salt water it belongs to those same clans. Thus the freshwater that flows into the bay at Baraltja belongs to Dhalwangu and Madarrpa (Fig. 3) and that at Milngiyawuy to Manggalili and Munyuku, the respective Yirritja clans through whose country the fresh waters flow. But where flood waters coming from clans of opposite moieties meet, then the waters remain conceptually separate – the water of one clan is said to flow above or below the water of the other, in the same channel. Or one body of water is said to flow underground, to emerge as bubbling freshwater springs in the intertidal zone. Or finally, one body of water is ‘stopped’ by another.

The dynamic relationship between salt and freshwater is epitomized by those places and times when the waters mix. This is called *dhä-wekanha-mirri* ‘giving taste to each other’. This produces a third category of water – brackish water – associated with its own characteristics and ancestral connections. It belongs to one moiety only, the Yirritja moiety, and it has its own names, one of which is Widiyarr. The body of Widiyarr expands, contracts and changes its characteristics with the seasons. At the end of the dry season around November the salt water has penetrated deep inland and its taste can be detected in the waters of some creeks and billabongs. In the wet season the process is reversed. The freshwater forces its way out through the river mouths and over the salt flats into the bays, or underground to bubble up as springs in the intertidal zone. This time of flux is when the ancestral lightning snakes associated with Widiyarr stand up and communicate across the landscape to one another, spitting out lightning and rain. This too is called *dhä-wekanha-mirri*, signifying the connection between the snakes belonging to the different Yirritja moiety clans.

What are the implications of these metaphors that define the patterns of ownership of the salt and fresh waters and how can these patterns be explained? The pattern of sea ownership draws attention to the fact that the traditional model of a clan estate in north-east Arnhem Land needs to be revised. Clan estates in the region are dispersed and comprise parcels of land and sea distributed widely across the region. We call these parcels ‘estate areas’. Thus the Dhalwangu clan has estate areas from the Gove peninsula in the north-east to Gurrumuru in the centre to Woodah Island in Blue Mud Bay. The dispersed clan estate includes areas that are owned by the clan alone and also areas that are jointly owned by two or more clans of the same moiety. Thus a clan’s overall estate will overlap in certain specific areas with that of another clan of the same moiety. This situation applies equally to areas of land as it does to areas of sea. Perhaps fewer than 10 per cent of estate areas are jointly owned, but those areas cover considerably more than 10 per cent of the surface area.

Joint ownership of estate areas needs to be distinguished from other kinds of relationship that a clan can have with an estate area of another clan of the same moiety. Those relationships include singing together for a place and ‘looking after’ a place on behalf of the owning clan. Clans who are connected to the same *madayin* or ancestral law will often be said to sing together for a particular place.⁹ Thus the set of clans connected

by the Dhuwa moiety shark will be said to sing together for their respective countries. And if a clan is weak or nearing extinction it is quite common for members of another clan to sing its songs on their behalf (Keen, 1994). Joint ownership is quite different: both clans have exactly the same rights in and relationship to the place that they jointly own.

How can the pattern of joint ownership be explained? In Yolngu terms at one level it is very simple. Areas are jointly owned because the ancestral law is jointly owned. Yolngu also provide secondary rationalizations about the relationships between the clans concerned: that they are *māri* (MM(B)) and *gutharra* ((Z)DC) to each other or they share a particular ceremony.

The ancestral, the ecological and the social factors in the creation of identities in place

What are the factors that influence the pattern and underlie the system of ownership as a whole? First, there is the ancestral dimension. Each estate area is what might be called an ancestral life space, an area of intensive action associated with a particular ancestral being or set of beings. Each of these places is incorporated within a region associated with a 'big name' (*yindi yäku*). Within each 'big name' place are a number of smaller named places associated with particular events. Yolngu, in attempting to translate for the benefit of outsiders, draw an analogy between a city and its component suburbs. As an analogy it only goes so far – as a spatial analogy it is telling, but how many cities have the narrative coherence of the estate area?¹⁰

Ancestral spaces interact with ecological considerations. The particular characteristics of the sea and the bays may be relevant in interpreting the ancestrally determined pattern. In general, place names are most dense at the coast, along the edges of the wetlands and along the rivers, reflecting the density of occupation of place. In general, estate areas are smaller in ecologically rich and accessible areas and larger in resource scarce areas and areas where access is difficult.

Coastal estate areas tend to be small and relatively precisely bounded. They usually include an area of land, the beach and the intertidal zone and the water and reefs offshore. The water and the seabed immediately offshore are usually owned by the same clan that owns the adjacent area of land. As one moves out into the bay one encounters waters that are owned by one or more clans that stretch along the boundaries of a number of coastal estates. The waters may belong to clans of either moiety. The centres of the bays in this particular area are associated with Mungurru waters of three Yirritja moiety clans. However, further out into Blue Mud Bay itself the Dhuwa Balamumu waters and the Mungurru interact with each other. Wetland estate areas are quite similar in their structure. Wetlands are densely named along their 'coasts', that is, the higher ground on their margins. Many of the large wetlands are like miniature seas; they are areas of joint ownership by clans who own estate areas on their margins.¹¹

Major rivers are segmented along their length. Sections of the watercourse and an adjacent area of land comprise an estate area. The next section and its surrounds will comprise another clan's estate area. It is noteworthy that rivers are not named as unitary wholes. European nomenclature on maps of the area provides an interesting contrast, particularly when it fixes on the Yolngu name of one estate area on a river and extends it to the whole river.¹²

It is therefore tempting to view this pattern in ecological terms. Those areas where people live and where the resources are exploited on a daily basis are characterized by smaller estate areas associated, in the majority of cases, with single clans. The pattern of ownership allows for a direct monitoring of resource exploitation and may act as a spacing mechanism in the way that Peterson theorizes (Peterson, 1975 and Peterson and Long, 1986). As one moves into the open sea, one enters zones used by people in transit and places where large sea animals are hunted. Joint ownership enables multiple right holders to access the sea. The dugong and turtle, which are among its main resources, are hunted collectively and tend to be distributed widely among members of a number of different related groups.

An analogous situation exists on land where areas that are poorly resourced or seasonally accessed (such as flood plains) tend to be subject to joint ownership. However not all estate areas fit neatly into this overall pattern. The joint ownership of the Dhudi Djapu and Djarrwark estate areas along the east coast of Grindall Bay cannot be explained on an ecological basis, though the small size of the estate areas fits in with the general pattern.

But ecological factors only explain part of the data of joint ownership, and the scale and location of estate areas. They do not explain why particular groups come together. The complete explanation lies in a combination of historical circumstances, geographical-ecological logic and fundamental principles of Yolngu social organization. One principle that operates is the distinctiveness and separation of the moieties from one another. Areas of land and water belong to groups of one moiety only. Any intrusion of ancestral beings into the land or sea of the opposite moiety in myth is likely to be instantaneous and remarkable, and to leave an indelible mark on the land which in that small space belongs to the moiety of the intruder. While in a few circumstances it is possible for water to belong to a different moiety from the sea or riverbed that it flows over, the water itself is said to belong to groups of one or other moiety, never both.

However while metaphysics or religious ideology maintains the distinctiveness of the waters, a degree of indeterminacy at the edges is inherent in the logic of the flow of water. Yolngu metaphysics embraces the metaphorical possibilities of this indeterminacy to create powerful symbols of connection (see also Keen, 1995; Magowan, 2001). Water moves across country and sometimes as it moves it changes moiety to coincide with the land it crosses and sometimes it passes over the land of the opposite moiety. Powerful wet season waters carry their spiritual identity with them and result in precise demarcations of water flowing at different levels. The Garangarri wetland system, for

example, is fed by a major river (Figure 5). Its headwaters are in the Manggalili inland estate of Wayawupuy, which is Yirritja. The waters flowing down from Wayawupuy are called Gularri, and in the Wayawupuy area the channel of the river is part of the Manggalili estate. The wetlands (the shaded area around the estuary) drain into the sea through a series of short channels. One of these, Djoyuwuy, was created by the wounded Dhuwa moiety shark as it came from the sea and gouged its way inland, over the wetland and up the river, coming to rest at the point where the river leaves the Manggalili clan estate. The Dhuwa moiety estate belongs to the Dhudi Djapu clan and can be referred to by the big name (*yindi yäku*) Dhurruputjpi, which is also the name of the homeland settlement where people live. Below the resting place of the shark, the river channel is part of the Dhudi Djapu estate.

How is the movement and ownership of the waters that flow through this system conceptualized? In the wet season the river is a raging torrent as the Gularri floodwaters push down from Wayawu. When they enter the Dhurruputjpi estate they are said then to flow over the top of the Dhuwa moiety shark's waters. Yolngu talk of this as 'mother and child coming together'. The interactions of the waters are metaphor for the relationship between the two clans concerned: Manggalili women marry Dhudi Djapu men, and so Manggalili is the mother of Dhudi Djapu. On the margin of the wetlands the Yirritja Gularri goes underground (the dotted line), emerging as bubbling springs in the coastal mangroves. The waters that inundate the surface of the wetlands are the Dhuwa moiety waters. The moiety division picks up on distinctive features of the behaviour of water but the precise point of separation of Dhuwa and Yirritja waters is not a central issue. Yolngu know that the waters mix at the edges just as they know that while the essence of the moieties lies in their separation and is maintained and reproduced by distinctive linguistic markers, lands, ancestral beings, marriage prohibitions, names and ceremonies, they are nonetheless perpetually joining together in marriage, in complementary roles in ceremonial performance, in alliances. The mixing of the waters is a metaphor for reproduction. If pushed, the fuzziness at the edges is unproblematic because the boundaries are axiomatic, if pushed further, the fact of waters mixing is unproblematic because the moieties, though separate, come together to form the social universe.¹³

The relationship between moieties and clans of opposite moieties is explicitly seen in the junctions and disjunctions in the waters' flow. Where Gupa Djapu waters meet the Munyuku waters at Mayawundji, they are *ngändi* and *waku*, mother and child, because Munyuku women have always married Gupa Djapu men and so are the mothers of Gupa Djapu children. The metaphorical case is exactly parallel to that of the Manggalili and Dhudi Djapu. The eco-mythological details are a bit different. The Djapu waters go no further: they end at the point of junction and only Yirritja waters occupy the surface and the subsurface of the floodplains below.

Kinship in the waters is not restricted to inter-moiety relations. The intra-moiety *märi* (MMB) *gutharra* (ZDC) relationship is equally manifest in the meeting of waters and in the mixing of waters. The *märi-gutharra* chain reflects the Yolngu system of

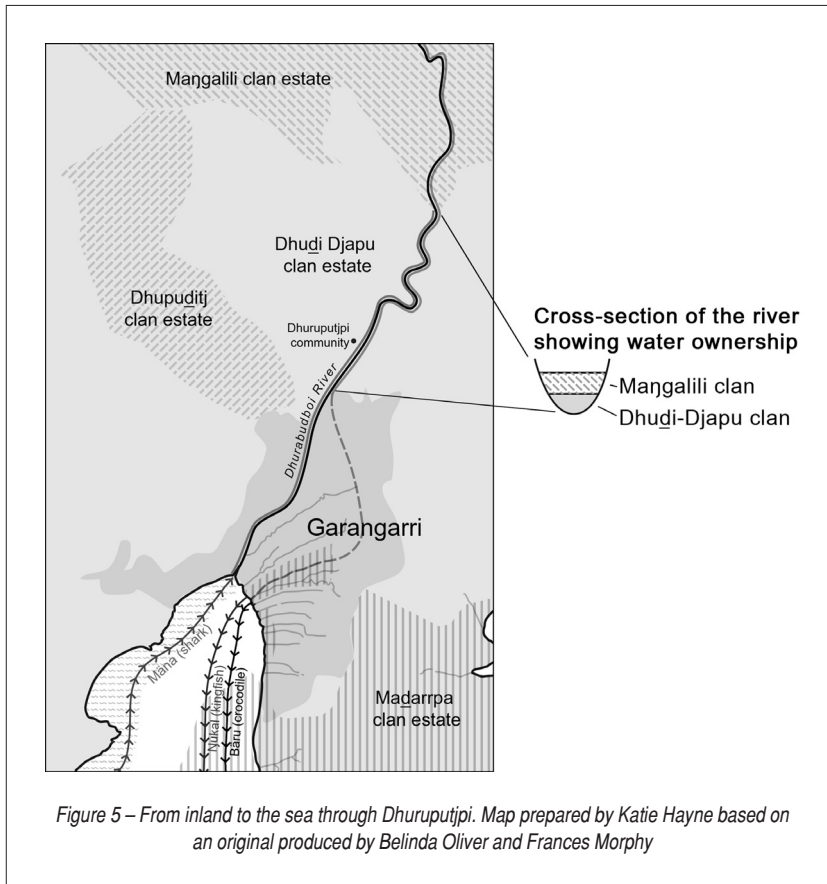


Figure 5 – From inland to the sea through Dhuruputjpi. Map prepared by Katie Hayne based on an original produced by Belinda Oliver and Frances Morphy

bestowal: male *māri* are the fathers of the women whose daughters marry into the *gutharra* clan. Within the moiety women move from *māri* clans to *gutharra*, rights in paintings extend from *māri* to *gutharra* and if a clan becomes extinct important rights of succession are vested in the *gutharra* clan. While *māri* and *gutharra* clan relationships generally are reflected in relationships of marriage between clan members, from a Yolngu perspective the relationships themselves stem from the *madayin* and are embodied in the land and sea. The lands are *māri* and *gutharra* and the marriages on the surface follow that pattern.

The clans that own Mungurru are linked together in the relationship of *māri* and *gutharra*. Manggalili is *māri* to both Madarrpa and Dhalwangu. Geographically Manggalili are positioned at the entrance of the Bay. Mungurru begins at Maymuru, the great rock sacred to the Manggalili and flows into the bay, touching first Manggalili land then Madarrpa and Dhalwangu. Manggalili are genealogically prior and the tidal surge begins in their sea. The deep sea is jointly owned, but from a Yolngu perspective it is no accident that it is jointly owned by these three clans.

In rhetorical terms Yolngu are not so much concerned with the actual statistics of marriage but will simply state that marriages flow from the relationships between countries and waters. However, demographic and political factors, including the consequences of warfare, mean that the direction of marriages cannot always follow the ancestrally determined pattern. Manggalili men are not always in every generation likely to produce the number of potential mothers-in-law to satisfy the marriage requirements of their *gutharra* clans, and sometimes women are likely to move in the opposite direction (Morphy, 1991: 51 ff.). Nevertheless the relationships between clans are underpinned by an ancestrally determined pre-existing template that is not only enacted in ritual but can be seen in the pattern of the landscape and the cycles of nature.

Conclusion

Crucially Bender writes 'we need to know how elements of landscape play back into human processes of socialization and empowerment in spatial as well as temporal terms' (Bender, 1992: 741). Yolngu landscape provides a map of history that marks past relationships, and in classic Levi-Straussian terms a map for history, a map that demonstrates how people should marry. The order of the world is validated by the ancestral past (*wangarr*) and when relationships need to be remodelled they are restructured to fit the ancestral past. The structure is one that is in accord with the structural properties of the kinship system which favours the asymmetric movement of women between groups in marriage. This movement in turn is manifest in the flow of names which maps the dispersal of clanswomen as mothers over time. The source of the names remains firmly in the landscape and does not move, since people's names are also generally place names or names associated with particular places. People know that the presence of a name in a distant clan indicates a preceding relationship. It also marks a claim, a right to be recognized and ultimately the possibility of the name returning, as the cycle is completed by the return to its place of origin.

Yolngu cosmology and society involve analogous processes of generalization and individuation. These processes articulate with one another and metaphor becomes a primary mode of expressing articulations. While at the local level groups are divided into clans and families, at a regional level they are part of an intermarrying system, in which moieties provide the framework for a structured process that reproduces the surface form of the local. Individuation is expressed in the detailed elements of the landscape and sea, from the naming of individuals for individual places to the fine discriminations between the estates of interrelated clan groups. But at the most abstract level the forces of the environment belong to no single group. Their continuity requires the interaction of the moieties and the ancestral forces that underlie them. However, this point of abstraction is almost unreachable: in being named, the winds and clouds and rain are linked to one moiety or the other, and they become entangled in that

process of individuation that produces particular groups and particular places. Yolngu eco-mythology is characterized by the perpetual emergence of form from flux. ○

Notes

1. Fiona Magowan (2001) provides an interesting analysis of the spiritual and, in Yolngu terms, physical interrelationship between people and the environment, particularly with reference to the flow of waters.
2. The basic research was funded by an ARC linkage grant, the industry partner being the Northern Land Council. The research team was an interdisciplinary one including three anthropologists – Howard Morphy, Nicolas Peterson and Marcus Barber – two archaeologists – Annie Clarke and Patrick Faulkner – and a linguist – Frances Morphy. Michael Reynolds, regional anthropologist for the Northern Land Council, also contributed significantly to the project. The case was heard before the late Justice Selway and the main judgment written by him before his untimely death (Selway, 2005). The final determination was made by Justice Mansfield in October 2005. The court found that native title did exist for the Yolngu people in Blue Mud Bay and in the waters of the intertidal zone. However Justice Selway felt unable to grant Yolngu people exclusive native title over the sea and intertidal zone, because a previous decision of the High Court, that recognized the general public's right to fish and freedom to navigate, effectively limited the degree to which native title rights could be recognized. The Federal Court's decision is presently subject to appeal by the applicants.
3. General discussion of issues of land ownership under the Northern Territory Land Rights legislation is provided in Peterson and Langton (1983) and Hiatt (1984). For an excellent discussion of the issues surrounding native title and for developing models of Aboriginal land ownership see Sutton (2003).
4. The Aboriginal Land Rights Act (Northern Territory) of 1976.
5. Morphy (1977) provides the first discussion of Indigenous sea ownership in Blue Mud Bay. Williams (1986) provides the most detailed general study of Yolngu land ownership. Berndt (1964) exceptionally provides maps of place names in the region of Yirrkala including sites in the sea, however his discussion is largely set at a general level. Bagshaw (1998) discusses sea tenure among groups to the west of the Yolngu region and Magowan (2001) writes insightfully about Yolngu metaphysics of water. Barber (2005) is a rich ethnography of the relationships of the Yolngu of Blue Mud Bay with the sea and coastal waters.
6. The maps we produce in this article are not the ones used in the court case but redrawn for present purposes with less information contained in them for reasons of clarity.
7. For a rich documentary resource on Yolngu paintings that relate to sea ownership see Buku-Larrnggay Mulka (1999).
8. While the three clans assert their equal relationship to Mungurru in the deep of the bay and claim joint ownership of the waters, the possibility of discriminating difference within identity always exists. Mungurru is associated with two sets of power names (*likan*): one set belongs to the Manggalili clan and the other is shared by the Dhalwangu and Madarrpa clans. The names are intoned in ritual contexts and are also given as deep names to individual descendants of clan members. The names provide a rich descriptive vocabulary that evokes the characteristics of Mungurru enacted in ritual performance. One Manggalili sequence for example includes Rirngilama – 'the waves are beginning to rise, beginning to get strong but not yet foaming' – Bulkaminymirri – 'the waves are rising together and beginning to develop white caps' – Bundurra – 'the waves are rolling over creating a hole in the centre'. The flow of power names represents the flow of Mungurru from the deep sea to the river mouths and the relationships between the clan groups. The initial power name for the Manggalili is Maymuru which refers to the place of origin of Mungurru out to sea and the initial name of the Dhalwangu and Madarrpa sequence is Wunungdhun which references the meeting point of Mungurru and Widiyarr.
9. The term *ringgitj* applies to sets of clans coming together with respect to the same ceremonial law (*madayin*). It is manifest in shared song cycles but is also represented in certain places (*ringgitj* places) where each of the clans Morphy & Morphy: Tasting the waters 83 concerned has a small area reserved for them in an estate area primarily belonging to one of them.

10. For more detailed accounts of the ancestral creation of landscape in place see Morphy (1991) (Chapters 10 and 11) and Buku Larrnggay Mulka (1999).
11. The present situation here may indeed reflect an ancient ecologically motivated pattern associated with an earlier coastline. The high margins were once the coastline established following the post-glacial inundation of the inland associated with the rise of sea level. The wetlands were at that time shallow bays. The existence of the early coastline is reflected in the fact that some of the present place names along the margins of the high ground belong to an earlier stratum of the Yolngu language from that of places along the present coastline.
12. For example on European maps the river that flows through the Yolngu named place Dhuruputjipi has been applied in the form of Durabudboi to the entire river totally contradicting Yolngu terminology which divides segments of the river on the basis of clan and moiety.
13. The inclusion of elements from the one moiety in songs and dances of the opposite moiety is rare but possible, just as conceptually the waters of the two moieties are thought to come together and intermingle in certain places or at certain times (see Magowan, 2001: 27).

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A Sensory Seascape: Eco-aesthesis and Marine Toponymy in Imrâgen Fishing Communities of Banc d'Arguin, Mauritania

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The Imrâgen people of Mauritania – whose territory is encompassed by the Banc d'Arguin National Park, created in 1976 – have long constituted the only fishing community within the nation's chiefly pastoral Moorish society. Their fishing practices, conducted with little equipment and, up until the early twentieth century, without any type of boat, did not seem particularly disposed them to develop a specific form of control over the sea. However, this scarcity of materials seems to have broadened their modes of interaction with the milieu, prompting a wider variety of innovations and compensations in terms of the senses and body techniques. Key to this process of socialization of the sea has been the development of a toponymical vocabulary. Place names have emerged as a ways of gaining an effective hold over the sea, while helping to create a space of shared practices, perceptions and memories. To fully understand this process, and to perceive the ways in which toponymy cements the bonds between these communities and the sea, one must first decipher the logic of place naming. After a brief overview of the variety of ways of relating to the sea in the Banc d'Arguin area, I will proceed to such a toponymical analysis and explain in more detail how place naming enables effectual collective mastery over maritime space.

Controlling Maritime Space in Banc d'Arguin: Multiple Modalities

Typology of Maritime Mediations

The Imrâgen, mentioned in texts as early as in 16th century,¹ have, since the 20th century, given rise to an expanding monographic literature.² Yet despite this sustained scholarly interest, few authors have explored the complexity of their relationships with

the sea. Moreover, there has been a tendency to read the sea as a domain reserved to fishers, thereby overlooking the subtler but nonetheless significant participation of other actors in the socialization of maritime space. This assumption was no doubt reinforced by the fact that only fishermen can “enter the sea” (*dḥel lā-bḥar*); that is, come into direct, sensory contact with it. Yet warriors (*ḥassān*) and marabous (*zwāyā*, spiritual guides) – for who fishing communities long constituted a subservient group – also obtain very tangible forms of control over the sea, defined by the respective roles attributed to each “order” (Bonte, 1987). Rather than a single type of human relationship with maritime space, multiple forms of domestication coexisted and interacted in close proximity.

Warriors engaged with the sea in two ways: through their control over and exclusive right to appropriate boats and any parts washing up on the coast (we will come back to this shortly); and through the taxes they imposed on various goods, notably on catches.³ (Artaud, 2010, 2018). Through these forms of interaction, warrior groups thus acquired a type of control over the surface of the sea comparable to the power structure of continental land ownership.

Marabous related to the sea by exercising a hermeneutic power over the infra-maritime world, specifically through the ritual solicitation of maritime species that play an important role in wintertime fishing, conducted by foot from the beach (Artaud, 2012). Indeed, the presence of dolphins draws mullets towards the coast, making possible to catch them using this technique. Religious leaders intervene to attract dolphins using talisman (*ḥjāb*); each has his particular way of creating these out of diverse materials and utterances. The success of marabous’ mediation depends on the cultivation of a close personal relationship with a specific set of dolphins.⁴ The third set of modalities of interaction with the sea in the Banc d’Arguin concerns Imrâgen fishing communities; they are the focus of this article. The sensory features of these interactions delineate a form of *eco-aesthesis*. By this I mean a way of connecting self and environment by adjusting, through the medium of the senses and of bodily dispositions, to the singularities of its terrain and natural environment. Several analytical entry-points can be used to read this *eco-aesthesis*: one of these is toponymy.

Mastering the Maritime Environment through the Mètis

Before moving on to a more detailed examination of toponyms, and of how these help shape a singular mode of interaction with the sea, a few preliminary remarks are in order. As mentioned above: while many authors have insisted on analysing the sea as the exclusive domain of Imrâgen fishermen, others have, conversely, been reluctant even to qualify these as fishing communities. The Imrâgen tend instead to be perceived as “shepherds temporarily resorting to ‘maritime hunting’” (Cheikh, 2002: 10), and as prone to viewing the maritime environment through the prism of more familiar continental models and hunting categories (Pelletier, 1981: 201). These communities have

thus long occupied a marginal position in the Mauritanian social landscape. Moreover, the rudimentary nature of their fishing techniques – their basic nets and, until recently, lack of boats – seemed to negate any special capacity to master the maritime environment. This lack of instrumental mediation did not, however, prevent them from forging relationships with the sea. On the contrary, it seems to have stimulated novel ways of relating, notably through bodily dispositions, as well as the refinement of a process of substitution; by pushing fishermen to find the means needed to reach their goals within the natural environment. Far then from seeking to refute technological minimalism as a core feature of Amrig (the singular form of Imrâgen) fishing practice, my analysis instead credits it with intentionality, reading it as an index of a specific form of domestication of the environment. This domestication can be captured by the notion of *mêtis*. As Detienne and Vernant describe it, the *mêtis* is a disposition that makes up for physical or material deficit and eludes assumed power relations. It makes it possible for “the weak, the frail, not [to] fight a losing battle” (1974: 33). It is through their very *lack* of the equipment, with which they might cross the sea or catch its resources in bulk, using only their wits, that the Imrâgen can master this space. This mastery depends on knowing and anticipating the behaviour of schools of fish; in other words, their instincts become the very medium of the fishing trap (Artaud, 2013). What material lack entails, then, for Imrâgen fishermen’s relationship with maritime space is a hyper-vigilance, closer attention to patterns in natural phenomena, as well as a search for ways of preserving these patterns and of introducing oneself as a minimal and discreet presence. This process of embodied learning, which inevitably creates a bond with the maritime environment, is expressed in a local adage: “to be Amrig, one must have neither shadow, nor footprint, nor smell.” Having little in the way of material support, fishermen come to rely more heavily on precise exogenous factors. For many, this lack also stimulates deeper knowledge of fish behaviour and of variations in the seascape. Toponymy is an indispensable tool precisely because it integrates these elements. By giving sailors fine-grained information enabling them to anticipate tricky terrain, or by telling fishermen where and with what techniques they should fish, toponymy guarantees the full efficacy of a form of interaction anchored in the *mêtis*.

Constructing Toponyms and the Binary Logic of Socialization of Maritime Space

A remarkably wide array of toponyms is used in the Banc d’Arguin, across both land and sea. Maritime names are densest in the zone of mudflat complexes. Here, among the shallows that lie at the heart of the Park’s current boundaries, over a hundred toponyms can be identified.

This density is partly but not fully explained by the abundance of topographical features, as well as of plant and animal species in this zone. The number of surface and

underwater protrusions of the seascape do not account for the whole range of referents on which toponyms are based. Many maritime place names instead draw on a register of immaterial and purely memory-based elements such as events, personal or tribal names, and biographical itineraries. These constitute seamarks whose meanings are clear to the fishermen who move through this territory and lived here seasonally in the past, before national park regulations prohibited landing on its shores.⁵ This toponymy is not merely an eclectic and contingent set of names; it is structured as a coherent system. This system is worth analysing in depth, for it provides a window onto the models that inform local representations of the environment.

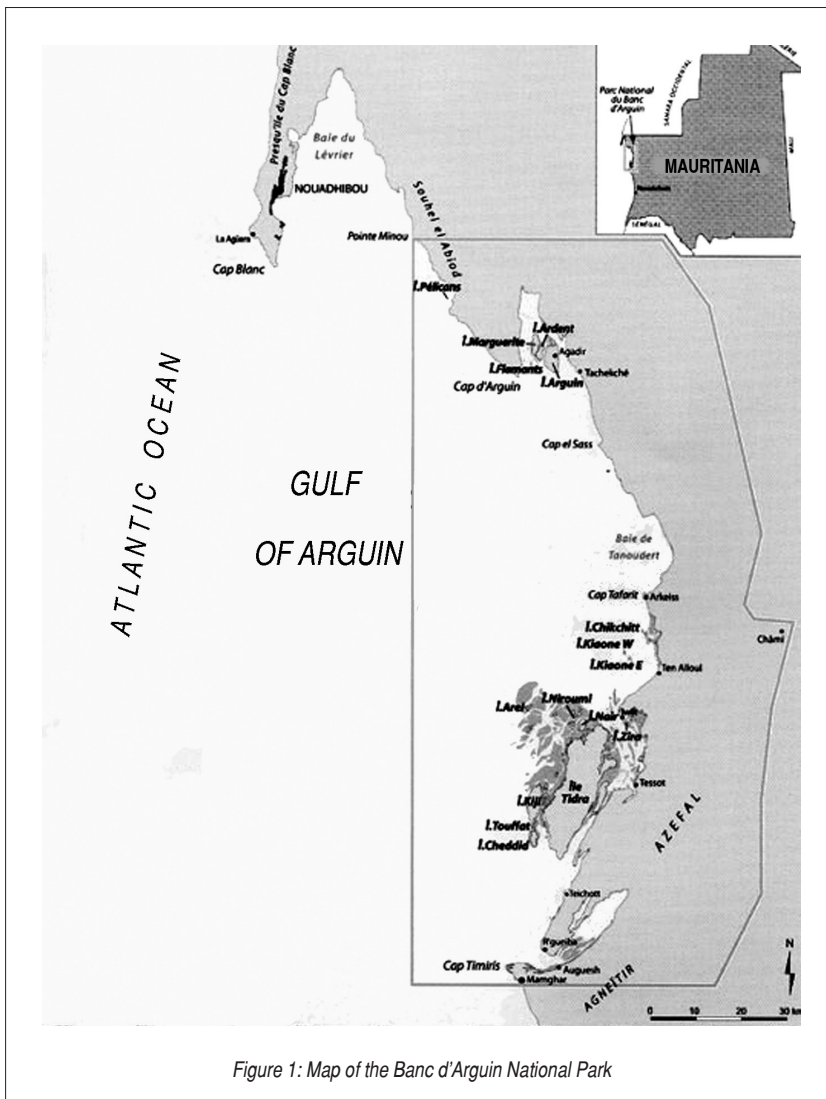


Figure 1: Map of the Banc d'Arguin National Park

The first step of this analysis is a formal decryption of the rules of toponymical structure. Although some toponyms contain a single term, such as the places called *enzuk*, *ejenjer* and *touivat*, the majority in the Banc d'Arguin zone are made up of a combination of two terms. In the sea, there are places, for example, known as *ʿayn Ekälbe*, *Täšāwzāz šavye*, *Tizizzag al-medvaʿ*, *Ayun Tessot*, *Krāʿ eregdī*, *Zbāra Lekawret*, *Tāmātārāt Mansour* and *Twkāt mgazi*. Such two-part toponyms are especially important for orienting the practice of those who move through these spaces, and in shaping representations of the natural and social environment – which the repeated process of naming anchors in memory. A striking feature of these binomial place-names is their stable and systematic formal structure. Each comprises a first lexeme, which describes a feature of the sea's surface or underwater terrain, while a second lexeme adds some dimension pertaining to the fisher's physical or emotional milieu, creating a more specific spatial reference. The analysis of marine toponymy, by attending to both the diversity of its repertoire and the consistent patterns in its typology, can render legible a perceptual syntax of the environment.

Analysing Toponymical Layers: The First Lexeme

Placed at the head of the name, the first lexeme describes a topographical feature, either typical or generic, of the seascape. The majority refer to underwater or surface protrusions in the Banc d'Arguin, as is the case of the terms *sagʿa*, *ʿayn*, *tāšāwzāz*, *tāmātārāt*, *Lbinker* and *Awkār*.

- *Sagʿa* is an islet that is partly or fully exposed at low tide; its bottom is carpeted by an eelgrass-type plant cover, shells or pebbles
- *ʿAyn* describes a relatively deep canal that is navigable at any time in the tidal cycle.
- *Tāšāwzāz* refers to a smooth and gradual slope that is good for beach fishing (by foot).
- *Tāmātārāt* is a spot defined by a distinctive ovoïd shape and soft sand; its sediments attract plenty of fish.
- *Lbinker* is a channel that is open on both sides.
- *Awkār* describes a barren landscape, devoid of plant cover; it is like a desert.

Other primary lexemes can be added to specify the main topographical variations within each of these core categories. Thus, there are several sub-categories of the type of islet called “*Sagʿa*,” such as:

- *Twkāt* is a *šagʿa* whose ground is white and particularly hard. Fishermen say they cannot drop their anchor there, for it hits the bottom without penetrating it.

- *Emetar*, in contrast with *twkərt*, is a *ṣagʿa* whose ground is loose and often dark due to a dense sea-grass cover.
- *Amojd* is a very long and narrow *ṣagʿa*. It can only be entered on smaller and lighter boats, and has a thick grassy cover (*eyšig*).

The type of canal referred to as “*ʿayn*” gives rise to the following sub-categories:

- *Əjer*, a very deep *ʿayn*.
- *Krāʿ*, a dead-end channel that is smaller than most *ʿayn*.
- *Zigzag*, a small *ʿayn* that can be entered and exited.

Each broad type of seascape feature, as listed above, has topographical variations that are known to fishermen.

These first lexemes have several layers of meaning. While “*ʿayn*” refers, in terms of marine topography, to a relatively deep canal, its literal meaning in Hassaniya language is “eye.” This is true of most terms used in place names (*ragbe* means “neck,” *kra* means “foot,” etc.). Indeed, bodily references, both human and animal, are pervasive; they are constantly used as a key for deciphering the landscape. This is true beyond the sea: zoomorphic references are also widely drawn on in continental toponymy. Their use, however, differs quite strikingly between land and sea. Frérot’s studies in the Adrar region showed specifically how the camel’s body was given a geo-referential dimension, noting the emergence of homologies at territorial level. The topography of Adrar can thus, in a way, be read through the fixed anatomical prism of a “sturdy camel”: “Each prominence is considered as a living being of which *ras* (the head) is the summit; *ujeh* (the face), *ragbe* (the neck), *menhar* (the nape of the neck)...” (Frérot, 1989: 115). Unlike in Adrar, however, the use of animal references to the Banc d’Arguin’s seascape does not entail a projection of whole organisms onto the environment. Instead, analogies are based on a fragmented perception of various species’ bodies (these species may or may not be endemic in the area). Thus, zones called *vəɾəʃ*, “turtle shell,” are mudflats whose surface is slightly convex. Lemgarne, or garne, which means “horn,” refers to the narrow shape and slight pinching found at the end of some mudflats, while double-ended extremities are referred to as *tweygilel*, or *gilel*, which means fishtail.

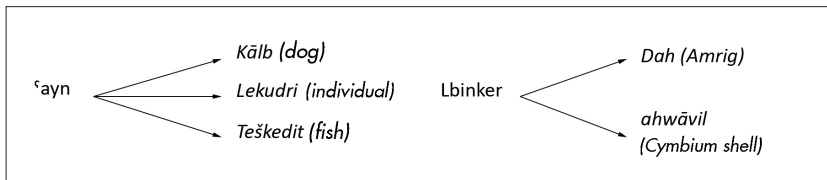
Fishermen are familiar with such analogies, which constitute a type of grid for reading the environment. Anthropomorphic references are also mobilized. Some are of a general nature, pertaining to both human and animal bodies, such as those listed above (*ragbe*, “neck,” *kra*, “foot,” *ʿayn*, “eye”). Others deploy more specific and subtle elements of the body to refer to the distinctive quality of a given seascape feature. Thus the term *lahnašš* (“nose”) describes long and narrow *ṣagʿa* that divide, at the extremity, into two parts, like the bridge of the nose and the nostrils. Analogies also refer to specific elements such as *lemzeqqeb* (from *mzeqqeb*, “hairy”), which designates, through a vivid image, a place where sea-grass (which is thin and black) grows so

thickly it suggests a head of hair. *Temdel*, which refers to parts of the shallows where dense foam develops, can be linked to the Zenâga⁶ term “*temzel*,” which describes the voluminous and airy mass formed by hair after it is combed. Other elements are also used in topographical analogies, notably material objects. The fork, *šagələ* that “holds up” the stick (*bārā*) on which fishermen hang their nets (*šəbkā*) is, for example, used to describe the fork-like shape of some mudflats that seem to “hold up” the bay. “*Tiziyaten*,” the Zenâga term for a small leather bag closed by a leather string in which domestic utensils are kept, designates a deep, enclosed area.

The first lexeme, which provides topographical information on a given place, is thus revealed as a mutual embedding of corporeal and ecological analogies – it would be hard to say which came before the other. These typologies are encountered through the mediation of visual and/or tactile senses: for example, *əjer* is often sounded using a stick (*mouktheve*) and an oar (*migdava*), while *tāmātārət* is only perceptible to the eye. They can also be approached through empirical deduction, without experimentation: for example, every *krā*^c is blocked off by an *əjer*, or every *lbinker* ends in *udzi*, whose curved shape retains water and makes sailing possible even at low tide.

Second Lexeme

While the first lexeme conveys a general topographical picture, the second adds more specific detail to refine how places are perceived. This second term is not determined by the first; rather, they are linked in a contingent manner. The content of second lexemes is thus extremely diverse, as shown by the examples below:



Nevertheless, three well-defined categories tend to arise fairly systematically. In the first, the second lexeme refers to a place’s “objective” elements, that is, the animals, plants and rocks found within it. The second category evokes a “subjective” dimension that has become associated with a place over time, such as the name of people or of boats, or the memory of an event that happened there. Lastly, the second lexeme can mobilize a kind of “phenomenological” element, which refers to the quality of human or vessels’ relationships with a place. This type of lexeme describes how a place opens itself up or becomes perceptible to the senses of fishermen who pass through it, or how a place manifests itself to a boat as it enters a given location. While the first (“objective”)

category is fairly self-explanatory, the other two (“subjective” and “phenomenological”) require some elaboration.

The use of individual or collective names in toponyms follows certain patterns. Places are given the names of individuals reputed for their remarkable technical skill or for their acute sensitivity to the sea. Thus, for example, *twkart Zaid* refers to the place where the fisher Salek Ould Zaid “who heard the rumbling (*rakiyu*) of the jewfish” obtained a miraculous catch. Similarly, the place called *krā Ahmed Lekebir* is where Ahmed Lekebir, who “knew exactly how to anticipate the speed of the winds and to predict it in order to make his way to a given location at the time of *itān* (a time that is good for fishing),” was in the habit of fishing. The use of tribal names in toponyms means, however, exactly the opposite: it highlights a group’s lack of detailed knowledge of the sea, or their incompetence in sailing or fishing in the interisland zone. These names thus commemorate inglorious events in a group’s history: when boats sank or were stranded in a specific spot. For example, the place named *Imissri Awlād ‘abd al-wahīd* refers to a small channel where members of the Awlād ‘abd al-wahīd tribe were stranded, apparently repeatedly so, because they lacked adequate knowledge of the shoals, which, in the interisland zone, protrude particularly prominently at low tide. Place names thus often crystallize and call attention to discrepancies in skills and knowledge within groups collectively defined as “Imrāgen.” Indeed, variable maritime abilities constitute a basis for differentiating between the communities of this whole. Amrig poetry suggests these differences were a salient issue in the interaction between communities – even well before Amrig identity became a significant institutional stake.⁷ They also served as criteria for discriminating among individuals belonging to the same group. Such differentiation regularly gave rise to debate and informal “challenges,” in which latent rivalries between fishermen from different localities could be expressed by setting riddles – a common form of challenge in Mauretania.⁸ Thus, individuals who best, or “most,” embodied Imrāgen identity could be discerned on the basis of their technical prowess (sailing and orientation), their mnemonic abilities (comprehensive knowledge of the area’s toponyms), their knowledge of fish species and the acuity of their senses.⁹

The use of names of boats in toponyms is more complicated. A distinctive feature of Imrāgen fishing communities is their late acquisition of vessels. Before this, the only boats in this area were of Canarian origin; these later served as models for locally built replicas. Canary Islanders used the *lancha*¹⁰ (called *lanche* in French) for coastal fishing, as a complement to larger schooners. When their load of fish was too heavy to bring back to the schooner, Canarian fishermen let these ancillary boats drift towards the coast. Once grounded, they were appropriated according to a strict tribal code. Some toponyms convey the memory of occasions when such boats ran ashore, indicating *where*, exactly, they were found. This information was, indeed, of particular significance in determining who could exercise legitimate authority over the *lancha*. As I pointed out above, warriors, marabouts and fishermen engaged in distinct modes of

socialization of the sea. Beached boat parts were hotly disputed among the coastal warrior groups who exercised control over the sea area. The location where these parts washed up determined which group could invoke “property rights” over them. Thus, toponyms simultaneously implemented and legitimated these rules of appropriation. Other place names referring to specific vessels celebrate particularly successful fishing expeditions. Thus *krāʿ saade* commemorates the *lancha* used to fish the most Nʿtod (*Sparidae aurata*, gilthead seabream) and *āzawl* (*Mugil cephalus*, flathead grey mullet) in a single day.

The last category, which I call “phenomenological,” encompasses toponyms that describe relationships either between the fisher and the maritime environment, or between the *lancha* and places through which it sails. As I noted above, human and animal body parts are prevalent in the first lexeme, incorporated in place names as keys or guides for reading the seascape. When placed in the second lexeme, however, such corporeal references are not intended as analogies for features of the maritime terrain. Rather, they are meant to describe how fishermen interact with a specific place in the sea. Take the emblematic, but not unique, case of the toponym *ʿa əl-hargve*, in which *hargve* means “hip.” Here, it indicates a shoal over which the water never rises above hip-level, and must therefore be sailed very cautiously. Another example of this third “phenomenological” category is worth mentioning. These are toponyms that consist of purely acoustic elements, of an onomatopoeic nature. This type of place name is interesting for various reasons, which I discuss in greater detail elsewhere (Artaud, 2016). In local Amrig tradition, as in many others, the “whispers of the world” give rise to spontaneous translations, which have well-known and widely shared meanings. Thus, the acoustic features of a milieu are associated with typical phonetic equivalents. Maritime toponymy offers a fascinating sample of such correlations, which are the basis for place names such as *Tizizzag Eketkat Teyshot*, *tentaz*” and *ʿayun eṣṣerṣar*. *Eketkat* is, fishermen say, the sound of water slapping the flank of a *lancha*, while *tentaz*, mimics the sound water makes just before it boils. In the toponym *ʿayun eṣṣerṣar*, *eṣṣerṣar* is the onomatopoeia for the sound of a *lancha* stirring up the layer of seashells that covers the seabed as it sweeps over it at low tide.

Toponymy: Foundation for a Shared, Shifting Seascape

The referents used to describe places are thus highly varied and heterogeneous; they can be topographical, ecological, affective and biographical. From the outset, toponyms present the seascape as a lived space, whose memories and potentialities are regularly reactivated by individual and collective journeys, both real and imagined.

Toponymy: a Performative Element in the Appropriation of Maritime Space

The remarkably dense concentration of toponyms in the Banc d'Arguin's maritime zone seems to work in specific ways for the Imrâgen community as a whole, including fishermen, warriors and marabouts. It operates as an effective means of mastering the environment; that is as a tool that is deployed to help navigate areas known to be tricky, by obtaining detailed information about one might encounter in such places. But it also works as a corpus of shared epistemological and perceptual referents, used to discern evocative features of the maritime environment and thereby build the foundation for a shared understanding of the sea. This construction of space is made possible and, in large part, held up by toponymy's binary naming structure. The indications conveyed by toponyms, and the memories they crystallize; these are what allow for the constitution a shared template of representations, referents and perceptions. As described above, the process of naming usually entails placing a first term pertaining to a place's topography at the head of the toponym, then linking it to a quality of another type, which relates to this place in an indirect, subjective way rather through a direct, objective connection. It is thus by situating or reactivating the memory of a precise event or sensation that toponyms simultaneously shape both the seascape and the collective sensibility and remembering through which it can be deciphered. The seascape opened up by toponymy thus emerges as a space of convergence between objective qualities of the natural environment, and subjective dimensions of sensibility and memory. Each toponym manifests this compromise between the real qualities of a place and its cultural contingencies. Toponymy is as much a descriptive and practical apparatus as it is a commemorative and sensory one; its key functions vary depending on whom – fishermen, marabouts, warriors or women – engages with it.

Shared Landscapes of Practice and Technique

Toponyms work, first of all, as performative statements. The naming of places provides fishermen with a means of acquiring greater material control over the sea. It enables them to anticipate physical obstacles and other navigational difficulties, and offers clues with which they can adjust their practice by selecting the most appropriate type of fishing technique for a given location. When, earlier, I pointed out the descriptive function of first-position lexemes, I did not point out their practical implications. The indications carried by the first lexeme do not merely define the topographical characteristics of a place. These can also produce a tangible effect on how fishermen and sailors interact with it. Toponyms may provide information about features of the underwater terrain (*Jedreijer* is where the water grows deep, while *Edegien* is a wide plateau). They may

describe the shape of shoals (*Amojd* is a large shoal; *Wonkere*, a very long and very narrow shoal; and *Tamden*, a large shoal surrounded by channels). A place name can also signal the presence of distinctive natural elements (Binker *aǧuvāl* means the presence of seashells, and *kṛāᶜ leḥlach*, the presence of pebbles). In each of these cases, the function of the lexeme is to inform sailors as to the exact type of terrain they will encounter, and to tell fishermen about the type of technique they should use. In sailors, toponyms prompt the necessary precautions. Some places are known for causing the *lancha* to be *trmekte*, that is to sail through with difficulty, either because an opening is too narrow or because of the time at which it is entered, for many spots in the Banc d'Arguin become impassable at low tide. Some toponyms identify places where one can get stuck, as with the zone named *lemwugef*, in which the verb “*ugef/yugef*” means “to park.” Conversely, the name *twkərt mgazi* tells sailors they can safely enter this zone, for here the *lancha* is “carried” (*gazi*). The table below lists some of the main toponymical indications of this type:

Sailing	Place where one can get stuck	<i>Lemwugef</i> , from the verb “ <i>ugef/yugef</i> ” which means “to park.” The toponym tells the fisher a zone is hard to sail through.
	Place where one floats	<i>Twkərt mgazi</i> describes a zone where a boat is <i>gazi</i> : carried as if the surface under it was “solid,” while <i>kṛāᶜ regdi</i> characterizes a place that is so calm one could fall asleep (<i>regdi</i>).
	Place of disturbance	<i>Ten beygelat</i> means “one-footed hop.” It refers to a group of shoals among which a boat is constantly thrown off balance, while <i>Tagirwit temši</i> is a channel said to be so long that encouragement is needed to cross it: <i>temši</i> means “sail, sail.”
	Docking area	<i>Tarzit</i> describes deep waters that lie next to sand, where it is possible for a <i>lancha</i> to dock.
	Easy sailing area	<i>Tāmātārət lemoyshe</i> , from the verb “ <i>maše</i> ,” “to go,” which indicates that boats entering this zone can sail through effortlessly.

Toponymy also guides fishing practice; it indicates what species can be found in a given area, and what techniques should be used. In many place names, the topographical description of the first lexeme is combined about specific information about prevalent species.

The zone called *kṛāʿ Tawnīt*, for example, indicates that white mullets (*Tawnīt*, *Mugil curema*) are plentiful, while *ʿayun tujuwan* is where young turtles (*tujuwan*) teem so densely they can be “caught by the feet.”

Other zones are defined not by the presence of a specific species but rather by the abundance and scarcity of any type of fishery resource. Thus, *Awoynit ten vader*, derived from the verb “*uve, yowve*,” “to finish,” signals that fish can no longer be extracted here; they have been completely exhausted. Conversely, *tiziyaten*, mentioned above, describes a place where fish are so abundant it is as if they are “enclosed” by it.

Indications for selecting fishing techniques are carried by toponymic information about both marine species and topographical features. Elsewhere (Artaud, 2011), I described how fishermen’s knowledge is based on associations between topographical typologies and fishing techniques. The highly varied underwater terrain of the mudflats complex results in a wide range of fishing techniques. Utilizing only a few basic tools, Amrig techniques have largely relied on an optimal exploitation of the specificities of marine topography, carefully adjusting their practice to a fluctuating seascape as tides make and unmake its features on a daily basis.

Several techniques are thus directly related to specific features of the underwater terrain, as the table below shows:

Techniques	Topographical features
Tänäwräv	Egdawal- twkərt
Tmarniš	Tabəlgīt
Ṛəbṭ	ʿayn- kṛāʿ
Tänäkrä	Wonkere
Kaşra	Lbinker

Such associations between technique and topography are what allow toponomy to have a direct impact on decisions about fishing practice. The technique known as *tänäwräv* is used in *egdawal*, a type of rocky cavity in which fish are “trapped” when the sea recedes, or in *twkərt*, a stretch that is totally visible and dry at low tide. *Tmarni*, a technique known as “the drifting lancha,” can only be practiced in areas where a type of underwater hole, called *tabəlgīt*, is found; these are particularly numerous around the Saint-Jean Bay. The technique is used in springtime, when the fish *Tumvertel* (*Sarotherodon melanotheron*, Blackchin tilapia) begin to migrate. This species likes to “graze” on a type of plant (*ešil*) that grows in these holes. The lancha is positioned on

the lee side and set adrift. Upon reaching the holes, the anchor is suddenly dropped. The sound agitates the fish, which then fling themselves spontaneously into the nets. Some toponyms even specify the timing of fishing activities.¹¹ For example, the place called *tāmātārāt eszri* or *eszri* refers to the last part of the night, suggesting this is the best time to fish here. The topographical information provided by the first lexeme implicitly tells fishermen about the most suitable type of technique for a place.

Many place names thus function as sources of *practical* guidance for fishermen. By pointing out places where boats have been stranded, or where access is difficult; places where they will be protected from the wind, or exposed; the knowledge in toponyms acts in tangible ways on how fishermen understand and master the natural environment. Previous experience sediments in the characterization of places, and is made available as an object of direct and collective appropriation. Thus toponymy enables distinctive forms of control and anticipation, which constitute, in Amrigh thought, as we will see shortly, the only possible way of “appropriating” maritime space.

A Shared Sensory and Mnemonic Landscape

Constructed through subtle and partial discrimination of the maritime environment, toponymy also fashions a shared seascape, real and remembered, into a space of unified perceptions and sensations. This gives it considerable epistemological and symbolic efficacy. Place naming gathers and focuses, momentarily, the attention and sensibility of all fishermen towards the same signs. Many features, which are often very faint, would otherwise go unnoticed. Yet these very features form the framework through which the natural environment is understood. A good example of the type of subtle perception in which spatial descriptions are anchored is a place called *Tischimdiye*. This name refers to the unique brilliance of its surface, which is said to sparkle with uncommon intensity, like a mirror (*Tischimdiye*). If fishermen’s attention were not thus drawn to the quality of the water surface in this location, not only would they be likely to overlook it. They would also be missing the sensory and qualitative clues that mould their perception of the environment. Toponyms thus create occasions for bringing specific qualitative elements of maritime reality into focus. Together, they create a network of sensory clues that all fishermen are familiar with. Thus, toponymy gathers up sensibilities around the path of specific itineraries; these are then ready to be deployed in multiple directions, and to identify, on the basis of a diverse range of referents, specific features of the environment. By thus directing fishermen’s attention towards details of the seascape, toponymy spells out its constitutive phases and reveals the sensory and shared syntax of the world, as fishermen perceive it.

Another function of toponymy is thus to operate as a commemorative framework, under some circumstances. It thus constitutes a form of living collective memory. This

memory is not exclusive to fishermen. Among women, who do not practice fishing, some also know these commemorative names.¹² Most such names are associated with past events, or with the paths taken through the sea to travel from island to island during a *bu*.¹³ For these women, place names do not carry the same type of meaning as for fishermen. They are not tools for leveraging technical efficacy, but instead function as anchors of memory. Older women are familiar with toponyms such as *Lbinker krāʿ al-gārab*, which commemorates the wrecking of a boat that washed up with goatskins. Two other examples are *tāmātārət lbel*, which designates a very large shoal on which, at low tide, herds could stop off when fleeing raids, and *zbāra lekawret*, in which *kwarta*, refers to the wooden casks used by the inhabitants of Tidra Island, instead of traditional goatskins, in order to stock larger amounts of water. Most of the toponyms known by both fishermen and *Timrâgaten* women (the feminine form of Amrig) are transmitted through poetry. Poems are, indeed, an important medium for preserving the names of the Banc d'Arguin's maritime zone. The poem below illustrates particularly well how place names imbue representations, giving them a role that is quite separate from that of procuring performative and practical efficacy for fishermen. It features a type of vessel used prior to Canarian lanchas that was built from assembled planks, and steered through the mudflats with an oar ().

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 خمسة لنسیگی الأبحم
 وخلص انجي للتاکرویت

*When you travel between Teyshot and Rgeyba Tidra, you come
 across a mudflat that is called "Ten kemen" and then across
 another of the name of "Tatiyite," and another "Nsäygi Lābkām"
 "He said: Three oars bring me to Tatkämmäm
 Another to reach Tatiyite
 And five for Nsäygi Lābkām
 Nine strokes of the oar brought me to Tegerwit." ¹⁴*

Similar poetic fragments are also found in the continental zone, where they help herders find their way. C. Taine-Cheikh, in "Poésies d'itinéraire et itinéraires poétiques chez les nomades sahariens" [Poetry as guide and poetic itineraries among Saharian nomads] (2006) notes that such stylistic motifs are commonly used for orientation purposes. Initially, these few verses may have functioned as a practical mnemonic and technical guide for navigation, notably through the metric instructions given for each given site ("An oar to reach Tatiyite, five for *Nsäygi Lābkām* (...)"). Over time, however,

as the poem was preserved and invoked beyond its original context, it seems to have acquired another type of efficacy, shifting from a technical to a symbolic and identity-defining role. The function of toponymical knowledge is thus as much epistemological as it is practical as sociological. It creates a fabric of referents that is common to all the group's individuals, no matter how diverse. Clearly, the homogeneity of perceptions and values – which results from shared knowledge of toponymy – works to help define and stabilize identities within communities, whose perspectives on and engagements with maritime space are otherwise deeply differentiated.

Toponyms: A Flexible and Changeable “Appropriation” of the Sea, which Unifies and Discriminates

Maritime place names are not fixed. Close examination reveals different chronological layers. Newer designations are sometimes brought in to complete, combine with or even replace pre-existing names. Clearly then, the knowledge carried by the toponyms of the Banc d'Arguin is not static. It is an unfinished and labile corpus, which is continuously reshaped by emerging dynamics. In some cases, name changes reveal a shift in collective representations, that is, in paradigms or cultural referents. The mudflat now known as *Nagete Seyidina Saleh* was once called *touïvat*, which fishermen say is a Zenâga term meaning “abundance.” It indicated that fish were always plentiful in this location, regardless of the season or phase of the tide. This has not changed: fishermen still find satisfaction here. This satisfaction, however, has since become associated with an equivalent but more orthodox connotation drawing on an Islamic reference. *Nagete*, which has been substituted for *touïvat*, is the name of the “She-Camel of Allah,” who gave the prophet *Saleh* milk for the entire Tamoudides tribe.¹⁵ Thus, this resource-rich mudflat is compared to the Koranic figure of the miraculous female camel that was able to provide for an entire tribe without exhausting her milk supply.

Similar examples of islamisation of toponymic references are quite common in the area. They sometimes take a subtler form, for example in altering the place name *tāmātārāt lebeydiye* to the more recent *tāmātārāt Mansur*. The first term, *tāmātārāt*, which tells fishermen about the locale's terrain, is unchanged. Only the second lexeme has been modified, giving the toponym a novel religious tone: *Mansur* is the name of a saint of the Awlād Delim tribe. Indeed, only the second lexeme is subject to such contextual modulations and substitutions. Unlike the first lexeme, its role is not to prompt acts of preparation by fishermen and sailors, but rather to link a place to a corpus of contingent referents whose memory is continuously reactivated by the act of naming. The essential vitality of the Banc d'Arguin's toponymy is thus expressed at the level of the second lexeme.

While toponyms constitute shared registers of practice and perception, they also operate as a means of differentiation. Earlier, I mentioned how place naming works to

delineate variations in aptitude within the *Amrig* collective. It also, perhaps now predominantly, distinguishes between older and more recent Imrâgen.¹⁶ All fishermen, whether they are exogenous to the zone or descended from Imrâgen fishermen, know a great deal of toponyms. Yet the nature and scope of this knowledge is variable. Toponymy underpins two distinct layers of memory. The first pertains to an ability to associate terms with their localization in the sea. This is the most widespread: even fishermen who are fairly new to the area know many place names. The second underlies the capacity to make the link between toponyms and their meaning. This type of memory is more exclusive, differentiated and dynamic. Those who join fishing crews, mainly from southern Mauretania, are taught place names on an on-going basis. Yet the meanings of these names do not seem to be included in this learning process. The transmission of toponymic meaning – the only possible foundation for any real appropriation of maritime space – thus remains strictly reserved to a limited circle of fishermen. The uncoupling of two depths of knowledge, two toponymical registers – one strictly nominative, the other deeply embedded in local history – thus works to set apart different forms of control over the Banc d’Arguin’s maritime space.

Conclusion

Analysing toponymy is a particularly productive avenue for grasping how communities in the Banc d’Arguin relate to the sea. Toponymy is not, for Imrâgen fishermen, a fixed and exclusive form of spatial delimitation. Rather, it upholds a flexible and dynamic knowledge of the sea’s specificities *via* their naming. This flexibility permits the occasional modification of place names, allowing for shifts and updates in their meaning. Still, a complex, systematic structure underlies toponymy; this chapter explored its efficacy. By offering contextual clues to actors, who in turn, through their real and symbolic journeys, preserve and update the meaning of place names, toponymy fashions a seascape that is alternately individual and shared, idiosyncratic and collective. Offering practical guidance to fishermen as a reliable support for both fishing and navigation, toponymy also represents, for fishermen and non-fishermen alike, a space of archiving and memory: a pathway along which local “events,” past and present, are simultaneously realized. ○

Notes

- 1 Cf. Cenival and Monod, 1938.
- 2 Lotte, 1937; Anthonioz, 1967, 1968 ; Maigret, 1984, 1990.
- 3 A detailed description of the highly complex classification of obligations and transactions operating on the coast, and varying from one warrior group to the other, is beyond the scope of this chapter (Artaud, 2011: 80-99).
- 4 Marine creatures solicited on such occasions have very specific names and physical characteristics. Among the hundred or so dolphins known by Imrâgen as emissaries of marabous, the most famous

- are, for the Bu-derbâla family, of the Ahl Bârikalla, Mbarîk at-taysîr, a humpback dolphin, and for the Ahl al-Maqarri family, of the Tendgha of Ahl Bouhoubbayni, Bu-dhirwa, a dolphin with a shorter dorsal fin.
- 5 This prohibition, cited in article 10. aa of the National Park's Law 2000-24, provoked strong opposition among local communities.
 - 6 Zenaga, or Znaga, is a Berber language that was spoken before the introduction of Hassanya Arabic; it is still understood by about 200 speakers in Mauretania.
 - 7 The Park has indeed given exclusivity of use of its resources to "the Imrâgen." Previously stigmatized, this characterization as Imrâgen was suddenly given new value, stimulating an identification with this category (cf. AW. Cheikh, 2002).
 - 8 Riddles are, in Moorish society (Dubîé, 1947), commonly used to express the difficulties of daily life, whose solutions can only be found by individuals with exceptional capacities. They are also used to distinguish between several individuals' levels of practical intelligence. Fishermen swapped verbal challenges in which riddles figured prominently. These formulated a problem whose solution was found by selecting the right fishing technique, or the best nautical route for surmounting an obstacle.
 - 9 All great fishermen had remarkable sensibilities: Yora Ould Chekouti predicted the approach of fish merely by attending to the motion of waves across the lancha; Ahmed Lekbir navigated the mudflats by smell, and Salek Ould Zaïd, by sounding the bottom...
 - 10 Canarian lanchas, *nassranyat*, were introduced late to the Imrâgen technical landscape. Although a few local replicas, built by blacksmiths, existed under the name of *musilmât*, they long remained "fragile skiffs, difficult to handle, made of anything spewed by the sea." (Interview with Minetu and Soukeyna Mint Ahmed Alien O.Khlive, Rgueiba, 14/06/2008.)
 - 11 Amrig fishing mobilizes a very intricate temporal classification, which specifies times when fishing is proscribed or proscribed, and those when only certain techniques can be used.
 - 12 I specified above that only Imrâgen fishermen could "enter the sea" (*dhal la-bhar*). This rule also applies to women who inhabit the coastal periphery. There are various reasons for this marginality, but they seem for the most part to be related to a particular phenomenon, locally designated by term *dgeïmi* (agitation). Accounts collected from women over several periods of fieldwork agree that these are not permitted to enter the sea in the localities of Teyshot, Rgeyba and Mamghar. In the latter, the effects provoked by the transgression of this rule are taken advantage of on some occasions. To agitate the sea, when it is "holding up" boats due to a lack of wind or of favorable currents, "beautiful" women were asked to undress before it. What denies the access of *Timragâten* to the sea is thus not, as in the above-mentioned cases of warriors and marabouts, a social status that would be lowered by an infraction, but rather the nature of their ties to maritime space and to the identity that it is attributed locally.
 - 13 Annual journeying between islands that takes place during the summer.
 - 14 Poem transmitted by Muḥammâd Salem, Arkeiss (27/05/2008)
 - 15 Quran chap. VII verses 71 and up.
 - 16 The appellation "Imrâgen" is indeed traditionally associated with an "open" professional category: any individual who practiced fishing could, by their occupation, be identified as such. Unlike other professional groups in Moorish society, such as griots and blacksmiths, the openness that defines this class, its capacity to incorporate strangers, is one of its key defining features (Révol, 1937: 221). "It is remarkable that this class has never been a closed one, that access has remained easy for newcomers who have found their place by making themselves vassals of the coastal suzerains." Thus, the "Imrâgen" identity was not, as for other classes, inherited at birth and irreversibly attached to an individual. This meaning has changed significantly over the last few decades following the creation of an exceptional status associated with the "Imrâgen." A context of natural resources conservation has favoured acts of definition anchored in the selection of rather restrictive criteria of identity. Because of its implications for resolving questions about who should profit from the Park's resources and who can claim "autochtony," the Imrâgen identity has been delineated by increasingly firm boundaries.

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Boundary Definition as a Basic Design Principle of Traditional Fishery Management Systems in the Pacific Islands

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In any fishery four existing or potential problems require management. These are:

- Resource flows (the regular availability of harvestable fish);
- Stock externalities (the economic and social impacts of harvesting interactions);
- Technological {gear} externalities (the incompatibility of various gears); and
- Allocation problems (competition for access to unevenly distributed resources).

“Conventional” or Western fisheries management focuses on fish stocks and stock externalities and assumes an open access resource regime. In other words, it focuses on trying to manage what is *unknown* (and perhaps inherently unknowable) and thus *unmanageable*.

Local or “traditional” management systems in the Pacific Islands take a different approach. They are focused on resolving gear externalities and allocation problems, implemented based on defined geographical areas and controlled access, self-monitored by local fishers, and enforced by local moral and political authority. In striking contrast to conventional fisheries management, traditional systems focus on human problems, which are inherently manageable. This implicitly accounts for the complex multi-species and multi-gear nature of the resource, thereby avoiding inherently unresolvable issues.

Both the problems of gear externalities and assignment are overcome in traditional community-based management systems at two levels. At the first this is achieved by: (1) control of a fishing area as a strictly bounded property; and (2) establishing precise social boundaries, by rights, to define who has access rights to that area. At the second boundaries are set by rules of operational behavior that then specify assignments of time and place within the group having access.

The first level is sustained by rights of exclusion, or limited access, that maintain the private area of a local community of fishers against outsiders. The second level, intra-group operational rules, is sustained by local authority that has the power to invoke sanctions on offenders. In a great many systems, sustainable harvesting practices are enforced, thereby leading to resource conservation

Although boundary closure is a necessary attribute of such systems, alone it is insufficient to either distinguish or manage common properly resources (Ostrom, 1990). However, it is a fundamental attribute, although not having the primacy often attributed to it (Ciriacy-Wantrup and Bishop, 1975; Ostrom, 1992). But clear definition of physical and particularly social group boundaries seems to be especially difficult in fisheries, and is particularly problematical in multi-species and multi-gear coral reef fisheries. In the Pacific such fisheries are often characterized by complex rights and rules systems that have several or more inter-related boundary expressions, complexities that are exacerbated by rapid and multi-faceted social and economic change.

Under those circumstances the prime importance of clear boundary definition must be questioned. In many instances, it is probably neither possible nor desirable. In this contribution, I examine some of these issues as they relate to the definition of spatial and social boundaries in inshore fisheries management in the Pacific Islands.

Spatial boundaries

The definition of fishing territories

In the Pacific Region, the sea territory of a social group is usually within the reel and commonly, but not always, defined by proximity or adjacency to its settlements). and by lateral and seawards boundaries. Communities or smaller social units maintain exclusive rights to all adjacent submerged reefs. Seawards of the reefs the degree of exclusiveness of rights gradually declines.

But this varies considerably according to both the local history of fissioning of human settlements and related migration, and the more recent processes of national modernization, particularly the geographical dispersion of kin groups. In Solomon Islands, as in other parts of Melanesia, for example, the inshore marine waters controlled by a social group are not necessarily those adjacent to the landholdings. The situation is far more complex than that. In the Lau and Langalanga lagoons of Malaita Province, for example, whereas the coastal or "saltwater" people hold rights to reefs and marine waters, the interior-dwelling "bush" people also hold extensive sea rights as well as large tracts of land in the interior of the island (Akimichi, 1978, and pers. comm.). In some places reefs belong to inhabitants of the interior, and not those owning the adjacent coastal land, as at Marovo Lagoon (Hviding, 1990).

At Marovo some groups have large sea territories but only small land holdings, whereas others control large land areas in the interior of the island, but have no sea territory. As everywhere, this is a consequence of historical processes of migration and settlement. In that area, to escape the endemic warfare, the “bush” groups’ ancestors fled inland from the powerful coastal peoples. The coastal groups established the primary sea rights now held by their descendants, most of whom still live in the traditional villages of “coastal” or “salt water” people. Further, inter-marriage between “bush” and “saltwater” people has led to some influential marine rights holders living among the interior “bush” groups but still retaining primary marine resource rights (dividing 1990).

Thus, a “community” on which traditional management is based does not always refer to a physically identifiable community, such as village, that can be delimited by precise social and geographical boundaries. A “community” in which traditional management rights are vested is a descent based kinship group. As a consequence of personal factors like inter-marriage or of the alternative economic opportunities brought about by national development, among many others, almost inevitably these days the social boundaries of any such group will be geographically widespread.

Sacred sea space

The physical and social boundaries of sea territories are often complicated by claims to “sacred space”. Example occur in Melanesia and Northern Australia. Such sea areas are closely related to the ancestors of the present inhabitants of an area. “Ancestors” is defined broadly to include mythological “ancestral beings”, as among the Yolngu Aboriginal People of the Crocodile Islands, Northern Territory, Australia. They generally regard boundaries indicating ownership as manifesting acts performed by ancestral beings while travelling over an area. For example, during a submarine journey an ancestral being may have surfaced and re-submerged several times. Such points are marked by physical features like sandbars, which have a sacred significance to the Yolngu. In this way seemingly isolated sites claimed by a clan are united by reference to acts performed by an ancestral being. Such boundaries are today regarded by the Yolngu as clear ownership boundaries of their resource territories (Davis, 1984).

Schug (1995) demonstrates that the relationship to the marine environment of Papua New Guinean communities along the northern coast of Torres Strait extends spatially far beyond exclusive fishing rights areas. The much broader spatial attachment of the individual communities of the Torres Strait is based on:

- the sacred quality and the “spiritual essence” of ancestral figures embedded in the larger area, which has indefinite boundaries;
- a geographically and socially very widespread mesh of interpersonal relationships through centuries of trade, inter-marriage, shared land and sea ter-

ritories, and other social interactions yields an identity claim over the entire Torres Strait region:

- a history of long-distance trading and resource use that extended all over the Strait; and
- the claim of the inhabitants to be spiritually related to dugong and turtles, that range throughout the entire Torres Strait.

Integrated resources territories

Widespread in the South Pacific is the close conceptual and ecological integration of inshore fishery resource areas with adjacent land resource units as a “corporate estate” held jointly by a kinship-based group. Typically, these estates embrace a connected range of terrestrial and marine resource zones. Land and sea and their associated occupations are seen as economically and nutritionally complementary domains, and not dichotomized along Western lines into “ownable land” and “unownable sea” (Ruddle and Akimichi, 1984; Ruddle, 1988). Examples include the Hawaiian *ahupua’a* (Meller and Horowitz, 1987), the Yap (Federated States of Micronesia), *tabinau* (Lingenfelter, 1975; Schneider, 1984), the Fijian *vanua* (Ravu-vu, 1983) and the Marovo (Solomon Islands) *puava* (Hviding, 1990), among others.

To rigidly define a boundary limited to just the exclusive fishing areas of individual communities is clearly not an accurate representation of local reality where such conceptual and managerial integration occurs. Were such a boundary used as a basis for fisheries management it would likely be seriously dysfunctional.

Social boundaries

Far more complex than defining spatial boundaries is the issue of social boundary definition (i.e., the spatial expressions of various rights and rules). Social boundaries can be based on either the individuals or social groups included.

Whereas social boundaries could be delimited and mapped, this would essentially be of academic interest only, since practical application would horrendously complex as to be useless, further, since social boundary relationships change as a response to external pressures on communities (Ruddle, 1993), their spatial expression would be in a constant state of flux, and so would require frequent redefinition. Therefore, under most circumstances, clearly defined social boundaries could never be attained.

Social boundaries are established and maintained by a combination of rights and rules. In many instances they are complexly interwoven.

Rights

Under traditional community-based systems in the Pacific Islands marine resource exploitation is governed by use rights to a property. A property right is a claim, consciously protected by customary law and practice, to a resource and/or the services or benefits that derive from it. Such a grant of authority defines the uses legitimately viewed as exclusive, as well as the penalties for violating those rights (Ruddle, 1994).

The characteristics of property rights may vary situationally. Common characteristics are exclusivity, the right to determine who can use a fishing ground, transferability, the right to sell, lease, or bequeath the rights, and enforcement, the right to apprehend and penalize violators of the rights. The right of enforcement, and in particular that to exclude the free-riding outsider, is a key characteristic, for without it all other rights are diminished either actually or potentially (Ruddle, 1994).

Almost universal throughout the Pacific Region is that members of fishing communities derive primary resource rights as members or a defined social group. Most commonly, traditional fisheries rights apply to defined areas, but superimposed on these may be the nested or countervailing rights of individuals or groups to species or technologies. The social boundaries expressed by the two main types of right, primary and secondary, are important and complex, because overlapping and detailed regulations on the use of technologies and species are widespread.

Primary rights

Most commonly primary rights are those to which a group or an individual is entitled via inheritance (i.e., a birthright), by direct descent from the core of a socially-bounded descent-based corporate group. Primary rights are generally comprehensive, since they alone confer access to all resources within a defined territory. Inheritance, ancestral interests, social obligations, and cooperative relationships within a defined social group provide continuity of ownership and rights.

Secondary rights

In contrast, secondary rights are more finely bounded, often being restricted to specific fishing methods. They are acquired through affiliation with a corporate group, by marriage, traditional purchase, exchange, as a gift, or as reciprocity for services. Sometimes they may be inherited. Secondary rights are often given to residents of inland villages lacking direct access to the coast, particularly when such villages have historical and kinship ties with a coastal village (Ruddle, 1994).

In some societies rights to fisheries, which are usually to areas, are overlain by other rights, generally those to species and gear types. Most such “nested rights” are quite simple, like those to stone fish trap sites. But in some cases nested rights are complex. Such complexity is particularly well-exemplified by Ponam Island, Manus Province, Papua New Guinea, where owners of sea and reef areas do not have exclusive ownership of their tenured waters, owing to strict limits set by countervailing, nested rights. That rights system is composed of three main independent, overlapping and bounded elements (Carrier 1981; Carrier and Carrier 1983, 1989) 1) ownership of reef and inshore marine waters, (2) ownership of species; and (3) ownership of fishing techniques.

Rules

Rules give substance and structure to property rights by defining how a right is to be exercised, through specification of required, permitted and forbidden acts in exercising the authority provided by the right. Thus whereas a right authorizes fishers to work a specific fishing ground, their options in exercising it are governed by rules which may, for example, specify gear type used or seasonal restrictions, among other limitations. The more complete a set of rights, the less exposed are fishers to the actions of others (Ruddle, 1994).

Basic rules related to social boundary issues are those that define:

- persons eligible to fish within a community’s sea space;
- access of outsiders; and
- the distribution of the catch within the community.

Eligibility rules: bounding the in-group

In addition to holding rights, in many societies fisher groups are further bounded by community-based, national or cultural rules. Whereas in many societies inheritance from a defined corporate descent group and/or residence are the only eligibility rules, in others further preconditions must be met. The sub-groups defined by such rules include caste membership, gender, marital status, and skill level, among many others.

Inter-community access rules: boundary permeability

Access controls are applied to outsiders: people from other social groups. There is often boundary permeability between neighboring groups, a consequence of long friendship,

kinship or other close association. Boundaries are less permeable the more distant the "outsider" group either socially or geographically. But increased commercial resource use often leads to the imposition of strong access controls, even on close neighbors.

Throughout the Pacific, the rights of outsider fishers are usually closely specified by rules defining access conditions. However, there is considerable variation in local detail.

The social boundaries of individual outsiders

At Marovo Lagoon, Solomon Islands, for example, fishing rights are inherited as an integral part of all other rights and obligations entailed in kinship in a particular decent group. Descent and inheritance is cognatic. An individual inherits group membership and associated primary rights from both parents. Thus a person's rights boundaries could embrace four group areas, if all grandparents were from different groups. But other factors intervene. An individual's rights are normally strongest and most complete in a core area near his principal residence, but weaken progressively toward the boundaries of the rights area. They also tend to weaken through time, if not actively used.

When perceiving the exclusiveness of marine boundaries and handling questions of access in daily fishing, fishers tend to interpret kinship connections so as to operate as widely as possible. Often, their interpretation accords with that of the area's managers. Disagreement occurs where managers feel that someone has interpreted kinship too liberally, and should really be defined as an "outsider", and so within a closer boundary (Hviding, 1990).

In Kiribati an individual could enlarge his fishing rights boundary by acquiring secondary rights in the area of another clan either through marriage or as a gift. Persons away from their home island could expand their fishing rights boundary by a recitation and verification of their genealogy. Acceptance of such an account by the clan elders enabled the claimant to take his rightful place in the meeting house, and so to identify his relationship with others using the same place. The logic is that those who shared the same place probably belonged to the same clan, and so would have shared land and sea rights (Teiwaki, 1988).

Permeable social boundaries of groups

In general, inter-community access is more likely to be granted to neighboring groups than to those more distant, since neighbors are regarded as closer in kinship terms. Further, the rights of outsiders often relate not only to the general significance of a marine area to a host community but also to the value of the resources therein. In Lau Lagoon,

Solomon Islands, for example, outsiders had the weakest claims to areas for net or trap fishing. The strength of their claims progressively increased from areas for collection of commercial shells, those for collection of shells for making shell money, areas for line-fishing or spear-fishing, becoming greatest in food shell-gathering areas (Allen, 1957).

In Okinawa Prefecture, Japan, formal entry contracts between neighboring and even distant fishing communities have long been a feature of traditional fisheries management. There, contracts specified the precise nature of the access rights granted to outsiders, including fishing season, target species, allowable gear types and numbers, conservation rules, and fees payable, if any, among other conditions (Akmichi and Ruddle, 1984).

Distribution of catch rules: expanding the in-group boundary

Rules that define which persons have access rights to harvested fish ascribe a social boundary to a fishery that is always wider than that of just the fishing group. These are an extremely important set of rules in many societies, since in terms of equity within a community re-allocation of harvested fish can be as or more important than access to fishing grounds. Distribution of the harvest is fundamental in ensuring intra-group harmony and the stability of the traditional management system, especially if distribution is from higher status persons, with species or other special access rights, to the community at large.

Such rules include those that provision the family and community, as in Kiribati (Teiwaki, 1988), those required as subsequent and continual repayment for the acquisition of fishing rights, as on Yap, Federated States of Micronesia (Anon, 1987), and those enmeshed in general community sharing and reciprocity and related norms concerning equity and fairness (Ruddle, 1994),

Catch distribution systems can be complex in terms of the categories of persons involved, as well as geographically extensive, as on Ulithi Atoll, Federated States of Micronesia. There, such valuable species as turtles are presented as tribute to the paramount chief, who slaughters and distributes them in a closely specified way. Some parts are given to the women in the menstrual house on Mogmog Island. They distribute what they do not need to women on other islands and to the heads of the two highest ranked lineages on Mogmog Island. In turn, they distribute some to the heads of the lesser lineages (Ushijima 1982)

Women on Ulithi also have distribution rights because canoes, although owned by a lineage as a whole, are overseen by the women. This is because canoe hulls are made from mahogany logs obtained from Yap Island, in exchange for cloth made by the women of Ulithi. Further because post-marital residence is patrilocal, women are scattered throughout the various matrilineages of an island. As a consequence, the food-distribution system reaches all parts of all islands of Ulithi Atoll (Ushijima 1982).

Fish distribution in the form of reciprocal exchange of goods also occurs among the islands of Ulithi Atoll. For example, ecologically-favoured Falalap Island provisions the rest of Ulithi with taro, breadfruit, sweet potato, and banana. However, Falalap lacks fishing grounds, and so must receive its fish from the other islands. In contrast, fishing rights areas are expansive on islands in Mangejang District, where, however, vegetable cultivation is precluded by the absence of freshwater lens. Thus there is an exchange of vegetables for fish between Falalap and Mangejang (Ushijima, 1982), thereby enlarging the social boundary of the fishery.

The change factor

Understanding common property resources in the Pacific Islands is complicated by rapid change as external factors increasingly impinge on traditional systems, sometimes causing their collapse. The main external forces are the legacy of colonialism, contemporary government policy and legal change, the replacement of traditional local authority, demographic change, urbanization, changes in education systems, modernization and economic development, commercialization and commoditization of living aquatic resources, technological change, the policies of external assistance agencies, and national policies for economic sectors other than fisheries. These forces usually comprise a mutually reinforcing and potentially destructive complex. As a result, traditional marine resource management systems now exist under environmental, social, ecological, political, and demographic circumstances that now often differ greatly from those of just a few years ago (Ruddle, 1993).

Widespread and powerful are the commercialization and monetization of formerly local and mainly subsistence or reciprocal exchange or barter economies, which are now increasingly linked with external markets. This, in turn, leads to changed perceptions in fishing communities regarding the value of marine products, and often to external factors being internalized by village elites, and so to the breakdown of traditional management systems through the weakening or total collapse of traditional moral authority. Small communities are not immune from the pressures that drive larger political and commercial elites, and which undermine the moral imperative of local management systems from within. Regional and global markets also have a direct impact on them: external incentives introduce temptations for individual profit at the expense of local social equity, and thus undermine systems from within by weakening or even destroying their moral and traditional authority. Thus community institutions and management systems are not immutable. Rather, they are dynamic, adapting to external as well as internal and local experiences and pressures, many of which are not directly related to the fisheries sector (Ruddle, 1993).

Papua New Guinea provides a brief example. Overlooking here local belief systems and social structures, traditional sea rights have essentially been defined by the

role of aquatic resources in the local subsistence economy. Where fish was not important in local subsistence, rights and boundaries may not have existed. But where fish was a staple complex terms of ownership and close defense of boundaries was the norm, further, and problematical for official documentation and registration, is that traditional rights boundaries often do not exist until they are inquired about: also, previously unclaimed areas may suddenly become the center of a dispute as a result of increased fishing pressure (Freilink, 1983). In general, under such traditional systems rights were asserted in inshore waters to known resources in areas customarily fished. Deep water fishing was a rare occurrence. But when non-traditional resources of commercial value are found in deeper waters, these then become claimed also, and rights area boundaries extended seaward.

This process is often manifested in change in boundary permeability with respect to outsider rights. Among Papua New Guinean mixed agricultural and fishing societies, for example, the rights given to outsiders vary. In pre-Contact times fishing was limited to reefs and shallow waters close to a village, partly because of warfare and partly because gear was limited to shallow water types only. But with the advent of colonialism the situation changed drastically. With the introduction of deeper water gears and the end of tribal warfare, fishers ventured into the areas traditionally belonging to other villages, churning access rights through kinship ties and marriage. This has occurred among the Tigak people of New Ireland Province (Otto, n.d) for example. Thus there has arisen a discrepancy between the boundaries of areas claimed as sea territories of the ancestors and those actually claimed at present. Sometimes ancestral areas are adapted to present-day demand, and village sea territories have been extended. With increasing commercialization of marine resources have come increased demands for closure and protection of marine territory boundaries

Concluding remarks

Codification of traditional systems of fisheries common property resource management is now a widely discussed issue, particularly in Pacific Island nations. Inevitably that implies boundary-fixing. But given the complexity of the various factors, and particularly in an era of vast and accelerating social and economic change, it is probably not desirable to attempt to fix rigidly the social and physical boundaries of traditional rights areas, at least in terms of Western-Style legal systems. As is well-appreciated in parts of the Pacific Region, customary law may well provide a more flexible resolution that allows for the expansion and contraction of physical, social and resource boundaries (Ruddle, 1994).

It has to be appreciated that for any resource management system the most important boundaries are a reflection of social relationships, which are recognized in physical space. Thus the important issue becomes the definition of all the social boundaries of

all the stakeholding groups involved in a fishing system, rather than just definition of the physical and biological boundaries of the system.

Further, because marine inshore ecosystems are closely linked with those in the coastal terrestrial environment, physical and biological boundaries are not immutable; they are always evolving, and so not amenable to precise and permanent definition. Appreciation of this dynamic land-sea ecological linkage is clearly reflected in the Pacific Island "estate" management concept

Similarly, the economic boundaries of systems are not immutable, especially nowadays. Local fishing systems are increasingly linked with the global economy, with markets in industrial-service economies now driving fishing effort and species targeting in distant local systems. Examples are legion: the demand by Hong Kong consumers, in particular, now drives the local and deleterious live fish trade in many Pacific Island coral reef fisheries (Johannes and Reipen, 1995).

It is probably not necessary to have strictly delimited physical and social boundaries when pressure on resources is light, as where human populations are small. But when pressure increases boundaries may be more firmly established. "Anticipatory claims", as many parts of Solomon Islands (Ruttley, 1987), may reflect a perception of this, in addition to an increasingly perceived market value for the resources.

I have tried to demonstrate that definition of precise boundaries can be exceedingly complex in a non-Western case, as in the Pacific Region. In focusing on the sea space actually defined and governed locally for present pragmatic purposes we run the risk of ignoring the larger cultural picture that includes the ancestral realm, as in the discussion of the Torres Strait. In such contexts, the design principle which demands a precise definition of boundaries is an illusion. By the very nature of tropical coastal marine ecology, complex social relationships, the multiplicity of stakeholders, and the pressure of external forces, boundaries must remain flexible and so able to adapt to remain situationally relevant. ○

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Linking Customary and Modern Marine Management Systems in Melanesia¹

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The value of Customary Management (CM) systems for managing and conserving marine resources has been recognized for decades. Researchers have studied indigenous ecological knowledge (IEK), customary sea tenure (CST), and local governance and cultural-religious belief systems (or worldviews) as nested dimensions of CM (e.g., Johannes, 1978; Akimichi, 1984; Ruddle and Johannes, 1985; Ruddle *et al.*, 1992; Cinner and Aswani, 2007; Narchi *et al.*, 2014). This interest has also been expressed in parallel foci, particularly in the study of rights-based fisheries such as Territorial User Rights in Fisheries (TURFs) for managing benthic resources and small-scale fishing in coastal areas in both developing (e.g., Cordell, 1989) and developed (e.g., Acheson, 2003) countries. Research in South and Central America, for example, suggest that territorial rights can incentivise fishers to sustain resource use and to comply with management initiatives that are locally prescribed and culturally context-specific (e.g., Begossi, 2001; Defeo and Castilla, 2005; Cudney-Bueno *et al.*, 2009). In this respect, Oceania has the world's largest number of remaining (Ruddle, 1998) and functioning (Johannes, 2002) CM systems, albeit these have been transformed and eroded by centuries of colonial and post-colonial social, economic, political, and ecological changes.

Research on customary management systems in the Pacific Islands has centred on the study of customary sea/marine tenure and associated indigenous ecological knowledge systems including case studies from Micronesia (e.g., Sudo, 1984), Polynesia (e.g., Bataille-Benguigui, 1991), Melanesia (e.g., Hviding, 1996) and Aboriginal Australia (e.g., Nietschmann, 1985). The motivation for these studies has been driven to reject the universality of the "tragedy of the commons" and to show the applicability of CM in marine resource management. Recent studies have focused on working with CM for developing hybrid CM-EMB (e.g., Aswani and Ruddle, 2013), co-management (e.g., Ruddle, 1998), marine protected area (e.g., Cinner, 2007; Mangubhai *et al.*, 2015), and disaster management (e.g., McAdoo *et al.*, 2009) programs. A consensus

of most studies is that CM systems are widely heterogeneous and can vary at small spatial scales (Aswani, 1999), are very dynamic and responding to market opportunities (Cinner, 2005), and are often the product of the amalgamation of traditional and foreign practices (Hviding, 1996; Ruddle, 1998). Furthermore, not all CM systems in Oceania are operational today, although coastal inhabitants are cognizant of their old rights, and non-operational CM systems can, in some instances, be adapted, revived, or hybridized to achieve modern management and conservation objectives (in heavily urbanized areas this may not be a useful strategy). Many of these remaining CM institutions, particularly in near Oceania (Melanesia), expand across centuries or even millennia of human interactions with the marine environment, and for this reason, they have received significant attention (e.g., Johannes, 1978; Ruddle and Akimichi, 1984; Veitayaki, 2000).

The persistence of CM institutions, even if transformed by past and ongoing cultural and socioeconomic processes, presents a real opportunity to combine or hybridize them with modern marine management systems for effective and culturally contextualized marine resource management in Melanesia and beyond. As a matter of fact, given the socio-cultural and historical dimensions of these local systems, there are no alternatives for comprehensive resource management in the region other than working with CM stakeholders. Trying to superimpose a top-down approach to artisanal fisheries management in Papua New Guinea and Solomon Islands, for instance, has utterly failed for lack of enforcement mechanisms. However, working with these local systems will require surpassing some conceptual and practical challenges that are not easily surmounted. In this paper, I explore the challenges and opportunities of combining customary management with modern fishery management prescriptions, including TURFs, Ecosystem-Based Management (EBM), Marine Protected Areas (MPAs), and non-spatial regulatory measures (e.g., gear restrictions to protect functional groups like parrotfish). The focus is to assess if CM institution can be adaptive and dynamic enough to combine with modern management strategies to create the local incentives that are necessary for promoting sustainable fishing practices and marine conservation in the region.

Customary management in Melanesia

CM in Melanesia has to be understood as entire socio-cultural systems that embeds resource use and management practices within the context of customary rights to sea space (CST) and which are informed by indigenous ecological knowledge (IEK) and local ideologies and political processes, or a worldview (Cinner and Aswani, 2007). Because CM systems are “peopled” seascapes with long histories, they are evolved territorial systems that are part and parcel of the indigenous socio-political economy and, therefore, they are *not* intended for the management and conservation of marine

resources *per se*, but rather for their control and appropriation (see Polunin, 1984; Adhuri, 2013). Often, “conservation” and “management” are side-effects of larger territorial and political strategies rather than purposive strategies conceived to optimize biological and economic efficiency, such as those of current Western marine management systems (which are not in actuality, but attempt to conceptually).

The fact that CM is not conceived for conservation is an idea that needs to be understood from the onset if managers and policy makers are going to attempt working within and between these systems. That is, before fisheries management and conservation practitioners try to formalize CM systems as spatially delineated spaces for the management of marine resources, they need to understand and factor in management that these are multi-layered context-dependent “messy” and “contested” social spaces that are continually changing and which significantly vary across Melanesia. In what follows, I review the nested dimensions of CM including indigenous ecological knowledge (IEK), customary sea tenure (CST), and local governance and worldview, and refer to my work in the Solomon Islands. After that, I explore the opportunities and challenges of combining customary management with the cited modern fishery management prescriptions.

Indigenous Ecological Knowledge

Indigenous/local ecological knowledge is one of the nested components of CM systems. It can be roughly defined as a cumulative body of knowledge gained through human-environmental interactions that are passed inter-generationally (Berkes *et al.*, 2000), but which is also being syncretized, transformed, created, or lost as it entangles with foreign ideologies. It is important to recognize that IEK is not only about some mental abstraction in people’s head, as IEK can be also generated in the everyday practical interaction with the environment (Ingold 1993), and new knowledge is produced across people’s lifetime (Godoy *et al.*, 2006). Nevertheless, extensive research around the world is showing that the transformation of IEK is resulting in an inter-generational loss in local people’s capacity to classify their environment and thus manage their terrestrial and marine resources effectively (Turvey *et al.*, 2010; Padilla and Kofinas, 2014). Critics, however, argue that we need to understand people’s capacity to generate and transfer knowledge rather than focusing on its loss (Gómez-Baggethun and Reyes-García, 2013). A knowledge deficit can weaken overall livelihood resilience in the short-term (Berkes *et al.*, 2000) as people need to recognize the habitats and species that they are exploiting, even if knowledge is produced eventually to adapt to new environmental and social circumstances.

Solomon Islands coastal communities heavily rely on local marine resources for their daily subsistence and income (approx. 33 kg/person per annum [Bell *et al.*, 2009]). Throughout the archipelago, fishers: (1) have mental maps of the seascape and the

marine organisms therein, and classify these accordingly; (2) are able to recognise local ecological processes and transformations, including habitat structure (habitat delineation), species composition and distribution, and significant biological events (e.g., spawning aggregations); and (3) have a general understanding of some aspects of habitat and species interconnectivity, vulnerability of species and habitats, and the ecological role of certain functional groups (e.g., echinoderms and lagoon water quality). This ecological knowledge is rooted in the maritime experiences of coastal peoples and is the “rules of thumb” that constrain or improved fishers’ catches, allow people to read environmental cues, help predict the changeability of climatic phenomenon, and assist in understanding the variegated spatiotemporal distribution of targeted fish and invertebrate species across marine habitats. Thus, a fisher’s capacity to perceive changes in the environment triggers variability in foraging behavior and concomitant regulatory strategies, whether intentional or not in design.

Today IEK in the Solomons is being transformed by the introduction of new fishing technologies and Western environmental knowledge (e.g., climate change campaigns). For instance, recent research in the Roviana Lagoon suggests that local people are increasingly losing the ability to identify marine species. In 1995, fishers provided 87 names for the fish harvested from 800 hours of fishing, but by 2011 fishers provided 60 names for fish collected from 800 fishing hours. Also, research results suggest that younger fishers (13-35) have lost up to 60 % of their capacity to distinguish taxonomic classes of marine fishes. Incidentally, this loss of IEK between 1995 and 2011 was simultaneous with a reduction in CPUE (catch- per-unit-effort) of fishers (Aswani and Albert, 2015).

Peoples’ loss of IEK is of grave concern, as the ways fishers perceive organisms and the state of the environment have important implications for how resources are used and managed—one cannot manage what he or she does not recognize. This also has consequences for people’s resilience in the face of climate change. When individuals detect and respond to change, or they don’t, the acquired information, or lack thereof, which feedbacks, or not, into their CM system. This, in turn, affects people’s livelihoods and their regulatory responses to new environmental circumstances. People’s failure to detect and respond to their environment and ongoing ecological changes weakens their overall resilience and increases their economic vulnerability. This presents a challenge for the subsequent hybridization of CM systems in Melanesia and modern Western fisheries management strategies, as the significance of the inclusion of local knowledge and institutions for ameliorating resource degradation will be diminished.

Customary Sea/Marine Tenure

Customary sea tenure is the spatial component of CM systems, and which delineate people’s claims to a seascape. Inclusive members describe their ownership rights as the way they ‘perceive’, ‘delimit,’ own,’ and ‘defend’ their rights to sea space (Ruddle

and Akimichi, 1984: 1). Through physical markers, such as geomorphological features and human-made structures (e.g., shrines or stone fish traps), people draw boundaries and claim title to estates, and share (or not) a given socio-cultural identity and history. The physical landscape, therefore, acts as a mnemonic device that reminds people of their rights and thus makes CST operational on the ground. Also, people's territorial entitlements are not only limited to spatial claims but can also encompass some different local rights (e.g., gear and species restrictions).

If someone went to any coastal village in Melanesia and unexpectedly asked a fisher about "sea tenure" and "others" fishing there, the response will likely be bafflement followed by the answer that "anyone can fish here." This response while perfectly coherent within the indigenous social economy—as "anyone" refers to people belonging to regional kin networks who are interlinked through history and culture, and who possess layered grades of tenurial rights and concomitant access rights—can mislead an outsider. Upon deeper investigation, however, one would discover the difference between "perceptual" or "cognized" and "operational" or "effective" execution of tenurial rights. Within any one region local communities who may have rights over one or more territories, can choose to enforce, or not, access and/or use limitations (to their members and outsiders) depending on (1) the social, economic, and political costs and benefits of defending a territory, (2) their capacity to have their territorial rights recognized by neighbouring groups (who may also be claimants), and (3) their actual ability to enforce their claims (e.g., villagers may not be capable of chasing out a Taiwanese trawler). Hence, rights become only operational when the benefits of defending a territory offset the costs—chasing out a distant relative or someone's friend while fishing and visiting one's village would be pointless and a waste of social capital! In sum, broadly speaking CST tends to be community-oriented rights-based fisheries that regulate the use, access to, and transfer of marine resources, and which are complex, context-dependent, and historically situated.

The Roviana Lagoon in the Western Solomon Islands illustrates the intricacies of CST systems. Today, governance and management changes in sea tenure not only have resulted from exogenous socio-economic changes but also from multifaceted local sociocultural and economic processes, which have led to 3 different sea tenure regimes in an area of high linguistic and ethnic homogeneity. In the past, various chiefly polities competed for control over natural resources, which led to periods of political and territorial instability. Through migration and intermarriage, this resulted in the scattering of entitlement holders away from their ancestral territories or to their neighboring nucleation. These population movements have resulted in differential territorial rights, affording some claimants several possibilities to access and control to various estates while denying others the same opportunities.

What has allowed for these tenurial asymmetries? Kinship and culture have permitted proprietors to claim rights to indigenous territories either by matrilineal and patrilineal descent (cognatic descent) and to accrue these rights across generations (cu-

mulative filiation). In fact, this gets even more complicated, as in Eastern Roviana there is a cumulative matri-filiation bias (links to land and sea rights accumulated through the female line), which creates regional differences in how the acquisition of rights are perceived and acquired. Though, Roviana people can accrue user rights to multiple estates from their past association to maternal and paternal ancestors. This can blur boundaries between social groups and rights to their concomitant ancestral estates. But as mentioned, people's distribution across the seascape is not randomly distributed, thus giving some groups more power and accessibility to sea territories than others, and their potential capacity for rearranging territorial limits, particularly under the pressures of commercial exploitation. Settlement histories, then, have determined the current choices and responses of fishers as they use and access marine resources within and across coastal territories, and has resulted in various systems of sea tenure governance in the region.

I have described three conceptual CST "models" (i.e., regimes) within the greater Roviana (Roviana and Vonavona Lagoons) (Aswani, 1999) that, while transforming, are still applicable today. First, the *territorial-enclosed* entitlement regime of sea tenure is a governance situation in which territorial boundaries are defined and perceived as inalienable, traditional control over territorial matters is centralized, and sea entitlements and limits are generally recognized by neighboring polities. In this situation, various local lineages/tribes that have amalgamated through intermarriage and occupy settlements within the accepted sea territorial boundaries are under the traditional authority of recognized chiefs and elders (occurs in Easter Roviana). Second, the *mosaic-entitlement* regime of sea tenure is a circumstance in which territorial boundaries are blurred and disputed, traditional authority over territories is spread out and contested by various groups, and entitlement holders are scattered across several polities. Stakeholders closer to the marine estate in this sea tenure regime conceptualize their entitlements as incorporating those of other regional claimants' but attempt to assert sole custodianship over their sea space, even if the boundaries are porous (occurs in western Roviana).

Finally, the *transitory-estates* regime is one in which two neighboring polities', one having a territorial-enclosed and the other a mosaic-entitlement regime of sea tenure entangle through intermarriage and change the flow of entitlements and claims. Depending on the future flow of intermarriage and the concomitant concentration of stakeholders in a particular area (or not) will result in either a configuration like a territorial-enclosed or a mosaic-entitlement regime (occurs in the Vonavona Lagoon). This dynamism has also been noted for other CST systems in the Solomons (Hviding, 1996), as well as in Fiji (Veitayaki *et al.*, 2005), Vanuatu (Johannes and Hickey, 2004) and Papua New Guinea (Asafu-Adjaye, 2000) among other places. Hence, when thinking of working with CST as the spatial component of a CM system for fisheries management (with clearly delineated boundaries), policy makers and managers need to consider carefully the fluidity of these systems. Attempting to superimpose artificial boundaries against this dynamic and ever-changing backdrop is a recipe for disaster.

Governance and Worldview

Overarching IEK and CST is a governance system that is sustained by a particular worldview about people and the environment. Islanders do not conceptually divide terrestrial and marine areas into separate domains, but rather see their estates as encompassing terrestrial and marine habitats, usually stretching from the interior of their islands all the way through to the open sea. An example of such systems of interconnectedness in Oceania include the Fijian *vanua* (Veitayaki *et al.*, 2005), the Marovo *puava* (Solomon Islands) (Hviding, 1996), and the Hawaiian *ahupua'a* system (Kaneshiro *et al.*, 2005) among others. In the Greater Roviana region, these inclusive units are known as *pepeso*, which are delineated by boundaries (*voloso*), which separate estates from each other. Terrestrial border is usually rivers and mountain ridges, while in the sea they are marked by the lagoon or coral reef passages. Each *pepeso* is divided into four major zones including the mainland (*tutupeka*), the lagoon (*poana* or *koqu*), the outer barrier islands (*toba*) including the adjacent sea-facing habitats (*vuragarena*), and the open sea (*lamana*). Inside each major terrestrial subdivision there are hundreds of small subdivisions that demarcate villages, communal plantations and gardens, individual land holdings, and households.

Within the marine division, locals name particular locations representing exploitation resource zones, geomorphological features that permit or restrict people from navigating, and cultural and historical markers that represent territorial boundaries and cultural sites of ancestral significance. Then, people name fishing grounds (*habuhabuana*) that are found within the locally called and geographically delimited zones. Fishing grounds themselves are made up of one or more floating spots (*alealeana*) where fishers target particular fish. Beyond *alealeana*, fishers distinguish events of biological significance (e.g. aggregating sites) and abiotic and biotic characteristics.

Traditionally, this worldview of interconnectedness translated into a holistic form of environmental governance, which was executed by chiefs and elders and who were responsible for the stewardship of land and sea estates. However, following more than 100 years of colonial and postcolonial history and its effect on local knowledge systems, this worldview has been entirely transformed. Today the information that people use for environmental stewardship (or rather the lack thereof) results from the amalgamation of tribal epistemology, Christianity, Capitalist, and Western environmental discourse (e.g., on climate change). Thus, views on environmental stewardship vary from those who see human action as unimportant, those who believe that God will regenerate nature, and those who foresee an increased degradation of ecological systems. In sum, working with CM systems for fisheries management in the context of these epistemological transformations will be challenging, especially because today traditional authorities have capitalized on their role as stewards by allowing logging, fishing, and mining companies to ravage their natural resources for their gain.

Opportunities in linking CM and modern marine management

Modern marine management prescriptions such as TURFs, EBM, MPAs, and non-spatial regulatory measures can be combined with CM systems to resolve gear externalities, overcapitalization, and allocation problems in small-scale coastal fisheries in Melanesia and Oceania at large. However, this will require a good understanding of what CM systems can and cannot do, and how they can overlap with modern fisheries management. First, CM like right-based fisheries (TURFs) or MPAs are spatially delimited (in principle) and are not everyone's property, thus have a measure of *exclusivity* and *excludability*. Participating members—whose rights of affiliation are determined by some social rules (e.g., birth, marriage and residence, or usufruct by direct transfer of rights by chiefs)—can exclude non-members from accessing and using their marine resources.

Second, CM stakeholders have flexibility in their property rights. Hence, they can hold rights to a territory either temporarily (e.g., usufruct rights for temporal commercial exploitation) or permanently; this being contingent on one's social status and kinship ties to the original owners of an estate. Thus, the spatial enclosure component of CM (or CST) and associated flexibility can be adapted to establish TURFs, MPAs, and spatially delimited EBM (e.g., watershed protection to protect adjacent coral reefs) that are locally contextualized. For instance, spatiotemporal reserves can be designed to allow inclusive stakeholders to dive or fish at certain times of the year (e.g., diving for *bêche-de-mer* to pay for school fees) or in special occasions (e.g., spearfishing parrotfish for a chief death's feast).

Third, user-rights in CM systems are transferable to offspring, kin, or affine members and the strength of rights can be primary (decision-making power), secondary (user rights), or usufruct (temporal user rights) in character. This parallels rights-based fishery (as in TURFs) and multi-use MPAs, and provides flexibility in the allocation of rights to different stakeholders. Fourth, CM participants can limit the amount of resources harvested by its members and outsiders, or subtractability controls, albeit increasing resource commercialization has strained the institutional capacity of CM to control marine resource extraction in recent years. Nonetheless, local authorities across Melanesia (e.g., chiefs, priests, and village organizers) still hold the power to enforce harvest limitations and if this capacity is paired with governmental or NGO support, co-managerial measures can be established to limit resource extraction. Such limitations are congruent with TURFs, MPAs, and EBM, thus facilitating their combination with CM.

Fifth, CM systems have durability in a manner akin to some informal or formal TURF system (e.g., Acheson, 2003; Gelcich *et al.*, 2012), with particular territorial domains extending over centuries of use, access, and management by the same socio-cultural and linguistic group. Even in places where national colonial and post-colonial jurisdiction has eroded or destroyed these systems, such as in Indonesia or Hawaii, the

historical and cultural memory of CM remain alive, hence allowing for the renaissance of “customary” rights such as currently occurring in Hawaii (Vaughan and Vitousek, 2013). In places where CM (or rather CST) is recognized in constitutional law, like Papua New Guinea, Solomon Islands, or Palau, local governance systems are primarily functional although the strength of tenure rights and concomitant managerial effectiveness varies regionally.

Sixth, a fundamental pillar of CM is holism and natural and social interconnectivity, which are essential principles of CM and EBM systems alike. As discussed, extensive research in Oceania shows that local populations perceive their ancestral estates as interconnected habitats that extend from mountain tops into the deep-ocean, and this conceptualization corresponds mainly with the core EBM principle of interconnectivity between and within terrestrial and marine ecosystems. Beyond natural resources, however, CM also encompasses social interconnectivity. That is, like a comprehensive EBM plan, CM also considers the social interconnectivity or the social networks and distances over which people communicate for accessing and using resources.

Seventh, there is a self-monitoring component of CM systems that can be easily combined with western scientific monitoring for detecting environmental and social changes. Because CM stakeholders live adjacent to their marine environment they can perceive changes in the environment over short and long periods, hence are better suited to modify any managerial prescription according to current social and ecological trends (i.e., adaptive management). This self-monitoring component can be a reinforcing mechanism because when people witness positive changes in the environment they can learn and change their behavior. For instance, a marine protected area established within a CM system and its resulting biological and social outcomes (assuming that they are positive) can be visible means of demonstrating the significance of resource management. “To see is to believe” and the witnessing of actual management results, whether real or perceived, is an effective means of environmental education and concomitant compliance to managerial plans.

Finally, rights over natural resources and property governed as part of customary management systems are based on local values and traditional law, these being an amalgam of traditional and imported ideas and behaviors. So autochthonous forms of *leadership* can potentially be drivers of positive change, albeit this will require the local determination and an attitude change to protect the environment from political corruption and concomitant capital resource extraction (fuelled predominantly by Asian logging and fishing companies), which today is the norm amongst Melanesian leaders. Given the right circumstances, local leaders can become champions of environmental protection—and not always for conservation reasons, but for resource appropriating and control—and can in tandem with community elders establish spatial and non-spatial management measures. Leaders can install a combination of one or more of the following restrictions: (1) spatial, (2) temporal, (3) gear or harvesting technology, (4) effort (through the number of participants), (5) types of species that can be harvested, and

(6) the number of resources harvested (e.g., through quotas) (see Cinner and Aswani, 2007; Aswani and Ruddle, 2013 for further discussion). All these measures conform to managerial prescriptions in TURFs, MPAs, EBM, and non-spatial regulatory measures. In sum, having leaders work with policy makers to achieve resource management will require sustained governance, financial, and educational support from government and non-government organization (Ruddle and Hickey, 2008).

Challenges in linking CM and modern marine management

Indeed, there are many opportunities for working with Melanesian communities for encouraging indigenous stakeholders to develop hybrid management and co-management schemes that combine modern fisheries management and CM. However, there are also many serious challenges to overcome. Grasping the dynamics of CM systems is not straightforward, principally because these systems are about people interacting with the environment in a complex and dynamic social and natural setting. One of the foundations for understanding human-environmental relationships in the context of CM is to research the *human and cultural ecology* of these systems before scaling-up for regional management (e.g., using CM as a framework for designing MPA networks or EBM).

First, history matters, hence research could focus on ethnohistory, genealogical demography, and spatial settlement dynamics across space and time. This knowledge is important because policy makers can identify population movements over time and to infer the likely effects of these changes on the spatial distribution of stakeholders (and their associated social networks), and the attendant impacts on the governability of CM systems today. Researchers could also study current socioeconomic transformations on coping strategies as well as people's institutional cognition and governance. By understanding people's livelihoods and food security, and measuring their responses to changing economic conditions, managers can understand the response of CM to local and global economic changes. Likewise, understanding the mental processes that inform people's current governance and management choices can provide information about group cohesion, conflict, and the probability of cooperative behavior for successful management.

Researcher could also geo-reference (and import into a GIS database), for instance, (1) cognition of rights and perceptions of conflicts when development is introduced (e.g., tourism and fisheries), (2) human inter and intra-habitat foraging strategies and seasonal variation, (3) local ecological knowledge, and (4) indigenous perceptions of protracted and fast ecological change among many other areas. Such research can assist in the design of context-centred permanent or seasonal MPAs and TURFs that consider local ongoing tenurial conflicts, human seasonal foraging patterns (responses to inter and intra-habitat productive variation), people's knowledge systems (e.g., spatial distribution of spawning aggregations), and people's perception of protracted and rapid

ecological change processes respectively. Indeed, efforts to integrate sociocultural and economic factors into the design of modern marine management regimes are ongoing (e.g., Gurney *et al.*, 2015; Mangubhai *et al.*, 2015), albeit more research is necessary to incorporate the dynamics of CM systems with current management goals. Regardless of research approach, there is no way around to conducting fieldwork (and long-term is preferable) for grasping CM systems, because these are about complex human relationships in the context of a transforming natural and socioeconomic environment. Consequently, understanding the complexities of CM relying on rapid survey data or simple categorization of their management effectiveness will result in the unsuccessful management of marine resources in coastal Melanesia.

Second, transforming the law to recognize the rights of coastal peoples and to legally acknowledge the role of CM in current resource management is a very challenging goal. First, governments in Melanesia not only need to recognize the legal rights of indigenous peoples over their sea territories (which has occurred in countries like Papua New Guinea and Solomon Islands), but to work with various stakeholders (local and regional) to devolve management to local communities while nesting local rights and plans into national policy for multi-level governance. Such incorporation would allow local communities to legally sanction interloping and free-riding while allowing regional and national authorities to ensure that natural resources are used sustainably and for the local and national benefit. Simultaneously, governments have the difficult task of acknowledging CM systems while avoiding setting boundaries in the ocean, as this formalization would diminish their institutional resilience and make them more vulnerable to internal disputes and fishery commercialization. Research in other parts of the world has shown that applying formal government co-management policy over CM or informal TURF systems can weaken local institutions by intensifying mistrust and conflict amongst local stakeholders, and reducing their adaptive capacity when facing transformation (e.g., Gelcich *et al.*, 2006). Scaling-up from dynamic local systems to more formal regional, national, and international governance, therefore, will require policy makers to be creative thinkers, accepting of governing diversity, and embracing the dynamic character of CM systems while maintaining a measure of control for safeguarding environmental sustainability.

Third, there is an epistemological dissonance between CM and modern fisheries management that needs addressing before combining management strategies for protecting the marine environment. EBM, MPAs, and TURFs are conceptualized to achieve economic efficiency and resource sustainability from the position of neo-classical economics, managerial rigidity, market-based economics, and under highly regulatory constraints. CM systems, conversely, are more decentralized, not market-based, locally managed (McCay, 1995), and are enforced by "traditional" moral and political authority. The principles of authority and sanction (for enforcing rights and rules) are embedded in indigenous/local socio-cultural practices, which result from the amalgamation of local and foreign influences (e.g., Christianity). In this respect, CM systems are not designed for resource management *per se* but ra-

ther, as argued by Nguyen and Ruddle (2010), to ensure community control, harmony, and continuity, and which commonly accentuates the historical and socio-cultural significance of ancestors, identity, and place over resource management. Also, not all communities are equal in effectively managing resources, as customary mechanisms for self-regulation may be more effective under conditions of low populations, greater distances from markets, and relative economic equality (Cinner, 2005) among others.

Finally, CM entitlement holders often move across territorial boundaries to form fluid and mobile networks with slight observance to the rigid spatial demarcations (Pauwelussen, 2015) of formal EBM, MPAs, and TURFs. To successfully link current prescriptions with CM, hybrid and co-management programs have to develop strategies that enable participation of stakeholders that do not conform with spatially-fixed notions of social and environment relations. Consequently, not only do managers need to understand processes of biological connectivity within any given marine territory, but also to recognize social interconnectivity (Wilson, 2006). That is the CM rights of coastal peoples and associated socio-cultural intricacies of local property rights, different worldviews of the natural environment, ways of dealing with conflict and resolution, and pathways for allowing diverse stakeholders (who maybe be regionally scattered) to appropriate and simultaneously manage their marine resources locally.

Conclusion

In this essay, I have reviewed some of the characteristics of CM systems and examined some of the opportunities and challenges for linking CM with modern marine management for producing the incentives for sustaining artisanal fisheries in Melanesia and Oceania more generally. Broadly, a significant problem in linking these systems is to recognize natural interconnectivity (e.g., impacts of fishing on habitats with attention to spatial and temporal dynamics) as well as the *social interconnectivity* (e.g., social networks and distances over which people communicate for accessing and using resources) of CM stakeholders. CM is not about demarcating territorial estates alone, but also are socio-cultural institutions that connect people with a common ancestry, give inclusive users' access rights, and are spatial domains that define people's history, culture, and sociality. CM systems are contested spaces that are not designed for marine resource conservation, although protection may occur as epiphenomena. While bio-economic models of right-based fisheries can incentivize fishers to sustain their marine resources in industrial or even small-scale commercial fisheries (Castello *et al.*, 2008), care should be taken when combining CM with modern systems of marine resource management (e.g., catch shares or spatial allocations).

The central task left ahead is to match at parallel scales social and biological connectivity (Wilson, 2006). Imposing a fisheries bioeconomic model of allocation of catch shares or property rights over a CM system to improve biological and economic perfor-

mance is likely to end up as a mismatch between natural and social scales. The spatial boundaries set by bioeconomic models for biological optimization will seldom correspond with the social connectivity between stakeholders of any CM system. Therefore, the spatial demarcation of TURFs or MPAs, for instance, based on rational economic or ecological prescriptions will not parallel with local cognition of rights, territoriality based on ancestral links, and claims grounded in historical and cultural territorial appropriation. Policy makers need to recognize history and culture and work with existing social networks that overlay any given marine space in addition to matching these spatially with biological reality. Only then can CM be actually linked to modern marine management for achieving some bioeconomic efficiency and fostering sustainability, equity, and the recognition of property rights of coastal peoples in Melanesia. ○

Note

- 1 I want to thank Jim Wilson and Robert Steneck for their stimulating ideas regarding the “scaling of social connectivity (e.g., distance over which people communicate) with biological connectivity (e.g., distance over which species function)” during the Florida State University William R. & Lenore Mote International Symposium dedicated to TURFs and held October 12-14th 2015, Sarasota, FL. USA.

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THE DIALECTIC OF
LAND/SEA SPACES

PART 2

Issues about marine tenure in French Polynesia¹

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In legal anthropology literature, the “ownership” of lagoons is often not addressed despite being a central issue for the island societies of Oceania. Depending on approaches, the question of “customary marine tenure” (Hviding, 1996), or the “Marine-land tenure” (Calinaud 1993), however, has been a subject of conceptual debates and practices since the late 1990s due to the practical management issues encountered, sometimes at the instigation of international organizations (FAO, 1991; Forum Fishery Agency, 1991, 2000).²

A first set of questions revolves around whether, according to cultural legal concepts, ownership of the lagoons and reefs is similar to the ownership of the land. To understand non-Western legal cultures in the contemporary context, a change of perspective is required so that ownership of the land is now being addressed in terms of types of access. The land itself is defined in terms of the relationship between human relations to the land. But the question of the nature of user rights, duties and responsibilities involved, associated with the lagoon, had not been discussed in as much detail, as for land ownership (Firth, 1965). Indeed, one can wonder whether the relationships that humans forge around these distinct ecosystems belong to the same semantic and legal category? Some Pacific island states make no distinction between land and sea, while others are part of the Western legal duality.³ Whatever the situation of state law with respect to land and marine land, many Pacific societies are also recognizing groups and extended families as holders of specific rights of different types in a given area of land and / or sea. Our hypothesis is that the approach developed concerning land property by the French school of legal anthropology (Le Roy, 1999, Bambridge *et al.* 2009) can be implemented in regard to the study of marine tenure in Polynesia. Thus, it becomes possible to examine the actual content of different responsibilities and duties related to land and marine territories.

Another series of important debated issues in the field of legal anthropology relates to the type of cooperation that is observed between state law and local norms. Though, this issue has been the subject of numerous studies regarding the land in Oceania and elsewhere (Croccombe, 1987; Morse, 1988; Chiba, 1998; Le Roy, 1999), marine tenure has not received much attention in Pacific anthropology, despite being a major concern of the local population (Johannes, 1978; Hviding, 1996; Ruddle, 1996). The conceptual

framework developed by Morse offers a promising means of addressing this neglect (1988: 101-120). From a historical presentation of the colonial influence, the latter is interested in the question of the incorporation of customary regulations under state law.⁴ On the whole, Morse shows that the incorporation of local standards by the state and centralized system transforms and distorts traditional norms rather than maintain them; Morse mentions three specific types of interaction between law state and local norms:

- Separation: contacts only occur by separation or conflict of norms;
- Cooperation: some criteria determine the remit of either Aboriginal or state courts;
- Incorporating: Aboriginal law is incorporated into all areas where the contradiction is not too important, and distorting the traditional norms;

Whatever the model involved, traditional norms persist, and continue to resist external impositions. Morse (1988: 114), detected a process of “rethinking” of previous, historically located models, concluding: “My view is that customary law has evolved over the years and can continue to demonstrate adaptability and flexibility to cope with future pressures if it is given the chance. If only I could be as confident about the ability of modern nations to do the same “.

In the context of this article, we will first analyze how the Polynesian societies located in what is now called French Polynesia, articulate land and marine tenure norms. We could formulate a very general assumption that the concepts and methods developed since 1991 by E. Le Roy, allow us to understand the ways in which land and sea tenures are linked. At the end of our study, we will return to the central question: is there a difference in degree or in kind between the two?

In the second part, we will start with the conceptual framework developed by Morse (1998) to show that today in French Polynesia, state law and local norms interact in the mode of incorporation. This dynamic has led to the development of legal pluralism regarding the appropriation of lagoons, similar to that observed in land tenure in the Austral (Bambridge, 2009).

Terrestrial and marine tenure: the example of the *rahui*

Marine and land tenure are too often treated separately in Pacific anthropological literature. To give a few examples, Hviding’s exemplary work (1996) is only interested in marine tenure while the fabulous book by P. Ottino (1972) on Rangiroa (Tuamotu Archipelago), covers only the land tenure aspects. While anthropology’s disciplinary objectives and fields appear limited, however, the same is not the case for Pacific practices that exhibit a principle of continuity between land and sea. The best illustration of this principle in eastern Polynesia is perhaps that of the *rahui* which appears as an

institution organizing and regulating access rights to lands, lagoons and resources in the context of this continuity (Hoffman, 2002; Bambridge, 2016).⁵

It is interesting to analyse this ancient Polynesian institution, the *rahui* as one applying to all marine and terrestrial ecosystems. Strictly speaking, *rahui* is defined as a temporary restriction in time or space, over a resource, resources, or a territory. The Polynesian Lexicon (Pollex) proposes the protoform *raafui* for East Polynesia and gives the restrictive definition 'prohibit'. According to the Pollex, *rahui* is variously defined as 'prohibit' (Easter Island), 'prohibition or restriction laid on hogs, fruit ... by the chief', 'to lay on such a *rahui*' (Tahiti), or as 'a restriction' (Manihiki–Rakahanga). These definitions are applicable to the whole geographical area of Eastern Polynesia (Dieffenbach, 1843; Davies, 1851).

The customary principle of Polynesian cultural continuity between land and sea can lead us to conclude that the appropriation of land and lagoon were determined by the same rules. But what is the case in the actual application of these principles to specific times and locations? We propose to address this issue through examining Polynesian contemporary history.

J. Morrison (1966: 162-3) second master aboard the *Bounty*, and a keen observer of Polynesian society at the end of the XXVIIIth century during his stay of several months, described the establishment of a *rahui* over a lagoon:

“The *rahui* on reefs is indicated by placing shrubs along the forbidden part with small pieces of cloth as they arise and no one would fish there under penalty of losing his land; they can still fish with nets, hooks, etc. in their canoes; if the beach is prohibited they can not use their canoe under any circumstances. But this only happens when the flags of the King through a territory.”

The report by William Ellis (1829: II, 286), a missionary of the London Missionary Society, is very informative when he describes the territorial categorization of the lagoon:

“If the owners of land on the coast want to preserve the fish of the adjacent sea, they *rahui*, or restrict, soil, setting a post on the reef or the coast, with a pile of bamboo leaves attached to it; by that mark, it is understood that the fish are taboo, and no fishing, and no one will encroach on these parts, without the consent of the owner.”

According to the description of W. Ellis, the sea portion near the shore is considered in the same way as the land. However, in a Polynesian context, it would be incorrect to speak of “property rights”. In fact, the type of property in question refers to a control or a privileged control of the land, a portion of the lagoon or a resource.⁶ The description of Morrison brings us also to believe that the prohibition on the removal of resources is

general rather than specific: all the resources located in the designated area are subject to a *rahui*. Finally, according to several witnesses, the political status of the person who implements the *rahui* could vary from the *Arii* (the elder leader of a territory) to a simple land owner (in this case, it extends to the beach). The term “king” employed by Morrison to translate *arii* reflects the norms of Morrison’s culture rather than the reality of Polynesian chiefly power.

Details are lacking on the establishment of a *rahui* over the lagoon and the penalties associated with it, but it is likely that there were some local differences in both respects. In some cases, a *rahui* could apply to everyone, including the leaders of the extended family, while in other cases, it excluded foreigners unless they are exempted from this requirement by individuals who have been authorized by the chief. Regarding sanctions involving maritime territory, some of their descriptions are quite similar to those applied to land (Morrison, 1966; Ellis, 1829). In some cases, the coercive influence of the head could be enough to achieve compliance, but it is very likely that the ancestral spirit or guardian of the leader was invoked to secure compliance.

As noted above, the *rahui* on land and at sea, gave rise to several kinds of rights and duties according to the status of the chief. The decision of a chief to apply a *rahui* on resources reflected local social organization. It is unlikely that the chief was the sole decision maker. Cultural norms meant that clan members and other leaders should be included in the many debates (Oliver, 1974). Based on our review of the literature regarding the Society Islands (Bambridge, 2016), one might think that the *rahui* of the lagoon was not so different from the *rahui* on the land in terms of usages associated with duties and rights: access rights, extractive rights, penalties for violations and relevant jurisdictions.

According to the American historian Henry Adams (1964: 27-30), who first came to Tahiti in 1891 and recorded the memories of the elderly female chief Arii Taimai:

“Tavi’s direct and full authority extended only over his own chiefly of Tautira, but by rank or courtesy, through his family connection or his influence, it extended over the whole island (...). A *rahui* was a form of corvée to which other great chiefs seldom willingly submitted; but even if a chief were himself anxious to avoid a war, which was the penalty of breaking it, his wife or his sisters or his relations were always ready to urge him to conspire against it.”

This description is interesting since it portrays a complex process that goes beyond the idea, often prevalent in current literature, that the *rahui* was the exclusive monopoly of the *arii* or even of a secondary chief. Moreover, this passage seems to imply that no one could impose a *rahui* outside the territory he directly controlled.

Although Takau Pomare (1971:100) described the *rahui* as an institution for the exclusive benefit of the *arii*, she notes that the implementation was more complex:

“The *rahui* of the broken branch prelude the *rahui* of the products of land. When the *uru*, the fruit of the breadfruit tree, had reached full maturity, administrators informed the *arii* who communicated it to the priest. This latter decided the day of *avari* (its end). Criers, carrying lighted torches, went from house to house to make the announcement, and as soon as the torches were burned out, delegations of men gathered around the feet of the breadfruit. They did not take the first fruits, but broke the branches or took a couple of these fruits and brought it as a special offering to the *arii* and god represented by the *arii* and the high priest.”

In other words, while Pomare notes the idea that the *rahui* was declared or lifted by the *arii*, she also describes a procedure that required the consent of several other authorities such as ‘administrators’ and a ‘priest’.

According to Handy (1971: 74), the criers mentioned by Pomare are the *vea* (messengers of the *arii*). Nevertheless, Pomare’s descriptions are ambiguous. Does what she describe apply to the exclusive territory of a chief or to several larger territories, including those on which the chief has indirect control, as Adams maintains? The sources remain coherent on the first issue, but diverge on the second.

The idea of a plurality of authority in the establishment of a *rahui* is mostly recognised by the eighteenth-century English beachcomber J. Morrison (1966: 161). An unusually astute and perceptive foreign observer of Tahitian culture, his testimony is all the more important and relevant as he was the direct witness of the traditions he described:

“The chiefs, *toofa* and *raatira*, may declare at their pleasure the *rahui* on such and such provisions, livestock, fish, within their jurisdiction and where they consider necessary to prevent excessive consumption of pigs, they decree a *rahui* in the entire district. The King may decree the *rahui* in several districts and sends instructions accordingly to the chiefs, *toofa* and *raatira* to prohibit the consumption or transportation of such or such food in such and such districts or properties for a specified time.”

Morrison’s words seem more explicit: all types of leaders (*arii*, *toofa*, *raatira*) may declare a *rahui* only on territories under their control. The implementation of a *rahui* on territories they did not directly control required the consent of other leaders who also directly controlled their own territory. This testimony concurs with that of Adams (1964) and casts doubt on Takau Pomare’s assertion (1971) about the *rahui* as the exclusive privilege of the *arii*. Besides, the social organisation in which the *rahui* was implemented is congruent with what we know about land tenure in Polynesian societies in the pre-European period (Oliver 1974, 1989 ; Crocombe, 1987).

Therefore, it appears that the political economy of Tahiti was based on a ramified organization that R. Firth (1967) calls “ramage”. A chiefdom grouped one or more “ramages”. The eldest member of a “ramage” is normally the leader not only of his extended family group, but of the whole chiefdom. But the “ramage” was a multiple-branched organization, in which every senior of each “ramage” was recognized as the head of his own extended family on its own territory.

Such recognition implies recognition of the ramage’s specific rights to control the land and lagoon attached to its territory. Among these rights, we must emphasize the power to implement a *rahui* on land and marine territory of its ramage. In our understanding, the usage rights associated with these *rahui* held by the ramage, are more relative than absolute. On some occasions and in different contexts, the *arii* could benefit from solemn *rahui* rights on a territory that he does not directly control (in terms of the first fruits or the first fish given to him). On other occasions, the right to implement a *rahui* by a smaller extended family leader, was independent of the privilege of the main leader. These rights not only concern the right to land but also address the lagoon territories as part of the territory controlled by the extended family in a context of overlapping functions and responsibilities.

The post-Contact Period

Recognition and attempts to destroy rights on the lagoon

The recognition of customary use rights on the lagoon and on the land has not been denied during the missionary period prior to French colonization (Bambridge 2005).

On the contrary, attempts to demolish and destroy local rights over the lagoons have been numerous. In a first period of centralization of indigenous state power during the independent time, Pomare II provided in the revised Code of 1824 that the *rahui* would become the monopoly of the *arii nui* (great leader), with the other chiefs of ramage becoming the *tavana* (translated from the English word for governor) rather than *arii*. From this period, the ancient *arii* became under the control of Pomare II. In the years 1820-1830, Pomare II did use the *rahui* extensively for his own benefit to control the trade of the Tuamotu black pearls, the pigs and the starch of the Society Islands and the Leeward Islands. All specified resources on a lagoon or land territory should not be consumed and should be given to Pomare.

The pre-colonial independent era of Tahitian history witnessed a variable geometry of power and resource control according to islands and archipelagos. For religious rather than economic reasons, missionaries tried and succeeded to abolish the *rahui*, associated by them with a form of maintaining links with the ancestors and old dieties. The conservation of such an institution seemed inconceivable at a time when the political objective was to impose a new Judeo-Christian god excluding Tahitian gods and deified ancestors.

As regards to the user rights on the lagoon, Cochin (1949: 31) notes that under the Protectorate, the Act XXIV of the Tahitian Code in its revised versions of 1842 and 1848, provides that portions of the lagoon (the “fish holes”, the “lakes”, passes, shore-lines) can be an object of priority, absolute or relative control:

“The sea was a source of wealth for the Polynesians who saw the appropriation of it. Were considered private property the coral reefs and lagoons located between the reef and the shore, and were owners of these properties the families who owned the land closed to the lagoon.”

The use of the term “owner” is, as we mentioned, delicate, even in 1842-8, as the Polynesian family property is not considering the issue of *abusus*. As we have mentioned for the pre-European period, there was less concern with property rights than with different types of access rights, relative or absolute exclusion and priority controls, according to the statutes of the individuals and the family group considered. The issue of land and marine tenure, if it is well recognized, however, will never be addressed by a State authority in ideological terms other than that of ownership in the Western sense. This is all the more true as the new Polynesian State, under the French Protectorate, organized shortly after a procedural claim of title.

The Property Declarations

The Tahitian Act of 1852, as the codified law of the Leeward Islands in 1898, organized a land claim procedure. Even if the designers of these laws did not necessarily plan to include marine territories in property claims, many marine territories were claimed in Tahiti (Vaimeho, 2008) and in the Leeward Islands (Calinaud, 1993; Huguenin, 2005). These claims were in line with the Polynesian vision of the territory, appropriating both terrestrial and marine areas adjoining it.

The *rahui* abolished by missionaries, will paradoxically be reintroduced into the legal order by the colonial state to the Leeward Islands, whose main town was on the island of Raiatea, after the annexation in 1897 and continued until its repeal in 1917. But the reintroduced *rahui* in this context no longer concerns lagoon resources, but only land resources (coconut, harvest); the *rahui* is now introduced or removed by the district chief, and incorporated into the coercitive state apparatus and does not refer to any land and marine use rights.

This new reality raises at least three important issues. On the one hand, the institution of *rahui* which regulates the right of access on land as well as the lagoon disappears, or at very least changed profoundly when it was “incorporated” to State law, to use the term popularized by Morse (1988: 111). On the other hand, it is phrased

in terms of ownership rather than in terms of the right to use that Polynesian land and marine tenure. Finally, the incorporation of marine territories into titles led several times to disputed claims in court to address the situation of these lagoon territories. Incidentally, René Calinaud (1993: 51-52) notes the consistency of the jurisprudence of the courts in French Polynesia, to recognize equivalent rights to land property rights, the lagoon or lagoon parts:

- a. before March 28, 1866, district councils and the High Tahitian Court admit without difficulty the appropriations of lagoons when the rights are established; a judgment of the High Court of Appeals for the October 27, 1898 mentions a couple of those decisions on the sea-related disputes; Here we quote a Supreme Order of 19 May 1864 on the demarcation of a “fishery” Moorea (BOC, 1864 p 208)
- b. the 28th of July 1866, the High Tahitian Court, for the first time, invalidate a property decision based specifically on the provisions of Article 538 (of the civil code); but the canceled property title was June 21th, 1861 posterior to the new law; there was therefore a normal application of the law in force without retroactivity and can make the same observation for the other examples that occur in 1867. Similarly, the judgment of 20 January 1871 and the cassation order (rejection) of October 7, 1871 intervened in a decision of 3 June 1868 also without retroactivity;
- c. inversely, the High Tahitian Court continued, after 1866, to admit the securities of this kind of property titles when the private rights were established before that date; Examples are the decision No. 16 of 25 April 1866 on a “inlets”, decision No. 25 of May 5, 1866 sharing a “fishery”; it should be noted that in both cases, the High Court was presided over by the same judge, Mr Langomazino, who delivered the judgment of 28 July 1866 and of which one can think that he perfectly knew the matter.”

The examination of the judicial cases by Judge René Calinaud concerning the recognition of property rights on the lagoon, not only aimed to show the legal translation of a cultural fact but also attests to the coherent order of the Polynesian legal system according to Kelsen’s theoretical approach. As noted by Calinaud (1993):

“The Tahitian jurisprudence is homogeneous, consistent with the general principles of our legal system, that is the respect for acquired rights and the non-retroactivity of laws and in harmony with the French jurisprudence that followed.”

In this perspective, the type of cooperation between the local marine use rights and the state order is similar to the one we analyzed in terms of land tenure in the Austral

Islands (Bambridge, 2009): it is the type of assimilation in the sense that Morse defines it (1988: 101-120).

It is also interesting to note the terms in which the custom is reinterpreted by state law. According Calinaud (1993):

“Already a judgment of 1 June 1893 had found that the Polynesians, if they could see themselves as owners of part of the sea or the lagoon, where they had the exclusive right to fish, however, remained “unable to ban to passage and navigation” and this customary servitude, combined with modern land use planning regulations and town planning, leads to the fact that the private owner of a portion of the lagoon therefore can neither enclose it, nor backfill it.”

In this perspective, it is clear that the jurisprudence transforms the custom at the same time it quotes it.

Legal pluralism or incorporation into question

In French Polynesia, the regime of property rights is based on the application of the French Civil Code introduced to the Polynesian legal order in 1866. On land, and apart from urban areas, this has led to a situation of generalized joint ownership in the islands of French Polynesia (Bambridge, 2009). What about marine territories?

If, as we have seen, the French Polynesian jurisprudence recognizes the ownership of lagoons or fisheries because of the rights acquired before 1866, state law has disregarded lagoon appropriations by families or communities in the islands since that date. The lagoon is now part of the public domain. This ignorance, however, did not prevent the continuation of an appropriation of the lagoon, creating a legal pluralism situation in the sense of J. Griffith (1985:3), which defines the legal pluralism descriptively as “the coexistence within a social field of more than one normative order”. This “reinvention of tradition” (Babadzan, 1982; Sahlins, 2000; Alveque, 2015) took short the anthropology of law in the Pacific. As we have written elsewhere (Bambridge, 2004): “From the perspective of an anthropological theory of identity, we are not concerned with supporting a “Pacific cultural revival”, but with the delay of current anthropological theories on the dynamics of this cultural and legal renewal that we observe for the last decade. Insofar as Pacific peoples continue to give meaning to their practices, to appropriate what they take also from outside, the law would not escape this general tendency. What is exactly going on in Pacific societies, and how Pacific examples enrich our knowledge of the broader relationship between law, society and culture?”.

In the Tuamotu archipelago, the existence of marine territories, with the exercise of specific uses rights is confirmed by research at least since the 1930s. Thus the work

of Emory on fish farms from the 1930, shows different types of ownership of, and access rights on, the lagoons.

As a matter of fact, Emory (1971) evoked different forms of marine control associated with the Tuamotu lagoons. In the atoll of Reiao, he found that each trap belongs to a family but did not specify what family it is (nuclear family, extended, and if so which one?). The property traps prohibits access to non-members of the group. The access control is family-based hereditary. The pitfalls is that although the property carries a right to use the lagoon territory it also obliges the holder to certain obligations: to maintain the traps and to keep them in condition.

Emory notes that of the 84 traps inventoried in 1930, all had names and were usually located, as for the other Tuamotu atolls, at the entrance of the passes near the villages, in the channels between the motus, near reefs oriented towards the open sea (see Fig. 1 and 2).

Finally, he notes that some traps were reserved for individuals who had prominent status in society (head of household or village) or to the entire community in the event of common celebration or ceremony, that take place at regular periods.

We find here a situation similar to that examined by Hviding (1996: 293-5) in the Solomon Islands when he describes the three main axioms underlying the customary rules on the Marovo Lagoon. First, the *butubutu* (extended family) has complete and recognized control of all the resources that lies within its marine territory. Secondly, no outsider is permitted to operate a marine territory *butubutu* for commercial purposes without requesting permission. Finally, the operations perceived as a threat to the marine territory (*puava*) are regulated and may come under a complete prohibition by the relevant extended family.

In diverse islands across French Polynesia like Rapa (Austral Islands) or Maiao (archipelago of Society Islands), pre-European institutions like the *rahui* have been re-established by local communities, respectively since 2000 and 2006 and involved, as in all of eastern Polynesia, in a reinvention of custom. This identity revival and its dynamic in French Polynesia and in the Pacific, had been carefully analysed by different scholars (Shalins, 2000; Alvéque, 2014; Saura, 2015). It shows the importance of cultural identity mobilization to reconnect with ancient Polynesian institution such as the *rahui* in a new neo-colonial context.

These modes of appropriation of marine territories recognize, in different ways, privileged access rights to members of the island, guests of members of the island, as well as resource control rights according to local specific contexts.

In these cases, customary courts similar to those found in the context of the common law (Village Council Head of extended families or representatives) have defined sets of access rules and applied civil and criminal penalties to those who break the rules in place.

For example in Rapa, article 24 of the Rules of the *Toohitu* (Council of Elders), renewed in 2006, provides:



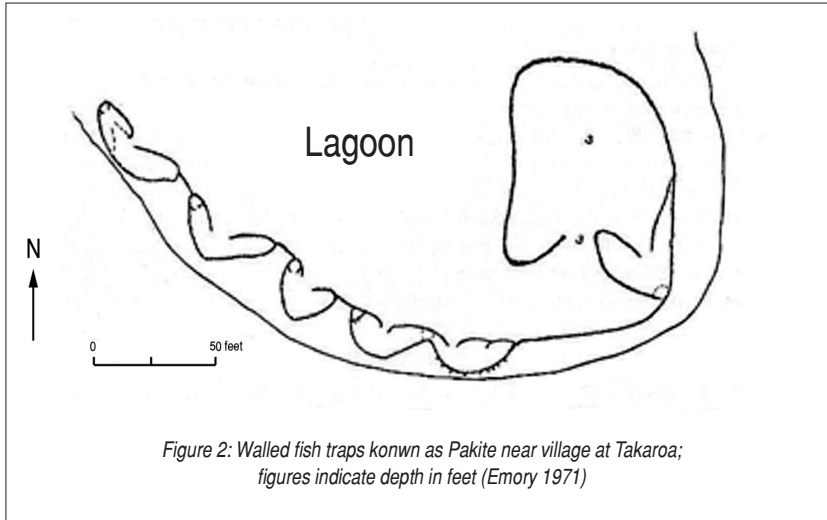
Figure 1: Fish trap in Tuamotu

“The council of the Elders calls for respect of the *rahui* (area closed to fishing) (For residents, no fishing, night snorkeling, or spear). Persons found to fish in these areas will be sanctioned by the council of Elders. If they do not comply with the sanction of the council, they will be judged by the people.”

If neither the article nor the rules settled up by the *Toohitu* indicate the sanction, we note that the Council of Elders then somehow plays the function of a trial court, while the population appears as a court of second degree.

Finally, it should be noted that on one day a year, usually in January, local authorities on the island of Rapa invites the population to meet at the Town Hall Square to report on all the conflicts between members of the population, various issues and find appropriate solutions. Social consensus and reintegration of offenders into the community there, are preferred solutions rather than seeking to sanction and/or punishment those concerned. So far, the state authorities in French Polynesia, aware of these realities, have not intervened in the judicial review, but emphasize the lack of legal certainty associated with such an institution because of the absence of state recognition.

In this article, we have only raised questions that require and deserve further attention before they can be more definitively answered. Integrated watershed management, island and coastal environments, institutional innovations of the societies related to the land and lagoons, are now at the heart of the dynamics observed in Oceania and especially in eastern Polynesia. In this context, the Polynesian principle of continuity between sea and land, appears as central in the context of discussions on land use,



when societies are reclaiming their past and reinvent their traditions. In the same vein, the type of cooperation between the state order and the local norms for the management of marine and terrestrial areas is equally important since the Pacific anthropology observe strong developments involving identity issues at the center the debate. As for French Polynesia, it is ironic that the recognition of property rights on the lagoon by the courts has led to an impasse and will pose new problems in the coming years. Indeed, transforming privileged access rights by ownership rights, then confirming this recognition by a consistent jurisprudence, lead the court to recognize exclusive rights that have never been, and now allows a disposition of such lagoon property rights. ○

Notes

- 1 I thank Paul D'Arcy (ANU) for his help in editing this chapter.
- 2 For example, we can mention the work of René Calinaud (1993: 47-53) in French Polynesia, the collective work of Hviding Ed (1996) in Melanesia, the pioneering research of Johannes (1989 and al), Bonnemaison (1985). There are in the Pacific and elsewhere many examples of community resource management and marine territories. For example, the system of Sasi, customary practice in eastern Indonesia, Gyokyo or ACP Association (Fisheries Cooperative Association) Japanese (McGoodwin, 1991) or the rahui, management system including marine areas and resources Eastern Polynesia (Bambridge, 2012). Under the impetus of global and regional conferences, it is also worth mentioning the momentum of various institutions in the study of marine tenure and community fisheries in the Pacific and in the world (FAO, 1993; FAA, 2000). The property in marine waters is much less well defined and more difficult to design because of the three-dimensionality of the sea, the fluidity of the environment and the mobility of its resources. Generalizations are also proving difficult because cultural attitudes towards property differ from one society to another. (...)"
- 3 This is for example the case of the Constitution of Vanuatu, as indicated by RE Johannes and FR Hickey (2002): "The rights to coastalwaters contiguous to traditional land holdings usually extend to the clans, chiefs or villages that own the land. Rights may be subdivided and allocated to individual heads of fami-

- lies. These rights are recognized in Chapter 12, Article 73 of the Constitution of Vanuatu that states: 'all land in the Republic belongs to the indigenous custom owners and their descendants'. Under the Land Reform Act (Cap. 123), the term 'land' includes 'land extending to the seaside of any offshore reef but no further.'" (Vanuatu)
- 4 This issue has already been the subject of lively discussion in the current legal anthropology. See: Chiba (1986); Roy (1987); Morse (1988); Rouland (1988); Cooter (1991); Sack (1992); Ward (1995).
- 5 With the rahui, we are dealing with a concept as much important as tapu, mana. (Oliver, 1974)
- 6 About the term "property" it should be added that we are aware of the issues and debates raised by the very concept of property in the sense that it is a cultural western invention which "the individual triumph" (Madjarian1991). In the field of anthropology of law, the work of Etienne Le Roy and al. (1991, 1999) in Africa show that addressing the land ownership in terms of property rights in the Western and civil sense led to a dead end: it's already fall within a particular legal culture dismemberment of the property by usus, fructus and abusus. For example, in a technical document of FAO, Francis Christy (1983) provides that "The detailed definition of the rights or should be exercised within the framework of a TURFs (territorial use rights relating to fisheries) raises complex problems can be even more difficult to resolve than in the case of property rights on land. We were told that the property is "a huge complex of adjustments between prerogatives and expectations" (Carmichael, 1975). As for the earth, variations of these prerogatives and expectations include, among other things: the right to transfer or assign the ownership of the land; the right to temporarily grant; the right to extract profit; the right to be free from pollution, such as pollutants from a neighbor; the right to make arrangements to monitor its future use; the right to grant the use of special purpose. The property in marine waters is much less well defined and more difficult to design because of the three-dimensionality of the sea, the fluidity of the environment and the mobility of its resources. Generalizations are also proving difficult because cultural attitudes towards property differ from one society to another. (...)

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Mastering Territories from the Sea. The Binomial Cultural Way of Resilience of Southeast Asia's Sea Nomads

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Patrimoines locaux et Gouvernance

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The Moken are sea nomads of Austronesian origin living in the Myeik (Mergui) Archipelago (about 800 islands stretching between southern Myanmar and southern Thailand). Their presence in the area can be dated back to at least the 18th century (the first known mention of them was written in 1826). While their existence is linked to the perpetuation of a lifestyle marked by nomadism, egalitarianism, and foraging pursued at the margins of surrounding dominant societies (mostly sedentary paddy cultivators, such as the Thais and the Burmese¹ in the current setting), a closer look at their migration history throughout insular Southeast Asia suggests that they have been exposed to many societies and cultures from which they borrow techniques, ideas, oral texts, fluidity, intermixing, and non-resistance.

These encounters brought innovations in various aspects, whether technically, linguistically, or ritually, and constituted a “cultural bank” from which they draw the strength of their adaptivity, typically inscribed in their hundreds and even thousand of hours of tales and stories in different languages, making them the living memory of the region. From yams to rice, from hunter-gatherers to sea-nomads, from Malay to Moken languages (sometimes spoken together, with old Malay being the ritual language; as for the yam, “the rice of the Moken”, it is still eaten in times of scarcity), the Moken have managed to survive throughout their migration, overcoming slavery, forced labour, and other threats to their existence, progressively leading them to the Myeik Archipelago where they have reached a sort of climax – an economic niche where they could “freely” express their nomadic identity – for the last three centuries at least. However, the story of the population movement in the region does not end there. From the 1980s onward, the Myeik Archipelago (see Fig. 1) witnessed the arrival of thousands of Burmese, former paddy cultivators turned fishermen in the quest for better livelihoods and opportunities, and greater (political) freedom under the military rule of Myanmar. From

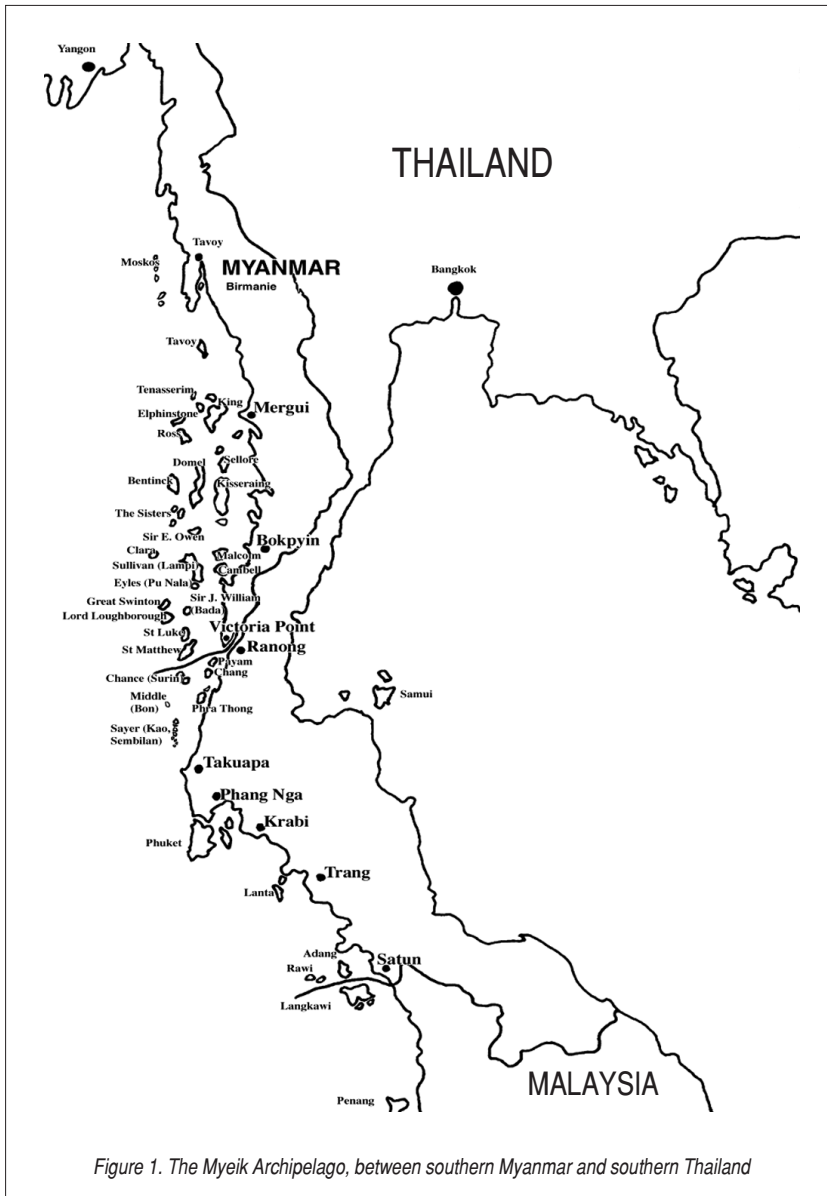


Figure 1. The Myeik Archipelago, between southern Myanmar and southern Thailand

then on, the Moken had to constantly deal with the increasing numbers of Burmese settlers in the islands, for a time fleeing to more remote places until more systematic interactions could no longer be avoided.

Through ethnographical evidence collected among the Moken communities of the Myeik Archipelago, combined with existing researches in the history and anthropology of Southeast Asian sea nomads, this article analyses the features that allow these

societies to perpetuate their lifestyle throughout history to the present day. More specifically, it argues that sea nomads are part of a wider network in which the binomial relationship between sea and land (or littoral) constitutes the foundation of their relative dominion (whether economic or symbolic) over millions of square kilometers throughout the entire Southeast Asian region, despite being “marginalized” minorities in the face of State-based dominant societies. Through the example of contemporary interactions between Moken and Burmese fishermen in the south of Myanmar, this article highlights the segmentation process among sea-nomad affiliated groups that result from a constant re-thinking of their relationship with dominant societies, sowing along the coast a web of small, highly fragmented local groups constituting just as many territorial landmarks from which the nomads draw their main force: adaptivity.

The Sea Nomads' Expansion in and “Dominion” over Southeast Asia

Sea Nomads in Southeast Asia: An Overview

Three sea-nomad populations live in the Andaman sea on the western coast of Thailand and Burma (Myanmar), namely the Moken, the Moklen and the Urak Lawoi. Among the dominant sedentary populations are the Burmese (*Bamar*), Malays and Thais (mainly *T'a*), while other ethnic minorities, such as Mon and Karen, can be found on the Myanmar littoral. The numbers of Burmese, together with a few Karen, have been increasing in the islands since the 1990s. The main migration of Burmese toward the Tanintharyi (Tenasserim) Region² occurred during a politically tense era, just after the 1988 protest and the elections of 1989. Among the Burmese, the remote archipelago was seen as a stateless area. There, they engaged in fishing activities and greatly profited from the government-initiated development and privatization of the fisheries sector (Boutry, 2007). In this way, they participated in the government's agenda of ‘Burmanizing’ the region by first populating it, then by building Buddhist monasteries, pagodas, and schools. The different levels of this Burmanization process have been analysed in previous works (Boutry, 2014; 2015a and 2015b). Later in this paper, we will focus on the relationship that this fringe of Burmese society has developed with the insular territory of the Myeik Archipelago, as they settled in the islands and started interacting with the Moken.

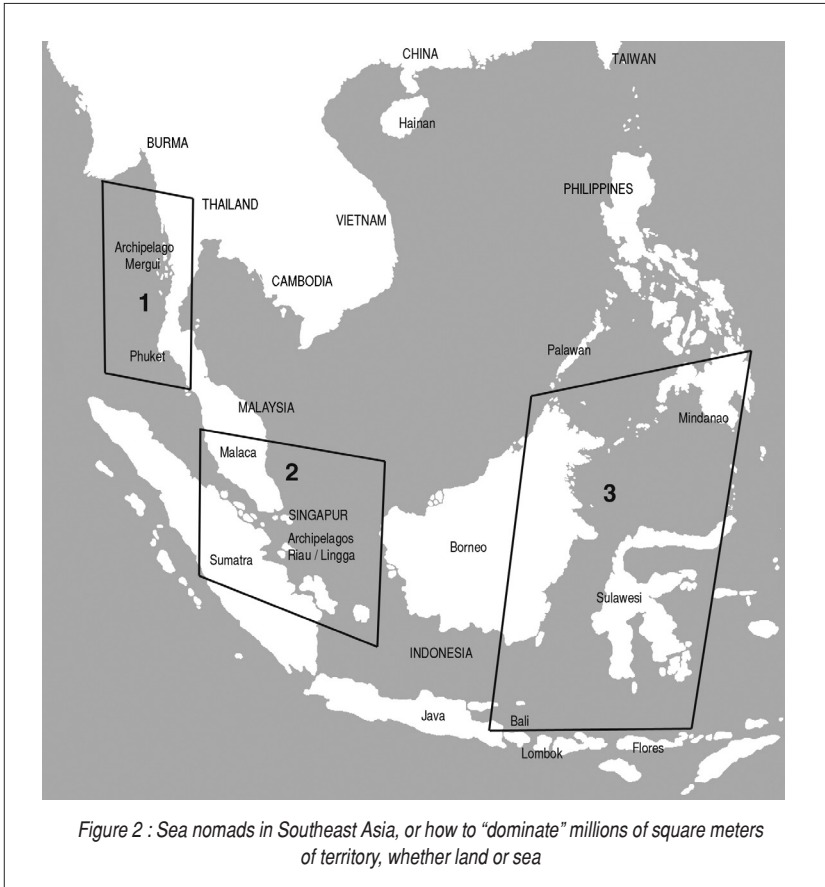
The Moken, Moklen and Urak Lawoi are only a small branch of a large set of sea peoples who speak Austronesian languages and dispersed throughout Maritime Southeast Asia:

“Nomadic boat people of Southeast Asia are found scattered in small, often distantly separated groups over a very extensive area. This area stretches more than 2,000 miles in an East-West direction, from Moluc-

cas to Tenasserim, and some 1,600 miles in a North-South direction, from about latitude 10°N. to the Northern shores of the Lesser Sunda Islands at latitude 8°S. Their entire number is less than 20,000. Individual groups among them live in different kinds of strand habitat and are in contact with many different peoples: Malay, Chinese, Burmese, Thai, Bugis, Madurese, Sulu and Moluccan, as well as Dayak, Toraja, Alfura, Sakai and Semang” (Sopher, 1977: IX).

Current linguistic evidence places the beginning of the Austronesian expansion at around 5000 BCE (Bellwood, 1985: 107-121; Pawley and Green, 1973: 52-54), initially involving most likely groups from Taiwan moving southward to the northern Philippines. Bellwood (1985, revised 2013) has proposed a comprehensive model of this expansion based primarily on linguistic and archaeological evidence. According to this model, carriers of Austronesian languages moved southward, settling in the islands with an economy based on agriculture, focused initially on grain, rice in particular, but adding as they moved southward a variety of tuber and tree crops, which in some areas replaced rice as the dominant local staple diet. Later on, it seems that the Riau-Lingga Archipelago acted as a kind of historical centre (Ivanoff, 2001) from which these maritime populations have dispersed throughout the coasts of insular and peninsular Southeast Asia.

Today, these populations are divided geographically, culturally, and linguistically into three major groups, each of which is the product of an apparently independent history of adaptation (see Fig. 2). Belonging to the first of these groups are the Moken and Moklen of the Myeik (Mergui) Archipelago of Burma (Myanmar), with extensions southward to the islands of southwestern Thailand (Anderson, 1890; Hogan, 1972; Ivanoff, 1985; 1987). The second group includes variously named populations, collectively referred to as Orang Laut (“sea people”), who inhabit the islands and estuaries of the Riau-Lingga archipelagoes, the Bantam Archipelago, and the coasts and offshore islands of eastern Sumatra, Singapore, and southern Johor (Andaya, 1975; Sopher, 1965; Wee, 1985). Among this second group of maritime populations, only its northernmost representatives, known as the Urak Lawoi, are to be seen in Thai territory and are culturally linked (through marriage for instance) to the Moken, from Phuket to the Adang Islands (Hogan, 1989: 1-2). Finally, the third group, which is also the largest, both demographically and geographically, the Sama-Bajau, includes maritime populations, strand-oriented communities, as well as small numbers of boat nomads scattered between the eastern coast of Malaysia and Indonesia, and the southern Philippines islands.³ Taken all together, these populations constitute what J. Ivanoff (2004) calls a “littoral civilization”, while some authors refer to them as the “Malaysian littoral” (Sopher, 1977).



Littoral and Sea:

The Binomial Cultural Way of Sea Nomads to Dominate a Territory

If we go back in history and follow the migrations of the sea people, we can observe, thanks to language reconstruction, that these people were predominantly sea-oriented, but not exclusively so. Here we can mention the sea Bajao, the Sama.

The social structures are the same and are enlightening for a better understanding of Moken culture. Thus, evidence also points to a long familiarity with farming, iron-forging, pottery-making, and weaving. Although their knowledge of the sea was more intimate than of the land, the early Sama were by no means a population made up entirely of boat nomads and fishermen. Instead, a marine orientation coexisted with “a significant and coherent tradition of land-oriented activity” (Palleesen, 1985: 255), indicating [...] the presence, (...) already at this predisposition time [of] a divergence

of orientation between the land and the coastal strands [...] (Pallesen, 1985: 117). Reflecting this divergence, different Sama groups, from the beginning, appear to have pursued, much as they do today, various permutations of this “dual orientation”, some focusing on land, others on the strand or sea, with communities of sea nomads forming only one of a multitude of economically diverse groups (Pallesen 1985: 118).

This binomial organization of the Sama and the Samal echoed the sociological strategy of the Negritos⁴ who specialize only after dominating the agrarian or fishing techniques of the stronger and more numerous populations, which is similar, in its principle, to the strategies of the Moken and Moklen.

It is very difficult to know which of the two groups appeared first, because they are structurally linked, in order to answer to the constant challenge of adaptivity. Specialization and segmentation go hand-in-hand; it is, as Sather (1984: 10-11) puts it, a “symbiotic exchange”, which is favoured by the proximity of the littoral and the islands. This dichotomy is also a strategic alliance for dominating a specific territory; all local Sama communities, whether sea nomads or shore-oriented groups, were historically enmeshed in a regional network of symbiotic exchange.⁵

These principles of socio-economic organization, which permit nomads to find their place within a network of political entities interweaving Maritime Southeast Asia, are still at work today, despite their mobility being hindered by modern national borders. The nomads’ network is very efficient because its plasticity makes it adaptable to the environment, straits, littoral, islands, mangrove, and coral reefs. These environments anchor – for a time at least – the segmentation process, all without destroying the intrinsic links between groups. Of course, people of the littoral are more subject to assimilation by the dominant population than those roaming the islands; this is one of the reasons why the Moklen speak Thai and go to school. In the Sulu area where the population benefits from strength in numbers, the Tausug use their power not only to maintain their language as a distinct one, but also to absorb the more settled land-based Sama, then present in the larger central islands of Sulu, assimilating them linguistically and culturally.

This process of assimilation continues to the present day. Economic differences were thus accentuated and the remaining Sama came to be increasingly associated with the peripheral islands of the archipelago and with the more maritime sectors of Sulu’s economy. This process, slowed down by the littoral and the few numbers of inhabitants on the western coast of Thailand, made the necessity and complementarity of the Moken and the Moklen much more accurate. The Moklen consider themselves as “men of the interior” who exploit the muddy strands of the inner seawaters of the mangrove.⁶ They are the “men of the interior”, as opposed to the “men of the islands”, that is the Moken. The Moken are in fact more “people of islands” than “people of the sea”, the latter being a name that is more of a reflection of Western fantasies. For them, the sea is the “outside” world that only the sacred men can access after their death (as dolphins or whales), but not the common men. The sea is thus a way of fleeing,

migrating, rejoining their historical place of regrouping, but not a place to live. The Moklen do not consider the place where they fish as the “real sea”; it is the littoral, where the mangroves help to keep them away from sight and enable them to go on shore to practice slash-and-burn rice cultivation. The Moken refer to a people according to the type of environment from which they draw their resources. They call the sea (high sea) “*taao*”, meaning “outside”, because it is the domain where they dive for goods destined for bartering, which does not fall under their own classifications for themselves. The sea can be everything representing the outer world and exchange (thus the *tokè*), but also freedom, discoveries, migrations. The real Moken world lies between the undergrowth of the forest and the high sea. In fact, the socialization of the Moken space belongs to women who exploit the undergrowth and the strand, but not the high seas nor the deep forest where only men venture. This may be one of the reasons why the man-father is never mentioned in the symbolic boat constructions, contrarily to women — the wife and mother who have especially strong bonds with their children (Ivanoff, 1997).⁷ Unlike their Moken cousins, Moklen are not attracted to the idea of going out to the deep sea (except for squid trapping). Nowadays, they use small Thai boats as opposed to the big dugouts used by the Moken.⁸ Due to their nomadic background and to the knowledge transmitted and improved over generations, the Moklen have been able to adapt themselves to the mangrove environment and to exploit it in a rational and sustainable way (Ferrari, 2007). Ko Phra Thong, one of their main islands, is a point of convergence where the Moklen, Moken, and Thais meet together. Here, as in other places in Phang Nga Province in southern Thailand, the different nomadic groups — Moken, Moklen and Urak Lawoi — gather and interact with the dominant populations — mostly Thais, Chinese and Malays — during the Tenth Month Ritual. This yearly ritual helps lay the foundation for an ethnoregional setting where the identity of these three nomadic groups, all three of whom are referred to as “*Chao Lay*” (People of the Sea) among the Thais, is bound to the sea and to the coast, both of which are under their mastery, contrarily to their dominant Buddhist and Muslim counterparts for whom the sea is considered as “wild” and untameable (Ferrari, 2015).

The Segmentation Process: Origins and Perpetuation

In contrast to their politically-dominant neighbors, the sea peoples identify themselves with a multitude of small, highly fragmented local groups, none of whom are sufficiently integrated or large enough to exist in its own right as an independent political entity. Most of these groups are distinguished toponymically by the name of an individual island or a cluster of islands identified by its members as their homeland or main area of settlement (Sather, 1993b). The boat nomads are the chief exception. Without an exclusive land affiliation, nomadic groups characteristically identify themselves as the Sama Dilaut, the “Sea” or “Oceanic Sama” (Sather, 1984: 12-13; 1993).

Again the same principle applies to the Urak Lawoi, Moken, and Moklen who refer to each other according to the specific type of environment from which they draw their resources (“Men of the Above”, “Men of the Island”, “Men of the Sea”, “Men of” such or such place, *i.e.* Sireh, Lanta). There is a three-fold segmentation process. The first one divides the population between the Urak Lawoi and the Moken/Moklen nomads; the second one divides the Moken and the Moklen; the third one divides the Moken amongst themselves, as a result of borders and national policies aimed at giving specific ethnic landmarks to the nomads but only within the national frontiers.

These segmentation procedures are not definite separations, but more a series of “cultural essays” from which every group will learn. Intermarriage, cultural exogamy, the gift of a girl, imbalance, unequal exchange, non-accumulation, non-violence are still the precepts for the survival of nomadic culture, and this process is still observable in Myanmar where the Moken and a fringe of the Burmese population interact with each other.

We may recall that hundreds, followed by thousands, of Burmese have been coming to the Myeik Archipelago since the 1990s in an attempt to flee the economic recession and political control prevailing in the centre of the country. Hence, these Burmese, formerly paddy-cultivators, had to tame a highly ‘estranged’ environment. Indeed, as a society of paddy-cultivators, the Burmese perceive the sea as an outer world, rather than part of an existing cosmology (Boutry, 2015a). However, for the Burmese fishermen embarking on a new way of life linked to the exploitation of marine resources, the marine environment had to be situated in a new “imagined geography”. The Burmese in this region transformed themselves from an agricultural society (culturally removed from any form of marine resource exploitation) into a population of fishermen. This sociocultural transformation is rooted in interethnic relationships with the nomadic Moken population. The main cultural strategy of adaptation to their insular environment is what we call “cultural exogamy” (Boutry and Ivanoff, 2008; Boutry, 2015a), consisting of systematic intermarriages between Burmese fishermen/entrepreneurs and Moken women, based on the traditional relationship of the nomads with their patrons/entrepreneurs (the *tokè*),⁹ a local adaptation of the traditional nepotistic system that rules all economic relationships in Southeast Asia. The Burmese progressively took the place of the traditional *tokè*. The *tokè* is a term of Chinese origin, the usage of which extends from southern Myanmar to Indonesia, including Thailand and Malaysia, and designates a patron-entrepreneur relationship. Traditionally, the *tokè* has been central to the preservation of the Moken nomadic way of life. The relationship between the *tokè* and his Moken group lies in the nomads’ necessity to acquire rice, the basis of their diet and the paradox of an insular population that only cultivates this grain for ritual purposes (Ivanoff 2004). According to this system, the Moken exchange produce gathered from the strands or collected by diving (mainly sea-slugs and seashells) with the *tokè* for rice, clothes, and other consumable goods. Consequently, they are always in debt to their *tokè* as long as the latter keeps protecting them from external influences

and interactions. The stronger the *tokè* is, the more freedom and relative tranquility the Moken may enjoy; the heavier the debt, the more protection the *tokè* will provide in order not to lose his investment. The *tokè* is thus the organic link connecting the Moken to the “rest of the world.” In practice, the *tokè* was more often of Chinese origin, Sino-Burmese or Sino-Thai.

The founding myth of the ethnic differentiation of the Moken is the Gaman epic poem (Ivanoff 1985, 2001). Gaman is the Malay civilizing hero who is believed to be the leader of the transition from yams (symbolized by the queen who represents hierarchy and land) to rice among the Moken. This makes him the first *tokè*, bringing the Moken out to sea, living day by day as outcasts for having committed a sin, the sin of adultery (with his younger sister-in-law *Kèn*, whose name is at the origin of the ethnic group's name and whose implication in this act of adultery resulted in her queen sister condemning her to be thrown – “*mo*” – into the water: *mo Kèn*, thus Moken¹⁰).

“Eh! Seamen, watch the boat carefully. I am going to see what is happening over there. Eh! Gaman is sleeping with Sibian. Their feet are united, their hands are joined together and their knees are touching each other. They are entwined and are breathing in the odour of coral, flowers and yams.”

(Bird's song) “Sleep with my sister-in-law, older Gaman. But I am very much afraid that the big toe of her foot will teach her something.”

“I am singing, I am speaking and I am watching. Follow the rhythm of the waves which make the boat pitch. Eh! I am singing for you Gaman.”

“You are sleeping and I hear you breathing, Gaman. You are sleeping profoundly, lying down, thinking of the house on the summit of the mountain and thinking of the seven casuarinas. Oh! Gaman! The Moken remember the past and before marrying, they look for a pillow, a mat, a bamboo bed and a roof made of leaves. But Gaman, think well before turning to the right. By turning to the right, people will think that everything is ended between you. All will be finished if you return to Grandfather's side.”

“Go back then, Grandchild, because the men are sleeping and your song disturbs them.”

“Oh! Grandfather wants me to go back, so I will do so. But your boat is drifting and the waves are striking it in front. It faces the wind but I am going because my song has ended. Oh! Seamen, you know that Gaman got married this afternoon. The middle star has disappeared but another one appears. It is rising. Listen to me: the morning star appeared and Gaman has returned to the prow. Sibian feels as if her heart has been pierced by

nettles. Oh! Seamen, the day is breaking and it will soon be very hot. Let us prepare the rice since we will not return and live with those who harvest strange things to eat. We are different and if you go off once again, I will go with you."

"Morning has come. Listen to me father and mother because I am angry. I am asking you to bring the boat towards the shore. I am going to urinate and defecate."

"There is no problem Sibian. Your young sister is going to draw the anchor and we will go onto the shore."

"If you really love me, young sister, hurry up and lie down so that my feet can thrust themselves into the sand. I will now come down; my two feet touch the earth. I tell you, Gaman, you have turned towards the front and you have made Sibian sick. My heart and my soul suffer as if they were stung by nettles. My young sister has stolen the dish of her older sister, the bowl of her older sister. She tore out the hair on the head of her older sister. You, young sister, who lives on the boat of which the broadsides of the hull are made of stipites, reflect well. I condemn my young sister to fall into the sea. May she become immersed in it, ¹¹ she who is called Kèn!¹² And now you can do what you want with my husband. Remain together both of you if you want to, but take her parents and Kaè!¹³ with you. Never come back again to my earth. Take the entire group with you, the young ones, the old ones, and the uncles. I forbid you to live here any longer."

"What happened this night, Kèn? I am your father and I want to know. Sibian has condemned you to fall into the sea. You are called Kèn, your body must be immersed. You have stolen your brother-in-law!"

"Father and Mother! I want your boats, the broadsides of the hulls which are made of stipites, to have a mouth which eats and a backside which is wide open.¹⁴ With these boats, Moken, you will live on the sea and later on, Kèn will remember the words of Sibian. She will remember this story and my judgements. I no longer want you here. Go away!"

"Eh! Father and Mother, Sibian has definitely left; she does not want us any longer because she detests us. We must leave this place and go towards the North where there is much land. She does not want us to remain here. Very well then! May she live and die on her mountain, there where she finds her food."

“Ah! Father and Mother, younger sister, Gaman, I will no longer take care of you. Things will be as they were before when we ate yams. I have never eaten anything else since I was born, except when I closed my eyes and I spoke. This was enough to satisfy my hunger. But the prow of your boat, from this time on, will be alternately dry and wet. And your head will be as wet as an anchor. Later on, you will remember my words, those of the Moken of times past. My young sister Kèn will never be rich because she has climbed over the head of her older sister,¹⁵ my own head, which has become a golden colour since it was exposed to the sun.”

The myth is a way to transcribe history and explains how the Moken succeeded in getting along with the British colonizers, the Japanese who enslaved same, the Thais who took them as slave temples or coolies to work along the transisthmian routes (boats going from “Persia” and Europe unloading their merchandises in Mergui or Tenasserim). This would explain why some Moklen still live near the archaeological sites of transshipment ports and why some are named Kalah (Ivanoff and Rozier 1986), a term use by the British to refer to the coolies. The Kalah became the modern coolies, as we can see in the evolution of Moklen society who voluntarily stay at the lower ladder of the social scale, which allows them to move in the mangrove (fishing), in the rubber tree forests (practising nomadic slash-and-burn dry rice cultivation, and working as road menders). They are always on the move regardless of the level development of the society they are in. They have identification papers and can go to school because they were recognised as Thai people when King Rama V visited the southern part of his kingdom. The Moken were not recognised because they lived on the islands, so this was another separation that occurred in modern times. Only before the Princess Mother visited in 1985 were they allowed to stay in Thailand, and it took another 20 years for them to become Thai citizens. In Burma, they were already included in the nation as one the 135 “races”, known as the Selung, classified as “divers” practising a “traditional” religion, which is not such a bad definition of their core ethnicity.

The epic poem of Gaman conveys also an important message; a Moken can mix, stop wandering, change the pattern of his or her culture and economy, but not the ideology and beliefs which can and must be adapted. The Moken, for instance, always avoid Islam, which is left to thrive on the seashore, at the rear end. They know Islam, and have created their own myth concerning the origin of this religion.¹⁶ The Moken always keep the form of external cultural features, but not the deep messages contained therein, so they can make them into their own image and incorporate them into their oral literature. For Christianity, the harpooning of the turtle was a forbidden action which resulted in the Moken being prohibited from reading (thus to not go to missionary schools), because the origin of writing began on the shell of the turtle, animals they consider as their sisters which the Moken eat during rituals. Reality, which introduces external dangerous cultural factors in society, is emptied of its message and distorted

to become an image that the Moken can interpret whichever way they want, so that they can cope with it, whatever it may be. It is a means to accept history and to make it acceptable to society, and this on Moken terms. However, it has been more difficult to do so with the Burmese who live with them permanently. As a result, the religious interactions with Buddhism are stronger, more “real”, but nonetheless negotiable, as being Burmese is in fact quite flexible. The Moken emptied Islam and Christianity of their religious substance, and made them understandable to the whole group, but on their own terms. They have to accept Buddhism with more pliancy (still they focus more on the *nat* — the spirit cult that co-exists with Buddhism — than on the Buddha, as for a Moken, the environment and the secondary figures are easier to culturally accept).

Nonetheless, the Burmese Buddhists married Moken wives as they needed the knowledge of the nomads to survive and to be able to tolerate a “space” for interactions and syncretism. In some places, one can find various altars in the corner of a house belonging to a Burmese fisherman married to a Moken woman: one for Buddha (the highest), one Moken altar, one for the *nat* spirits, and ones for new beliefs (*i.e.* the prow of an old boat). Ancient, new and mixed rituals can be found in the villages where the Burmese have decided to live with the Moken.

Therefore the Moken now have to recompose themselves with Buddhism, especially since the arrival of Burmese fishermen. This is where the strength of their resilience and above all the flexibility of Burmese beliefs can be observed. The Burmese are generally known to be very strict, harsh and violent. Interactions in this part of Myanmar prove the contrary. Both sides need to survive, thus they have to accommodate each other’s beliefs in order to benefit from each other, a first in a region which is more known for its massacres and enslavements. It must be noted here that Islam’s beginnings in Southeast Asia are linked to slavery, which partly led to the “nomad choice” (Ivanoff, 2004: 337): to “roam” in the islands, to “eat and spew out the sea” on board the *kabang* (the traditional Moken boat) and to be eternally dependent upon sedentary societies to supply rice in exchange for their products. The Moken composed themselves with this new way of life imposed upon them. With the Malays, they understood each other very well, as the vast majority of Muslims are Austronesians like them. But now Islam is far removed, and Buddhist fishermen have taken its place. The interactions with Islam are stronger among the southern Urak Lawoi nomads, thinner among the Moken, but no longer exist very much among the Moken.

Moken-Burmese Descendants as the Foundation for a New Segmentation?

At the time when the first Burmese pioneers came to the islands, alliances made between the Burmese and the Moken were as opportunistic as they were strategic for the Burmese.¹⁷ Indeed, a Moken group traditionally gives away one of its girls for marriage to the *tokè* to ensure his loyalty. However, from the Burmese perspective, driven by the

motivation to profit from insular resources, it was also a way to acquire on the one hand legitimacy in the insular territory and its resources, and on the other a more in-depth knowledge of this new environment. These intermarriages between Burmese men and Moken women are significant enough to factor in the Burmanization process of the borderlands, given the proportion of these alliances in the different settlements of the Myeik Archipelago and, above all, the critical role of the Burmese-Moken households in territorializing Burmese presence in the islands.

Symbolically, the Moken concept of territory is mostly expressed through belonging to a subgroup, itself founded by ancestors buried on the islands of fathering. This belief that a known couple of ancestors created a subgroup is attached to a story, a myth or a legend, depending of the importance of the place. All these myths create a feeling of belonging to a place, representing the most respected belief by the Moken and their spouses, even if the latter are foreigners. These ancestors (*ebab* for male, and *ibum* for female in Moken language) are materialized by two spirit poles (*lobung*), renewed at each transition between the dry season and the monsoon during the *bo lobung* ritual. These spirit poles (together with other ritual elements such as cemeteries and spirit houses) map out the archipelago and put all the important places in a mental cartography known only to the Moken. They possess the coordinates that help to understand the archipelago: places to go, places not to go, water streams, dangerous places, each being the subject of its own story. Oral literature and ritual make the Moken the masters of the archipelago, and are a means to transmit their knowledge to younger generations. Thus, the Moken relationship to their territory is intrinsically linked to the couple, a structure that is transposed to the relationship between the Burman *tokè* and his Moken wife, hence the Moken group. These ancestor islands are a marker for the Moken who identify themselves as Nyawi (Bada), Chadiak (St. Matthew), Dung (Ross and Elphinstone), among other islands of residence in the archipelago¹⁸ within a territory formed of networks, structured by the availability of different resources in different places, water points, etc. This territory is ever-changing – because of outside forces (construction of fishing infrastructures, forced movements by the authorities) – and above all symbolic.

In the context of Burmese colonization, the representation of the territory is always expressed through ancestor worship, but more specifically by creating lines of descent. One of the consequences of Burmese colonization is the sedentarization process of Moken flotillas through the creation of new villages, as well as an increasing proportion of intermarriages. Flotillas belonging to the same subgroup traditionally communicated with each other through the ritual calendar (and especially during the spirits *poles* ceremony) and regularly through intermarriage, economic activities, exchanges with the *tokè*, etc. The arrival of Burmese fishermen in the islands was more efficient in leading to the sedentarization of the Moken in these new villages than any attempt made on the part of the Myanmar authorities to settle the nomads, thanks to intermarriages which led to the multiplication of intermediaries in the traditional Moken economic system. In each mixed village, many *tokè* employ Moken “groups”, usually on the basis of kinship

between the tokè's wife and his employees. This organization results in the subdivision of not only subgroups but also within flotillas. Burmese settlers hence multiplied the traditional and structural relationship of interdependence between the nomads and their tokè, breaking the foundations of nomadism and the nomadic concept of territory. As such, the identification of the Moken to a subgroup tends to be ousted in favour of the creation of lines of descent, allowing to match this dual reality in a less collective and more territorial identity while integrating the Burmese.

Specifically, this process is organized on a ritual level through the mixture of symbolic compositions within households. In homes sheltering mixed couples, Burmese and Moken altars – Buddhism and nat (genies accepted by “official” Buddhism) worship for the former, ancestor worship and cosmological representation for the latter – co-exist. Despite a trend of “religious hierarchy” applied to these compositions by the Burmese, for whom Buddhism should dominate (visually and allegorically) any other form of worship, it is not uncommon to find symbolic compositions made of Buddha, nat and Moken spirits' altars at the same level.

Traditionally, only the Moken shaman had an altar in his boat, which was brought home in the rainy season and to the ritual altar during rituals. With the disintegration of large subgroups, each of which traditionally have a shaman, the spirits poles ceremony (*bo lobung*), which enables the gathering of flotillas at a turning point for Moken identity (between dry and rainy season, that is between nomadism and provisional settlement), loses its traditional symbolic significance, mainly turning into a contract (*karun*) in order to sell out the debts (*senè*) of men and spirits. The ritual is now performed in order to find a new path for the Moken to navigate and live in the archipelago alongside others, and another way of reaching a world beyond that is not responding to their demands. The Moken want to know, through these rituals, what their future will be, and, in the meantime, they show their ancestors that they have not forgotten them but wish to understand the ever changing present. So each year, since 2004, there has been a change in the religious functions, in the demands, in the way in which to make the world beyond respond. In recent years, the *bo lobung* ritual has been celebrated irregularly, almost to the point of disappearing, in the village of Nyawi. The only exception has been the village of Lengan, thanks to the presence of the shaman Gatcha – an exception that will be further discussed below. But sometimes, in other places, the big ritual can be performed if the conditions are right to reunite (not too many Burmese, no officials, no drunk fishermen, some money for the offerings). Some other rituals have been transformed by well-known Buddhist monks, attracting many followers and using the Moken the same way the Thai Buddhists use the Moklen in the Tenth Month Festival. Even though the Moken are used in these places (Jelam, Lord Loughborough for instance) to show the superiority of Buddhism, it is still not known whether one day these new positions within the syncretic system will not allow the rituals to survive. The increasing appearance of altars in most Moken houses is likely related to the loss of symbolism once manifested in

the *bo lobung*, the most important ceremony of the ritual calendar. However, it should be noted that the most complete altars in terms of cosmological representation are those related to the Moken shaman. This creates a first form of lines of descent that can transcend the new representation of a fragmented territory produced by the arrival of the Burmese.

Furthermore, the dynamic syncretism dominating the permanent restructuring of the Moken symbolic universe can integrate Burmese altars into a lineage process expressed through the conservation of altars that once belonged to kin. This is the case of a sacred dancer (*siti*) from the village of Ma Gyon Galet (Eyles or Pu Nala) who keeps at home three altars: one belonging to her late Burmese husband, another from her late Burmese stepfather, and the third to her father, a Moken shaman who is also dead. The Buddhist altar of her husband was re-appropriated by integrating nat figures together with Hindu deities, pictures of important persons taken in newspapers, etc. This set allows the *siti* to legitimize her belonging to a pioneer community in terms of mixed ethnicity between the two populations, by integrating the Burmese to ancestor worship, and thereby reclaiming the new “territorialization” of the archipelago. Thus, for the Moken, the objectification of their relationship with the Burmese is conditioned by an increasingly strong Burmese demographic pressure against which they cannot fight. Still they have their “mental cartography”, which gives them an advantage because of the almost complete knowledge it offers of the archipelago. The choice of Moken society presents itself in terms of chosen adaptation or rejection of change, the latter of which could be fatal.

At this stage, the capacity of the Burmese *tokè* to mobilize Moken “labor” becomes a source of power, and hierarchy, still in its infancy, operates in favor of the *tokè* who marry Ebab’s daughters (the descendants of the founding ancestors of Moken subgroups) for their largest gathering faculty (Boutry, 2014). If the basis of that power uses a traditional Moken structure – the subgroup – it goes against the egalitarian system of nomads and even tends to favor the compartmentalization of lines of descent. These lines of descent, or the refusal to pertain to this new scheme, may be the first stepping stone towards a new segmentation process among the Moken. Indeed, as previously mentioned, Gatcha’s Moken flotilla was quite an exception as they continued to perform the *bo lobung* ritual annually, unlike the other groups, with the only links nowadays connecting all the sub-groups being religious. The shaman, by perpetuating this tradition, takes a stand against other Moken communities that are more mixed with the Burmese, especially that of his sister Polèng. Indeed, the pioneering interactions between the Moken and the Burmese took place in Lengan – now officially named La Ngann Selung¹⁹ village by the Myanmar government (Boutry, 2014). At the same time, Gatcha participates in the *bo lobung* of his sister’s flotilla as they belong to the same subgroup, but always after long negotiations between the two, during which the growing presence of the Burmese is a central subject. This means that:

1. Territories of hunting and gathering are very strongly defined and they are the pillars of the exogamy of the islands;
2. Gatcha is the strong man who should find a solution for all of the Moken. But he has to succeed to be the leader of the island to which he migrated (Lengan and Lebi), that is to say he needs to propose a way forward in rebuilding Moken ethnicity.
3. Another phenomenon should be noted. As Gatcha refused the position, because Moken society is not strong enough for him to hold it together. The Moken have changed the meaning of the word used to designate the “shaman” (*dzinyang*), the latter of whom allows Man’s double (*manga*) to go to the spirit world beyond to discuss the year to come and the year that just passed. Nowadays, the words for shaman and *léphèng* (“master of ceremony”) can have the same meaning and are often the same person. By disintegrating the power of the word “shaman” – the *siti* (sacred dancer) could be in a state of trance and her *manga* could be in the spirit world, a situation that was witnessed in Pu Nala in 1987 – the Moken dissolve the ritual hierarchical structure, leaving room for a new one to come, hoping that the “Great Shaman”, Gatcha, will solve their problems, if they let him wait long enough whilst gathering the strength of the soil, the tides, the sea, the sky, hoping for a new communicant or way of communicating. The survival of this society lies also in the recognition of a new way to communicate between two worlds.

Furthermore, this strategy could pay off, because it should be noted that more and more Moken have been coming to Gatcha to follow his path, even if he himself does not know exactly where it will bring them. Small flotillas of *sampan* boats (the small secondary boat that follows the *kabang*), sometimes dragged by a surviving *kabang* (nowadays often replaced by a Burmese boat), are now roaming the seas of the archipelago once again, trying to find their place in the midst of newcomers attempting to share the area’s natural resources. Mobility might be slower, even restricted in some parts; nonetheless the flotillas are rebuilding the basis for a possible future.

Even within the non-violent society of the Moken, conflicts do exist, notably when it comes to the changing of position and territory—Which form the two bases of the group’s cultural solidity. We can easily imagine that such interactions between a minority population and the dominant Burmese population are not a homogeneous process provoking identical reactions from one side of the archipelago to the other, even less so over such a short period of time (three decades). On the contrary, these interactions have led to a multitude of “cultural essays”, one of which involves Polèng (of Lengan)’s attempt to try out the “line of descent system” explained above, together with other groups, while Gatcha’s stance leans more towards preserving Moken tradition. In the

end, Polèng may have the final stand (land, territory, recognition by the government) but will lose the Moken power and ideological group on their island.

However, we can imagine that the ritual transmission may occur with someone other than the shaman, with a *siti*²⁰ for instance. Some of these *siti* are also called shaman, and some *léphèng* are called shaman as well, but they are still under the authority of the group of Gatcha. He can, at any time, take the position of shaman. Though he is called a shaman, he does not act like one (his “double” does not go to the world beyond to make contact with the spirits during the ritual), but everybody follows his orders, and he is their society’s elder whom everyone should follow. The disappearance of the traditional limits of action and the confusion in the meaning of ritual positions both facilitate the process of adaptation. There is a loophole in the Moken ritual hierarchy, which contributes to enabling the syncretism between the Burmese and the Moken. For instance, the *siti* named Biba (from the same group as Gatcha) holds the position of shaman during rituals when Gatcha does not want to perform as such. Biba’s late husband was Burmese, and sooner or later, if Gatcha does not take the position, the *siti* will herself become a *dzinyang*, the shaman, and the Burmese could make up a new category within the Moken rituality itself. While there is nothing definitely settled in the archipelago regarding this matter of transmission and the evolution of syncretism, we can imagine that Polèng and other powerful families remain “stranded” in some islands, thus becoming the “People of Lengan”, the Olang Lata, or the “People of Surin” who have been separated from their Chadiak (St. Matthew) mother-island by the border between Myanmar and Thailand. Alternatively, they can become another group, like the Orang Sireh in Thailand whose name comes from Sireh Island and are believed to be the descendants of mixed Malay-Moken communities (Ivanoff 1986; Boutry and Ivanoff 2008). This would by no means hinder the perpetuation of Moken groups. Instead, as explained above, it would help to maintain the links developed between the different nomadic groups, as well as between them and the dominant populations, *i.e.* the Burmese.

Sharing Resources: History and Territory

Fighting over Territory through Anteriority

The cultural features of Moken society are very complex and flexible. From the 16th century onwards, from the Riau-Lingga Archipelago to the Myeik Archipelago, Austro-nesian sea nomads – of which the Moken are the sea-faring pioneers – have a complete mastery, in terms of both knowledge and skills, over all the land, sea, shore, and even forest. In fact, it must be remembered that the Moken are not fishermen; they are hunters, hunters of the sea, and gatherers. They recognise themselves as “different” – *basa asing*, meaning “different people” – because they do not “*maum ekan*” meaning

“to fish”; instead, they hunt – “*leba(r)k ekan, penyoy*” meaning “they harpoon (hunt) fish and turtle”. In harpooning turtle, they are symbolically killing their own mythical sisters (social anthropophagy) who did not reach the boats in time when the great flood arrived, according to the myth. The turtles also bear on their shells the “Moken Writings”, so by hunting and eating them, the Moken deprived themselves from getting formal education. One of their ideological strengths, namely their capacity to flee from the dominant ideologies (transmitted through schooling), is inscribed in their myths. As a result, they consider that fishing is for the poor littoral mainstream populations, while hunting is for the Moken, those who refuse acculturation. Their mobility is entirely based on their drive to hunt, collect, and marry between groups. Their domination over 800 islands (stretching over an area almost as wide as 1000 km) by 10,000 people is amazing. One can easily imagine the strength of their capacity of adaptation to survive, maintaining their status as “Masters of the Seas”, a name given to them by the local dominant population.

Of course they have had to integrate more complex and wider systems into their own, especially when it comes to beliefs, but in this domain they remain the major strategists. For instance, the Tenth Month Ceremony²¹ could not be held without them. In the beginning it was merely a contract between the various local populations — Chinese, Sino-Thai, Thai, Semang, Moken, Moklen, Urak Lawoi — to renew a “pact”, the latter of which allows everyone to take a part in drawing from the region’s resources without disturbing one another (Ferrari, 2012): tin mining for the Chinese, timber for the Thais, fishing for the coastal populations, and sea-hunting and strand-collecting for the Moken. This annual ritual became integrated into the Buddhist Tenth Month rituals, during which mainly the Urak Lawoi, but also the Moklen and some Moken, go to all the Buddhist temples on the shore (there are hundreds of them) to collect gifts from Buddhists to their dead, gifts that the Moken bring to their home and offer to their own ancestors.

In this we can observe that the Moken have mastered the link between populations, the sharing of resources, and the occupation of the territory. Historical comparisons could help us to better understand how the territory and its resources (both natural and mythical) are shared among nomadic groups and dominant populations.

On the larger, more heavily populated, and mainly central islands of the Eastern Austronesian expansion (notably in Indonesia), the Sama are greatly outnumbered by the land-based and predominantly agrarian Tausug. Historically, within the Sulu Sultanate, the Sama formed a subordinate population. In the *silasila*, the Tausug genealogical histories of Sulu, the Sama are represented as the recently-arrived “guests” of the ranking lines of local Tausug leaders (Saleeby, 1908:156-157), a representation that reverses, as we shall see, their actual historical relationship. Traditionally, power in Sulu was based on factional politics, and local leaders, both Tausug and Sama, were joined in a loose, pyramidal network of personal allegiances that ran from village headmen and local title-bearing chiefs to the sultan at the apex of the political order (Kieffer, 1972;

Sather, 1984:3-8). Tributary trade was a central feature of the Sulu State. Power derived from control over trading commodities and the people who procured them. Thus, the sultan's authority was sustained by a procurement economy, articulated through personal patronage and alliance, in which labour and locally-produced commodities of trade were supplied by a variety of differentially adapted ethnic and sub-ethnic communities, including local bands of boat nomads. The same processes and dynamics can be imagined to have occurred when the Majapahit and Srivijaya thalassocracies took control, by forcing the Moken to work for a hierarchical empire, be it a maritime empire. But with the collapse of the last power, the Riau-Johor Complex (16th century), the Moken were either released or took flight to take over the sea once again.

These numerous stories of slavery is why Moken's myths are full of slave hunters, temple slaves, and slave-warriors. Slavery is often the commonly accepted origin of their identity, their geographical location and names – e.g. the Moklen were taken as temple slaves before settling in the mangroves of South Thailand; the Moken fled Malay slavery to end in the Myeik Archipelago, “drowned at sea”. Slavery for the Moken is always at the origin of the creation of a new group or subgroup. It is part of their ethnic DNA. This cultural strategy of survival was not developed overnight; it was made from the accumulation of experiences over thousands of years developing into “latencies”, that is a set of cultural responses adapted to an always changing environment.

More recently, the same idea of wanting to assert control over their dominion prevailed in Thailand, where in the 1980s one of the authors was asked by authorities (National Research Council of Thailand, Royal Forest Herbarium, Siam Society) to declare that the Thais had been present on the islands before the Moken in order to be granted permission to study there. The symbolic power of being the first inhabitants is very strong. Those who can claim to be the first ones can always find a way (whether spiritual, ritual, political or judicial) to get the land back. The report that was released on Koh Surin (the island in Thailand that belongs to the southern Moken group) in preparation of turning it into a natural reserve was somewhat complete, except that there is no mention of any people, only some “traces of...” who knows what or who. The aim was to avoid letting any ethnologist or sociologist venture there, because the first inhabitants would receive the power of being the primeval genies. According to official discourse, the Thais were there, in the same way that the Thais “saved” the Moken from the tsunami disaster, when in fact it was the opposite. A dynamic dominant society cannot accept any form of superiority from a nomadic ethnicity, which is one of the reasons why the Moken remained discreet. However, all this occurred before the national policies of moulding everyone into a certain “plastic” “Thainess” (Pavin, 2005) developed. Fortunately, Thai research led by the Chulalongkorn University Social Research Institute soon gave the Moken a real place in society, or at least to a certain degree. There is still a lot to do, and in the absence of the power of an omnipresent state in Myanmar steps can be taken to enhance the transmission of Moken culture.

Due to the recognition that one's anteriority on a place provides in terms legitimacy and power over others, the names of locations are appropriated and re-appropriated by the different populations in order to sustain each's vision of history and territory. As mentioned above, the "Lengan Islands" (a Moken word meaning "hand" in reference to their appearance as a series of five finger-shaped islands) have been transformed into "La Ngann" (which could mean "salted moon" in Burmese) by the first Burmese settlers, a name that was subsequently formalized through the central administration system. This transcription of the Moken name into Burmese accurately reflects the interaction between the two communities, especially the structuring nature of intermarriages in the social and economic life of this village (Boutry, 2014 and 2015a). In contrast, the place known among the Moken as "Lebi" (coming from "Lampi", the name of the official national park, also known as "Sullivan" in English) comes from Malay, as does Pu Nala (another place name). The Moken call the entire place (Bo Cho, Eyles, Pu Nala) "Lampi". On the other side of the strait is "Luark", which in Moken means "canal".²² And near a point in a small bay, in front of the village, there is a big cemetery. Men, the dead, and spirits are enclosed in a mental domination over the Moken; it is a difficult place to stay, as the stream can wash you a way in seconds, but it is ideally located in the middle of the southern part of the archipelago. It is the "administrative centre" of the archipelago, where NGOs hand out medicine that the Burmese sell back to the Moken, which a lot of money coming from the fishermen goes through. It is a strategic point.

The Myanmar government tried to establish an "Ideal Selung Village", but it is officially known as Ma Gyon Galet, allegedly from the name of a famous Burmese female trader, Ma Gyon, and "*galet*" meaning "strait" or "canal" in Burmese. The Moken name which comes from Malay has been evinced to the benefit of a Burmese individual's name, in an attempt to ground Burmese presence in history, with the official account given in 1998 being that the military evicted all the Burmese off the island to "give" it to the Moken, the latter of whom went away as soon as they could.²³ As a matter of fact, in Pu Nala, the village's Buddhist pagoda was the first one to be erected in the south of the archipelago in 1996, so a compromise has to be found. Although there are still Moken groups living in Ma Gyon Galet village (within the Lampi Group, Lebi in Moken), the degree of interactions between nomads and Burmese settlers is not as structuring as in Lengan/La Ngann. In fact, Burmese settlements formalized past the year 2000, like Lengan, may retain the Moken name, at least for a while. In the same fashion, the Burmese settlement of the island known by the Moken as Nyawi, further south, is simply transcribed as "Nyaung Wee" in Burmese, with no special meaning. This name may be changed later on if the Burmese presence takes over the Moken's.

Language is important because a name is a mark of possession. This is one of the reasons why they are so many words for one place. Ask a Malay in Thailand (who culturally belongs to Malaysia) where is Narathiwat (the official name of the southernmost provincial capital) – a name that Thais "cut into pieces" in order to find new meanings, *i.e.* *Na Ra Thi Wat* – and you will get no answer; ask him where is Nibong (the local

name in Malay for this town, which means a kind of bamboo), and he will be able to indicate where the place is. This phenomenon occurs in all of region's countries. The same goes for the name of the southernmost town of Kawthaung in Myanmar – which could mean in Burmese “the rising sandbank”. But in fact, the name Kawthaung comes from Koh Song (meaning “islands” and “two” in Thai), and before that from Polao Pulau (“islands - two” in Moken), and even before that Pulau Dua (“islands - two” in Malay). This is one of the political ways to absorb a new territory by taking out its true meaning which refers to a history explaining how the place was colonized. But it takes centuries to forgot the real name. Throughout the archipelago the same process of renaming in order to appropriate replicates itself for the islands, with, for instance, Lengan/La Ngann. Collective memory has to be erased in order to really take control of a place. But homogenizing the names of 800 islands, thousands of streams, beaches, rocks, is an impossible task. There will be always a remnant of the Moken. These are the foundations of a project led by the authors to establish an “archipelagic” museum in Kawthaung.²⁴

The Funeral of a Tokè's Wife:

The Sharing of the Territory between Burmese and Moken

Besides naming the territory, notably to serve an administrative level of appropriation – *i.e.* a “Burmanization” process (Boutry, 2015b) – other attempts to share territory between populations happen at a more local and symbolic level, as analysed below through the funeral of Ma Hmwe, the Moken wife of a Sino-Burmese *tokè* named San Ngwe.

Ma Hmwe was a very well educated woman who spoke Burmese, English and of course Moken. She lived mostly in Pulo Tonton, 4 miles from the town of Kawthaung on the littoral, under the protection of another *tokè* of Chinese origin, Kyaw Yin, well known in the south of the archipelago. San Ngwe is his adopted son. After falling ill, Ma Hmwe returned to her husband and died about a month after arriving at Ma Gyon Galet.

The coffin was made by the younger brother of Ma Hmwe the morning following her death. He painted motifs representing squids at the head and foot of the coffin, and fish on the sides. The squids are there to recall the main activity of the Moken, that is fishing for *mimik* (“squid” in Moken), an activity which became the main exchange currency with the *tokè* throughout the southern half of the archipelago. Squid fishing replaced the traditional collection of shells, sand-worms, oysters, etc., which were once central elements of the nomads' economy. Some squids drawings were even found on the spirit poles.

The deceased will rest to the east of the tomb of another Moken family of extended relatives. On a nearby tree leans a wooden post at the upper end of which are fixed two boards, one below the other. The highest and the shortest is painted red, and the phrase “Ma Hmwe, aged 39” is marked in blue paint. Below, adjacent to the first, the

rough wood read “Ma Hmwe, 39 years old, may thou rest in *thu'gati*”,²⁵ painted in blue letters clipped with red. The procession brings a cassette radio, and several bottles of rice wine. The older sister places at the head of the coffin a bowl containing the offerings that will eventually be buried with the deceased.

The hole is now deep enough to accommodate the coffin. By digging the earth, the bones belonging to a deceased ancestor are dug up and placed on the side of the grave. A green coconut is cut, its water spread all over the body from head to toe “to wash it”, according to the *tokè*, “as well as to feed it”.

Then cigarettes, nuts and betel leaves, tobacco and lime accompanying the manufacturing of betel quids, are deposited on the chest of the deceased, a typical Moken practice featured among other ethnic groups in Southeast Asia as a symbol of one of the many pleasures of everyday life. Envelopes, marked with the words “by Air Mail”, are also placed in the coffin to help the deceased reach the other world, together with some Burmese cosmetic powder (*thanakha*, a Burmese specificity). The coffin is finally laid to rest, carried by the *tokè* and the Moken. It is laid head south, towards the sea. Unlike the Burmese funeral ritual, in which offerings are then given to the monks, here they are deposited in the grave, including some of the deceased's belonging: some of her gold, betel quids, soft drinks, alcohol, even makeup, clothes... for use in the other, more “sedentary”, world. During that time, the deceased's aunt who stays the longest around the coffin before it is buried prays at the altar of the Moken neighbour's tomb.

Then, in a kind of frenzy, the immediate family of Ma Hmwe, her husband and her son wearing monk's garb (the latter is doing his Buddhist novice, *shin byu*) throw several plates of sand to cover the coffin. Then her Burmese and Moken friends do the same. Before the hole is completely filled, the younger brother, aunts and sisters of the deceased break rice wine bottles they already emptied on the entire surface. This is meant “for looters attracted by gold, so they cut their hands and can thus be recognised”. The hole is finally filled, topped with dead wood and green leaves. To the east of the grave, a coconut shoot is planted, marking the land of Ma Hmwe and her family. The sign emblazoned with her name and her picture is stuck to the head, and a green coconut is deposited at its base.

The interaction between the Burmese and the Moken thus goes as far as the world beyond. It is through such actions that a real and new form of nomadism and cultural syncretism appear. Because the possession of territory lies in the hands of the dead, spirits or genies, the burying of a person of mixed heritage, in other words a culturally mixed performance, will allow for new path to open. This could be also one of the reasons why sometimes strange things can be found in the cemetery of Lebi, like the skulls on the Moken tombs last year.

The night of the funeral, the sisters and aunts of Ma Hmwe gather around the *tokè* in his house. They tell him not to be afraid of the bones of the grandfather who was re-buried in the earth, since they belong to Ma Hmwe's family. It is important to bury all members of the same family together, so that they may find each other in the other

world. Trees mark the affiliation of a whole family in one place and, conversely, the right to the land.

Although Ma Hmwe was Moken, she was largely incorporated into Burmese society among which she was a teacher, as the wife of a powerful Burmese *tokè*. The performance of the funeral is at first dominated by the Moken, while San Ngwe and the few Burmese present remain passive during most of the ceremony. However, the two populations are collaborators in the execution of this rite of passage. It represents to the Burmese a way to access a higher form of life in the cycle of rebirth, and to the Moken a means to access the world of spirits and the dead. Though the religious objectives of this ritual are significantly different for each of the two communities, its development has many similarities with the traditional forms of Burmese and Moken funeral rites. Also, it can be suggested that the Burmese and the Moken share this ritual from which a common symbolism emanates for these two populations: the appropriation of territory.

A coconut tree is planted at the feet of the deceased, the bones of the grandfather are dug out before being buried again, as a reminder as to who owns the place. These elements are the very basis of customary law in Southeast Asia, giving the first arrived the right to claim the use of the land. Nowadays, for the Moken, their lands still belong to the ancestors who mark the belonging of a subgroup to an island. Furthermore, the Moken are often forced to change their nomadic area (*i.e.* when they were chased by the military, forcibly moved by the settlement of a Burmese village, or expelled to make way for the creation of a pearl farm), and the dead, who are considered ancestors when they go beyond two or three generations, allow them to renew this sense of belonging. The Moken, to signify their legitimacy in the archipelago facing the arrival of thousands of Burmese, often say “our ancestors planted here”. This notion of “the earth’s testimony” is also associated with the washing of the body with coconut water, which is not unique to the Moken. In Burmese funeral rites, the practice carries the same meaning, that is “the earth will bear witness where men may forget” (Shway Yoe, 1963: 593).

Both rituals practised at the funeral of Ma Hmwe therefore draw upon a common symbolism among the Burmese and the Moken. The planting of a coconut shoot, as practised by the Moken after the burial, is also found in a specific form of Burmese funeral rites. Indeed, in the case of a (violent) death that occurs outside the village, the body, which cannot be brought inside the village, is buried outside, and the place is marked with a flower, or a tree shoot, planted in the ground. This situation is fairly common throughout the archipelago because the drowning of a fisherman is considered a violent death. In this way, dozens of islands are guarded by the *nat* - whose appearance is almost always linked to a violent death, whether in the more generalized worship of the 37 Lords or for local figures – who are incarnations of the dead.

This desire to appropriating territory through funerals is particularly important as it offsets the exogenous – Burmese – representation relegating the Moken to the sea. Indeed, the Moken’s representation of their own territory places the sea as a reflection of

the sky. However, the representation of the sea by the Burmese compartmentalizes the mythical universe to the underwater world (Boutry, 2015a), thus creating a boundary between the surface, belonging to the world of men, and, in the process of socialization by the Burmese, the depths of the sea. This mythical underwater world represents the territory to which the Burmese reject the Moken, where mermaids are the counterparts of men (Boutry 2015a). This representation as it is perceived and assimilated by the Moken is symbolized even in the death of Ma Hmwe, through the paintings on the coffin representing squid, the sea, and fish, a practice that was unknown to the Moken before the arrival of Burmese in the archipelago. It should be noted that this exogenous representation may have been adopted among the Moken in order to allow them to assert their specificity and to mark out an opposition between the people of the sea and the people of the land, all while expressing a new form of alliance between the Moken and their *tokè*. It symbolizes the distribution of the “territory” (the sea for the Moken, and the archipelagic lands for the Burmese), and the assimilation of squid fishing into tradition, thus becoming an activity guaranteeing a certain extent of freedom and a form of nomadism nevertheless integrated in the Burmese colonization of the archipelago. Finally, the assimilation of the Moken into the underwater – and therefore mythical – world, along with *mimik* (squid) fishing, maintains a continuous socioeconomic and mythical space for all of the Moken groups to share despite the fragmentation of their territory by the Burmese and the recent administrative initiatives by the authorities in the archipelago. Risks to Moken culture and identity appear to them in the form of social recomposition so that they may rethink their nomadism and culture in order to preserve their identity amidst increasing interaction with the Burmese.

The Nomads’ Dominion over Territory, from the Sea

Compromises made by the Moken, notably through their alliances with Burmese fishermen, is part of an objective strategy to retain their place in this newly imagined part of a physical territory which has been affected by the ever growing presence of the Burmese in the islands. In the social and economic context of the Burmese appropriation of the archipelago’s islands, the Moken kept a central place, rather than resigning themselves to being marginalized or being considered as an obstacle. This being said, ritual and nomadism in their traditional forms are still at stake: traditional Moken boats no longer roam the seas of the archipelago, and the nomadism of an entire flotilla is practically inexistent; but flotillas of *sampan* still roam within this limited free space, which means that the determination of the nomadic life is still out there, while the yearly *bo lobung* ritual gradually loses its symbolism during the transition from the nomadic dry to the sedentary monsoon season, since most Moken communities are now settled in villages, whether mixed with the Burmese or not. In response, new forms of mobility and legitimacy over the territory take shape: specialists (such as shamans, sacred

dancers, and harpooners) are now the main cement of Moken groups throughout the archipelago, and the *bo lobung* ritual appears to be more of a circumnavigation through the archipelago aimed at maintaining the bonds linking the different groups. Coupled with the phenomenon of interethnic communities, such as the Moken-Burmese settlement of Lengan/La Ngann, the Moken on the Myanmar side of the Myeik Archipelago offer a diversity of situations – *i.e.* from resistance to integration to Burmese society – that strongly supports the analysis of a segmentation process that is perpetually at work among Austronesian societies. This segmentation process in itself is at the heart of a binomial cultural relationship that these Austronesian societies have with both land and sea, pertaining to the distribution of territory and resources between them and the dominant societies. Though they are being symbolically cast out to sea by the Burmese, the Moken retain their dominion over the insular territory. ○

Notes

- 1 Here we use the term “Burmese” to designate the dominant ethnic “Bamar” population of Myanmar.
- 2 “Regions” were called “Divisions” prior to 2010.
- 3 In this article, the authors have set aside the Vezo of Madagascar who originally come from Southeast Asia, but are nowadays geographically and culturally distinct from their Southeast Asian ancestors.
- 4 The term “Negritos” encompasses a set of populations of foragers preceding the Austronesian migrations into Southeast Asia. They are scattered all around Southeast Asia, and are of “Negroid” complexion, thus their name. No one seems to agree on their origin, but it has been recently accepted that they could have interacted with the Austronesian maritime populations, such as the Moken for instance. These interactions are at the origins of the ideologies, practices and “cultural latencies” kept aside by the Moken, and are part of the history of the migrations of Austronesians, Malays, Proto-Malays, and the Moken (Bourdier *et al.*, 2014).
- 5 Thus, for example, in addition to farming, some Sama communities in Semporna produced pottery for trade, including earthenware hearths carried by sea nomads aboard their boats; others offered iron-work, tortoise-shell jewellery and skilled carpentry; or supplied caulking resins and kajang-roofing for boats (Sather, 1984: 11).
- 6 The words in Moken language referring to the sea and the forest have two meanings: *taao*, the sea, also represents the exterior, while *kotan*, the forest, is the interior. These coordinates also resort to a vertical classification, in which the upper direction “*data*” means the continent, and the lower direction means the islands, a classification that is also applied to the inhabitants and reflected in ethnonyms. The environment of the Moken is thus set into these horizontal and vertical coordinates, and these are constantly recalled during the numerous rituals that take place throughout the year.
- 7 For example, their traditional boats (*kabang*) have a “mother strake” and “children strakes” which allow the boat to become a real *kabang*.
- 8 Formerly, the Moken also built dugout boats, but these were different from Moken boats and were very similar to the boats called *ruea mat*, used nowadays among the Muslim people of the littoral.
- 9 The *tokè*, term of Chinese origin, refers to the patron who provides rice and other consumption goods to the Moken in exchange for their collected produce. Traditionally, the *tokè* obtains a wife from a Moken group in exchange for his loyalty to the group.
- 10 A frequent theme in the etiological myths of Southeast Asian societies.
- 11 Lemo, “to immerse”.
- 12 *Kèn*, name of Sibian’s younger sister. *lemo kèn* = *mo kèn*, the ethnonym because the prefix /le/ is dropped in everyday language.
- 13 Sibian’s youngest sister.

- 14 This represents the ideology of non-accumulation; this is the structuring element of the new nomad society.
- 15 *Nyaæk otak aka*, “climb over the head of the elder”, an action forbidden to the younger persons.
- 16 The story will explain that an incest between a dog (son of a couple) and her human sister gave birth to a boy who will later kill his dog-father and by shame, cover his face with the intestines of this father (Ivanoff 2001).
- 17 For a detailed account of the arrival of Burmese pioneers in the Myeik Archipelago and the Burmanization process of this borderland, see Boutry (2014 and 2015a).
- 18 See Ivanoff and Lejard (2002) for a detailed account of the subgroups.
- 19 Selung is the Burmese exonym for Moken.
- 20 Meaning “girl” in Malay, the “sacred dancers and singers of the shaman” in the sacred language of the Moken, changing again the meaning of a word to transform the position and the strength of a person.
- 21 The Tenth Month Ceremony – tenth lunar month of the Thai calendar – is a ceremony for merit making that is held in southern Thailand, during which the praet (the sinful persons who expiate their sins in hell) are allowed to leave hell and receive offerings. It is a generalized ceremony, which allows the three groups of “Sea People” (Moken, Moklen and Urak Lawoi), from the Thai exonym “Chao Lay”, to assert their common nomadic identity to the Buddhist Thais and Sino-Thais all while accepting to be part of it.
- 22 Canals are considered by the Moken as powerful places, which is one of the reasons why the Moken chose this specific place, and certainly why the other name of more Malay influence (“Pu” coming from the Malay word for island “pulau” to make “Pu Nala”) is preferred.
- 23 However, since a certain level of exchange was necessary, the Moken, like some Burmese pioneers, returned to the island.
- 24 Project “Tanao Sri”, International Research Network, supported by the French National Center for Scientific Research (CNRS).
- 25 Of Pali origin, this term means a transition to a “happy state of existence” (Judson, 1893: 1029).

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Mangrove grabbing. An exploration of changes in mangrove tenure from a political ecology perspective

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The three-dimensional nature of the sea spaces and the mobility of the halieutic resource make very complex their modalities of appropriation, use and access (Cormier-Salem, 1995 ; 2000). However this moving spaces are not *res nullius*, but *res communes* or commons, under the control of a community. Among others, Berkes (1985) and Mc Cay and Acheson (1987) have questioned the theory of the tragedy of the commons (Hardin, 1968) and put in evidence the diversity of the TUR'f (Territorial Use Rights in fisheries) and the CMT (Customary Marine Tenure), according to the historical and geographical context and the institutions (from local people to international decision-makers). They have been the object of numerous definitions and classifications, underlining their age (as the middle-age "prudhomies" of the Mediterranean lagoons in Braudel, 1949) and their flexibility (among others, see Christy, 1982 ; Pollnac, 1984 ; Durrenberger & Palsson, 1987). The diversity of institutions testifies the various relationships between people and sea, from the halieutic fief of Calabria, Italy (Collet, 1985) to the "lobster gang" of Maine, USA (Acheson, 1975, 1988) and the maritime tenures of the Pacific Islands (Ruddle and Akimichi, 1984). From Pacific case studies, Ruddle et al (1992) have highlighted 6 principles: sea rights depend on social status; resource exploitation is governed by use rights; resource use territories are defined; marine resources are controlled by traditional authorities; conservation was traditionally widely practiced; sanctions and punishments are meted out of infringement of regulations.

Our fieldworks, conducted since more than 30 years in West Africa and extended to diverse countries (East Africa, Guiana, Antillas, India, Vietnam, Thailand, etc.) led to distinguish two types of coastal tenure, the amphibian "terroir" of peasants-fishermen and the sea trails of the migratory marine fishermen (Cormier-Salem, 1992 and 1995). The former is a closed, limited, managed area, while the latter is a permeable, extensible, discontinuous, reticular structure, consisting of marine roads and specific controlled places (for fishing, landing, market..).

In this paper, we focus our attention on the mangroves, which are coastal wetlands, semi-closed seascapes, such as estuarines, lagunas, lagoons and corall reefs.

Mangroves have long been considered as wastelands in the Western thought. Nevertheless, for the local people, they are communal territories, inhabited, managed into multiple use systems, governed by access and use rights and controlled by local customs. Through an approach of political ecology, the aim of this paper is first to highlight the diversity of mangrove tenures, second to analyse the main actors, factors and steps of their enclosure, third formulate hypotheses on their « grabbing » and the effects on local livelihood. The growing literature on “land grabbing” and more recently on “green grabbing” emphasize the pervasiveness of the neoliberalism and the risk of nature’s commodification (Fairhead *et al*, 2012; Kozoy and Corbera, 2010; McAfee, 2012). Land grabbing and green grabbing are forms of land appropriation or commons enclosure, conducted by public or private actors, moved by diverse logics (productive versus conservative). The term « ocean grabbing » is more and more popular, but remains poorly explored. In their synthetical article, Bennett *et al* (2015), suggest an analytical framework and point out the need of in-depth investigations, based on empirical studies, spatial analysis, historical accounts and exploring drivers, consequences and solutions to avoid or resist ocean grabbing. From various mangrove case studies (see Fig.1), this paper aims to contribute to the exploration of coastal and ocean grabbing and illustrates the complex current web of rules and policies, jeopardizing a sustainable and fair governance of the mangroves.

The diversity of mangroves tenure

Forgotten civilisations

The age of the occupation of mangroves and the precocity of their multiple use are attested as well in Asia (between 8000 and 4000 BP, according to Higham, 1988) as in Latin America (13000 BP in coastal Amazonia from Figuti, 1992; 6000 BP in the Antillas from Barrau and Montbrun, 1978), and in Africa (5000 BP from Linares de Sapir, 1971; Chauvaud, 2014) thanks to shell middens, found on all the continents. The excavations reveal the presence of potteries, tools made with teeth of sharks and shells, rests of food (rice, fish). These shell middens constitute the main, otherwise unique, information sources on the first human establishments in mangrove. To arrest the specific links between people and mangrove, in particular their management and tenure regimes, the former sources are lacking: we can only base them on the linguistic analyses, the toponymy, the founding myths and other oral traditions. With the European explorations towards the New World from the end of the 15th century and the colonial penetration, the written sources multiply and give a first, very contrasted, image of those regimes.

In countries where mudflats are very mobile (Delta of the Amazon, Delta of Niger, Everglades, etc.) and where the resources of the hinterland are plentiful, we do not raise hard and permanent houses in the mangrove. Only small groups of itinerant users

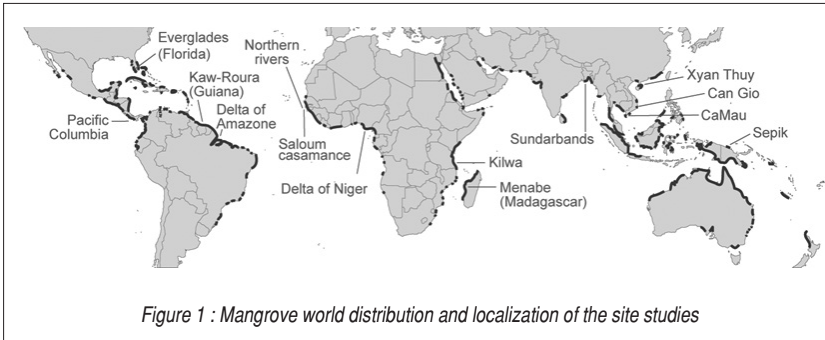


Figure 1 : Mangrove world distribution and localization of the site studies

live there, on a seasonal or not regular basis: in North America, the first Amerindians - Calusas and Tequestas of Everglades - so lived near the coast and combined the fishing (fish, oyster, tortoise, eel) in the mangrove and the hunting on the highlands (bears, deers) (Vileisis, 1997).

The existence of former civilizations in the mangrove is nevertheless attested in western Africa. Among other narratives, that of the André Alvarez d'Almada (1594), is completely explicit on the construction of rice "terroir" in the mangrove along the Northern Rivers (between the current region of the Casamance in Senegal and Bissau Guinea) (Cormier-Salem, 1999). According to Harapasrad (1999), a former and dense population would have lived in the mangrove delta of the Ganges and of The Brahmaputra, the Sunderbans, in India; big cities prospered until the decline of this forgotten civilization in the 18th century, in particular due to the British colonization. Island Kilwa in Tanzania establishes another remarkable example of an urban and commercial civilization, built in the mangrove (Sheriff, 1987): the tens of palaces and mosques, dating from the 9th to the 16th centuries, testify of the glorious past of the sultanate, until the arrival of the Portugueses, who destroy the estate in 1505 and monopolize the trade of gold, textile, spices, ivory and... slaves.

Plurality of Customary Mangroves Tenures

Considering in one side the fragmentary precolonial sources and in other side, the diversity of the human establishments in the mangrove, we can that make the hypothesis of highly varied forms of customary tenure, since the "simple" knowledge of its resources, the presence of spirits and supernatural creatures, with which the populations have to negotiate, until the construction of mangrove "terroir", controlled by local people, as it is the case for the Northern Rivers' communities.

The knowledges on mangrove, that the local people, master, are essential to adapt to this extreme ecosystem, regarding the quantity and the quality of water, with each tide. The Black or Afro-descendant groups of Pacific Columbia (Hoffmann, 2002), the

estuarine fishermen of Brazilian Nordeste (Cordell, 1980), or the aborigines of the Australian mangrove (Warner, 1958) master perfectly the lunar calendar and the cycles of tides. On the islands of the Pacific and in Asia, this traditional ecological knowledge was well highlighted (UNESCO / UNDP, 1986) in particular in Vietnam as regards the extensive production of shrimps. In Papua, Murik, inhabitants of the north coast, are designated themselves as “mangrove men” and have a rich corpus of songs associated to mangrove (Lipset, 1997).

More elaborate forms of control of the mangrove are also found, more or less, all over the world: the appropriation of ecological niches (a sandbank, a rock), the exclusive use of certain resources (e.g. shellfish and mollusks, sedentary resources, easier to master than the migrant pelagic species), the protection of habitats and species harmonize with the regulations of fishing seasons, the control of gears (e.g. the limitation of the size and the meshing of nets, the ban on the custom of the poison).

Obviously, CMT are particularly developed among mangrove-dependant people and along mangrove coasts, populated and managed for a long-time. These socio-ecosystems are under the authority of the local communities, who built their “terroirs”. The “terroir” correspond to portions of amphibian territories, defined as continuous and contiguous spaces, more or less closed and limited, valued for multiple purposes (cultural, religious, aesthetic, halieutic, silvicultural, agricultural, pastoral, etc.), managed and shared according to the local institutions.

So, to resume the example of the Northern Rivers (Cormier-Salem, 1999), all the space of mangrove is the object of a control which follows the custom of the Ancestors, the respect for which is assured by the Elders Council. In Casamance, the Diola communities are homogeneous¹, without any casts or classes, structured by lineages and clans, under the Elders Council’s authority : this Council is in charge of the distribution of the benefits from the terroir, of the decision-making and the conflicts resolution. From the concessions to the banks of the “bolons” (or tidal channels), diverse uses and access rights are combined. The domestic gardens, the rice seed nurseries and the rice plots, located on the supratidal terrasses, are individually owned by the chief of the household ; the fish ponds, the big dikes, which enclose the terroir and protect it against the salty water, the infratidal mudflats, the bolons are collectively managed by the set of the usufructuaries, descendants of the founding lineage. Certain places are haunted, sacred or submitted to prohibitions. They correspond very often to remarkable places of the mangrovescape: sandbank, island, small “bolon” or river, “tanne” (most often nude and oversalted area, located in back-mangrove zone), shell middens, populated with spirits, sheltering totemic species, such as manatees, tortoises and birds, being of use as tumulus or ancestors’ graves. They can also result from introduced elements, such as baobabs, where takes place *ndout*, Serer initiatory ceremonies in the Delta of Saloum in Senegal.

Narratives of the mangrove's grabbing

If all the social scientists agree to recognize the relevance on the long lasting of the customary tenures, all also underline their current disuse and dysfunctions that conduct to conflicts (Ostrom *et al*, 1990 ; Peluso, 1993). The drop or the abandonment of the CMT holds so at first the constitution of a centralized public device and the elaboration of an official legislation, often inspired by the roman law, which tends to make mangrove of the public or private goods. The colonial institutions, then the new independent States competed to the explosion of the commons or "terroirs", to the destruction of the former order, to the escheat of the traditional institutions, to the marginalization of the traditional users and, finally, to the tragedy of the commoners (MacCay *et al*, 1987 ; Ostrom *et al*, 2002).

From a juridico-administrative point of view, the mangrove, forest in the sea, is a composite and unstable area, difficult to define. Actually, two views are raised among State administrations: for some, mangrove is a wasteland, or a no-man's-land, free of access; for some others, on the contrary, mangrove is a very valuable socio-ecosystem, matter of a plurality of jurisdictions, as each of its components depends on a different public authority. The borders between those components are never clearly defined, even undefinable. So, the terrestrial component, eg the forest, is most of the time within the competence of Waters and Forests Ministry, or of the Agriculture, while the most marine component, eg the bolons, the rivers, which drain the forest with variable extensions according to the cycles of tide, depend on Maritime Affairs, on the Fishing, or/and on the Environment Departments.

The lack of public institutions or, on the contrary, their multiplication with competitive authorities of jurisdiction, from local to international levels, each of them with their own designs of the environment and the development, drive to conflicting policies and overlapping bureaucracies, weak law enforcement and, globally, contribute to a undesirable governance of mangrove. In the following section, from precise case studies, we redraw the stages of the mangrove enclosure, which is a world-wide tendency and highlight who are the main actors of mangrove grabbing, what are their logics, which mechanisms they mobilize.

From colonial imperialism....

The predominant image of mangrove swamps, the one that emerges from the narratives of European voyagers and missionaries in the 17th century, echoed throughout the 18th and 19th centuries in the writings of colonial agents, is that of a repugnant, hostile, unhealthy and impenetrable environment (Cormier-Salem, 2006). For hygienist and productivist aims, mangrove swamps were reclaimed under the control of strangers, who became their landlords.

In America, according to Carney (1993), the reclamation of mangrove for ricecultivation in South Carolina is directly bound upon the arrival of the slaves, native of western Africa, who, not only, supplied the working strength, but introduced their know-how.

In the South Vietnam, part of the French colonies of Indochina, in 1911, the French colonists decided to fit out the mangrove swamp of CanGio in the following way: 4000 ha were protected to preserve the air quality around Saigon; 500 ha of mangrove also protected around the community zones as shelter against typhoons; all the rest was left for purposes of silvicultural exploitation. In 1917, rules being little binding, the forest was strongly exploited, without there are real controls (Tran, 2006).

In Martinique, according to Barrau *et al* (1977), the mangrove up-to-now is a place of confrontation of races and classes. Its control makes the object of conflict of authorities between the diverse departments of the State (National Office of Forests, Direction of Agriculture, Department of Maritime affairs, Direction of the equipment, etc.). This confusion benefits the White Creoles: endowed of concessions by the State, they widely banked up and polderized the mangrove swamps and so enlarged their properties. With the end of the slavery, certain properties of sugar cane decline and become game reserves in the hands of the White Creoles. Along channels, given up by the planters, former slaves settle down, grounds that the mangrove is a domain relatively free of constraints. Small fishermen's villages develop. As express by Barrau *et al* (1977:19) "everything indeed takes place as if, in these wood of undecided muds, between land and sea, the tenure tensions sublimated, engendered by about four centuries of a colonial exploitation, originally based on slaves plantations."

.... to green imperialism

The first enclosures of the mangrove were public, colonial and aimed at converting mangrove swamps into sugarcane plantations or rice fields. The following more recent enclosures (especially from the years 1970s) joins what certain authors qualified as "green imperialism" (Grove, 1996) and aim at making it world heritages (Cormier-Salem, 2006). The emblematic species (royal tiger of Bengal in Sundarbans, migratory birds in western Africa, tortoises and crocodiles in Latin America) and habitats (Ramsar Convention on Wetlands, 1971) are protected in conformance with diverse regulations (taxes, quotas and zonations such as Exclusive Economic zone, temporary fisheries closure) and national and international conventions. The patrimonialization of the nature matters among these political institutions, which, in the name of the preservation of the biodiversity, exclude the local communities of their terroir and make traditional users of the delinquents, the fishermen of the predators, the wooden collectors of the main responsible for the deforestation (Cormier-Salem and Roussel, 2000).

The Natural Reserve of the Kaw-Roura swamp in French Guiana illustrates the tensions and the conflicts of custom and appropriation of the mangrove (Cormier-

Salem, fieldworks, 1997; 2006). The inhabitants, grouped in the village of Kaw, are a few, 70, among which 40 permanent residents. Descendants of the former slaves, their installation would go back to the colonial period and would be connected to the development of sugarcane plantations. From 1860-70, with the end of the slavery, this system collapses: contrary to the Antilles, houses and plantations are given up. The contribution of new workers within the framework of the transformation of the Guiana in penal colony from 1852 till 1946 does not allow the relaunching of the agricultural activities. Nature reasserts itself: fallow lands are recolonised trees groves. The Guiana mangrove moves back and forward, according to the tides and the enormous quantities of muddy sediments transporting from the Amazon River. The inhabitants of Kaw, very isolated, devote mainly to the activities of fishing in the Kaw river and hunting. The implementation of the Natural Reserve of the Kaw-Roura wetland of a surface of about 98500 ha and its ecotourist valuation arouse strong tensions. Classified site Ramsar in November, 1993, the Natural Reserve is created by decree in March, 1998. Thanks to its vast surface, the mosaic of ecosystems and landscape (from mangrove forest to feshwater forests or "pinotières") and the wealth of the fauna (black caiman (*Melanosuchus niger*), Matamata tortoise (*Chelus fimbriatus*), manatee (*Trichechus manatus*), agami heron (*Agamia agami*), crested Hoazin (*Opisthocomus hoazin*), red Ibis (*Eudocimus ruber*), Kaw Roura is the biggest wetland of France and has a status of Natural Sanctuary.

In front of these environmental and ecological assets, the inhabitants of Kaw are afraid for the sustainability of their practices, in particular hunting and fishing, because of the restrictive measures of protection of the wildlife and the competition of "Metro" hunters, native of Cayenne. Besides, the slaves-descendant populations are not autochthonous. They have neither property rights, nor rights of user recognized on the resources of the mangrove. Contrary to the Amerindians of Guiana, who can take advantage of traditional ecological knowledge, and mythical ancestors to be recognized claims on the Amazonian forest or Black groups of Pacific Columbia: Hoffmann (2002) shows how the mangrove became the heritage of Afro-descendant groups to legitimize their territorial claims and base their identity.

In this generalized movement of enclosures, it is also necessary to question the arrival of new actors with other logics and more opportunist and individual strategies, the modernization of the techniques of exploitation, the globalization of the exchanges. The schooling, the urbanization and the conversion in other religions (christianization, islamization) also compete to the loss of identity and to the questioning of traditional values.

The development of the shrimp farming, in the hands of private enterprises, in the years 1970-80s, is obvious all around the world, at first in Asia, but also in Latin America and in Madagascar, to a lesser extent in Africa. Numerous works showed the ecological damage (the boom of the shrimp farming is recognized as one of the major causes of the mangrove loss, around 20 % in 30 years from Alongi, 2002) and the

socioeconomic vulnerability of former users: the intensive breeding drives to the privatization of commons, to the upheaval of the multiple use systems, to the impoverishment of fishermen's communities.

In Madagascar, when shrimps are decreed national strategic resources (Goederoit *et al.*, 2002), mangrove swamps, more exactly tannes, appear as pioneer fronts to conquer and to convert into shrimp farms (Cormier-Salem, 2006). From the years 1990s, is launched a vast reclamation plan of the tannes, considered by the public Administration as an open space, being a matter of the public domain. The economic stakes in the shrimp network are such, as industrial companies obtain the support of the Malagasy government and see granting vast surfaces. The tannes are not inhabited areas; they are not permanently exploited or managed with fixed, visible, marks. They are often situated at the confines of the territory. Nevertheless, they have a number of non-use and use values, as they shelter geniuses or spirits. They are very often grazing lands for the herds, land reserves and buffer zones between communities. So they play a major role to maintain good neighborly relations. With the demographic pressure, the emergence and the development of new practices, these areas are the object of numerous greeds. In Menabe region, along the north-west coast of Madagascar, the conversion of tannes into shrimp farms, owned by foreigners (Aquamen), incited the local communities of sakalava-vezo fishermen to claim their first occupier's right or "*tompontany*" on these lands. Not only they feel marginalized and outcasts of this lucrative sector, but, besides, they cancel the land grabbing and their exclusion from the lands of their ancestors territories.

The phenomena of trance (*trumba*), where the spirits of the ancestors speak through wizards soothsayers (*ombiasy*), the reactivation of former prohibitions (*fady*), the acts of sabotage against the shrimpculture ponds express the force of the local claims. In Madagascar, the enclosure of tannes and their reclamation reveal the complex sets of power between the private (economically and politically powerful actors coming from Pakistan or *zanantany*) and public interests, the traditional and official institutions, the local notables, the State and the royal sakalava descendants.

The new mechanisms of payments for environmental services, biodiversity offset and REDD+ (Reduced Emissions from Deforestation and Forest Degradation), appear as the last one adversities of the market economy and accelerate the movement of green grabbing (Sunderlin *et al.*, 2015). The 2015 political agenda, national and international (COP 21; UNEP program Ecosystem-based Adaptation), puts mangroves in the spotlight because of their particular function of Climate Change mitigation (Alongi, 2002). Main discourses report the dramatic loss of the mangroves areas and their ability to sequester carbone, justifying politics of reforestation in the frame of REDD+. Those dominant discourses are reinforced by the recognition of the multiple values and functions of mangrove (shelter against tsunamis, nursery for fish, refuge habitat for birds, water purification, fuelwood, etc.) (Cormier-Salem, 2014). In previous publications (Cormier-Salem, 2004; Cormier-Salem and Panfilli, in press), we questioned

the definition of mangrove as a single forest of mangle trees and the reforestation schemes, based on uncertain scientific data on mangrove dynamics (Cormier-Salem, 2004), limited methodologies for carbon accounting (Leach & Scoones, 2013), and most often inappropriate guidelines (monospecificity of the plantation, too high density of the seed lines, unfair compensation of the seed collectors, etc.). Besides, we highlight the risk of environmental injustice and mangrove grabbing (Peluso, 1993; Beymer-Farris & Bassett, 2011; Sikor & Newell, 2014 ; Fairhead *et al*, 2012).

In Senegal, the changing legal status of the mangroves is a key question, leading to territorial claims and conflicts (Cormier-Salem, 2006): in Low Casamance and Saloum Delta, as discussed above, mangroves have long been communal territories or “terroirs”, used, managed and owned by local peoples. With the “White” penetration and colonization, then Senegal Independence in 1950s, ownership on non-managed or non-permanently exploited lands, was transferred into the National Domain. Since, under the umbrella of political decentralization,² a vast plethora of laws and rules, negotiated between rural communities (traditional land owners) and governmental institutions, emerged: for instance, in the mangroves of the Saloum Delta, some areas are public good, on a national (e.g. National Park, 1976) or an international level (e.g. Unesco biosphere reserve, 1981; World Heritage,³ 2011); some others are still communal good, ruled by local conventions; endly some others are private goods, owned by local actors⁴ (marine fishermen, fish processors, etc.) but also, more and more, by foreigners (tourist operators, private entrepreneurs, traders..). The vast reforestation campaigns, called “Plant your tree”, launched in 2008 in the Saloum Delta, managed by a Senegalese NGO, Oceanium, funded by Livelihood Funds (a consortium of private companies such as Danone and Yves Rocher) rised again the question of mangrove grabbing. For at least 30 years (the duration of REDD+ contracts), the private companies have the control of the reforested mudflats. There is a privatization of plots, transformed into mangrove forest areas after reforestation operations on the detriment of the “commoners”. Also, women, who are used to collect cockles on “their” mudflats, have no more access to this place; fishermen can no more circulate and exploit fish (Cormier-Salem & Panfili, in press).

Mangrove’s tenure under controversial claims: webs of power relations

In the following last sections, we analyse the current web of actors, principles and devices through two case studies, Casamance in Senegal and Vietnam. We emphasize the controversial claims on mangroves, revealing the heterogeneity of local actors and the asymmetric relations between institutions and highlight the risk of environmental injustice. Beyond tangible costs and benefits, studies of environmental justice look to comprise three interrelated dimensions: distribution of direct and indirect benefits from natural resources, procedure relating to decisions which govern them and recognition

of culture, knowledge and needs of different groups in those processes (Schlosberg , 2007). Empirical studies conducted in Senegal and Vietnam question the relevance of environmental politics under the umbrella of Nagoya protocol regarding Access and Benefit Sharing.

The Northern Rivers's mangroves: threatened patrimonies?

The Northern Rivers mangroves, as discussed above, are terroir managed by the local communities, structured by the rice growing and the other uses, such as the gathering of oysters and fishing in the bolons. In Casamance, they constitute the basis of the Diola heritage, inherited from the ancestors, passed on by generations in generations and in which they become identified. The Diola heritage recovers a set of techniques (among which the *kajendu*, the instrument of plowing of the mudflats to transform them into rice fields), of practices (for example, the construction of the dikes of protection against the intrusion of the salty water from the bolons and the Casamance river), of knowledges and know-how (the desalination of the plots of mangrove, the circulation of waters under the control of a chief of waters), but also traditions and rites. Since the 1950s, this heritage underwent profound upheavals, in particular because of the massive emigration of the young people who constitute the main part of the manual labour force. The hardness of the rice works, the weight of the family constraints, the isolation and the difficult living conditions in the villages of mangrove swamp, without fresh water, nor electricity, are many repulsive factors. On the contrary, the pursuit of the education, the obtaining of a paid employment, the financial autonomy, the mirages of the urban life are so many objective and suggestive factors, which contribute to the acceleration of the emigration from the land towards the cities. For lack of labour force, dikes are not any more maintained and numerous rice fields are given up. This demographic crisis, demonstrate from the 1950s, accelerated with the drought of the years 1970s-80s and its incidences on the salinisation of grounds and waters. To face this crisis and slow down the exodus, the family strategies diversified: the adoption of varieties of rice with short cycle, the transfer of the activities of culture from lowlands towards uplands (rice growing, sylviculture, gardens, etc.), the conversion of numerous farmers-fishermen in the marine fishing are so many examples of innovation.

In Casamance, we so find a tendency towards individualism and the abandoning of 'traditional' systems, as a result of the emigration, the globalization, the commodification of the relations, the contesting by the juniors of the power of the seniors, even the rejection of the ancestors' religion. These socio-spatial mutations question about the preservation of the community heritage. Besides, the Casamance and, in particular, its fishing resources, attracted an increasing number of actors, foreign to the region. At first (years 1980s), the migratory marine fishermen, native of the North of Senegal,

were welcomed by the Diola communities, then little turned to the sea and settled their fishing camp on the beach, exploiting marine, free-access waters.

In the same way, the *cubbaló* fishermen, native of the Senegal River, were welcomed by the communities of Middle Casamance, at first to hunt crocodiles, then to specialize in the shrimp fishing.

The massive arrival of actors from the North (or Nordists), mastering lucrative sectors and the increasing pressures on the resources (in particular fishing) in a context marked by the drought, were translated by lively tensions between communities and establish one of the springs of the war, which rages in Casamance for more than 30 years (Cormier-Salem, on 1992; Marut, on 2015). Coastal and river waters, for a long time officially open access, were the object of diverse State regulations, which, far from solving the conflicts, aggravated them. So, since 1974, a series of measures are taken by the Fishing Department, sometimes authorizing, sometimes forbidding the shrimp fishing in the Casamance river (Cormier-Salem, 1992).

Without getting into detail conflicts between the Fishing Administration and the fishermen's communities (Mbaye & Cormier-Salem, 2015), suffice to hold, on one hand, the powerlessness of the State Fishing department to enforce the regulation, on the other hand, the initiatives taken by the local communities to govern the shrimps fishery according to two different logics, even opposing : the Diola of the rural community of Mlomp, which recovers 24 villages, bounded an "Area of the Autonomous and Community Heritage" (APAC), which corresponds to their traditional mangrove terroir. Diverse measures were adopted to regulate the uses within their community and exclude the fishermen of the other communities. Similar APAC are envisaged in numerous communities of the Casamance with the support of the State departments (Direction of the Community Marine Areas, the sub-prefects and the prefect of the Region of Ziguinchor). This official recognition of APAC is perceived by the other fishermen's communities as a pretext to exclude them from fishing zones. The fishermen shrimp boats, for the most part of the migrants, were refused the access to these areas. So, they proposed to the Fishing Department alternate measures, such the institution of a biological rest.

Since about fifteen years, in Senegal, the craze for the local conventions did not contradict itself: these contractual instruments are adopted on the basis of frames of dialogue by a deliberation of the local authority (Rural Communities, Regions) and approved by the Administration (sub-prefects, Prefects, Governors) which becomes a joint signer (Mbaye & Cormier-Salem, 2015). These conventions proved their efficiency to govern both mangrove (Casamance River, Saloum Delta) and marine waters: so, diverse fishing ports on the Senegalese coast such Cayar, Ngaparou, Pointe Sarène, etc., set up priority fishing zones on the basis of local conventions. Nevertheless, they question about the exclusion from the non-native or "allochthonous" fishermen and more generally the notion of allochtonie in regions characterized by the age and the importance of the human mobilities (in particular in marine fishermen's communities), on the

marginalization of certain native (“autochthonous”) actors (such women and juniors, who do not participate in the processes of dialogue) and the loss *de facto* of the sovereignty of the State on the public assets. By restoring the legitimacy of the local communities on their terroir, this asymmetry between actors can drive to environmental injustice.

Vietnam

Over the years, the Vietnamese government has developed a different approach to manage the forests, from centralized State controlled models to cooperative management models, and private management (Ha *et al*, 2014). State ownership of forest resources led to *de jure* state property, but *de facto* open-access, because of its poor management capacity and a deficient institutional and legal framework. In Vietnam, mangrove is a national asset, owned by the State, managed under different regimes, regarding forest allocation and land tenure and involving various stakeholders – State central administrations, state-owned forestry companies, People Comity, farmers, woodcutters, fishermen, etc. During the American war (because of defoliation⁵) and the post-war period (because of wood-cutting by the first refugees), mangrove dramatically decreased. In the 1970-80s, the development for shrimpfarming accelerated mangrove destruction. In the early 1990s, to face this loss, reforestation efforts started along with new forest management regime: the 1993 Land Law and Decree 02/CP in 1994, mandated that management be handed over from state-owned enterprises (SFEs) at the central and provincial levels to households, villages and communes for sustainable and long-term use (De Jong *et al*, 2006). Here, through first empirical studies conducted in 2015, we underline the contrasted status of two mangroves sites, one in the north, Xan Thuy, the other in the south, CanGio, although they are biosphere reserve under the authority of the People Comity, managed for forest protection (in the core zone) and economic development (in the buffer and the transition zones).

The Xuan Thuy mangrove was designated Ramsar Site in 1989 (the first in South-East Asia), then National Park in 2003, endly, core zone of the biosphere reserve of the Red River Delta in 2004 (Nguyen, 2014; fieldworks Cormier-Salem October 2015). The forest of mangrove, low and locally dense thanks to the reforestation, is a strictly protected space which belongs to the State, but *de facto* open access, strongly degraded and threatened by the overexploitation of sea food. This is not only against the law, but in the absence of any form of management regime, it has also resulted in conflicts. Also, more than 500 women enter the core zone to collect oysters, crabs and fish. Along the sea, on the vast mudflat, thousands of people have fixed their nets for catching clams (*Metatrix spp*). The collectors live in on-pile houses and have no secure rights on their plots. In the buffer zone, the main authority, Nam Dinh Provincial People’s Committee (PC), has allocated mudflats to households on leases (5 years inside the Park, 20 years outside the Park). The price depends on the quality of the

mudflat. The shrimp farms, because of the declining quality of soil and water, have been replaced by the clam farms. The dyked ponds are more and more extended, even to the detriment of the protected and replanted forest of the core zone. The clam farmers set up an intensive system of exploitation. They control all the stages of the operations : the collection of the mother seeds at sea, the breeding and swelling in ponds, then the trade to the other farmers, the replacement of the pond' s ground, each month, by fresh sand, etc. Those breeders have a double settlement, one in hard in the village, the other, one more summary, near ponds. As long as they have means to manage their ponds and to pay the leasing, they are tenants of the plots of mangrove and can have very high income. More in-depth investigations are needed to assess the mangrove tenure. However, we can point out the unbalanced distribution of plots allocation and the economic and political power of two groups of actors, privileged government officers and breeders.

The CanGio mangrove, in the Mekong delta, was designated as a coastal protection forest by the Ministerial Council Decision in 1991. In 1993, the State Forestry Enterprise was replaced by the Environmental Protection Forest (EPF) Management Board under the Department of Agriculture and Rural Development (DARD). In 2000, the EPF came under the jurisdiction of Can Gio District People's Committee. In 2000, CanGio became the first Mangrove Biosphere Reserve (MBR) in Vietnam. Management was transferred from DARD to Can Gio People's Committee / Can Gio Forest Management Board (PFMB).

The forest of mangrove is in very good state, dense and diversified (between 1978 and 2000, were transplanted 21100 ha of *Rhizophora apiculata*, 715 ha of *Eucalyptus* spp. and 281 ha of *Nypa fruticans*) and the access to forest resources is strictly controlled (what is not the case of the fishing resources). The CanGio Reserve is registered, divided into 24 forest compartments, who are divided into several sub-compartments themselves.

The core zone (4720 ha) shelters the Can Gio Forest Management Board (PFMB) and is reserved for the scientific activities. Few families live there. In the buffer zone (37340 ha), the exploitation of the forest is forbidden, while the "traditional" exploitation of the rivers and tidal channels is authorized, without any official regulation. We raise diverse groups of users : men and women, residents, collect on foot, crabs and shells in the mudflats; fishermen, native of other provinces, are migrants, seasonal workers and run the rivers aboard their boats. They use diverse fishing gears – nets, baskets and dams ; others have flexible enclosures, built with nets, along banks. They farm black cockles and check them since their boats.

The transition zones (29310 ha) is densely populated and converted in farms (oysters, shrimps, etc.). The originality of CanGio holds the presence in the core and buffer zones of protective families of the forest (Burgos, 2008). In 1990, the government of Vietnam invited new residents to come to settle down in Can Gio. Can Gio PFMB signed contracts with 141 households, offering them a ground, a subsidy of installation, and a small income during 30 years, in exchange for which, they made a commitment to watch



Figure 2 : Photo of the Vietnam mangrove forests: the contrasted mangrove-scape testifies the contrasted management regime CanGio mangrove, South Vietnam (Cormier-Salem©ird, 2015)

and to protect the mangrove forest. To-day, there are 160 protective families, every family is responsible of on average 80 ha (the smallest protected forest is 25 ha and the biggest, 300 ha). They could conserve their charge as long as they fulfill their duty.

Conclusion: lessons from the past, scenarios for the future

The complexity of the coastal spaces with intangible and moving resources, the multiple and contradictory pressures on them, the plurality of the tenure regimes put with



Figure 3 : Xuan Thuy mangrove, North Vietnam (Cormier-Salem©ird, 2015) In CanGio as in Xuan Thuy mangroves (Fig. 3), in spite of the differences of regime (strict control versus lack of management), we raise a game of powers between the representatives of the central and provincial government, the protective families or endowed with concessions, the foreign and migrant users and, at the same time, a strong social dynamics with the enrichment of certain actors (new traders in CanGio, stemming from protective families; breeders of clams in Xuan Thuy). In the CaMau mangroves, Ha et al (2011) point out a similar imbalance in access to finance, markets, and differences in authority between the two actors, farmers and State Forest Companies. This expresses the unequal distribution between first inhabitants and immigrants, as well as among privileged government officers and farmers.

acuteness the question of the legal status of mangrove: are they pioneer fronts, in the limits ceaselessly moved forward in the maritime infinity, as the mangrove of Madagascar or the North Vietnam, converted into shrimp ponds? Are they amphibian garden spaces in the hands of peasant-fishermen's communities as the mangrove terroir of Northern Rivers? Or are they still wild sanctuaries, refuges habitats for numerous botanical and animal species in danger as the mangrove of Guiana? Besides, to whom belong mangroves? Are they local, national or world heritage? Who are the beneficiaries? To whom return the benefits of the conservation of their services?

From our field studies and analysis of international literature, we can put forward the general lines of the history of mangrove tenures: the systems of customary rights, under the authority of the elders, were replaced by laws, under the jurisdiction of the State policies; mangroves, formerly terroir or commons, became public domains with the Western Colonization, then Independent State. During the 1960s-80s, they were dramatically reclaimed to be converted into private shrimps farms. Under the name of conservation policies (following the first international Convention, Ramsar, focused on

wetlands and signed in 1971), number mangroves were designated protected areas and reforested. The coercitive regulation mechanisms (such as MPA, Marine Protected Area) and the incitative market mechanisms (such as REDD+) conceived to conserve our “global commons”, lead to amplify conflicts and claims and, most often, accelerate mangrove’s enclosure to the detriment of the “commoners” (McCarthy, 2009).

In fact, the history of mangrove tenures is not linear and must be qualified, considering the diversity of the geographical and historic contexts and the game of actors. On the ground, to-day, we raise a set of rights, laws, agreements. The same place may be under various jurisdictions. We argue that the plurality of incompatible management regimes, the lack of coherent policies, standards, and weak enforcement of policies in leasing the mangrove commons (e.g. various unregulated aquaculture in Vietnam or Madagascar, inappropriate reforestation campaigns in Senegal or Tanzania, conversion of fishing zones into protected areas and tourism zone in Florida or Guiana) have resulted to mangrove degradation (deforestation, seafood overexploitation, reclamation) and environmental injustice (illegal usurpation of indigenous people’s rights over ancestral domain areas, unequitable access to mangrove resources, deprivation and marginalization of local people, weak concertation and unbalanced participation of the stakeholders in the procedures, loss of CMT recognition, identity crisis).

From 1990s, in connection with the new international governance of biodiversity, we attend a change of paradigm of environmental policies as regards the role of the local actors, from their marginalisation to their patrimonialization (see article 8 alinea j, CBD, 1992; Nagoya protocole, 2013) (Cormier-Salem and Roussel, 2002). Mangrove-dwelling people are no more considered as the main drivers of mangrove degradation, but as management partners, even the guardians of our mother earth, our common world heritage. This new paradigm raises question on the power struggle between State leaders and civil society, and furthermore, on the responsibility of the State, the participatory democracy and the legacy of community-based management and local conventions (Ostrom *et al*, 1990; Peluso, 1993; Reniel *et al*, 2011).

Most often, the transfer of rights and responsibilities to local groups, organizations and local level governments institutions do not come along with the transfer of means and decision-making power. Furthermore, the local conventions and the co-management of the resources, certainly, allow to restore the custom, of recognize the rights of the local communities on their land. But they do not avoid asymmetrical relations between groups of actors and the marginalization of some. Marginalized people are the poorest, the less powerful, the most vulnerable, among whom the women and the youngest, but also the migrant users.

Further empirical studies are requested, first to better identify the stake-holders with their perceptions, uses and tenure regimes (knowledge, techniques, practices, customary rights, etc), second reveal conflictual interests and claims on mangrove at various levels (notably at local level, between men and women, juniors and seniors, residents and migrants, etc., but also at national and international levels, with a par-

tical attention to be paid on NGOs and new private entrepreneurs), third elaborate relevant scenarios of management, adapted to every context. Equitable access to mangrove resources and fair allocation of wetlands among the concerned stakeholders is of paramount importance to afford a long-lasting and shared governance of mangrove. ○

Notes

- 1 They have long been qualified under the term of “acephalous” society, without chief or hierarchy (Thomas, 1959). In fact, the head of the lineage is the main authority, with the priest. The non-Diola people, the war captives, as the former people of Casamance, the Baïnouk, have been assimilated to Diola lineage through marriage and, so, got rights to the terroir use and access on an egalitarian basis (Linares, 1987).
- 2 Senegal has launched Act III of its decentralization in 2014.
- 3 The cultural and religious values of shell middens or tumuli, older than five millennia, have justified, among others criteria, the inscription of Saloum Delta on the Unesco List of World Heritage (Cormier-Salem 1999).
- 4 The notion of local actor is delicate and object of identity and territorial claims among the fishermen groups : the Serer Niominka are native (or autochthonous) of Saloum Delta ; the migratory marine fishermen are either Senegalese (Lebu from the peninsula of Cap-Vert, GuetNdar from Saint-Louis), either foreigners (Bozo and Somono of Mali, Guineans, Nigerians, etc.). These fishermen are more and more numerous, attracted by the coastal resources, in a context marked by the drought of the 1970s-80s and the crisis of the farming systems (Cormier-Salem, 2014).
- 5 More than 2.2 million hectares of land in South Vietnam (Mekong Delta), of which 150,000 hectares of mangroves, were heavily damaged by bombing and toxic chemical défoliants from 1965 to 1970 (Tran, 2006).

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MARITIME ONTOLOGIES:
FROM ERASURE TO VISIBILITY
IN PUBLIC POLICIES

Going with the flow? From beluga, eels and black sturgeon fishery to marketing conservation in the St Lawrence Estuary, Québec

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Kamouraska is one of eight regional county municipalities (RCM) in the Bas-St-Laurent administrative region, and is representative of this stretch of the middle St. Lawrence Estuary (map 1). Covering 2,244 ha., Kamouraska has a population of 21,154, or ten percent of the Bas-St-Laurent region, the majority living along the coast (Gouvernement du Québec, 2013). The primary activity is agriculture and dairy farming. Logging for pulp and paper production is also a non-negligible source of income for those who live in the backcountry. Fishing remains a major activity in the Bas-St-Laurent region, though significantly less than in the Gaspé, Magdalene Islands or the North Shore. The value of landings in 2008 was Can\$ 9.4 million, representing around 10% of the value of landings for the Québec fishery as a whole (MPO 2014). The Bas-St-Laurent fishery is primarily comprised of northern shrimp and crab, which are very lucrative and whose landings are made in the RCMs of Rimouski and Matane. The landings and the value of the fishery in the Kamouraska region are quite low in comparison.

This was not always the case, as the fishery was once thriving and abundant, constituting a cultural and economic mainstay for the region. Until the 1980s, all the species of fish were caught, and for centuries enabled the population to survive the harsh winters and to take part in the market economy. The case of Kamouraska is of interest because a particular type of wading fishery is still practiced here that is not found throughout the St. Lawrence River region. Using weirs, the local inhabitants caught beluga, eels and black sturgeon, the only place in North America where it can still be fished.

This chapter looks at how the fishery in the Kamouraska region hinges on the appropriation and occupation of the coastal space. It is based on an analysis of environmental, social, economic and political changes at the heart of the perception of the nature of the fishery and its management. Paradoxically, the Kamouraska fishery today

would seem to be weakened and threatened at a time when it is being increasingly promoted through diverse natural and cultural heritage initiatives. To understand this dynamic, we must combine analysis of the fishery with that of traditional and contemporary management mechanisms, drawing on the fishing practices themselves, government scientific programs, evolving nature conservation policies and national political issues.

The entanglement of these processes, involving the fishery, its management and its conservation, is based upon a political ecology approach that focuses more specifically on the social and environmental consequences of capitalism development in the recent history, the social and political implications of conservation and resource management, and the ramifications of place and landscape's production through these two processes (Peet *et al.* 2011). This allows for the examination of the relationships between marine environment, landscape and fishing activity and how they are mediated by power relationships tied to, among other things, differentiated access to places and resources.

To this end, a portrait of the political ecology of the St. Lawrence River region that includes the Kamouraska fishery is drawn, followed by an examination of the relationship between the marine environment and fishing activity. Finally, natural and cultural heritage marketing mechanisms and the related environmental conservation mechanisms, which are creating distinct production spaces that are different from previous production spaces, are highlighted. From this examination, it can be seen that the weakening of the fishery is not a 'natural' and inevitable phenomenon, any more than the resulting social and economic differentiations, and that these phenomena are closely tied to the appropriation of the coastal space.

This paper presents the research results of the eel and black sturgeon fishery that is part of an ongoing study of the Lower-St-Laurent's region activities. These fisheries have been examined through a combination of ethnographic and historical methods (Denzin and Lincoln, 2000). Reviews of archival documents, government reports, newspaper articles, and scientific literature were carried out, along with a media review focusing on glass eel fisheries and black sturgeon aquaculture in the State of Maine (USA) and the Maritime provinces (Canada). A statistical analysis of eel and sturgeon captures and sales in Québec was also conducted. Interviews and participant observation with active estuary fishermen were carried out as well, focusing on catches, collection, gear inspection, and markets. Fishermen participating in the study ranged from 35 to 74 years old and often work with family members and spouses, many of whom also took part in the study. Among the 21 eel fishing permits still active, only 15 are in use by 9 fishermen. As for the black sturgeon, it is managed by a global quota of 60 tons a year, divided into 30 permits owned by 10 fishermen but fished by 4 fishermen. Interviews and participant observation with 13 fishermen were conducted between July 2013 and December 2015. Interviews with an eel researcher and black sturgeon governmental representatives were also completed in the same timeframe. Ethnographic research took place in the neighbouring villages of Rivière-Ouelle (population 1050)

and Kamouraska (population 598), part of the Kamouraska MRC in the Bas-St-Laurent region (Figure 1) on the south shore of the St. Lawrence River (SLR), the last place in Québec where the silver eel and black sturgeon fishery are still practiced. No glass eels are fished in Québec and yellow eel fishing in the St. Lawrence River (SLR) has been closed since 2009 along with the yellow sturgeon. Although indigenous people are still actively fishing for eels in the Canadian Maritime Provinces (Davis and *al.* 2004; SRSF, 2002) and Ontario (Algonquins of Ontario, 2012), no indigenous people were part of the study, since few if any indigenous people living in the estuary are still fishing eels.

The political ecology of St Lawrence: three emblematic species flow away

Political ecology gives a distinctive historic, economic and political perspective on the St. Lawrence River and the activities practiced there. Rooted in the critical theory of political economy, it seeks to understand the effects and the mechanics of inserting market and capitalist logic into socio-environmental ecosystems and organisations. How, to paraphrase and expand on the proposal made by Roseberry (1989), do anthropological topics develop at the junction of local interactions and broader processes in a given environmental context?

Firstly, political ecology allows to grasp the socio-environmental consequences of capitalist development in the St. Lawrence Estuary. In the context of the St. Lawrence River, analyses have more specifically questioned a national economy strongly characterized by the exploitation of resources, the dependence on exportation and foreign markets, on over-specialisation and governmental regulation of production that maintains this system of production over time, also known as the primary 'resource regions' economy or the staples economy, to use the term developed by Innis (Innis, 1930, 1933, 1956; Howlett, 2003, 2008; Hutton, 1994, 1997; Pineault, 2014). More recently, neoliberal concerns have also marked political ecology studies (Castree, 2008; Harvey, 2005), underscoring in particular how issues concerning the appropriation of space, especially in terms of property rights, are fundamental to socio-environmental relations.

The socio-environmental issues touching the St. Lawrence River hinge on those that have marked the province of Québec, and are based on a succession of mainstays. History shows the impacts of colonization and the fur trade, along with the lesser-known trade in American ginseng (*Panax quinquefolius*), which was initiated and encouraged by the Jesuits for the exportation of dried rhizomes to China. This early merchant economy led to the quasi-eradication of the beaver and ginseng. The first has now recovered, but not the second.

The 19th century saw the shores of the St. Lawrence River stripped of their prime native species of trees for shipbuilding and for construction in major U.S. cities such as Chicago. Following Napoleon's continental blockade in 1806, the United Kingdom embarked on the timber trade in Canada and Québec, supported by protectionist ex-

port policies. During the first half of the 19th century, the best stands of pines accessible by water were cut down. The capital generated fuelled the development of the railway system in the last half of the 19th century encouraged the whale hunt. This process led to free trade policies and the lumber trade with the United States. From the Lower St. Lawrence to the Ottawa River Valley and the Great Lakes, white pine, red pine and white oak disappeared from their shores, leaving behind fir and spruce, which would then be over-harvested to supply the North American newspaper industry.

The successive exploitation of resources along the St. Lawrence River paved the way for the industrial cod fishery that continued to expand until its collapse in the early 1990s. This fishery was vital for Canada from an ideological standpoint but also from a pragmatic perspective, as thousands of families relied on it for subsistence (Bavington, 2010; Finlayson, 1994; Palmer and Sinclair, 1997).

The central role of the cod fishery helps explain how the beluga, eel and black sturgeon fishery also developed in the staple economy. The history of these activities is interesting and less well-known; they illustrate the deleterious effects of the exploitation of natural resources in today's capitalist economy.

Belugas, eels, black sturgeons

Nature conservation is tied to sensitivity toward emblematic and charismatic elements of the environment. Such is the case with the St. Lawrence River, which long served for travel, trade, transportation, commerce, industrialisation and is now also a protected heritage, with its emblematic landscapes and species, like the beluga. Yet while this charming smiling mammal is now protected and can even be adopted (for Can\$5,000, a beluga can be adopted from the Groupe de recherche et d'éducation sur les mammifères marins) and has a 'nursery', this was not always the case, as it was hunted commercially from 1660 to 1950 and more intensively from the 1920s to the 1950s.

In the 20s, catches of cod dropped sharply. North Shore fishermen blamed the belugas, known locally as 'marsouins'. They thought that these marine mammals fed on cod and salmon. Seeing their livelihood disappear, they pressured the provincial government. They asked for help and demanded nothing less than the eradication of the marsouin from the waters of the St. Lawrence.

War was declared against the beluga in the 1920s. The Ministère de la Colonisation, des Mines et des Pêcheries distributed rifles and ammunition to fishermen so they could shoot all the marsouins they saw. A monthly allowance of Can\$30 was given to each sailor who took his arm with him aboard. From 1928 to 1939, this incentive was quickly boosted by a Can\$15 bounty paid to anyone who brought a marsouin tail to a Ministry agent. This maritime "Far West" wasn't effective enough according to the cod fishermen. Under increased pressure, the government took drastic measures. New technologies were more accessible in this inter-war period,

and the belugas were hunted from the air. A pilot was hired to bomb them from a small fighter plane.

The Québec government, through the Département des pêcheries du Québec, conducted in-depth studies of the beluga in the 1930s and published a series of studies on the biology of the belugas in the St. Lawrence River and Gulf, their incidence on commercial fishing and on their economic potential (Vladykov 1940, 1943). The various techniques used to capture beluga on the St. Lawrence River were noted. The use of gill nets and shooting with a rifle or a harpoon from a motorboat or sailboat was found on the North Shore (Pointe Lebel, Les Escoumains, the north shore of Île-aux-Coudres). At Rivière-Ouelle, weirs had been used since 1720. Fishermen sunk 7,000 saplings 5,5 metres high every 45 centimetres in a semicircle covering a total of 38 acres. Belugas that entered were stranded when the tide went out and the fishermen could then harpoon them. A shareholder company was formed at Rivière-Ouelle in 1870, counting 7,200 shares worth 1dollar each. Each member held shares corresponding to the length of the weir that he maintained. The income was redistributed among shareholders. The Rivière-Ouelle beluga weir fishery was abundant, people spoke of the 'miraculous catch' of 1929 when 187 were taken in a single catch, but fewer belugas were taken every year during the 1930s and 1940s, until the fishery was prohibited in the 1970s. It must also be said that, as noted by the biologists conducting the studies, once the government dropped its support measures, the fishermen gave up the hunt. Only 300 belugas remained in the estuary.

Products derived from the beluga are known for their quality, but the market was hard to develop because the hunt was not abundant enough for industrialization. Beluga leather is known for its quality and strength. Laces made from beluga hide were particularly prized. Beluga oil, which contains free fatty acids, was also prized because it doesn't deteriorate. This melted fat was primarily used as lamp oil and had a boom with the advent of the railway; beluga was used to grease the wheels of locomotives and railroad cars. Furthermore, the finer-grade oil from the head of the beluga served to lubricate precision mechanisms, especially clockworks and armaments. The price for a litre of beluga oil in the first half of the 20th century varied from 13 cents for regular oil and Can\$6.70 for head oil. The government sought new outlets for beluga products, whose highly resistant hide could be made into clothing, shoes, bags and other leather goods. The meat could be sold to fur farmers, as had been tried in another Canadian province. An average-size beluga could bring, considering the value of its oil, hide and meat, about Can\$30 in 1943. The government also considered developing a beluga sport fishery, similar to salmon sport fishing, aimed at wealthy Americans who came to the 'Belle Province' for its natural attractions (Vladykov, 1944). The majority of beluga products were sold in England, until WWII brought an end to this trade, which was not resumed.

The beluga has been protected, prohibited from hunting and declared an endangered species since 1979 (COSEWIC, 2011; Fisheries and Oceans Canada, 2016). This

was one of the reasons that prevented the construction of a deepwater port in their breeding grounds in 2015 (Rivière-du-Loup).

Going from a source of oil to the ultimate charismatic emblem of the river and its estuary, the example of the beluga clearly shows how perceptions of what is to be protected vary from one era to the next, and also that this perception is linked to economic processes and opportunities at a given time in history. Today, the beluga, having become an endangered species, is an indicator of the health of the St. Lawrence River, a helpless bystander in the human obsession with growth and a victim of globalization and the concurrent need for deepwater ports. The beluga has gone from the status of a harmful pseudo-fish and source of fuel to that of the marine alter-ego of *Homo sapiens*. The waters that shelter this fragile cetacean today feed our nostalgia for a lost and altered nature, but which was long seen as a source of provision for industrial ends.

The end of the beluga fishery corresponds to an intensification of the eel, and then the black sturgeon fishery. The socio-economic organization already in place for the beluga fishery facilitated the installation of weirs and the creation of the limited partnership company that led to the transition toward an organized eel fishery.

Eel and black sturgeon fisheries have been very generous historically. For centuries, silver and yellow eels were commonly harvested in the SLR and estuary and could be fished throughout the entire drainage. Upon their arrival in the early 1600s, the first French settlers in the region reported that the local indigenous people were catching eels (Fortin and Lechasseur, 1993). Settlers are believed to have begun fishing the species themselves soon thereafter. Until the 1950s, eels remained the second most fished species in Québec after cod. The disappearance of eel and sturgeon fisheries, linked to the possible extinction of these species, has been announced for several decades. Eel populations are now at less than 1% of those estimated to have existed when colonization occurred (in 2010-2011, only approximately 155,000 adult females apparently travelled downstream to mate in the Sargasso Sea) (Verrault *et al.* 2012). As for the black sturgeon, it is categorized as endangered in North America and as a threatened species in Canada. The Quebec population is an exception as we will discuss later.

The industrialization of the St. Lawrence River and the Great Lakes is an important source of contamination and one of the main causes of the reduction in eel and sturgeon populations. The various military, pulp and paper and car making industries and aluminum smelters developed have polluted the SLR with different contaminants including PCBs and organochlorines. The aerial spraying of DDT to eradicate mosquito outbreaks to avoid disrupting participants at the 1967 Universal Exposition in Montreal (and probably the major backfills having expanded St. Helen's Island from the excavation material of the Montreal subway), had a very negative impact on the species, leading to the complete disappearance of this fish until the 80s. Moreover, the obstruction caused by some 8,400 dams on the SLR and its tributaries, and the turbines of some large projects, including those on the Ottawa River and especially those

in Moses-Saunders and Beauharnois, kill approximately 44% of female eels migrating downstream each year. This situation is therefore far from natural and has a direct impact on fisheries.

The environmental changes, caused by policies favouring economic growth, industries and hydroelectric development, contributed the most to the eel fishery's decline. However, no strong measures were taken by these corporations. The government also failed to halt or prevent the environmental degradation, framing this as the fishermen's responsibility. This particular process reflects a larger tendency in neoliberal contexts to favour capitalist development over environmental protection while delegating conservation's responsibility to the individual local users (Adams and Hutton, 2007; Brockington and Duffy, 2010; Harvey, 2005; McCarthy and Prudham, 2004).

The conservation status of eel and black sturgeon is evolving. In addition to the numerous international treaties and conventions to protect these resources,¹ the American eel (*Anguilla rostrata*) is designated as a threatened species in Canada by the COSEWIC (Committee on the Status of Endangered Wildlife in Canada). This makes it possible to impose certain measures to protect it and monitor the evolution of the populations. More particularly, Hydro-Québec had to install 4 upstream fish ladders on its 5,260 dams, proudly displaying its environmental goodwill (ironically, the eel is H-Q dams' emblem). The scope of this measure may seem minimal. Indeed, is this parastatal business benefitting from flexible and environmentally friendly regulations?

As for the black sturgeon, the species is already designated as being endangered internationally, and the COSEWIC wishes to do the same for the Quebec population (which is currently designated as "threatened", a less precarious status). Yet, this diagnosis is highly contested by the fishermen and researchers who have been closely managing the species in Quebec for more than 20 years. Indeed, signs of good health among the black sturgeon population are undeniable in the St. Lawrence River and its estuary. The constraints imposed on the types of catches authorized established for its preservation are now paying off. Yet, the COSEWIC, a federal agency, does not seem to take into account the reports and recommendations of provincial ministries and fishermen in the establishment and interpretation of its standard. The fishermen actually deplore the fact that they have never seen a researcher from the federal government set foot on their fishing territory and they question the validity and legitimacy of their knowledge on the species; some of the fishermen call them "potheads"!

The precarious state of eel and black sturgeon fisheries is linked to political causes and a historical context of provincial, federal and international economic development marked by industrialization and modernist ideologies that have deteriorated the St Lawrence environment. This deterioration, doubled by the industrialization politics of the state, consequently impacted negatively the fisheries. This is all related to the way those fisheries have been managed until now as will be explained in the next section.

The management of eel and black sturgeon fisheries: flowing towards the fishermen's marginalization

The eel and black sturgeon fisheries are closely linked both by the fishing technique that was used to catch them as by an environmental history and political ecology grounded in developing a primary economy that exacerbated their exploitation. Eel and sturgeon fishing, and its related activities, are also closely tied to traditional and contemporary management practices and to the conservation principles that informed these practices. Furthermore, taken as a whole, their management and conservation are shaped by access to and control over fishing spaces and practices. In the current global context, prevailing neoliberal principles concerning the use of nature, including privatization, deregulation and individual responsibility for practices now govern these fisheries.

Various anthropological studies have addressed these questions. Anthropological studies of coastal communities and fisheries in Québec date back to the 1930s, when various community studies were conducted by students of R. Redfield at the University of Chicago. One of the students was Horace Miner, who studied the village of St-Denis-de-Kamouraska. Rural studies in social science started in the second half of the 19th century with the works of Léon Guérin and later Gérald Fortin. Sociological and anthropological studies specific to coastal communities and fisheries were first conducted at Université Laval in the 1950s under the direction of Marc-Adélar Tremblay. In the 1960s, he directed a group of students, some of whom themselves eventually became professors at Laval. Various studies of communities in the Basse-Côte Nord (Lower North Shore) were conducted by Yvan Breton (1995), Paul Charest (1973, 1981), Pierre Beaucage (1968). They undertook extensive fieldwork and specifically examined fishing activities, social structures, and economic organization in the Québec and Canadian political context, describing the multi-faceted marginalization of these groups. Other studies examined the Madeleine Islands context (Claude Bariteau (Laval), Aliette Geisdorfer (CNRS)). Follow up studies were conducted in the late 1980s, and students have re-examined some of these sites since the 1990s, but no systematic research program has since been developed. Despite all of these studies, the eel fishery has not been the object of much anthropological attention in Québec. A master's thesis (Gilbert, 1995) examined the eel fishermen's economic marginalization and internal differentiation. In the natural sciences, various studies conducted by the federal and provincial governments have more particularly examined the decline of the resources and impact of contaminants as well as that of electric dams on the black sturgeon and eel population's mortality rate (Verrault *et al.* 2012; Verrault and Trencia, 2011). Currently, one biologist based in Rivière-du-Loup is working in collaboration with local fishermen to carry out such research.

The eel fishery

Eel was largely a subsistence fishery, and did not become commercially lucrative until the 1950s when export to Europe began to intensify (Robitaille and Tremblay, 1994; Laberge, 1993). The technique used to catch eels has not changed much over the centuries, and fishermen today still use what they refer to as the “ancestral technique.” In the brackish waters of the estuary, fishermen set up a fixed tidal weir called a “fascine” on a suitable piece of shore, usually located on their property.² This “net wall” blocks the eels heading downstream in the fall and leads them into a funnel where they are trapped in a wooden trunk. The number of trunks determines the intensity of the fishery for a particular fisherman (typically using 1 to 10 trunks each). The “fascine” also called “the fishery”, *la pêche*, (nets and trunks) of one fisherman can range from 40 to 700 fathoms in length. Most fishermen go in tractors to empty their trunks at low tide, twice a day, every day, during the “*dévalaison*,” (outmigration), which takes place from September to November each year. Apart from land ownership rights, the equipment needed to participate in this fishery costs approximately Can\$200,000, but most say that they need an additional Can\$5,000 each year to run their fishery (Gilbert, 1995). Fishermen, 2 to 4 to a team, are often people from the same family (e.g., father and son, uncle and nephew, brothers). Crews must put in some 20 weeks per year, in springtime and summertime, setting up their equipment, and in the fall conducting the fishery and taking down their equipment before winter comes and shore ice moves in (Gilbert, 1995). An important feature of this fishery is that it is very closely tied to land rights and land-based activities. It depends directly upon reliable access to the river shore and, for this reason, it has traditionally been conducted by farmers whose property is along the river’s edge in a ribbon farm pattern (Fortin and Lechasseur, 1993; Laberge, 1993). The fishery complemented the farmers’ schedule and physical organization of their other work activities, such as the farming and logging.

Since the first settlement of the area by Europeans, eels were caught for consumption, for sale in neighbouring villages, and later for export (live on ice) to the United States when the railways were built in the region in the 1920s. Prices were relatively low, however, until the 1950s, and this kept the total number of fishermen from expanding. At the time, the government had no measures in place to manage the fishery. In the 1950s, prices started to rise, from 0.09 cents per kilo to 1 dollar per kilo by 1960, and then to 5 dollars per kilo by the late 1960s. These surging prices were largely thanks to growing exports to Germany and the Netherlands. Witnessing this boon, the Quebec government decided to give permits to anyone who asked for one, using the motto “the sun shines for everyone” as one fisherman recalls. Soon, there were over a thousand active eel fishermen in the SLE. The goal of the state was to increase revenues for the region’s inhabitants as much as possible and hopefully to promote the region’s modernization. This, however, opened the door to increased fishing effort by fishermen who did not live on the river.

In the 1960s, the Québec government³ had an existing strategy concerning coastal artisanal fisheries which recommended the closure of all unproductive and low value fisheries. The eel fishery escaped elimination, because of the substantial economic benefits it brought (Gilbert, 1995) - so much so that, in 1974, the Quebec government paid eel fishermen to travel to Scandinavia to learn new, more efficient eel netting techniques. It also paid for the upgrading of fishing gear and employed a technician to assist them in installing new equipment, believing the eel fishery was worth the investment.

However, after the contamination crisis and the closing of the European market in the 1980s, more lucrative fisheries for salmon and black sturgeon began to be favoured over the harvesting of eels. Once again government policy was based on immediate economic profitability. Consequently, the government halted all support measures for the eel fishery.

Later, major ministerial restructuring led to a decision to jointly manage the commercial eel fishery and the recreational freshwater fishery. Eel fishermen felt betrayed by this decision, noting they were no longer considered to be real fishermen by the state. They reported losing the positive relationship they had once had with some biologists and fisheries managers who were concerned about eel fishing because, among other things, many had family in the fishery (Gilbert, 1995). Some also expressed regret that no one was being hired to survey the state of the stocks or monitor diseases anymore, and argued that government biologists were increasingly studying “nice little birds which don’t bring in any food to eat” (Gilbert, 1995). The fishermen felt abandoned by government agencies and worried they would lose access to political decision makers. Time proved them right in many cases.

Concerns over eel depletion in Québec were quite limited until the 1990s. So much so that the fishermen themselves, through their Association (l’Association des pêcheurs d’anguilles et d’esturgeons du Québec), asked for a meeting with the biologists of the Québec government to inform them about the alarming decrease in the eel population. The association was quite proactive and sought to build the glass eel population by releasing 40,000 baby eels bought in New-Brunswick into a local lake in 1999. The association’s request for government assistance coincided with the arrival of a new team of biologists in the regional bureau, people with whom close and respectful relationships have since been built. Some fishermen say the biologists have become almost like part of their family now. One biologist said that before the eel fishermen intervened, no one within the government was aware of the situation and that without their action, the eel might have disappeared from the estuary altogether without anyone noticing. Their initiative resulted in numerous studies about eel depletion, involving mutual collaboration between scientists and eel fishermen.

The studies identified Hydro-Québec and Hydro-Ontario dams as a main cause of the eel decline (Caron *et al.* 2007). The documented decrease in eel stocks left the government and Hydro-Québec with no choice but to take the situation seriously and

propose measures to mitigate the decline caused by the company's turbines and dams. With the technical and financial collaboration of the ministry and Hydro-Québec, an eel sowing program was established. This took place in 2005 in Lake Champlain and in 2006 in Lake Ontario, resulting in the introduction of 7 million glass eels between 2005 and 2010 (COSEWIC, 2012). The objective was to bring the population back to its 1980 numbers. This did not have the intended results, however, and the program has since been stopped.

Nevertheless, the eel sowing program was successful in preventing the eel population from completely disappearing. A researcher for the Ministry of Natural Resources maintains that their presence in the St. Lawrence basin contributes to their protection as a species. Indeed, if there were no eels left, no measures would have to be taken; but since there are at least some left in the river system, authorities must take them into account, whether or not they have the potential to make up a commercially viable fishery.

Another measure employed to manage the eel fishery was to cut fishing catches by half, resulting in a decrease of between 10% and 20% of the total mortality rate.⁴ To achieve this goal, the Quebec government and Hydro-Québec financed the voluntary buying back of eel permits in 2009 (MRNF, 2009). The rate of compensation was Can\$5,000 per fishing site, plus a percentage of fishing revenues from the last three years; the compensation per fisherman could amount to as much as Can\$100,000 per fisherman, for a total of Can\$2.5 million overall. The fishermen who sold their fishing permits also had to permanently give up their access rights to the coast, which had been passed down in their families for generations. This resulted in the buying back of 46 of the 67 eel fishing permits then remaining in the estuary.⁵ Older fishermen who did not have anyone to take over their fishing operations took advantage of this program, as well as others who did not have very productive fishing sites.

The buyback program was supported by some active fishermen, who thought there were too many people involved in the industry as a result of the indiscriminate giving out of fishing permits in the 1950s. Among the 21 remaining fishing permits, only 15 are being used.⁶ Even with these reduced numbers, however, their total production fell to an unprecedented low of 14 tons in 2013. Those who remain are predominately dairy farmers (except for two who are owners of the local fish store). They say that they are still in the fishery because they are the "real thing," the ones that have been fishing for three or more generations, the ones who intend to keep on doing it and pass it on to their children. Their vision of their rights and their legitimacy to continue to pursue fishing in the region is reflected in the following statement: "If somebody wants to stop the fishermen, they'll have to stop Hydro-Québec as well!"

Despite the dramatic decline in the eel population, the virtual closure of the fishery has gone relatively unnoticed, and the main causes are not discussed. Instead, eel fishery management followed a neoliberal logic and a solely profit-driven rationality. Management policies now propose new regulations, based on neoliberal principles,

which change the access and property regimes that have been in place for centuries. This approach is viewed as a better solution than temporarily closing turbines or installing migratory passages on some of the 5,260 dams during periods when eels were migrating out of the region. The individual, voluntary, and gradual withdrawal of fishermen from the fishery did not help them to organize themselves or to make this problem more visible to the general public.

The black sturgeon fishery

As for the “crisis” of the black sturgeon, its story is slightly different but also led to the implementation of a resource management in collaboration with the fishermen that culminates in a form of privatization, the allocation of fishing quotas. This species had completely disappeared from the SLR between 1967 and 1978. In the mid-80s, eel fishermen saw the black sturgeon reappear in their weirs, where it had traditionally been fished. The fishermen then decided to take full advantage of this new manna as eel catches were continuously declining.

While wading had been used to fish the black sturgeon in the SLR at the turn of the 1980s and 1990s, certain eel fishermen, using capital built namely with eel fishing and a special family experience in marine transportation (cruise passengers), bought boats to catch the sturgeon at sea by pulling gill nets. This strategy was extremely lucrative for these first bold fishermen and, quickly, other fishermen joined them in this new fishing practice. In just a few years, the estuary was crossed by small craft measuring 6 meters or less from June to September: a new small-scale fishery was born.

This emerging offshore fishery favoured the new practices that impacted social relations and fisheries management. Fishermen who used wading to catch the black sturgeon adapted their knowledge of fishing and the sea to an offshore practice. They had to learn everything, not having even previously owned a boat. Their narratives of this shows the strong impression left by fishing and the fear they have of the sea even today after practicing for more than 20 years. They often point out the risks they take and the changing nature of the SLR, which has often put them in dangerous positions. The new fishermen at sea had to learn about and tame the currents, islands, seasons and frosts, dimensions that, although important for wading, are completely different offshore.

The abundance of offshore fishing certainly stimulated wading fishermen to convert to this type of fishing practice, but this conversion is also due to the importance of defending one’s territory and having it enforced. Indeed, the boldest fishermen and those with the greatest knowledge of navigation always tried to go a little further to set their nets, intruding on traditional informal territories of other fishermen who continued wading. Wading fishermen, whose practice coexisted without interference, each on their own piece of land, suddenly had to interact and grasped the finiteness of the SLR

and its resources. The sea, which used to simply be marked by landmarks (individual agricultural lands in a “ribbon pattern” touching the sea and islands spread in front of them), became an open space fought over by fishermen who, not being clearly determined by their belonging to the land, had to venture out and appropriate what some believed to be rightfully theirs. Some of them believe that the SLR gives of itself to those who understand and challenge it and that the search for great fishing sites in this stormy area belongs to the most reckless and knowledgeable. With this, they noticed the large amounts of black sturgeons caught, astonishingly much larger than those caught through wading. Certain fishermen then sounded the alarm preventively, leading government officials to regulate this new withdrawal intensity.

Management of black sturgeon fishing was established on the recent knowledge and practices developed by offshore fishermen. To regulate the practice, the fishermen themselves proposed the delineation of exclusive fisheries zones using their knowledge of the sea. The zones correspond more or less to the living areas and working places of the fishermen practicing these fisheries. Can some fishermen’s greater knowledge of the waters, through their experience at sea as part of marine transportation have influenced the designation of these fishing areas in any way? Whatever the case, a certain imbalance has emerged in the catch capacity among the various fishermen: each with their exclusive fishing areas, the fishermen were allocated specific net lengths depending on their requests. Some requested hundreds of fishing net fathoms. Some remained modest in their request, not knowing what the government’s goal was and believing the situation to be under review; a fisherman explains the situation by saying: “I only asked for 300 feet,⁷ I didn’t want to be extravagant”. These allocations, however, remained unchanged and this same fisherman says that if he had known, he would have asked for a lot more and that now he is disadvantaged compared to the others because of his initial sobriety.

Authorities continue to manage the black sturgeon by allocating a quota by fisherman according to the length of the net to which he or she is entitled. In addition to a fixed amount of fish per year (60 tons), fishermen must, based on the regulated measured numbers, release large spawners and juveniles. Despite some initial reservations, the fishermen are fully cooperating and claim that these measures helped to ensure the very good health of stocks of this species whose marketing is, however, threatened because of the species’ precarious status internationally.

The management of the eel and sturgeon is grounded in the Québec government’s development vision that promotes above all the development of hydro-electric power regardless of the ecological consequences. Nevertheless, the parastatal agency puts an environmentally friendly spin on its communications and appears to practice what is known as greenwashing. Though not included in the discussions, such initiatives affect species conservation and fisheries management.

Despite the good faith of fishermen and their participation in the collaborative management process with the government (they inform government biologists of the

changes that they notice in their environment and in the characteristics of their catches; they voluntarily participate in inventory projects of all the species that they capture, which is an important task, particularly with regard to monitoring at-risk species such as the striped bass (*Morone saxatilis*); they declare what they catch to biologists; using a special device, they verify whether there are microchips in the eels that they catch and pass these live eels on to the biologists; they separate the smaller eels, which are most likely hatchery-reared and which have a particular growth pattern, placing them in their holding tanks for return to the biologists; they attend fishery management meetings (federal and provincial) to which they are invited; and finally, in 1999, they released 40,000 glass eels which they bought themselves in New-Brunswick, into a lake close to their fishing locations), it seems that property ownership structures have led to privatization and threaten the long-term survival of the fishery.

Both the allocation of sturgeon quotas and the buyback of eel fishing licenses represent a step towards the marginalization of this fishery by reducing the number of fishermen and thereby the fishing intensity. For the buying back case, ancestral access rights to the shore and intertidal zones, which are attached to specific land that has been transmitted by indigenous people and then passed on for generations for fishing activities, are thus measured economically, given a value (Can\$5,000 per site), then commodified, and prohibited from any further use. However, the licenses that are bought back by the government are irrevocably taken off the market. The fishermen that are still active approved these measures, most probably because it allowed them to expect better productivity by decreasing the total number of fishing sites. The fishermen who sold their licenses did so voluntarily, but without having all the information at their disposal concerning the future of their activity. Indeed, some feared to lose everything because the government was requiring that at least 50% retired from the fishery. However, without transmitting the information, and through private dealing, some sold but say they would have kept it, knowing the strategy and the outcome, and are resentful of the way it had been done.

This reduction in fishing licenses and sites seems to be taking place without any public outcry. In each case, however, there has been an economic, social, and cultural loss that has interrupted the transmission of unique ecological knowledge. Moreover, as others have discussed in different contexts (Carothers and Chambers, 2012), this change in the use of the shoreline reflects an enclosure tendency that is typical of neoliberalism. The use of the shoreline is now being prioritized for other purposes, particularly tourism and the promotion of cultural and natural heritage, as discussed in the next section. New regulations are also being implemented to protect Hydro-Québec's use of the environment, thereby enclosing places that have been available for many different uses for centuries.

Although collaborative resource management involves fishermen in the process, it does not help re-establish the fishery, because it is not their practices that affect catches. Access to and control over fishing sites and the means to fish has

historically been grounded in shoreline property rights and are key to this privatization.

Conclusion

The fisheries and their relationship to the environment are tied to the development of the St. Lawrence River and Estuary, and are embedded within a larger capitalist development. Management policies and conservation issues have impacted the activity and the lives of the fishermen and their families. Local places were transformed and new landscapes created through these changes. The disappearance of fixed tidal weirs and the creation of new fishing grounds invested by emerging offshore fishermen are emblematic of these changes and are creating new regional dynamics. The socio-environmental relationships intertwined in these changes are based on neoliberal logic, which protects industries destructive to the species, favours the commodification of the resources and fishing grounds, and maintains commercialization structures based on market relations that have atomized the fishermen, and such logic exacerbates social differentiation based, among other things, on sea knowledge and access to the land and capital.

Issues tied to the access to stocks and the fishing grounds are fundamental and characterize not only the resource management but also the ongoing social and economic marginalization process underway in the area, illustrated by the fact that those who continue practicing these fisheries do not depend on them for their daily subsistence, while others have practically abandoned them. For fishermen, it seems that the only way to save their activity is to adopt “responsible” practices to protect a resource that has been depleted mainly by other more powerful actors and to engage in a costly “natural heritage certification” process. Each individual fisherman is left to contend with the difficulty of figuring out the best solution, given the reality of the environmental, political and market constraints.

Moreover, this process of creating a heritage out of fishing places and coastal landscapes dispossesses local inhabitants from a coastal space which they can engage and experience. Rather, it is replaced by a new space destined for a tourist and neo-rural population that mainly wants to consume an undisrupted visual landscape, knowing that its fishing resources are well protected. In this sense, the campaign for the conservation of the beluga whale is symptomatic of this new engagement with nature along the St. Lawrence, even as it masks other stakes in the conservation of the ecosystem and socio-cultural organization. Given this context, the ongoing marginalization of the St. Lawrence eel and black sturgeon fisheries, whose disappearance causes surprisingly little stir despite their historic and regional importance, seems to lead to dispossession of the coastal space and points to the importance of examining the evolution of the other St Lawrence River fisheries. ○

Notes

- 1 IUCN and Greenpeace have them on their red list. In Europe, they are listed on CITES *Appendix II* since 2007 and 1997 for the black sturgeon, and managed by the EU since 2009. In the United States, the eel has no special status, but the United States Fish and Wildlife Service and the National Marine Fisheries Service have petitioned to list it as endangered (and the Atlantic States Marine Fisheries Commission published a new management plan in 2013) and black sturgeon fisheries is prohibited.
- 2 The fishing gear was formerly some 3,7 meters high, but a Scandinavian net model with a higher structure of 7,3 meters was introduced in 1974.
- 3 Guided by the Canadian program of the " Bureau d'aménagement de l'Est du Québec".
- 4 In 2010-2011, fishermen caught 9.2% of the silver eels on their spawning migration. In 2013 this represented a total of 14 metric tons. By contrast, the number reached over a 1,000 metric tons in the early 1900s and oscillated between approximately 400 and 600 metric tons annually until the 1980s [36, 49, 50].
- 5 They were over a thousand until the end of the 1980s.
- 6 The owners of the six remaining permits keep on paying the fees associated with it in order to keep their fishing rights, even if they are not fishing eels.
- 7 90 meters

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Gunayala: indigenous land, sea and islands in a global world, Panama

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It is paradoxical that although 71% of our planet is covered by water, we still call it *Planet Earth*. It is similarly paradoxical that although the Guna territory in Panama is 59.6% land (3,320 km²) and 40.4% sea (2,180 km²), and 47 out of the 49 Guna communities live on the coast or on islets scattered along the coastline, they decided to name their *comarca* (territory) *Gunayala* (lit. “mountain of the Guna”). It would clearly have been more appropriate for the planet to have been named “Planet Sea” and the *comarca* “Guna Balu Di” (“seas of the Guna”). The reason these names have been culturally unsuccessful both globally and among the Guna is not because the sea or the water is unimportant for our survival as a species. We depend on it to hydrate and feed us. Humans may not be aquatic but we are hydrophilic and our sense of place generally encompasses both water and land (Orlove and Caton, 2010: 408).

The aim of this chapter is not simply to reflect on the names of the places we dwell in but to attempt to understand the relationships – symbolic and material – that we establish with maritime spaces and the role they play in constructing the concept of indigenous territory. I therefore propose to examine the relationship between the Guna people and their maritime waters and the problems that have emerged in recent years through the commercial exploitation of the sea. This text, written following 15 years of regular but intermittent observation¹ of the fishing activities and conflicts between the Guna authorities and entities involved in business activities in their territorial waters, invites reflection on the effects of globalisation –also called oceanisation (Helmreich, 2011: 133)– on indigenous societies’ control of their territories.

The Guna sea, its multiple facets

The indigenous *comarca* of Gunayala comprises a continental mainland strip –with beaches, mangroves and cliffs– and 402 islands, most of them of coral origin. The more than 30,000 Guna who inhabit the mainland rely on its resources for agricultural produce, construction materials, medicinal plants, wild game and freshwater. They bury² the bodies of their loved ones in it. Most communities live on the islands (40 out

of a total of 49), along with coconut plantations and hotel complexes of all kinds (hotels, cabins, hostels, dormitories, camp sites, restaurants, etc.) that are managed locally by the Guna themselves. The sea is a place of transit, fishing and mystery, a space in which to navigate, predate and speculate about the creatures that live in its depths.

The Guna see their relationships with the sea and the land as being complementary. Both are extremely important living spaces for them, not only in material terms but also symbolically. The earth is commonly known as “Nana” (mother) and the sea “Muu” (grandmother). They are considered female because, like their mothers and grandmothers, they are the providers of food and shelter.

When contemplating a study of the sea in the Guna world, multiple facets need to be considered. The relationship between Gunayala’s inhabitants and the sea cannot be understood without considering the *comarcal* and State regulations governing this particular space, nor without a knowledge of the place the sea has occupied in the past, the systems of marine resource ownership, the local representation of the environment, the conflicts arising from the arrival of new entities who occupy and exploit the marine space, or even the changes taking place in the physical environment itself. The following pages aim to consider these different facets with the help of the available ethnographic data.

The sea in comarcal and State legislation

While Law 16 of 1953 creating the *comarca* and the 1995 Basic Law on the Gunayala *Comarca* provide a clear definition of the territory’s land borders, the extent of the Guna’s maritime territory remains vague. Despite their material and symbolic importance, the waters are scarcely mentioned in these texts. At no point are precise coordinates given, nor a specific number of miles from the coast. The only precise points noted refer to dry land. Despite being the main source of resources and an excellent means of communication, the sea is neither demarcated nor access to it fully controlled.

This lack of definition of the *comarca*’s marine boundaries is closely related to the legal status of the Gunayala *comarca*. It is an autonomous region of the Republic of Panama and, as such, is subject to State governance, through its rules and programmes. Panama has a considerable coastline, 1,287 km along the Atlantic and 1,700 along the Pacific. In fact, with a total landmass of 75,000 km², Panama has the highest coast to landmass ratio in the Americas (Suman, 2002: 92). This substantial coastline raises problems for marine resource management. For example, although there have been fishing regulations since 1959 (Law 17), these laws only set restrictions, closures or quotas for large-scale fishing. Artisanal fishing –common throughout the country- is neither monitored nor subject to special provisions.

The institutions established to manage the waters and their resources have not, however, enabled any effective control to be gained over the environment. Panama is

characterised by multiple State bodies devoted to the control, exploitation and conservation of the sea but with very little coordination among them. The first attempt at regulating the natural resources came with the creation of INRENARE (National Institute for Renewable Natural Resources) in 1986. A further step was taken in 1998 with the approval of the General Environmental Law (Law 41 of 1 July) and the establishment of the National Environment Authority (ANAM). Environmental policy was thus expanded and an agency was put in place to manage and plan concrete actions both for the country's hinterlands and for its 200,000 miles of coast. However, in relation to the sea, coordination with other agencies responsible for managing the national waters, such as the Maritime Authority or the General Directorate for Marine and Coastal Resources, was inefficient and only complicated the implementation of concrete actions. The Aquatic Resources Authority of Panama (ARAP) was created in 2006 (Law 44 of 23 November) with the aim of ensuring compliance with and application of the laws and regulations governing marine/coastal resources, and managing aquaculture, fisheries and other related activities. The lack of a separation of powers between ANAM and ARAP, however, often complicated the implementation of the different important actions. Finally, in 2015, it was decided to reform the National Environmental Law, creating a Ministry for the Environment and amending the provisions governing ARAP, granting this agency more powers over the maritime space.

In addition to all these institutions with competence over the marine/coastal space, there is the Tourism Authority, responsible for granting administrative concessions for tourism development –for periods of up to 40 or 70 years, renewable for a further 30 years– on islands, lands, and in coastal zones owned by the State. Although Law 2 of 7 January 2006 governing these concessions establishes that areas of tourist development in the indigenous *comarcas* must obtain the approval of the corresponding *comarcas* authorities, such businesses are not subject to their control in areas immediately bordering the *comarca*.

Lastly, the role of the State's defence forces must further be borne in mind, as these also have authority over the coastal maritime areas: the National Aeronautic Service (SENAN) and the National Border Service (SENAFRONT).

In fact, even though the 1982 UN Convention on the Law of the Sea recognises coastal States' right to exercise exclusive jurisdiction up to 200 miles from the coast, Panama's marine boundaries have not been established. On the one hand, the numerous State bodies aimed at promoting control of the coastal areas and their resources have failed to pool their energies and there is little integration of the different regulations (Spalding, Suman and Mellado, 2015). On the other, although the decisions of the indigenous authorities take precedence over those of government agencies in some indigenous *comarcas*, such as Gunayala, they do not have the necessary resources to enforce them.

In this context, as in many others, ownership of the waters is suffering from a tension between collective rights and the desires of individuals and/or groups to control the aquatic resources (Strang, 2011). Although the waters tend to be owned by the

State rather than held in private hands, the Panamanian government's actions aimed at managing its marine and island territories have been so ineffective that, against all odds, the indigenous societies living in them have managed to conserve their particular system of control over the waters and marine life.

Their historical relationship with the sea: the sea as a locus of arrival of foreigners

Even today, the elders in the communities remind the younger members that the Guna did not always live by the sea. Their ancestors came from the hinterland, their place of origin being Tacarcuna Mountain (Ventocilla, Herrera and Núñez, 1997: 33), outside the current *comarca*, in Darién, close to the border with Colombia. With the Spanish Conquest, the sea became unsafe for the indigenous populations of the isthmus. The Spanish established the settlement of Acla on the eastern coast of the current *comarca* at the start of the 16th century. This urban settlement, founded by Pedrarias Dávila, replaced María la Antigua del Darién in its role as point of departure for colonial expeditions (Parson, 1996: 25; García Casares, 2007: 136). Acla was well-known for being the departure point for Vasco Núñez de Balboa's expedition to the South Sea in 1513. It is also well-known among Panamanians and current Guna for being the place where, in 1519, Pedrarias and Gaspar de Espinosa imprisoned, tried and beheaded Vasco Núñez de Balboa and several of his companions (Mena García, 1992: 112). People began to leave Acla from the 1530s on and, by the middle of the 16th century, it had disappeared altogether. During the 17th century, however, the same coast saw the arrival of the English, French, Scots and Dutch, all rivalling the Spanish for control of Darién (Gallup Díaz, 2002). The area was strategic for trade and served as the point of departure for numerous pirate expeditions who, along with the indigenous population, had penetrated the forested areas of Darién in order to cross the isthmus and attack Hispanic settlements (García Casares, 2007: 142). The Panamanian isthmus, famous among pirates and buccaneers alike, took on even greater importance and visibility when Lionel Wafer, a surgeon who spent four months living with the Guna after sustaining a wound on board an English pirate ship, published the chronicles of his adventures, giving interesting descriptions of the region and its inhabitants (Wafer, 2012 [1681]). His tales presented the natives as sovereigns of their territories, sworn enemies of the Spaniards and allies of other colonial powers. They also described the Guna way of life in the 17th century: how they dressed, ate, their beliefs, etc. Thanks to Wafer, we know that the Guna have been exploiting the marine resources of their coasts for more than 300 years: "The Indians fish in very different ways, depending on their location: at the mouths of rivers, along the shores and in the sandy bays, where there are no rocks, they use nets similar to our own, made from *majagua* or *pita* fibres from the Antilles, which they carry in their canoes" (Wafer, 2012 [1681]:124).

The Guna say that a great *nele* (shaman) from the past foresaw that people from other lands would arrive by sea, bringing an end to peace and the good life. And the *nele* was not wrong: peace would not return to the Guna settlements until the 19th century, when the European powers abandoned their attempts to colonise Darién. This was a new era in which contact with the sea became decisive: the Guna communities decided to occupy the islands of the Mulatas Archipelago and make them their home.

This move towards the islands can be explained by a number of things. The first, although clearly not the most important, was down to purely economic motives. Around 1870, the demand for coconuts was increasing in Colombia while that of products such as cocoa and *tagua* was declining. Faced with this new reality, the Guna adapted to the demands of the market by exporting coconuts grown on the islands. Very soon, coconut became their main export product and, given that the trade was maritime, they adapted their settlements to the new source of resources (Stout, 1947; Tice, 1995; Howe, 1986). Other factors that encouraged their migration to the islands were the emergence of new epidemics (particularly malaria), the presence of predators (snakes, crocodiles and jaguars) on the mainland and the great abundance of marine resources along the coast.

Occupying the islands involved a process of domesticating the marine environment. In many communities, the *neles* (shamans) had to pacify the evil beings that lived in the depths of the sea. They say that, in the Gardi sector, the *neles* had to negotiate with the *gardule*: “spirits that lived in the depths of the whirlpools, under the mouth of the river.” The work of the *neles* here must be interpreted as part of a process of socialisation and control of the environment. References to these negotiations with beings that lived in whirlpools are common when talking of the way in which the coast was settled. Even today, despite being their home, the Guna view the sea as an inhospitable place inhabited by dangerous and evil beings with whom you have to negotiate in order to live peacefully.

Slowly, the island mangroves began to be lost; coconut was planted, houses were built and this new environment was colonised. As in other indigenous societies, property rights were achieved in Gunayala through the use and management of resources, as well as through the emotional ties that were developed with places. In a context such as this, notions of ownership were fluid: for centuries they were based on social identity, mythical aspects, knowledge, use, affective bonds and long-term occupation. (Strang, 2011).

The sea, a space for survival and cohabitation

Once settled alongside the shores, the local knowledge of this environment clearly increased. At the start of the 2000s, most fishers in the Gardi sector were able to identify 80% of fish species, 22% of invertebrates but less than 1% of corals and sponges

in the area (according to Clifton, Kim and Wulff, 1996). In all, they recognised 243 species of fish, corresponding to 165 denominations. This demonstrates that the Guna have a good knowledge of large, daytime and social fish species but are unaware of the different and varied marine flora that lives in their reefs (Martínez Mauri, 2011).

This knowledge enables them to complement their agricultural activities with fishing. Although the *comarca's* inhabitants are not considered to be primarily a fishing people, most of the men know how to fish and do often go out fishing. Without fish, most of the families would not maintain a regular animal protein intake in their diet. Some of the most commonly eaten fish on the islands are little tunny (*Euthynnus alletteratus*), jacks, trevallies and kingfishes (*Caranx spp*), horse mackerel (*Decapterus spp*), yellow tail snapper (*Ocyurus chrysurus*), other snapper (*Lutjanus spp.*) and cod (*Epinephelus* or *Cephalopholis spp*). They tend to catch them with line, harpoon, rope nets or trammel nets. Since the 1980s, in addition to traditional subsistence fishing, they have also caught Caribbean spiny lobster (*Panulirus argus*)³ for commercial purposes. There are lobster fishers in many communities, expert divers who are devoted solely to selling these and the other species they capture below the water's surface: octopus, spider crab, prawns and shrimps.

Numerous marine species are not consumed as they are considered *ised* (prohibited). Some of these restrictions affect only pregnant women and children but a good number of them have to be observed by the whole population. Such is the case of the shark, for example: the Guna believe that if you eat its meat you could become similarly aggressive. Other examples are octopus and squid, not eaten because their body shape could cause deformities in future generations. The *ised* and their consequences for those who do not respect them are a good example of how those who live in animist systems conceive of the world. Objectivising the other –both human and non-human- consists of recognising the singular properties of a physical body without this implying a different inner self. Apart from the knowledge and use of marine resources, a close association between humans and non-humans is prevalent in the Guna islands. An association which, as in various cultures of the tropical Americas, leads to humans endeavouring to intervene in relation to the other, taking over their body. And a fairly widespread way of doing this, as the Guna experience clearly shows, is by eating it (Descola, 2005: 396).

Another factor that shows us the extent to which the system of relationships with marine non-humans is dominated by principles of animist ontology is the frequent parallels between human and non-human forms of social organisation. Many marine animals, like humans, have *saglas* (leaders), and may be subject to restrictions (*ised*) or may determine the well-being of humans. One way of intervening in the health of people is by capturing their *burba* (soul, spiritual principle). The elders recount that when Baba created the world, he placed a great net in the sea to prevent illnesses from reaching the islands and entrusted its protection to *Olobindibilele* (the dolphin leader). He is responsible for controlling everything that goes on under the sea. *Suggu*

(the sawfish) is under his orders and has the task of stopping sharks and whales.⁴ *Ologailiber* holds the net and *Pugsu*, the archer, shoots at the dangers trying to cross it. In addition to the leaders of the marine animals who help humans, however, there are those that may take their *burba*, causing them disease and even death. The Guna are particularly afraid of eels, sharks, crocodiles, caiman, lizards, octopuses and rays; they have a fear of *ansu* (mermaids) and *nia* (demons). It is important to note that, in Gunayala, unlike in other nearby ethnographic contexts, it is not the shark or the crocodile itself that takes the human *burba* but the spirit of the animal, guided by its leader, that acts in this way. It is an imperceptible phenomenon for most mortals. Human beings realise they have lost their *burba* when they fall ill, and then the *nele* (shaman) intervenes. This specialist visits the patient, sits with them, burns a little cocoa in a clay brazier (*sianar*) under their hammock and lights a pipe. The smoke helps them to understand what is going on. From out of the figures drawn by the smoke, the *nele* can divine the place of the theft and who was responsible. The *neles* learn from dreams and have allies in the non-human world, the *darba*.

Some *neles* and *absogedis* (exorcist shamans) maintain that there are many diseases (*bonigan*) in the high seas that are travelling towards the mountains without the island inhabitants realising. Some *neles* can perceive their movement and advise the preparation of a particular medicine to prevent epidemics. Others advise preventing the spread of disease by observing a series of prohibitions, one of which involves not engaging in sexual relations at sea.

In short, for the Guna, the distance separating humans and non-humans has no effect on their intimacy, and the distance between sea and land does not even prevent the possible existence of very close relationships between marine non-humans and land non-humans. Their representation of the world, both marine and land-based, corresponds to the animist model.⁵ The relations they maintain with their environment are characterised by exchange. The chiefs (*saglas*) of the animals and plants offer something of value to humans, in expectation of a return. The Guna receive marine and land resources from *Baba*, or from the *saglas* of the animals and, in exchange, they care for the resources and ensure their reproduction.

The territorial sea: rights to fishing areas, sea tenure or marine territoriality

The maritime anthropology that commenced in the 1970s/80s has enabled us to: understand how fishing societies perceive, define, delimit and share what is their own; how fishers defend their rights to fishing areas; how sea tenure systems develop (Ruddle and Akimichi, 1984; Cordell and McKean, 1992); how marine resource ownership is perceived (Johnson 1996, McCay and Acheson, 1987); and how these processes are related more to systems of local management and meaning than to the particular nature of the sea (Olson, 2010).

One of the greatest contributions of maritime anthropology has been its criticism of the theory of the tragedy of the commons (Hardin, 1968). This theory maintained that collective management of resources was inefficient and generally spread the idea that efficient systems were based on privatisation. Even before Ostrom (1990) demonstrated that Hardin's examples were more a problem of open access than of common ownership, research with fishers had already challenged this explanatory model. Based on research into the traditional sea tenure systems in the South Pacific, Johannes (1978, 1981) showed that there were communal rules restricting over-exploitation. The reefs and lagoons were governed by an ownership system aimed at controlling peoples', clans' or families' access to fishing areas (Johannes 1978). For his part, Hviding (1988) showed how, in Marovo (Solomon Islands), relationships between people and resources were mediated by groups of relatives and territories. In this context, kinship groups (*butubutu*) laid down a series of regulations governing the use of marine resources with the aim of limiting access to the territory, the use of technology and the exploitation of certain species (Hviding, 1988: 54). In Melanesia, there have been and remain sophisticated sea tenure systems which, on the basis of seasonal and territorial restrictions and food taboos, have encouraged the conservation of some marine species in Papua New Guinea and the Torres Strait (Clarke, 1990; Johannes, 1982; Nietschmann, 1989).

In short, one of the great achievements of maritime anthropology has been to put an end to the idea that fisheries have no owners and to explore ways of perceiving, designating, sharing, owning and defending the marine species and their resources (Cordell and McKean, 1992: 183; Acheson, 1981; Akimichi, 1984; McCay and Acheson, 1987; Berkes, 1989). In these explorations, cases have been reported in which the sea was a place of open access for some kinds of fish while, for others, individuals and communities had developed systems of resource ownership (Acheson, 1981; Berkes, 1989). Systems have also been documented that limit spaces for control (Ostrom, 1990; Bromley, 1992). Some studies have detected the delimitation of exploitation areas connected to the development of commercial fishing. Such is the case, for example, of some communities focused on commercial shrimp or sardine fishing (Begossi, 1995).

The Guna experience is in harmony with the observations of some of the studies mentioned here. In Gunayala, there are fishing areas reserved for the members of some communities and *comarcal* regulations that prevent the exploitation of marine resources by non-indigenous people.

In general, the rules marking out access to, and control and transmission of, the land differ from those of the water. The *comarca's* forests are collectively owned by all Guna, and their title is held by the General Guna Congress, which controls their access and use. At the request of the Guna themselves, *corregimiento* (administrative area) 1 was declared a protected area by the Panamanian government in 1994 (Martínez Mauri, 2007). The yucca, pineapple, banana, coconut and other farms near the coast and in the lower reaches of the rivers are either owned collectively, by families, or they

belong to a single individual or group of producers. Gunayala's lands are not only owned –collectively or individually- but also have clear bounds in national and indigenous legislation. On dry land there are collective and individual plots, demarcated and inherited, while the sea is neither delimited nor passed down: it is collectively owned by the Guna. It therefore seems impossible for just one person to own the sea.

The sea may be inappropriable but this does not mean that access to its resources is not regulated. According to Article 205 of the Fundamental Law of the *Comarca*, only the Guna can exploit the *comarca's* marine resources. Non-indigenous people need the Guna government's authorisation to fish in the *comarca's* waters. Some communities set aside fishing areas or make access conditional upon payment of a toll. This is the case, for example, of the Gai Maoggi area (Dutch Keys) where community members who do not belong to the six peoples⁶ have to ask for special permission and pay a toll to be able to fish in the area. Another known case is that of the Gardi Muladub community, which fine anyone from outside the community who fishes on a reef close to their island. Lastly, in more recent times, some islands have designated small spaces as protected areas where no humans can fish or capture marine species.

There is a collective property system in Gunayala both for the land and for the sea which, with the arrival of tourism, is coming under severe external pressure that could change the sea and land tenure system. As James M. Acheson (2015) notes, under pressure, collective landholdings tend to become private property, while systems of collective ownership of the sea tend to turn into open access regimes (e.g. Aswani 2002). Only occasionally, when the marine resources are particularly valuable, such as in the exploitation of lobsters, does it tend to be transformed into private property.

Most classical theories (e.g. Boserup, 1965) note that property rights develop due to demographic issues, scarcity, competition over resources and cost/benefit relationships. When resources become scarce, they become more valuable and some groups develop rules to maintain differential access to them. Similarly, researchers such as Cashdan (1983) and Dyson-Hudson and Smith (1978) have suggested that territorial polices develop when the benefits the area provides are greater than the costs of defending it. This is known as economic defendability.

From an anthropological perspective, these theories raise problems. One of the first questions that arise when trying to apply them to non-capitalist contexts is: what costs and benefits do these theories refer to? Although from the point of view of a market economy we can identify certain elements such as economic costs and benefits, these concepts become questionable from other perspectives. In the Guna case, in relation to the sea, we could talk of benefits deriving from fishing and tourism, this latter stimulated by the landscape value (to the tourists) of the island space and the boom experienced by the maritime crossing between Gunayala and Colombia following the opening of the El Llano – Gardi highway at the end of the 2000s. However, many Guna do not see tourism as an advantage at all. They associate tourism with a massive influx of

visitors whom they are required to service in exchange for a few dollars, and with the growing arrival of foreigners who consume their resources and generate a huge amount of waste.

One hypothesis which seems far more in tune with the Guna reality is that proposed recently by Acheson: “High economic defendability will lead to private property and low economic defendability will result in common property” (Acheson 2015: 40). To explain why societies opt for private or collective property systems, Acheson suggests balancing the costs of exclusion and the economic value of the resources by using a revised concept of *economic defendability*. Unlike Cashdan (1983) and Dyson-Hudson and Smith (1978), Acheson considers how this capacity for economic defendability is affected by a number of physical, cultural, political, technological, productive and organisational factors. The fact that the sea is common Guna property is closely related to the local authorities’ ability to control this large space and the benefits that some communities derive from the sailing boats that frequent the area.

Disputed sea and resources

As demonstrated above, Guna settlements were located inland until around the mid-19th century. Only in the early part of that century did they begin to settle along the coast and on the islands, making marine and fishery resources their main forms of subsistence. At that time, disputes arose over some of the sea’s resources with inhabitants living on the borders of the *comarca*. In 1909, the government created a border post and a hamlet in Puerto Obaldía (on the border with Colombia). In 1915, it established the Constituency of San Blas and founded a permanent government post (Intendencia) on the island of El Porvenir. Some years later, through reports and recommendations, it began to promote the exploitation of the area’s resources.⁷ Because of these settlements, created to control the local population, non-indigenous settlers began to arrive and conflicts soon arose over the exploitation of *nispero* (the medlar tree), *tagua* (‘vegetable ivory’) and turtles. Following constant complaints from the Guna, the Panamanian government some years later regulated the capture of turtles,⁸ and established a tax payable on *tagua* and *nispero* by neighbouring inhabitants from the bordering coastline and Puerto Obaldía.

And yet non-indigenous settlers continued to flow into the area. One illustration of this is the fact that, in 1933, Brigadier Inapakinya, one of the leaders of the eastern sector of the *comarca*, was sending notes to the government complaining of Colombian fishers moving onto the island of Oro, within the reserve.⁹ In fact, the coastal inhabitants were making the most of the turtle breeding season –April to October- to capture the females and take their eggs.

In addition to conflicts over the influx of neighbouring populations, new interests appeared in the 20th century that were to be detrimental to the Guna’s control of their marine/coastal territory. With the arrival of foreign businessmen obsessed with devel-

oping tourism on the Guna island territory, new conflicts arose over control of the sea. Particularly notable were the cases of two Americans, Thomas A. Moody and Denis Barton, who established hotels on two islands in the *comarca* at the end of the 1960s. For more than two decades, the highest *comarcal* authority, the Guna General Congress (CGG) called on the two businessmen to leave the islands and cease their illegal business operations. According to the laws of the *comarca*, the islands –as part of the indigenous territory- cannot be leased to foreigners. Finally, at the end of the 1980s, the two hotels ended in tragedy. Barton's was set on fire and Moody's violently attacked by a group of young Guna (Martínez Mauri, 2010).

Despite these tragic incidents, there were further attempts by Panamanian and foreign entrepreneurs but all ended in failure. To this day, the only foreign businesses that have been successfully established in the *comarca* in spite of national and Guna legislation are the so-called floating hotels (boats that receive tourists on board).

Over the last decade, conflicts over illegally-established sailing companies have been increasing in the region (Framhein, 2002; CGG, 2010; Dumoulin and Gros, 2010, Pereiro et al., 2012). Until the start of the 2000s, the vast majority of boats arriving in Gunayala did so between December and March, being around-the-world yachts wishing to cross through the Panama Canal to the Pacific. Nowadays, however, these kinds of boats are in a minority. A large number of yachts owned by retired foreigners and chartered boats reside permanently in the waters. Many reasons have brought them to Gunayala: security (few thefts and no pirates), climate (outside the hurricane zone), cheap anchoring¹⁰ (USD 20 a month), more information on the area (publication of maritime navigation guides: Bauhaus, 2007; Lecumberry, 2004; Zydler and Zydler, 1996), more sophisticated navigation systems, and improved land transport (opening of the El Llano-Gardi highway).

These boats operate two main kinds of business activity in Guna territorial waters. Firstly, they carry backpackers from Panama to Cartagena, an activity that is permitted by the CGG. Secondly, they operate as charters: receiving tourists on board and sailing with them through the *comarca's* waters. The Guna call this activity "floating hotels" given that the boats, whether catamarans or monohulls, provide full board and lodging to the tourists. This latter activity is not permitted by the *comarcal* authorities as it is in violation of the basic Guna law that prevents foreign profitmaking and safeguards the supposed indigenous monopoly on tourist activities.

Guna society has long had established norms for the way in which it relates to the Panamanian government and foreign actors. The CGG drafted the Fundamental Law (1995), the General Congress Regulation (1993), the *Comarca* Statutes (2000), and the Rules governing Tourist Activity in Gunayala (2007) with the aim of improving Law 16 of 1953 organising the *comarca*. These four regulations were drawn up by the indigenous people themselves to reinforce their self-government. Although they were never approved by the corresponding State bodies, they do govern the lives of the communities.

Of the 41 articles contained in the rules governing tourist activities in Gunayala, 12 are devoted exclusively to pleasure craft, yachts and cruisers sailing in Guna territorial waters. These rules stipulate that vessels must obtain the authorisation of the Board of Directors of the CGG before entering the *comarca's* territorial waters and that the total number of craft must not exceed 200. Moreover, sailors are banned from: any kind of profitable activity, topographical, hydrographical or biological studies, taking photos or making films in the communities, carrying firearms, taking drugs, practising nudity, introducing foodstuffs for purchase in the communities, diving with oxygen tanks, fishing with harpoons and conducting boat maintenance tasks.

The Guna law and decisions on the prohibition of charters are clear and can be found in Spanish on the CGG's website. However, if you search the web you will often find captains advertising their boats for charter or companies devoted full-time to this kind of work. How can they operate in spite of this ban?

Although the vessels can be identified over the Internet, it is impossible to know the exact number of craft that are in violation of the *comarcal* laws. It is very difficult to distinguish them from the yachts and cruisers that pass through the area taking backpackers to Colombia or simply sailing through on holiday. When chartering their boats, many captains explain to their clients that if the Guna authorities should check or inspect the boat they must say they are friends or family.

Another reason that explains the persistence of this illegal activity is the benefits it provides to the families and communities of the seamen. The shops where they buy provisions, the families they leave their mobiles with to charge, the Guna friends who transport them, etc. They all know the *comarcal* laws and are aware that some boats are operating commercially but prefer to keep quiet about it.

Finally, and with reference to the concept of economic defendability (Acheson, 2015), it must be recalled that when balancing the costs and benefits of this activity of maintaining communal control of the sea, the local authorities may choose to both condemn and tolerate it at the same time. Given their current resources, they realise it is impossible to exercise the necessary control to eradicate it without the help of the State's security forces, and such cooperation would in fact prove problematic for them. It must be recalled that Gunayala is on the border with Colombia where drugs traffickers operate and where there are frequent conflicts with the National Border Service (SENAFRONT).

Climate change: waters and lands in movement

The pressures exerted on the territory by charter companies is not the only problem facing the Guna. Recently, the inhabitants of the smaller islands have found themselves up against a new enemy: climate change. The Guna are among those most affected by rising sea levels.

The Guna note that the landmass of their territory is shrinking by the day while at the same time their population is increasing. In order to address this problem for future generations, they are enlarging their islands by taking back some of the sea. This land reclamation, known as “filling in”, is very common in the *comarca*. As coastal families’ plots diminish, they tend to increase the household plot by “filling in” around the edges. To do this, the men take blocks of coral from the nearby reefs and sand from the river banks. While they are gathering these construction materials, they mark out the site to be filled in with wooden posts. Then they build a wall with the coral and fill it in with different layers of logs, gravel, plastic and sand.

The growth in size of the inhabited islands is directly proportionate to the reduction in living hard coral. According to the biologists Héctor Guzmán, Carlos Guevara and Arcadio Cartillo, the Guna have reclaimed a total area of 62,289 m² from the sea, while hard coral cover has declined from 60% at the start of the 1970s to 13% in 2000.

While the inhabited islands are growing through human action, the uninhabited ones are shrinking. It is estimated that, over the 1907-2000 period, the sea level in Gunayala increased by 2.00 mm each year and that, in the last three decades, it has been 2.4 mm/year (Displacement Solutions, 2014: 16). Based on aerial photos of the uninhabited islands, a 50,363 m² reduction has been observed, with total landmass declining from 664,954 m² to 614,591 m² (Guzmán, Guevara and Castillo, 2003: 1398).

As Strang reminds us, more attention needs to be paid to the relationship between notions of ownership and the material qualities of the things people want to own. The fluidity of water should thus require us to consider more fluid notions and processes of ownership (Strang, 2011), while the volatility of the islands’ landmass should cause us to bear in mind the fragility of some territories. In Gunayala, this fluidity is also of the islands. We are faced with a moving territory, one that is appearing and disappearing.

This idea of the fluidity of the Guna space can already be found in their histories of land formation. According to oral tradition, after the world was created, strong hurricane-like winds came causing great disaster: *muu* appeared, a tsunami. The word *muu* generally denotes “things that grow bigger” such as, for example, seeds. But it also refers to the sea as this can expand or contract. Although the sea is mostly peaceful and tranquil, when the wind rises or the earth shakes, it can become angry and grow. This is when the Guna call it *Muubilli*. And this is what they called it on 7 September 1882 when, at 02:50 in the morning, a great earthquake measuring 7.9 in magnitude shook the Panamanian isthmus (Ramírez, 2004: 113; Fernández, 2002). The earth moved, and a great tidal wave more than three metres high arose, transforming the land of Gunayala: some islands became submerged and, elsewhere, new reefs appeared above the surface. There are no documentary sources to bear witness to this tragedy but so many people died that *Muubilli* is to this day remembered by the elders.

It is hardly strange for the inhabitants of Gunayala to fear the sea. Although the sea is generally a fertile place for the Guna, one in which many creatures grow and breed, they feel that its rising levels may one day force them from their homes. As noted by

Krause and Strang (2013), the water can be bountiful but it can also threaten life; this depends on the time, amount, formation, spatial distribution and socio-economic control of its flows. Given the threat of rising sea levels, some Guna communities have already stated a desire to return to the mainland and one, Gardi Sugdub, is already planning a new settlement in an area close to the El Llano – Gardi highway (Displacement Solutions, 2014). Since 2010, this community has been asking the government to be relocated to the mainland. Many of the media have highlighted their demands.¹¹ Slowly, the island is becoming symbolic of the global problem of climate change.

Conclusion

The sea and the lands that are in contact with it form fluid territories in which resource ownership systems can be developed. The Guna experience shows the extent to which sea tenure systems exist, are viable and need to be recognised. Unfortunately, they are often fragile and still only partially understood (Hyndman, 1993). It is therefore hardly surprising that many violations of the sea tenure system never get as far as the courts (Johannes, 1978). In contrast to abuses of the land tenure system, territorial rights to waters tend to be denied by States. Many refuse to approve regulations governing access to maritime areas inhabited by indigenous peoples and make no effort to regulate the use of marine resources in accordance with the local lifestyle. This difficulty in establishing clear property systems over water is related to the very materiality of the environment (Strang, 2011). Unlike land, the ownership of which is facilitated by its physical demarcation with fences and panels, and which act as culturally recognisable indicators, water –like air or wildlife- is more difficult to own (Rose, 2004: 280).

Land is passed down and has greater value from a symbolic and material point of view. The fact that the *comarca* in which the Guna live is named Gunayala (“mountain of the Guna”) is in line with this perception of the environment. In the local consciousness, dry land forms a more stable territory, one that can be demarcated and controlled far more easily. And yet the waters, both salt and fresh, are vital for the survival of the *comarca*’s villages. Without it, there would be no fish, no drinking water, no hygiene. This is why the sea and rivers do not belong to everyone. Given the great mobility of the world’s population and the lack of local means of control, they are open to all but they belong to the Guna people and form a fundamental part of their territory.

Historically, the sea has been a place of contact, both for the Guna and for many other peoples. It is via the sea that the Spanish, French, English, Scots and Dutch all arrived in search of great treasure. They brought with them new products and new knowledge, but also death, pillage and exile. When they left, the sea became a place of mercantile contact. Developments in the coconut trade during the 19th century were only possible because of the easy movement permitted by the Atlantic Ocean. Today, the sea is also a place of contact and provides benefits through tourism, although this

new industry is creating new territorial problems. Although Guna political autonomy, consolidated during the first half of the 20th century, led people to believe that foreign investment would no longer threaten their territory, the presence of sailing boats practising illegal activities while the Guna authorities are powerless to stop them raises new challenges for the future and for the long territorial struggle of the Guna people. The proliferation of these vessels, free from any form of control, is forcing free access to the waters and raising new problems for the environment, such as for example waste management¹² and harm to the coral reefs when at anchor.

The experience of the Guna people enables us to broaden our focus on the complexity of water tenure systems. Tourism is not only transforming the identity and economies of the islands but also bringing about changes in the perceptions and systems of sea tenure. Although these latter changes are yet to occur in the Guna case, their authorities are increasingly concerned with controlling access to their territorial waters. These and other concerns related to the arrival of visitors to the region have been the object of constant debate. At the last extraordinary congress on tourism held in Mamidub community in August 2015, the ban on floating hotels was reinforced and, at the time of writing, the Guna General Congress is proposing to declare the sea a protected area. ○

Notes

- 1 Some of the data in this article was obtained through participation in the “Strategic Study of Tourism in Kuna Yala (Panama)” (CID07-009 SENACYT 2008-2011), “The rights of indigenous peoples in Latin America. An interdisciplinary exercise based on its forms of recognition and exercise” (SEJ2007-61209, MEC 2007-2010), “Bird life in the western sector of Kuna Yala: Inventory, Ethnotaxonomy and Tourism” (CCP09-015 SENACYT 2010-11) and “Consolidating guides in bird observation” (CVP11-013 SENACYT 2014-15) projects.
- 2 Most Guna are buried in cemeteries on the mainland, with the exception of small animals and babies who are buried on the islands themselves. Some families have established small cemeteries on islands they own although this is not usual practice.
- 3 For more information on lobster fishing in Kuna Yala: Cf. Abelló and Díaz, 2001; Castillo and Lessios (2001); Spadafora (2000); Ventocilla et al.(1997).
- 4 Whales are not seen in Gunayala but they do sometimes appear in local storytelling. Their inclusion is likely due to contact with foreigners and the trips some Guna sailors made on board European ships.
- 5 According to this ontological system, plants and animals are not merely there to conceptualise the social order given that the basic categories of social practice are decisive factors when considering the relationship between humans and non-humans (Descola, 2005: 179).
- 6 The six peoples is a confederation formed by the communities of Magebgandi, Niadup, Tigre, Narganá, Corazón de Jesús and Río Azucar.
- 7 Cf. Law 56 of 28 December 1912. Narciso Navas 1909, “Estudio sobre la cría de tortugas y careyes en la costa Atlántica”; 1910, Report No. 9; 1910, Report No. 10 of 1910. N. Navas to the Governor of Colón Province, 9-4-1909; N. Navas to Porras, 2-8-1913. N. Navas to Eduardo Navas, 1-15-1913. S.J. Piliides “Memorandum Notorio sobre San Blas”. ABP: Presidencia cartas generales, letras L-M, 1913, vol. V, box no. 17. Ministry of the Interior and Justice (letters) Vol. I, series 5, year: 1912-1914. Cited in: Howe, 1998: 98; Herrera, 1984: 95-98.
- 8 According to Decree 68 of 28 April 1915, the sale and capture of turtles by non-indigenous peoples was banned along the coast between San Blas and Cabo Tiburón. It became an exclusive reserve for the Guna.

- 9 Archivo de la Intendencia, El Porvenir: Carta, De: brigadier general Inapakinya, A: J. A. Jiménez, secretario MGJ; 6-6-1933.
- 10 At the start of the 1990s, the Guna authorities began to charge the sailing companies. The first tax imposed was five US dollars for three months' stay and one dollar per visitor, then eight dollars for three months. Since the CGG held in Achutupu in 2007, each captain has had to pay 20 dollars a month anchorage fee in the comarca. Luxury yachts pay 50 dollars a month. These taxes do not give the right to anchor anywhere in the comarca, as some communities require a payment of five to ten dollars to anchor in their immediate vicinity. This is the case of Tigre, Ugubseni, Gardi, Narganá, San Ignacio Tupile, Isla Pino and the Dutch Keys. In addition to the Guna taxes, sailing companies have to pay national taxes to immigration and to the maritime authority (sailing and navigation permit for three months).
- 11 See for example the following news items: La Estrella de Panamá, 17/07/2015: "Desaparecen más islas por el cambio climático", <http://laestrella.com.pa/vida-de-hoy/planeta/desaparecen-islas-cambio-climatico/23879631>. La Prensa, 29/09/2014: "Cambio climático causará el traslado de 28 mil gunas", http://imprensa.prensa.com/panorama/Cambio-climatico-causara-traslado-gunas_0_4038346182.html. El País, 09/12/2014: "Los gunas se quedan sin islas" http://elpais.com/elpais/2014/12/09/planeta_futuro/1418135985_659104.html. CCTV America: Land of Kuna Indians of Panama in danger from climate change and pollution, <https://www.youtube.com/watch?v=1Ujy4010460> Telemetro, 24/09/2014, "Estudio revela hundimiento en isla de Gunayala": http://www.telemetro.com/nacionales/Estudio-revela-hundimiento-Guna-Yala_3_737356311.html
- 12 On waste management plans: Howe and McDonald, 2015.

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The defence of Lafkenmapu: rethinking the sea from the Lafkenche communities of southern Chile's coastal zone

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The Lafkenche Law was enacted in 2008¹ and it sets out the legal concept of the marine coastal space of Chile's native peoples. A long participatory process on the part of the indigenous communities of Chile's southern coast thus ended in the production of a legal text that was to provide legal recognition of their rights to sea-related natural and cultural resources. This has raised new challenges in terms of the legal recognition and delimitation of indigenous territories in Chile which, thus far, had been considered exclusively from the perspective of dry land. Of the 25 communities that have registered requests since this legislation came into force in 2009, only two have managed to gain control over the management and administration of their marine coastal areas: the native peoples of Punta Capitanes (Fresia commune, Los Lagos region) and Trincao (Chiloé). For the inhabitants, this means recognition of their customary use of these spaces, over which they are granted different rights related, for example, to fisheries exploitation, benthic resource management, seaweed harvesting and also to the implementation of recreational and religious activities, flora and fauna protection, and tourism.

The main architects of these legal changes to the way in which indigenous territoriality is viewed and managed were not the legislators but rather the indigenous communities of the country's south themselves, grouped together under the name of "Lafkenche". Lafkenche is the name given to one of the geographical areas of the Mapuche world, corresponding to the communities that live along the coast and whose economic and spiritual lives are intricately bound to the sea or *Lafkenmapu* (*Lafken*:

sea/water; *Mapu*: land/territory). Together with the Nagche (“people of the lowlands”), Wenteche (“people of the plains”), Pehuenche (“people of the Pehuen” or mountains) and Huilliche (“people of the south”), the Lafkenche are an expression of the cultural and linguistic diversity present within the Mapuche people, who are often incorrectly considered to be a homogeneous whole.

The Lafkenche have introduced new factors into indigenous demands in Chile, as these have traditionally been aimed at resolving land tenure conflicts and related political rights to territory, without considering the marine environment. Just as these conflicts are a result of strong pressure placed on the communities’ lands by extractive and energy companies, demands related to the use and management of maritime natural resources are a result of disputes over their unbridled exploitation for purely economic gain, to the detriment of the local populations.

These circumstances have led the Lafkenche to organise and mobilise not only to defend their marine territory but also to gain recognition for a set of practices and ways of being in the world that has passed down from generation to generation. In this context, an ethnography of Lafkenche mobilisation is required in order to understand the sociocultural aspects that are interwoven into the political and economic events that have taken place over the last 20 years in Chile.

We will thus look at two forms of mobilisation that have taken place in recent times, and which have sought to gain recognition for coastal communities’ rights and for the particular bond that the inhabitants have with the different entities that make up *Lafkenmapu*. The first has taken place on a local level and relates to the opposition raised by communities affected by a pipeline construction project. The second refers to a wider process related to the formation of the Lafkenche movement, which has sought to introduce epistemological changes into the very structures of the Chilean state. This Lafkenche aspiration forms part of a continental trend by which a number of indigenous movements have, over the past decade, attempted to “transform” (Sousa Santos, 2010) the nation states by making epistemological changes to their structures, in particular their laws and constitutions, as for example in the case of recognising the “rights of nature” (Acosta and Martínez, 2011).

The roots of the “CELCO conflict”

One major conflict related to the sea in Chile and how it is conceived and used is undoubtedly that of the resistance movement organised by the Mehuín² communities for the last 20 years. The way in which this conflict has developed is an illustration not only of developments in the Chilean state’s relationship with the Mapuche communities but also of how Mapuche communities and organisations have managed to impose new ontological ways of conceiving territory onto the public and, in particular, political scene.

José Ruiz Caniulaf recounts that, in the mid-1990s, a group of Mapuche artisanal fishers from the villages of Mehuín and Mississippi began to organise to oppose the construction of a pipeline that was going to discharge industrial waste into their fishing zone. This pipeline was the project of a CELCO (Celulosa Arauco y Constitución)³ plant that was producing bleached Kraft cellulose from pinewood (*Pinus radiata*) and eucalyptus (*Eucalyptus globulus*).⁴ By 1998, once the artisanal fishers had organised themselves into a committee and increased their capacity to gain external support, they managed to bring construction of the pipeline to a halt. In the end, the so-called “Valdivia Plant”, which had begun operating in San José de la Mariquina commune in 2004, began to discharge its liquid industrial waste (LIW) into the Cruces River instead. Just a few months later, environmental organisations and neighbourhood groups began to warn that the river was becoming contaminated and that black-necked swans from the “Cruces River Nature Sanctuary” were dying.⁵ As an alternative, CELCO then proposed building a pipeline almost 37 km long that would discharge the plant’s liquid waste into the sea, in exactly the same place as had been proposed in the 1990s, namely Mehuín Bay. Although this decision was seen as a new stage in the so-called “CELCO conflict”, the communities of Mehuín and Mississippi (see Fig. 1) viewed it simply as part of an ongoing and latent threat to a resource that was essential to their daily lives. It was in the context of their opposition to the pipeline that the communities began to self-identify as Mapuche-Lafkenche, focusing in particular on their close ties with the sea.



Figure 1: Panoramic view of Mississippi village, Mehuín Bay, from the mountains, in Maiquillahue community (©Ana Guevara)

Genesis of the Lafkenche

To talk of a Lafkenche territory and population involves referencing polymorphous and age-old interrelationships between indigenous communities and their environment. In the territories of the so-called Valdivian Temperate Forest Ecoregion, now occupied by Mapuche-Lafkenche communities, anthropic action has modelled the environment primarily since the start of the Holocene, intensifying at the time of contact with European societies, when the southern Austral landscape was recognised and described by chroniclers, missionaries and travellers (Camus and Solari, 2009; Lara *et al.*, 2012; Torrejón and Cisternas, 2002).

Lafkenche also involves reference to an ancient socio-political organisation of Mapuche society. The chronicles and maps of missionaries who settled in the south of the Chilean kingdom in the 17th century already indicated the existence of various groups or provinces inhabited by Mapuche populations, delineating several *butalmapu*⁶ (Boccara, 1998). *Lafkenmapu* itself is explicitly mentioned in this literature dating from the 17th century (Boccara, 1998). José Bengoa (2003) insists on the day-to-day importance of the sea to the “ancient Mapuche of the south” as well as the numerous rivers that drain into it. The first chronicles and other documentary sources refer to the common use of canoes and other boats. The existence of maritime activities among the indigenous populations that settled along the coast is also noteworthy, such as the harvesting of seaweed and shellfish and the successful fishing of seabass (*Argyrosomus regius*) (Martínez 1995).

Beyond a simple regional delimitation, this demarcation of the Mapuche world corresponded to spaces in which alliances were built between the different *butalmapu* in order to present a common front to the Spaniards. Guillaume Boccara (1998) explains that, during the 17th century, there was a crystallisation of power within these macroregional units and this resulted in various transformations involving their greater autonomy, as well as a feeling of common belonging and the emergence of specific ways of relating to the colonial power. This process of “ethnogenesis” led to the transformation of these temporary and contextual spaces into real territorial identities (Le Bonniec, 2002) with their own capacity to take political decisions within their territories. The Lafkenche thus appear to be among the first groups who came together to agree peace with the Spaniards in 1724, while others maintained their rebellion. The territorial identities that emerged from this historic process of ethnogenesis are now known as Lafkenche, Nagche, Wenteché, Pehuenche and Huilliche, and have developed their own distinct identities within the overall group known as the “Mapuche people”.

With Chilean independence and the formation of the State on Mapuche territory, the *butalmapu* lost their importance and were often relegated to a glorious Mapuche past associated with the history of their great chiefs who ruled over large stretches of land until the second half of the 19th century. Apart from their political aspects, linguistic

and cultural variations have remained between the different groups that identify more generally as the indigenous Mapuche people. In other words, and as noted by the anthropologists Teresa Durán and Héctor Mora (2005): “each one of these [enclaves] has taken on its own symbolic and identifying elements, although this intra-diversity is of no threat to the unified vision of the Mapuche material and symbolic world in terms of its fundamental features.”

Although the Mapuche continued their demands for recognition as a people throughout a large part of the 20th century, a discursive turn occurred at the end of the 1990s towards focusing more on the local and “traditional” bases of the communities. On the one hand, they sought to reclaim long-lost forms of organisation through the “reconstruction” of historic territories such as the *lof* and *ayllarewe*. On the other, this change resulted in the recognition of local traditional authorities such as the *lonko* (political or ceremonial chief), *machi* (shaman), *ngenpin* (wordmaster) or *werken* (messenger). The traditional authorities’ demands thus, in some way, became a way of validating structures historically proscribed by the State, seeking to re-establish cultural, and thus territorial, control.

The emergence of the Lafkenche movement over the last two decades is in line with this trend and illustrates how the Mapuche have attempted to overcome the geographical, administrative and epistemological boundaries established by the monocultural Chilean state.

Extractivism and energy projects on Lafkenche territories

The territorial focus of modern Lafkenche discourse is also a response to new threats to their natural and cultural resources and thus to their ways of being and living. In fact, Chile’s current economic development is based primarily on the over-exploitation of natural resources found largely on indigenous territories.⁷ In *Lafkenmapu*, the communities have had to confront different extractive companies, above all in relation to the emergence of pinewood and eucalyptus monocropping over vast areas of land bordering the communities. These intensive plantations have replaced thousands of hectares of native forest, to the extent that they have transformed the local landscape of a large number of neighbouring Mapuche communities (Guevara and Le Bonniec, 2008). Although this forest presence has offered new job opportunities to the Lafkenche communities, as day labourers for example,⁸ it has first and foremost caused damage and harm to the different areas. It has made the natural and spiritual environment of the communities more fragile, resulting in droughts and a loss of both plant and wildlife biodiversity (McFall, 2001), and has facilitated the spread of diseases⁹ due, according to some inhabitants, to the close proximity of intensive forestry operations (Boccaro, 2007).

In an area of land scarcity and above average rates of poverty when compared to the rest of the country (CASEN 2009), forest exploitation has been flagged up as

one of the main causes of the so-called “Mapuche conflict” that exploded onto the public scene in 1997 (Bengoa, 1999) and which has remained to this day albeit in different forms and with varying intensities. The Lafkenche movement, formally known as the “Mapuche-Lafkenche Identity of Arauco Province”,¹⁰ submitted a document to the government in 1999 entitled *De la deuda histórica nacional al reconocimiento de nuestros derechos territoriales* (“From national historic debt to recognition of our territorial rights”) aimed at offering a comprehensive proposal for resolving the “Mapuche conflict”. The organisation, headed by Adolfo Millabur, a Tirúa councillor,¹¹ stated in this document:

“We now have to recognise that the large forestry companies, private investors and sea fishing companies are largely responsible for the deterioration in our territorial spaces and for the conflicts arising from this and which we are now facing. We see that the forestry companies have bought up - for their own benefit - Mapuche lands that were usurped by private individuals not so long ago or which were taken by the Chilean state itself”.

The document highlighted the need to recognise the “territorial spaces of Lafkenche heritage” through their own forms of development and local government. This proposal was based on what were considered the guiding principles of Mapuche culture and society, such as the concept of *Icrofil Mogñen* (translated as “biodiversity”) or the traditional organisation of the *lof* under the more modern form of “territorial spaces of heritage”. The “development option” proposed by the Lafkenche communities of Arauco was based, in part, on indigenous knowledge and wisdom, rejecting the intensive model of natural resource exploitation promoted by the State. It further proposed that their territorial spaces of heritage should replace the State-imposed territorial management and administrative structures such as *Títulos de Merced* (land titles), associative status communities and Areas of Indigenous Development.

This proposal was one of the first in southern Chile to raise the possibility of socio-environmental logics other than the hegemonic discourse and to link this latter to the negative consequences the forestry industry was having on the Mapuche communities. The collateral impacts of forestry activity on the indigenous territories, such as the construction of large highways or cellulose plants, has not, however, yet been quantified.

Since this first Lafkenche proposal, socio-environmental movements have gradually come together in *Lafkenmapu* not only around their discourse but also around their experiences, the symbolic and spiritual dimensions of their maritime environment. An ethnography of the practices of resistance being implemented by Lafkenche and non-Lafkenche fishers from Mehuín helps us to gain an improved understanding of the contexts in which this ontological dimension is emerging and to see how the social memory of these groups is formed.

Ethnographies of a conflict

Various ethnographic studies (Biskupovic and Le Bonniec, 2008; Skewes and Guerra, 2004; Morales, 2013) have been conducted into the disputes and conflicts created by these new threats to the sea. These studies are in line with a growing concern for environmental conflicts in Chile and Latin America, their mobilisations and their effects on the affected communities. However, they also provide ethnographic material that is highly relevant to our understanding of the sociocultural features of the conflict, which involves both Lafkenche and non-Lafkenche. The discourse and narratives created within this conflict have focused not only on environmental and economic dimensions but have also highlighted the relevance of multiple local ways of socialising the sea. This Lafkenche “re-emergence” is reflected on different levels ranging from the intimate to the international.

The conflict has thus had unexpected consequences and effects in ceremonial contexts, as in the case of the most important ritual of the Mapuche-Lafkenche, the *Ngillatun*.¹² During meetings organised to prepare for this ritual in one of the affected communities, and particularly during their *Junta Chica*,¹³ representatives from the most important sector lineages began to raise their concerns at the threat CELCO was representing and its consequent pollution of the sea.

Gradually, public events protesting at the pipeline began to start and end with a *Ngellipun*,¹⁴ i.e. a small ceremonial prayer which, according to José R. Caniulaf, serves to protect them from the outside and thus “scare the evil spirit”, pray for the community “to do well”, and “to obtain and give us *nepen* (strength)” in the face of fragile situations and external threats.

At different decisive moments in the conflict, there have been times when “the sea has been entered” with horses, ridden by representatives of the “traditional” families of the coastal Lafkenche communities, thus reproducing one of the ritual actions of the *Ngillatun*: the *awin* or horse ride to drive away evil spirits. This entering of the sea, according to the Lafkenche of the coastal community of Maiquillahue, enables them to “communicate better with the *Ngen* or owners of the sea and for our supplications to reach *Nguenechen* more quickly” (José R. Caniulaf).

Along the same lines, a re-establishment of the ritual offering of fish and shellfish has often been proposed, as a complement to other offerings that are mostly associated with the “land” in the context of the *Ngillatun*. This can be seen in comments from participants who evoke the historical memory of Lafkenche rituals with phrases such as “in the past there were offerings to the sea but we have forgotten them...” or “the ancient [Lafkenche] used to ask for a good harvest from the sea with offerings” or even the memory of moments experienced in contact with the sea: “I remember my grandad telling me that past generations from here would carry out a ritual involving entering the sea”.

Emergence of a Lafkenche ontology in the arena of conflict

The Mapuche generally, and the Lafkenche in particular, maintain a close and complex relationship with their environment, which is expressed in different aspects of their daily and spiritual life and which enables them to recognise, inhabit and symbolise the domestic, sacred and mythical spaces of their territory. A particular way of perceiving the marine environment can be identified within Lafkenche thinking in which, in addition to human beings, this environment is inhabited by non-human entities that the people call “natural beings”. These beings live in, interact among and with humans and are rooted in a specific maritime space.

Previous studies have noted that, in both daily life and at highly ritualised and codified moments such as during the *Ngillatun* ceremony, what we call a “logic of permission” operates. Through this logic, which is repeated throughout multiple activities and narratives, permission to use a natural element or nature is requested primarily of the non-human entities. It can thus be said that the term “permission” structures a certain way of thinking as well as actions undertaken particularly in relation to the environment, whether on a personal, family or community level (Guevara, 2011, 2015; Bacigalupo, 2007). Studies such as those of Grebe (1992, 1993) and Antona (2014) consider that this logic of permission is based on affects towards non-human entities which are considered the “guardians of nature”.

From these interpretive frameworks, we can posit that the Lafkenche have a specific ontology of the environment and the sea in particular, i.e. a way of “being in the world” (Latour, 2012; Descola and Ingold, 2014) and of identifying human and non-human beings in a maritime territory. This particular vision of the space formed in the context of different ontologies associated with a Lafkenche territorial identity was explained in 2007 by the fisher and Lafkenche leader of the Sea Defence Committee, Boris Hualme:

“We have a fairly holistic vision because we do not simply observe the pollution or death of certain resources that are economic but view the whole biodiversity that is here, that exists in this territory. Ours is also more sociocultural, this territory involves sacred spaces, religious and spiritual spaces, there are cultural spaces that we have to defend. This is a different view from that which is common in Chilean society.”¹⁵

This distinct view of certain ontological concepts has been passed down in different ways (both material and immaterial), including stories, ritual prayers (*ngillatun*) and dreams (*pewma*). The pipeline conflict has thus involved ontological and socio-political dimensions that are based on the Lafkenche community’s particular bond with their environment and waters, in particular *Lafkenmapu*. Faced with the threat of pipeline

construction, these dimensions have taken on greater strength through an appreciation of narratives passed down in the coastal communities and which inculcate respect for and the “permission” of the *natural beings* (Table 1). Sofía Caniulaf, daughter of the Maiquillahue community *lonko*, explains that the *Ngen* are: “the spirits that inhabit nature, they are always present, they are the owners of all we can see ... and also what we cannot see because the natural beings are all around us. You learn this when you are very little, these words are passed down from the elders, that we must respect them, ask their permission and not trouble them too much so as not to annoy them”.

Stories associated with *Lafken*, the sea

The story of the *Ngen ko*, which translates as the masters or owner-spirits of the water, is often told in its different variants in the Lafkenche communities. The *Ngen ko* is a multi-faceted figure that is linked to the water, and associated with a Lafkenche ontology of how the water is experienced and viewed as sea, lake or river. The *Ngen ko* or *owner-spirits* can live and exist, according to the Lafkenche of Maiquillahue and Mehuín, in different geographical spaces such as an estuary, waterfall, lake, the sea or the ocean. These *Ngen ko* interact with other *Ngen*¹⁶ present not only in the immediate environment but also in other places and temporalities. As Elio Caniulaf notes: *The sea has Ngen, the Ngen ko. Because each element of water has its owner. The Lafken, the sea, is strong and has its owner, because when it gets rough, no-one can enter. And when it is calm, you can enter at will.*

Some of the tales related to the sea and the beings that live within it have taken on greater force during the more tense moments of the conflict with CELCO, and the story of *Mankian* (Faron, 1963; Carrasco, 1989; Kuramochi, 1992; Foerster, 1993; Ñancupil undated) is particularly noteworthy. It is interesting to note in this regard that “access to the sea has generally been circumscribed by stories of fabled restrictions such as the *Mankian* stone or *Nometulafken* – the land on the other side of the sea- where some Mapuche believe that the spirits of the dead go to rest” (Ancán, 2002:111).

Over the years,¹⁷ we have been able to obtain different versions of this story, primarily within the Mapuche-Lafkenche community of Maiquillahue. The general features of *Mankian* show that he is a human being who, through his failure to respect the natural spaces, the protocol for accessing natural beings and, above all, the forces associated with *Ko* (water), was gradually turned to stone, suffering greatly in the process. Elio Caniulaf tells us his version of *Mankian*:

“This is the Epeu [history, story] of *Mankian*. The *Mankian* that captured shellfish in this part [of the sea] went off to fish and, before low tide had arrived, he saw the estuary running there. And he began to tease the estuary telling it: “Look how your pee [urine] runs. You’ve

had enough and you can't stop peeing." And with this he stretched down to take the water but it grabbed him by the hand; he tried to free his hand but it grabbed the other. Eventually he was completely trapped. The water next grabbed both his legs and he could not get free. So there he stayed. In the end, his family went down the next day and took him food and so on. I think they even took a shaman to him who invoked nguellipun and prayers but they could not release him, they could not free him. They "pulled" him so hard he cried out in pain because he was now part rock/part man. So he had to tell the people not to come any more as he now had everything he needed. They took no more food and there he stayed a while. Then, as the tide went out, the sea took him and turned him into stone right there in the sea, and there he stayed. [...] This is why you shouldn't mess about with the estuary, far less with the sea, you have to ask permission and not annoy them too much or they may get angry and you can see what happens."

Some of these Lafkenche tales have served as a backdrop and interpretive framework to the events surrounding the imminent construction of the CELCO pipeline in Mehuín Bay as well as the different stages of the confrontation with the cellulose company. In the case of the story of *Mankian*, the focus and relationship that it aims to establish is that as CELCO is failing to respect the *Ngen ko*, in line with the protocol of "requesting permission", it has suffered and will suffer the consequences of this transgression of nature. The fact that the sea became agitated and "angry" when the company's technicians came to gather scientific samples for one stage of the project was, for example, interpreted as a warning from *Lafken* (the sea) and its associated forces. There is thus an anthropomorphisation of *Lafken* that can be seen in a range of emotions ranging from tranquillity, *the sea is so quiet today*, to anger, in expressions such as *the sea has become angry; it won't let anyone through*.

Based on our ethnographic data, it can be seen that the Lafkenche have established a possible relationship between the mythical figure of *Mankian* and "*la Barra*", a great rock where the currents are dangerous but which has to be crossed to gain access to areas offshore of Mehuín and Mississippi.¹⁸ "*La Barra*" is mentioned by all fishers, as it requires experience and courage to be able to cross it during a storm and return safe and sound. Many fishers say: "*We have given prayers to cross; we have put ourselves in the hands of whatever forces and saints there are.*" Women and children look out from their windows or go down to the bay to ask for news of the boat and its safe arrival.

Natural beings mentioned in Lafkenche oral histories from the conflict zone	Main characteristics
<i>Ngen Ko</i>	Spirit-Master associated with <i>Ko</i> (water). Can live in streams, waterfalls, lakes, the sea. Multi-faceted being (water, wind) that interacts with other <i>Ngen</i> and <i>natural beings</i> .
The Bull	A being in animal form that is considered sacred and which can turn into a bird or a fish. It is linked to the <i>Lafken</i> (sea, lake) and <i>Mawida</i> (mountain, volcano).
<i>Mankian</i>	A being that may be found in human or non-human (condor) form and which turns primarily to stone when, as a human, it violates or mocks nature.
The seahorse	A being that appears in order to announce some misfortune or a strong sign from nature (tidal wave, external threat, imbalance in nature).
The sea wolf	A being that appears when there is a lack of “respect” for <i>Ko</i> (stream, estuary, sea). Generally associated with a female human figure.
<i>Kai Kai filu</i>	Serpent that lets the sea rise. Associated with <i>Trentren</i> , the serpent that makes the mountains rise. The presence of the two serpents enables a balance in nature and in the Mapuche. <i>Tren Tren</i> and <i>Kai Kai</i> form part of the oral history of the origin of the Mapuche people.

Table 1: Non-human entities associated with the water (*Ko*) and sea (*Lafken*) in the Lafkenche community of Maiquillahue Lof, based on ethnographic data collected in 2008, 2009, 2010 and 2012.

When the Lafkenche communities organise for Lafkenmapu

As these different socio-environmental conflicts emerged in the coastal communities, an important Mapuche organisation began to form in Chile known as the Lafkenche Identity Territorial Movement. This movement was formed of communities and organisations from different regions of the south of the country who wished to respond to common concerns over the control and administration of their maritime territories. This

process began, according to one of the participants, Boris Hualme, through informal phone conversations and messages and, finally, managed to bring the members of dispersed communities together and thus “strengthen our vision as Lafkenche” (Hualme, 2003: 327).

As we have seen, headed by the mayor of Tirúa, Adolfo Millabur, the Lafkenche movement’s first steps in the national political arena came in 1999 with different public demonstrations (occupations of forest lands claimed by communities, marches...) aimed at publicising their proposal “*From national historic debt to recognition of our territorial rights*”. This proposal emerged, more properly speaking, from a group of communities in Arauco province; however, the movement gradually gained ever more influence outside the administrative boundaries of Tirúa commune and Bio Bio region. Tirúa community’s resources, both economic, administrative and in terms of international relations, have enabled the movement to extend its influence to communities and organisations along the coast of the 9th and 10th regions and to create synergies with other notable Lafkenche organisations from other communes.

One such organisation is Newen Pu Lafkenche (“Strength of the Lafkenche”) in Carahue commune, bordering Tirúa but located in the 9th region. Since it was established in 1998, the association has gained specific experience in marketing *cochayuyo*, an edible seaweed; participating in an intercultural health programme; designing a Participatory Territorial Development Plan of Cultural Relevance; and also creating a “regional good governance board”. Its strategy has been one of clear intervention and participation in public bodies, not only to obtain a degree of decision-making power within them but also to “repoliticise the culture and ‘culturise’ or ‘Mapuchise’ politics” and propose “a new way of doing politics, legislating, governing and reaching agreements with powers outside the community” (Boccaro, 2004). This association is not unique in this regard as there are various Mapuche organisations sharing a similar strategy of aspiring to make the local State institutions more “Mapuche” in their decision-making processes and “revalidating” both the spaces and the cultural institutions and agents they consider their “own”.

Within these collective social and decision-making bodies that the Mapuche communities and organisations have revived over the last few decades, the *trawun* have played an important role in coordinating the different Lafkenche components, their claims and narratives. These political assemblies, which can last up to three days, are mass arenas for discussion and collective decision-making inspired by the parliaments of the colonial period. They are ritualised and organised in very specific spaces, generally the outdoors. They tend to begin early in the morning with a *Ngellipun*. From 2002 onwards, these meetings began to spread to various communities in the south of the country or *Ngulumapu*, but also to *Puelmapu*¹⁹ and urban areas.

Both these different organisational experiences developed by the Mapuche communities, along with the socio-environmental conflicts such as the CELCO case, have been decisive in creating these contemporary internal spaces for discussion and de-

cision-making. In the Lafkenche case, however, a major reason for their growth and greater strength lies in the reform of a law that directly affects the cultural and economic way of life of these communities. These communities had, since 1991, been governed by the fisheries law, a law that was gradually restricting their access to the different marine resources. This law granted the fishermen's unions the sole right to exploit these coastal resources, ignoring other forms of organisation such as the Lafkenche communities. It furthermore failed to recognise the traditional customs of these people, who have historically lived from the sea. Economic concerns were also a major issue in this conflict given that management of the marine area was subject to payment of a tax, an unthinkable requirement for those who had historically used the resources of the coastal zones.

From 2002 on, a number of communities and organisations from the coastal area began to meet during the *trawun* to discuss and develop strategies with which to face up to this gradual loss of control over their natural and cultural resources. Given their high dependence on marine resources, both fishing and shellfish/seaweed harvesting, the issue at stake for the Lafkenche was their very survival.²⁰ As we have seen, the sea also plays an important spiritual role, manifested in their relationship with the *Ngen*, which are conceived of as protectors and providers, and with whom one seeks to maintain good relations through offerings and prayers during traditional ceremonies.

Drafting the Lafkenche Law

Between August and October 2002, at least six *trawun* were held in the coastal communities (Puerto Saavedra, Mehuín, Tirúa, Carahue) and in Temuco. These assemblies, which lasted one or two days, brought representatives together from nine territorial spaces, along with an advisory team of lawyers, public officials, professionals from FUSUP (Foundation to Overcome Poverty) and academics from the Indigenous Studies Institute (*Universidad de la Frontera*). Their aim was to participate in the parliamentary discussion on amending the 1991 fisheries law and, in particular, to redefine the relationship with the Lafkenche's *Lafkenmapu* and decide on strategies by which to get their maritime rights recognised. This series of *trawun* culminated in a meeting in Santiago de Chile with the deputies and ministers involved in amending the fisheries law. Finally, it was decided not to amend the law but to create a special one for the Lafkenche, an initiative that was supported by the President of the Republic, Ricardo Lagos. This initiative gave rise, between 2003 and 2004, to a new series of *trawun* and workshops, this time extended to 13 regional areas along the 1,000 km coastline from the Gulf of Arauco to the provinces of Palena and Chiloé (see Fig. 2 and Fig. 3).

These meetings formed the prelude to drafting the Lafkenche Law, and discussions focused on the Lafkenche's particular conception of the sea, seeking to distinguish them as a people from the non-indigenous fishers. This need to build a discourse

around different or specific characteristics in order to enable them to request a special law involved drawing on the whole symbolic universe of the Lafkenche, in addition to promoting, agreeing, specifying and passing it on to new generations.

In one of the first *trawun* held in Puerto Saavedra in August 2002, one of the participants, José Miguel Malo, stated the following of the *trawun*: “now we are once again becoming peñi [brothers] of truth, meeting each other again, meeting once more with the youth and some futakeche [elders]. I am not so old but there is no real need to reach a certain age to begin to learn and also to begin to share what you have learned. I think this is the meaning behind the *trawun*, in the sense of struggling for the good of our society as a people.”

For their participants, the *trawun* are true intergenerational and interregional bodies of learning, social restructuring and updating of the social memory and narratives on the symbolic and ontological dimensions of the sea. Workshops were therefore organised in all areas and local *kimches* (wise men) and experts in cosmovision were invited.

Emphasis was placed on the different ways in which *Lafkenmapu* is conceptualised, the differences between the holistic vision of the Lafkenche and the compartmentalised vision of the State. “When we talk of territory it covers everything, it encompasses everything, the sea is not just a strip of water, it is fixed to the land and so you cannot separate the two. When we talk about the land we are therefore talking about everything as a whole,” explained José Miguel Malo at the *trawun* held in Puerto Saavedra, August 2012. This explanation is going to be transposed literally into the future planned Lafkenche Law and posted anonymously on the website created by the Lafkenche identity to explain “who the Lafkenche are”.²¹ Some of the discourse resulting from these interactions may seem fanciful or stereotypical, with statements heard on different occasions such as: “We do not own the sea, we are part of the sea” or “If they leave us without our *Lafken*, we Lafkenche will be nothing, we will no longer be a people, we will no longer be *che*”.²² However, they need to be seen from a linguistic and conceptual understanding of logic and notions that is generally unknown to the State’s lawyers, legislators and officials, and who need to be convinced of the grounds for a Lafkenche Law. They are also part of a process of constructing the common language and rhetoric necessary for the Lafkenche to be able to mediate with the State, just as this process is acting as a “coordinating pivot of intra-Lafkenche social relations”, presented as “one of the most important mechanisms, and catalyst of the effective construction of the Lafkenche territorial identity” (Flores and Delamaza, 2012: 117-118). The capacity to subjectivise the discourse and practices of the workshops and *trawun* must not be under-estimated, not only in terms of inculcating the Lafkenche cultural norms but also of acting as a vehicle for values and feelings of justice and dignity in relation to their longstanding discrimination within Chilean society. In this regard, the presence at the *trawun* of representatives from other territories involved in environmental conflicts, such as Boris Hualme from Mehuín, acted as a reminder that the future law was vital both for the indigenous communities and for the non-indigenous



Figure 2: Map showing the different Lafkenche territorial spaces mobilised around Lafkenmapu (Source: <http://www.identidadlafkenche.cl/>)

coastal populations, as a way of opposing extractivist projects.

Enactment and scope of the Lafkenche Law

One proposal, which brought both legal and sociocultural aspects together, came out of this process in the early months of 2004 and was submitted to President Lagos during a *futrawun* (large meeting) of three days' duration at Budi Lake in March (see Fig. 4). This meeting undoubtedly represented a show of strength for the Lafkenche, who managed to bring 5,000 people together from the different territories. It was also a demonstration of the diversity of the Lafkenche identity, showcasing the different ceremonial and ritual expressions all in one place.

It was a key moment in the formation of a collective Lafkenche identity, despite the fact that President Lagos never turned up to receive the proposal. This “failed meeting” between the Lafkenche and the Chilean state was, for the former, an opportunity to pressurise the latter into meeting its commitments, and enabled a technical intersectoral com-

mittee to be set up formed of Lafkenche leaders and advisers plus representatives from different State institutions. After ten months of joint work, a draft law was sent to Parliament aimed at creating a maritime coastal space for native peoples, and which gave rise to a debate in particular around the concept of “customary use of the water’s edge”.²³ In the end, the final text of the law defined customary use as “the practices or conduct generally undertaken by members of the association of communities or community, as appropriate, on a regular basis and which are collectively recognised as manifestations of their culture. (...) This may include, among other things, fishing, religious, recreational or medicinal use.” (Art. 6). This legal definition seems quite far removed from the practices and discourse observed in the Lafkenche communities, and leaves a wide margin for interpreting, and even denying, the maritime rights of the Lafkenche. Nor does it achieve the Lafkenche movement’s aim of validating ways and means of organising that are different to the associative model imposed by the State.

The final legal text that was enacted in 2008, and implemented one year later, ordered the creation of a “coastal marine space for native peoples, the aim of which is to safeguard the customary use of these spaces in order to maintain the traditions and use of natural resources by the communities with links to the water’s edge” (Art. 3). The delimitation and granting of the concession to these areas is now subject to a whole series of technical studies by the different institutions. It involves the Lafkenche communities proposing an administrative plan that will ensure the adequate exploitation and responsible management of their resources, and which explicitly defines uses and users. The communities thus have to produce the evidence and limitations to form the basis of their request. This work also creates new needs and greater dependence, forcing the Lafkenche to rely on lawyers and NGOs. These requirements, and the small number of communities that have actually managed to obtain management responsibility over the areas requested six years after the law came into force, has created disillusionment and criticism.

In the case of Mehuín, however, implementation of the Lafkenche Law and requests from the coastal communities threatened by the pipeline have enabled a temporary halt in its construction, by legally preventing the necessary marine concessions from being issued. It is worth noting that the communities have used this law to delay and protect this coastal area, in a process that still involves tension with the cellulose company and with the Chilean state, this latter faced with the contradictory roles of having to protect the native communities while at the same time promote the region’s economic development.

Conclusion

The Lafkenche communities’ struggle for control of their maritime territory involves different dimensions that cannot always be separated. The Lafkenche Law that arose out of these conflicts is pioneering within the Chilean monocultural legal tradition as it

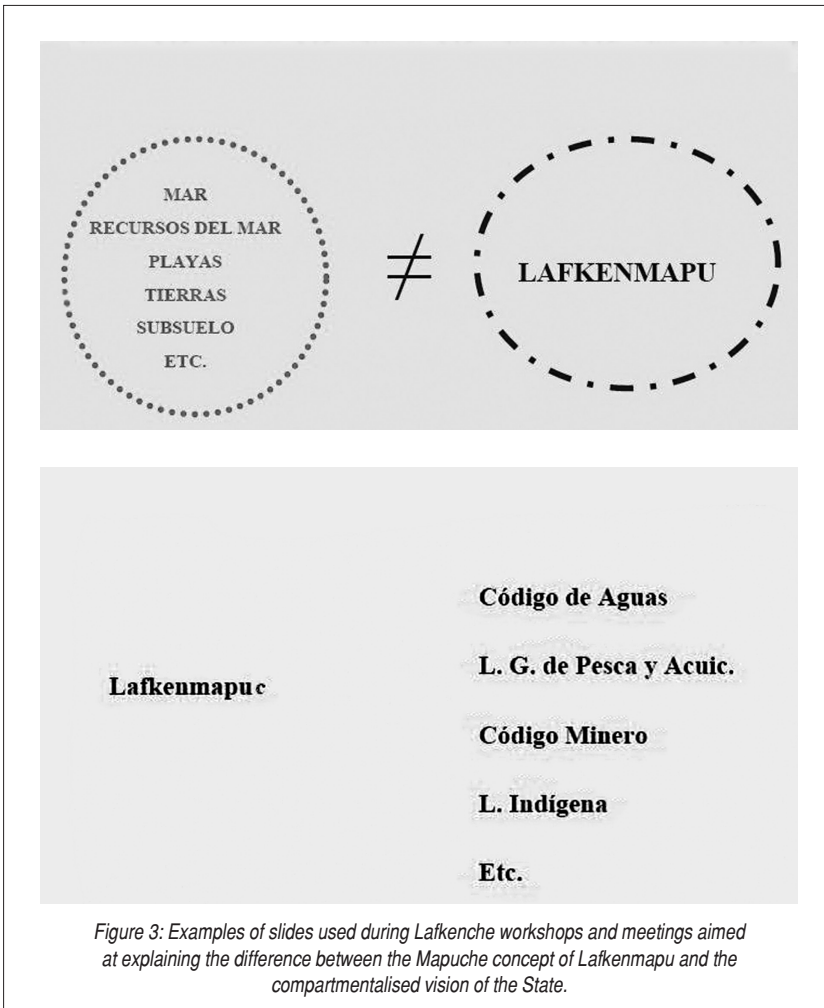


Figure 3: Examples of slides used during Lafkenche workshops and meetings aimed at explaining the difference between the Mapuche concept of Lafkenmapu and the compartmentalised vision of the State.

incorporates references to the specific features of the historical and religious relationship between the Lafkenche communities and the sea. The Lafkenche are required to provide evidence, however, and even explicitly reference their daily and internalised practices and knowledge. The demarcation of marine spaces, including places of sociocultural significance or spiritual strength such as the *Ngen ko*, constitutes a new challenge in the necessary intercultural dialogue in Chile, in which the law and, more widely, the legislative system and the State, are called upon to consider subjective factors raised by the indigenous groups.

Although the participatory process for producing and implementing the Lafkenche Law, commenced 15 years ago but still underway, has suffered setbacks and disappointments, it has also had some unexpected effects such as the State's transforma-



Figure 4: Futra-Trawun of Trawa-Trawa - Budi Lake - Puerto Saavedra commune. March 2004.
(©Fabien Le Bonniec)

tion in building new bridges of understanding with indigenous peoples in Chile. In the communities themselves, it has been possible to observe – alongside the *trawun* and workshops – a re-appraisal of elements of their collective memory, such as narratives or ceremonial practices recalling the fundamental place of *Lafkenmapu* in the life of their inhabitants (Le Bonniec, 2009). The Lafkenche Law shows how a legal-political process the importance of which was initially primarily economic has been indissociable from identity processes that are locally-grounded in marginalised coastal communities. The emblematic case of Mehuín Bay and CELCO shows how, from the local sphere, the Lafkenche have been able to reframe these global processes from their own ontological experience of the entities of the sea. ○

Notes

- 1 Law No 20,249 (Biblioteca Nacional del Congreso 2008). Lafkenche means “People of the sea” or “of the lake” in mapudungun.
- 2 Mehuín Bay and village are located in the municipality of San José de Mariquina, Valdivia province, Ríos region, some 800 km south of the capital, Santiago de Chile. The area has beaches that primarily attract regional tourists.
- 3 Belonging to the ARAUCO S.A. business group, which itself belongs to one of the most powerful families in Chile, the Angelini family.
- 4 These two species of allochthonous tree were selected to for intensive sowing over thousands of hectares in the south of Chile from the 1970s onwards, in a productivist economic policy that sought maximum profit from some of Chile’s existing natural resources.

- 5 Initially, the industrial waste caused environmental damage to the Cruces River (it should be noted that waste from the plant is continuing to be discharged into the river as of 2016) for which CELCO was prosecuted and punished, a decade later, in 2014.
- 6 The butalmapu or “greats lands” were “longitudinal alliances that divided up the territory into four large ‘jurisdiction’s in which each covered one of the four environmental ‘zones’ that can be recognised: coastal flats, hinterland plains, Andean foothills and Andean valleys.” (Zavala 2008: 84)
- 7 Minerals are mined in the Likan Antai, Aymara and Quechua territories In the north of Chile, while in the south numerous Mapuche communities are affected by logging companies, hydroelectric dams, and fish farming. As Ximena Cuadra notes (2014: 147): “currently [in 2013], the National Human Rights Institute (INDH) has catalogued 95 conflicts, 37 of which are in indigenous territories, which is extremely high given that the density of indigenous population is very low in rural areas”.
- 8 This is a common situation as the members of Lafkenche families tend to alternate their livelihood activities, intimately linked as they are to the natural resources around them (forest, potatoes, fish, shellfish and seaweed).
- 9 These diseases can be explained in the Mapuche world by a breakdown in relations between human beings and non-human entities, caused by a transgression of the system of reciprocity represented by the forest presence. This brings about a series of imbalances that can cause different illnesses known as Kutran (Citarella 1995).
- 10 Although the Mapuche-Lafkenche identity in Arauco Province is pioneering in its capacity to formulate and widely disseminate the demands and concerns of the Lafkenche, the pre-existence of other organisations such as the Pu Lafkenche, created in Tirúa in 1992, or the Commission for the Defence of Lafkenche Rights in Puerto Saavedra, cannot be ignored as they were an early expression of concerns for sea-related rights (Delamaza and Flores 2012).
- 11 Tirúa is a coastal commune in Arauco Province, Bio-Bio region, bordering the region of Araucanía, some 600 km from the Chilean capital. It is known for being the first town to have a Mapuche mayor in 1996, Adolfo Millabur, who was re-elected four times.
- 12 The Ngillatun is basically a religious ritual of agricultural origin, involving supplications and thanks to the *Ñuke Mapu* (Mother Earth) and/or Chao Ngenechen (Supreme Being); it is a coordinating theme of Mapuche unity. In the Lafkenche community of Maiquillahue, this happens once a year in January when, for two days, dances, offerings and sacrifices take place. Among the multiple and complex ritual actions conducted, thanks are given and supplications made for different reasons (prosperity, good harvest, health); it is a space for communication between the living and the dead (ancestors); a moment of communication between humans and non-humans, through the Ngen or spirit masters of nature. This ceremony is an excellent time to meet and pass on memories with regard to water and build the “us” of an extended Mapuche-Lafkenche family.
- 13 This meeting or Ngillatun in a small committee, which lasts just one day, is an opportunity for representatives of families who live all year in the rural area to come together and finalise the organisational details and prepare themselves spiritually for the Junta Grande or great Ngillatun held in January.
- 14 To simplify, the Ngellipun can be distinguished from the Ngillatun by the fact that the former can be done by anyone who knows how to speak Mapudungun and is a “small respectful ceremony”; in contrast, the Ngillatun can only be led by a “traditional” spiritual authority such as the Ngenpin, Machi or Lonko, reporting to the communities. The common thread is that the lineage, the descendancy, of the first inhabitants (humans and non-humans) who lived in the area has to be noted in both ceremonies, along with geographical references, and the different Ngen “spirit forces” present evoked.
- 15 Extracts from the article on the conflict in Mehuín: “Nosotros tenemos la razón y tenemos la fuerza” in <http://argentina.indymedia.org/news/2007/01/482415.php>
- 16 For more detail on the Ngen, see the works of Grebe (1992, 1993), Course (2011), Bacigalupo (2007) and Antona, who indicates that “every Mapuche immersed in their culture and aware of their identity has an obligation to safeguard the habitats of the Ngen, and so it is necessary to ask permission of the ‘owner’ and undertake Ngellipun (prayers and offerings)(when you want to access a space or use a natural resource found there.” (Antona, 2014: 158).
- 17 Our ethnographical data was gathered in Maiquillahue community, Mississippi and Mehuín coves, from 2007 to 2012, at different times during the developing conflict.

- 18 As a consequence of the tsunami that followed the 9.5 magnitude earthquake in 1960, the whole bay was devastated and Mississippi State in the USA financed a large part of the reconstruction of the fishermen's cove which was then rebaptised, albeit with its original name of Lower Mehuín.
- 19 Puelmapu is the territory to the east, or current Argentina. Ngulumapu corresponds to the territory to the west, or current Chile. Puelmapu and Ngulumapu constitute Wallmapu, the territory of the Mapuche people.
- 20 According to the National Fishing and Agriculture Census (2008), 16.7% of artisanal fishers in Chile belong to an indigenous people. They are largely shore collectors (46.2%), artisanal fishers (25.3%) and shellfish divers (9.6%).
- 21 <http://www.identidadlafkenche.cl/quienes%20somos.html>, viewed on 12 January 2016.
- 22 These phrases are the equivalent of the common rhetoric in public Mapuche discourse by which "We are not owners of the land but part of it" and "a Mapuche without land is not a Mapuche, they cannot be a person".
- 23 On the parliamentary debates that affected the Lafkenche Law, the article by Flores and Delamaza (2012) can be consulted, which is based primarily on a document produced by the National Congress Library on the "History of Law No 20,259", built on the basis of information provided by the Project Procedural System of the National Congress.

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